McGAHON
SURVEYORS

Volume C Pricing Document

CLIENT: LMETB

JOB: Extension to DIFE, The Twenties, Drogheda, Co Louth

DATE: 10/07/2026

www.mcgahonsurveyors.com

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PRELIMINARIES

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1. PRELIMINARIES PARTICULARS **1 PRELIMINARY PARTICULARS** **This Pricing Document must be completed in full and returned with the tender** **1.1 Project, parties and consultants** The name, nature and location of the project Construction of a new two-storey multi-purpose tertiary education building extension to Drogheda Institute of Further Education, Drogheda, Co. Louth The nature of the Works is the construction of a new two-storey extension to the existing college providing teaching accommodation including all associated siteworks on a live educational site. The location of the site is Drogheda Institute of Further Education, The Twenties, Drogheda,Co. Louth, A92 V586. A general description of the works The contract comprises the following works: Construction of a new two-storey multi-purpose tertiary education building extension to the North-East of the existing Drogheda Institute of Further Education school building, comprising Nursing Practice Classroom, Dental Studies Practice Classroom, Pharmacy Tech, Computer Room, Multi-Purpose Room, General Classrooms, Male/ Female Changing Rooms and other ancillaery spaces, together with all associated services, drainage, landscaping and siteworks. The works are to be delivered over two phases. Of particular relevance to this project is that the existing building is in use and this usage must be facilitated throughout the works in a safe manner all as detailed in Volume A Works Requirements. The names and address of the Employer and Consultants together with their respective roles. The 'Employer' shall mean Louth and Meath Education and Training Board (LMETB), LMETB Administrative Offices, Abbey Road, Navan, Co. Meath, C15 N67E Names and addresses of the Consultants The term 'Employer's Representative' shall mean MCOH Architects, Old Church, Church Street, Portlaoise, Co. Laois The Architect is: MCOH Architects, Old Church, Church Street, Portlaoise, Co. Laois					
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	1. PRELIMINARIES PARTICULARS (Cont)					
	The Civil and Structural Engineer is:					
	DBFL Consulting Engineers, Ormond House, Upper Ormond Quay, Dublin 7,					
	The Building Services Engineer is:					
	Semple & McKillop Ltd., Unit 6, Drumillard Retail Park, Monaghan Road, Castleblayney, Co. Monaghan					
	The Quantity Surveyor is:					
	McGahon Surveyors Ltd., Block 1, Quayside Business Park, Mill Street, Dundalk, Co Louth					
	The Project Supervisor Design Process is:					
	Waterman Moylan, Eastpoint Business Park, Alfie Bryne Road, East Wall, Dublin 3					
	1.2 Description of site					
A	The boundaries of the site, the means of access and the position of the works are as indicated on the Architect's drawings. The Contractor should visit the site and note all adjacent and/or abutting buildings.	1	item			
B	The proposed extension is located to the North-East of the existing Drogheda Institute of Further Education school building, The Twenties, Drogheda,Co. Louth, A92 V586.	1	item			
C	The existing facility shall remain fully operational during the construction of the proposed works.	1	item			
	<u>The existing boundaries of the site include the following</u>:					
D	In general the existing boundary treatments to the site are to remain in place and are not to be altered or disturbed during the works. However the exsiting fencing & gates to the new rear car park area is to be removed and replaced with new vehicular gates and fencing as detailed on Architect's Drawing Nr. TD0103. The Contractor shall take all necessary precautions to protect existing boundaries for the duration of the contract. Any damage to existing boundary treatments shall be made good at the Contractor's expense to the satisfaction of the Employer's Representative.	1	Item			
E	The contractor is expected to visit the site when preparing his tender submission and satisfy himself as to the existing site boundary conditions.	1	Item			
	<u>Means of Access</u>					
F	Construction access to the proposed site area will be via the existing double gates to the North of the drop down area along The Twenties for both sections/ phases of the Works. Contractors are advised to carefully review the Volume A Works Requirements in this regards. No claims from a lack of understanding of site access or restrictions will be considered.	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
A	Pedestrian / Cyclists - Pedestrian routes around the construction site are to be segregated from the vehicular routes. The pedestrian routes will be demarcated with a timber post and chain or similar visual/wayfinding system. Task lighting will be provided on the site and car parking areas. An area for bicycle parking facilities is to be provided for construction personnel.	1	Item			
B	Proposed Parking for Construction Personnel - Car parking will be provided within the site boundary in line with expected personnel levels during construction.	1	Item			
C	The main construction car park is to be located within contractor's compound footprint where limited parking for site management staff and visitor parking should be provided. The contractor will explore the possibility of establishing an offsite temporary car park with shuttle bus connection should all parking not be accommodated within the site boundary. No construction parking will be permitted on the approaches to the compound within the existing college grounds or along The Twenties.	1	Item			
D	Appropriate wayfinding and warning signage is to be erected within the environs of Drogheda Institute of Further Education. The contractor is to devise an appropriate strategy which minimises disruption and inconvenience on the road network in the area during the construction of the project.	1	Item			
E	The successful tenderer will be required to prepare a Traffic Management Plan which will have to vary to reflect the changing site access patterns. The Contractor's Site Specific Safety Statement must also reflect the changing status of the sequencing of the works.	1	Item			
F	The Contractor is required to provide a secure, control gate access point to the site for all Phases of the Works.	1	Item			
G	The Contractor shall provide and maintain a full time "log in and out system" for all persons entering the works.	1	Item			
H	Disciplinary action may be taken against any person found entering or leaving (or attempting to enter or leave) the site other than by the designated gates or entrances. If the Contractor uses a gate or gates to gain access or egress from the site, the Contractor shall be responsible for securing such gate or gates at all times throughout the contract period.	1	Item			
J	The Contractor shall ensure that no damage is caused to the existing roads due to the delivery of materials or the removal of site materials, demolitions or rubbish. All vehicles entering or leaving the site carrying loads which constitute a potential dust or dirt nuisance such as aggregate, sand, gravel, soil or the like shall be secured so that no materials shall leave the vehicle.	1	Item			
K	The Contractor shall be responsible for keeping all roads adjacent to the site free from mud droppings or other materials which are due to his own and all other operations and safeguard the Employer from any liability resulting therefrom. The Contractor is expected to take reasonable care to ensure that all vehicles entering and leaving the site are free of mud on the wheels or tracks, and the loads are secure.	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
A	In the event of fouling of any roads due to any operations the Contractor will be expected to clean them expeditiously at their own expense to the satisfaction of the Employer`s Representative and/or Employer. The Contractor shall be entirely responsible for any damage due to his failure to comply with this clause.	1	Item			
B	The Contractor shall confine his activities to the Works Area included in the contract and shall not allow his men to trespass on the other parts of the site or on the adjacent lands unless in direct execution of Works included in this Contract. In the event of any claims arising due to failure to comply with this clause, the Contractor shall be held entirely responsible and shall pay costs in connection therewith.	1	Item			
C	Prior to appointment the main contractor is to develop and provide by a specialist a clear strategy for the management of construction traffic and personel and college traffic/pedestrians during the construction works.	1	Item			
D	Access through the existing occupied college grounds is strictly forbidden; it is the responsibility of the contractor to ensure that all subcontractors, suppliers, visitors and others are made aware of the construction site access and do not enter the school grounds.	1	Item			
E	Tenderers must visit the site and ascertain the facilities for access thereto. They shall be understood to have acquainted themselves with the nature of the site, the existing college buildings and all adjacent buildings to the site and all other things insofar as they may have any connection with or affect the works. Tenderers must take all of the above into account when tendering and no claims for extras will be allowed in consequence of the failure to do this. Tenderers must make arrangements to visit the site by appointment. To arrange a visit to inspect the site of the Works, contact: Mr Shane Clynch of LMETB at SClynch@lmetb.ie.	1	Item			
	<u>Restrictions on Access</u>					
F	Restrictions to Contractor`s access to the site for the various stages of work are shown within the red line on Architect's Drawing Nr. TD/0102.	1	Item			
G	The working space for the Contractor will be confined to the immediate sites of possession as shown on Architect's Drawing Nr. TD/0102. The Contractor should note that he or she will be required to keep the college and site and adjacent public areas free of debris, muck, dust and the like and shall control noise and vibration.	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
A	The majority of the works are to proceed during the academic year within a live college environment. The Contractor must note that a teaching / pupil presence will exist within the college at all times. The Contractor will be responsible for their control and safety both on the construction site and all boundaries and interfaces with the college and its activities. The Contractor shall respond and deal immediately with any reasonable safety issue that may be raised by the College during the building works. If the College raises any concern about safety, the Contractor's site manager shall respond promptly and address the issue satisfactorily within a reasonable time frame and take whatever measures are necessary to ensure such an issue does not occur again. A programme / sequence of works shall be agreed in coordination with the Employer's Representative and Drogheda Institute of Further Education.	1	Item			
B	College and construction traffic are to be separate at all stages of construction. Construction traffic shall not park in the vicinity of the existing college buildings, or along The Twenties and surrounding residential developments/ streets. It is the responsibility of the Contractor to inform all subcontractors and suppliers of this restriction. This should be fully coordinated with the college before works commence.	1	Item			
C	The Contractor should note they are operating on the site of an occupied college. Contractor to allow for consulting the convenience of anybody who may be affected by the Works with regard to suitable times for carrying out works, making deliveries, etc. and include all necessary costs associated in complying with this requirement.	1	Item			
D	The contractor is fully responsible for Construction Management Plan and must ensure that all deliveries are coordinated and managed to ensure there is no queuing within the public roadways, and pedestrian footpaths and access routes are maintained at all times.	1	Item			
E	The existing college emergency exits and entrances shall be maintained throughout the construction period.	1	Item			
F	The contractor shall implement a road cleaning regime for the duration of the works, including wheel-washing facilities for vehicles entering and exiting the site. The frequency of cleaning is the Contractor's responsibility and shall be included in the Construction Management Plan to be issued to the ER and Local Authority prior to works commencing.	1	Item			
G	The Contractor shall mark all boundaries with warning signs to make clear that access to third parties is not allowed. The contractor shall erect 2.4m high suitably solid and secure hoarding with independent posts to all boundaries. Hoarding not to be fixed to existing fencing. All hoarding shall be to the contractors temporary works design and coordinated with the PSDP.	1	Item			
	<u>Position of the Works</u>					
H	The new build accommodation is located as indicated on Architect's Proposed Site Plan Drawing No TD/0102.	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
	Existing Buildings and Services					
A	The existing College buildings (on site) and the neighbouring residential developments may be seen by visiting the site.	1	Item			
B	The existing college will remain in operation on the site for the full duration of the proposed works. Services connections must be maintained by the contractor in all employer occupied areas for the duration of the works.	1	Item			
C	A Ground Penetrating Radar Survey of the site has been completed which shows the extent of existing underground services - the survey is included in Appendix 3 of the ITT- Information Pack.	1	Item			
D	It is the contractor's responsibility to verify the location of all existing underground services throughout the entire site prior to the carrying out any of the construction works, by way of a Ground Penetrating Survey (GPR). The Contractor must provide herein for all costs associated with carrying out this survey prior to any works commencing. No claims on the grounds of want of knowledge in this respect will be entertained whatsoever.	1	Item			
E	The Contractor shall liaise with the existing college to ensure all existing services are maintained at all times, in particular where final connections to the diversion of existing services need to be completed. Final Connections shall take place outside of normal college hours, to avoid the loss of service to the college.	1	Item			
F	During the construction phases of the project method statements are to be prepared by the Contractor with regards to services tie ins, locations and the erection of hoardings and temporary security fencing and access to existing buildings to carry out necessary works. These method statements must be issued in a timely manner and in accordance with the Contract, for review and approval by the Employer's Representative.	1	Item			
	Adjacent / Abutting Structures					
G	Any works beyond the boundaries of the college will involve hoarding outside the boundary of the site together with making good the existing public paths, public roads, grass and planted areas on the adjacent lands within the area of the works. The contractor shall liaise with the council, owners of the lands and affected local residents when this work is being undertaken, to minimise disruption to the local area.	1	Item			
H	A full condition survey of the existing building shall be undertaken prior to commencement and issued to the ER for record.	1	Item			
J	A full dilapidation survey of all surrounding land shall be undertaken prior to commencement and issued to the ER for record.	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
A	A full condition survey of the college access/ exit roads off The Twenties shall be undertaken prior to commencement and issued to the ER for record. The Contractor is responsible for maintaining the surface of these shared access roads throughout the construction period. This will include road surface repairs to potholes that develop whilst construction traffic use the shared access points to the site. These roads should be handed over in the same condition as before the commencement of the project.	1	Item			
B	The contractor shall liaise with the adjacent landowners when undertaking the work to minimise disruption.	1	Item			
	1.3 Drawings and other documents					
	Drawings and other documents used for the preparation of this bill of quantities are:					
C	Documents contained in Volume A - Works Requirements	1	Item			
	Project Particulars & General Conditions					
D	Provide for any costs arising from complying with items given in Volume A1 - Project Particulars	1	Item			
	Drawings - Copies					
E	Copies of the Drawings, additional to those provided for in the Conditions of Contract shall be provided at the Contractor's expense. Keep one copy of all contract drawings on the works for inspection by the Employer's Representative on completion of the works.	1	Item			
	Pricing Documents					
F	The basis of measurement is the Agreed Rules of Measurement, Issue Four 2010 (ARM4) and ARM 4 Supplement 1, agreed between the Construction Industry Federation and the Society of Chartered Surveyors Ireland.	1	Item			
G	Mechanical & Electrical Works measured in accordance with The Agreed Rules of Measurement 4 to Supplement 2	1	Item			
H	Tendering Contractors are referred to the General Rules section of ARM 4 Supplement 1 (Issue 1 2010) and the ARM Standing Committee Notice of Amendments to ARM 4, Supplement 2 dated 15th November 2019 used in the production of Volume C Pricing Document.	1	Item			
J	Tenders must be priced in accordance with section 5.7 of the Instructions to Tenderers issued with this tender	1	Item			
K	Errors in the Pricing Document will be dealt with in accordance with section 8.1 of the Instructions to Tenderers issued with this tender	1	Item			
L	Unbalanced Tenders will be dealt with in accordance with section 8.2 of the Instructions to Tenderers issued with this tender	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
A	Abnormally low tenders, abnormally high or low rates or prices will be dealt with in accordance with section 8.3 of the Instructions to Tenderers issued with this tender	1	Item			
B	The Contractor shall keep one unpriced copy of the Pricing Document on the Works and the Employer's Representative or his representatives shall at all reasonable times have access to it.	1	Item			
C	No alterations or qualifications of any kind may be made by the Tenderer to the text of the Pricing Document. Should any alteration amendment note or addition be made it will be ignored and the text prepared by the Quantity Surveyor shall be adhered to.	1	Item			
D	The tendering contractor must comply with the rules set out in the Instructions to Tenderers when completing Volume C - Pricing Document	1	Item			
	Generic Names / Performance Requirements / Proprietary Names					
E	To avoid long descriptions repetitions, certain descriptions and measured items refer to the specification by use of the words " as described" whether so referred or not, all instructions and information contained in the Specification Clauses will be deemed to have been taken into consideration in pricing the whole of this Pricing Document.	1	Item			
F	Wherever a proprietary name is used to specify a material or process it shall be deemed to have the term "or equivalent" appended to it.	1	Item			
G	Where a material or process is described by reference to its proprietary name the name is used to indicate the standard of construction, appearance, ease of maintenance and durability acceptable to the Employer's Representative. The Employer's Representative will approve the use of alternatives where such alternatives are shown to equal or surpass the qualities of the product or process specified. Accordingly proprietary names wherever mentioned in the Specification, Pricing Document or on the drawings shall be deemed to mean the provision of the named product or process or an equivalent.	1	Item			
H	If the Contractor wishes to propose an "equivalent" product to that specified, they must follow the following procedures:	1	Item			
J	a) Proposal to change must be formally requested through the employer's representative (ER) citing the reason why and demonstrating that the "equivalent" is equal to the original specification	1	Item			
K	b) The ER is entitled to seek further demonstration that the "equivalent" proposal is equal, and tendering contractors should expect and include for same	1	Item			
L	c) The ER's approval of the "equivalent" must be issued in writing prior to the works commencing	1	Item			
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	1. PRELIMINARIES PARTICULARS (Cont)					
A	In exceptional cases where it has not been possible to specify a generic element and a specific product has been named, an equivalent product to that specified is acceptable where it meets the technical, functional and aesthetic standards of that specified: the onus is on the contractor to ensure that an equivalent product to that specified meets the standard by means of an agreement cert, insurance backed guarantee or warranty, detailed specifications, fire test certificates where applicable, brochure and other means of proof of compliance. Notwithstanding this, the appropriate foregoing documentation and samples are to be provided to the architect prior to being incorporated into the construction.	1	Item			
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1. PRELIMINARIES PARTICULARS (Cont)					
COLLECTION					
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1. PRELIMINARIES PARTICULARS **Carried to Summary**					

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	2. CONTRACT					
	2. CONTRACT					
	2.1 Form, type and conditions of contract					
	Form, type and conditions of contract					
	The Form of Conditions set out in the Public Works Contract for Building Works designed by the Employer with a cited revision reference commencing with v2 published on http://constructionprocurement.gov.ie/contracts/ on the date 10 days before the latest date for receipt of Tenders (disregarding any amendements posted on that date).					
	Articles of Agreement					
A	Agreement A2	1	Item			
	Conditions of Contract - clause headings					
	1. THE CONTRACT					
B	1.1 Definitions	1	item			
C	1.2 Interpretation	1	item			
D	1.3 Inconsistencies	1	item			
E	1.4 Pricing Document and Works Proposals	1	item			
F	1.5 Performance Bond	1	item			
G	1.6 Reliance Documents	1	item			
H	1.7 Joint Ventures	1	item			
J	1.8 Assignment	1	item			
K	1.9 Miscellaneous	1	item			
L	1.10 Background Information	1	item			
	2.0 THE LAW					
M	2.1 Law governing the Contract	1	item			
N	2.2 Compliance with Legal Requirements	1	item			
P	2.3 Consents	1	item			
Q	2.4 Project Supervisor	1	item			
R	2.5 Safety, Health and Welfare at Work Act 2005 and Safety, Health and Welfare at Work (Construction) Regulations 2013	1	item			
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	2. CONTRACT (Cont)					
A	2.6 Ethics in Public Office	1	item			
B	2.7 Legal Opinion	1	item			
C	2.8 Data Protection	1	item			
	3.0 LOSS, DAMAGE AND INJURY					
D	3.1 Employer's Risks of Loss and Damage to the Works	1	item			
E	3.2 Care of the Works	1	item			
F	3.3 Insurance of the Works and Other Risk Items	1	item			
G	3.4 Contractor's Indemnity	1	item			
H	3.5 Employer's Indemnity	1	item			
J	3.6 Public Liability and Employer's Liability Insurances	1	item			
K	3.7 Professional Indemnity Insurance	1	item			
L	3.8 Existing Facilities and Use or Occupation by Employer	1	item			
M	3.9 General Requirements Concerning Insurance	1	item			
N	3.10 Limitation on Liability	1	Item			
	4.0 MANAGEMENT					
P	4.1 Co-operation	1	item			
Q	4.2 Contractor's Representative and Supervisor	1	item			
R	4.3 Employer's Representative	1	item			
S	4.4 Employer's Representative's Communications	1	item			
T	4.5 Instructions	1	item			
U	4.6 Works Proposals	1	item			
V	4.7 Required Contractor Submissions	1	item			
W	4.8 Value Engineering	1	item			
X	4.9 Programme	1	item			
Y	4.10 Progress Reports	1	item			
Z	4.11 Notice and Time for Employer's Obligations	1	item			
AA	4.12 Documents	1	item			
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	2. CONTRACT (Cont)					
A	4.13 Contractor's Management	1	item			
B	4.14 Communications	1	item			
C	4.15 Meetings	1	item			
D	4.16 Confidentiality and Secrecy	1	item			
E	4.17 Contractor's Things Not to be Removed	1	item			
F	4.18 Contractor's Documents	1	item			
	5.0 CONTRACTOR'S PERSONNEL					
G	5.1 Contractor's Personnel to Carry Out Contractor's Obligations	1	item			
H	5.2 Qualifications and Competence	1	item			
J	5.3 Pay and Conditions of Employment	1	item			
K	5.4 Subcontractors and Specialists	1	item			
L	5.5 Collateral Warranties	1	item			
M	5.6 Removal of Workers	1	item			
N	5.7 Weekly Labour Records	1	item			
P	5.8 Ancillary Certifiactes	1	item			
	6.0 PROPERTY					
Q	6.1 Ownership of Work Items	1	item			
R	6.2 Infringement of Property Rights	1	item			
S	6.3 Works Requirements	1	item			
T	6.4 Rights in Contractor's Documents	1	item			
	7.0 THE SITE					
U	7.1 Lands Made Available for the Works	1	item			
V	7.2 Trespassers	1	item			
W	7.3 Contractor Responsible for all Site Operations	1	item			
X	7.4 Services for Employer's Facilities	1	item			
Y	7.5 Security and Safety of the Site and Nuisance	1	item			
Z	7.6 Other Contractors	1	item			
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	2. CONTRACT (Cont)					
A	7.7 Setting Out the Works	1	item			
B	7.8 Archaeological Objects and Human Remains	1	item			
C	7.9 Access and Facilities	1	item			
D	7.10 Condition of Site on Completion	1	item			
E	7.11 Working Times	1	item			
	8.0 QUALITY, TESTING AND DEFECTS					
F	8.1 Standards of Workmanship and Works Items	1	item			
G	8.2 Quality Assurance	1	item			
H	8.3 Inspection	1	item			
J	8.4 Tests	1	item			
K	8.5 Defects	1	item			
L	8.6 Defects Period	1	item			
M	8.7 Defects Certificate	1	item			
	9.0 TIME AND COMPLETION					
N	9.1 Starting Date	1	item			
P	9.2 Suspension	1	item			
Q	9.3 Delay and Extension of Time	1	item			
R	9.4 Programme Contingency	1	item			
S	9.5 Omissions and Reduction of Time	1	item			
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U	9.7 Taking Over Part of the Works	1	item			
V	9.8 Liquidated Damages	1	item			
	10.0 CLAIMS AND ADJUSTMENTS					
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X	10.2 Contractor to Pay Employer's Cost of Checking Quantities	1	item			
Y	10.3 Contractor Claims	1	item			
Z	10.4 Proposed Instructions	1	item			
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A	10.5 Employer's Representative's Determination	1	item			
B	10.6 Adjustments to the Contract Sum	1	item			
C	10.7 Delay Cost	1	item			
D	10.8 (Not used)	1	item			
E	10.9 Employer's Claims	1	item			
F	10.10 International Procurement Instrument Measures	1	Item			
	11.0 PAYMENT					
G	11.1 Interim Payment	1	item			
H	11.2 Unfixed Works Items	1	item			
J	11.3 Retention	1	item			
K	11.4 Full payment	1	item			
L	11.5 Final Statement	1	item			
M	11.6 Time for Payment and Interest	1	item			
N	11.7 Value Added Tax	1	item			
P	11.8 Withholding Tax	1	item			
	12.0 TERMINATION					
Q	12.1 Termination on Contractor Default	1	item			
R	12.2 Consequences of Default Termination	1	item			
S	12.3 Suspension by the Contractor	1	item			
T	12.4 Termination by the Contractor	1	item			
U	12.5 Termination at Employer's Election	1	item			
V	12.6 Consequences of Termination by Contractor or at Employer's Election	1	item			
W	12.7 Survival	1	item			
X	12.8 Payment	1	item			
Y	12.9 Reference to Conciliation	1	item			
	13.0 DISPUTES					
Z	13.1 Dispute Management Procedure	1	item			
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B	13.3 Adjudication	1	item			
C	13.4 Arbitration	1	item			
D	13.5 Jurisdiction	1	item			
E	13.6 Agent for Service	1	item			
F	13.7 Continuing obligations	1	item			
	14.0 COVID-19 MADATORY CLOSURE					
G	14.1 Covid-19 Definitions	1	item			
H	14.2 Covid-19 General Provisions	1	item			
J	14.3 Covid-19 Costs	1	item			
	15.0 PRICE VARIATION					
K	15.1 Definitions	1	item			
L	15.2 Contract Sum Adjustment	1	item			
M	15.3 Proportions	1	item			
N	15.4 Change in Law	1	item			
P	15.5 Failure to Commence by the Start Date	1	item			
Q	15.6 Failure to Complete on Time	1	item			
R	15.7 Excluded Amounts	1	item			
S	15.8 Revisions of Index Figures	1	item			
T	15.9 Permitted Increases and Permitted Decreases for Material Categories and Fuel Categories	1	item			
U	15.10 Adjustments for Labour	1	item			
V	15.11 Efficiency	1	item			
	Appendices to Clause 15					
W	Appendix 1 Definitions	1	Item			
X	Appendix 2 Permitted Increases and Permitted Decreases for Materials and Fuel	1	Item			
Y	Appendix 3 Labour	1	Item			
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	2. CONTRACT (Cont)					
	THE SCHEDULE - PART 1					
A	A. Employer's Representative and Communications	1	item			
B	B. Documents	1	item			
C	C. Project Supervisor	1	item			
D	D. Insurance	1	item			
E	E. Performance Bond	1	item			
F	F (i). Collateral Warranties	1	item			
G	F (ii). Ancillary Certificates	1	item			
H	F (iii). Named Specialists	1	item			
J	G. Dates for Substantial Completion, Sections, liquidated damages, retention	1	item			
K	H. Early Completion	1	item			
L	I. Defects Period	1	item			
M	J. Random Checks for Employment Records	1	item			
N	K. Delay Events, Compensation Events, Programme Contingency, Delay Costs, Adjustments	1	item			
P	L. Payment Particulars	1	item			
Q	M. Cap on Liability	1	item			
R	N. Conciliation, Adjudication and Arbitration	1	item			
S	O. Rights in Contractor's Documents	1	item			
T	P. IPI Measures	1	Item			
U	The completed Schedule Part 1 of the contract is contained within Volume B. Provide herin if not included elsewhere for complying in all respects with the schedule & conditions as described.	1	Item			
	<u>The insertions in the Schedule Part 1 are</u>:					
	<u>A. Employer's Representative and Communications</u>					
	Sub-clauses 4.3 and 4.14					
	Notices under clauses 12 and 13 to be sent to					
				To Collection €		

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2. CONTRACT (Cont)					
Mr Martin G O'Brien, Louth and Meath Education and Training Board (LMETB)					
LMETB Administrative Offices, Abbey Road, Navan, Co. Meath, C15 N67E					
Other notices to the Employer to be sent to					
Ms. Susan Harte					
MCOH Architects, Old Church, Church Street, Portlaoise, Co. Laois					
Phone: 057 8622566					
Email: susan.harte@mcoh.ie					
The Employer's Representative is: Ms. Susan Harte, MCOH Architects					
Notices to the Employer's Representative to be sent to					
Ms. Susan Harte					
MCOH Architects, Old Church, Church Street, Portlaoise, Co. Laois					
Phone: 057 8622566					
Email: susan.harte@mcoh.ie					
The number of Project Board members for the Contract shall be:					
1 member from each Party					
Maximum adjustment to the Contract Sum for a single Change Order: €2,000.00					
Maximum cumulative value of adjustments to the Contract Sum for Change Orders in any 3 month period is: 0.25% of the Contract value, unless approved by the Employer.					
B. Documents					
Works Requirements are:					
As Scheduled in Volume A Works Requirements					
Pricing Document is:					
A Bill of Quantities to the Agreed Rules of Measurement 4, as amended by Supplement 1 Issue 2, as included in Volume C.					
Mechanical & Electrical works measured in accordance with The Agreed Rules of Measurement 4 to Supplement 2					
Works Proposals are:					
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	2. CONTRACT (Cont)					
	As included in Volume D and attachments - Works Proposals (response to Technical Merit Criteria as outlined in Appendix 1 of the ITT document and accompanying tender information outlining the technical merit criteria).					
	C. Project Supervisor (Sub-clause 2.4)					
	The Contractor, or an individual or body corporate named in the Work Proposals, is to be appointed project supervisor for the construction stage for the Works and any other work on the Site between the Starting Date and the date of Substantial Completion of the Works contemplated in the Works Requirements.					
	D. Insurance (Sub-clause 3)					
A	Insurance of the works: minimum amount insured for professional fees 12.5% of the Contract Sum	1	item			
B	Minimum indemnity limit for Public Liability insurance: €6,500,000 for any one event, but this limit may be on an annual aggregate basis for products liability, collapse, vibration, subsidence, removal and weakening of supports and sudden accidental pollution	1	item			
C	Minimum indemnity limit for Employers' liability insurance: €13,000,000 for any one event	1	item			
D	Maximum excess for Insurance of Works and other Risk Items: the greater of 1% of the Project Value or 0.5% of Contractor's turnover	1	item			
E	Maximum excess for Public liability: the greater of 1% of the Project Value or 0.5% of Contractor's turnover in respect of property damage only. There shall be no excess for death, injury or illness.	1	item			
F	There is no excess permitted for Employers' liability insurance.	1	item			
	Permitted exclusions from all Insurances					
G	War, invasion, act of foreign enemies, hostilities [whether war is declared or not], civil war, rebellion, revolution, insurrection or military or usurped power	1	item			
H	Pressure waves caused by aircraft or other airborne objects travelling at sonic or supersonic speeds	1	item			
J	Contamination by radioactivity or radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or its components, in each case not caused by the Contractor or the Contractor's Personnel	1	item			
K	Terrorism	1	item			
L	Asbestos	1	item			
	Permitted exclusions from insurance of the Works and other Risk Items:					
				To Collection €		

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	2. CONTRACT (Cont)					
A	Use or occupation of the Works by the Employer except in connection with the Works	1	item			
B	Unless otherwise specified in the Works Requirements, cost of making good defects in the Works but not damage caused by such defects to other sound parts of the Works	1	item			
C	Wear, tear, normal upkeep or normal repair or gradual deterioration	1	item			
D	Inventory losses	1	item			
E	Loss of use or any consequential loss of any nature including penalties for delay, non-completion or non-compliance	1	item			
F	Failure of information technology	1	item			
G	Mechanical or electrical breakdown but not resulting damage	1	item			
H	Cessation of the Works for more than 3 months	1	item			
	Permitted exclusions from public liability insurance:					
J	Persons under a contract of service or apprenticeship with the insured	1	item			
K	Property of the insured or in the insured's custody or control other than existing premises and their contents temporarily occupied for the purposes of the Works	1	item			
L	Defective workmanship or materials but not resulting damage	1	item			
M	Mechanically propelled vehicles within the meaning of the Road Traffic Acts	1	item			
N	Loss or damage due to design	1	item			
P	Gradual pollution or contamination	1	item			
Q	Territorial limits	1	item			
R	Unless otherwise specified in the Works Requirements, aircraft and waterborne craft	1	item			
S	Fines, penalties, liquidated damages	1	item			
	Permitted exclusions from employer's liability insurance:					
T	Offshore work	1	item			
U	Liability compulsorily insurable under the Road Traffic Acts	1	item			
	Permitted exclusions for professional indemnity insurance:					
V	Persons under a contract of service or apprenticeship with the insured	1	item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	Ownership, use, occupation or leasing of mobile or immobile property	1	item			
B	Effecting or maintenance of insurance of or in connection with the provision of finance or advice on financial matters	1	item			
C	Dishonest, malicious, criminal or deliberate illegal acts	1	item			
D	Libel and slander	1	item			
E	Insolvency	1	item			
F	Fines, penalties, liquidated damages or any penal, punitive, exemplary, non-compensatory or aggravated damages	1	item			
G	Failure of information technology	1	item			
H	Contractual liability that would not apply in the absence of the contract	1	item			
	Optional insurance provisions					
J	Sub-clause 3.8 (Existing Facilities and Use or Occupation by Employer) shall apply.	1	item			
K	Insurance of the works and other Risk Items shall include the following property of the Employer, other than the Works and Work Items: Not applicable and the minimum sum for which this property is to be insured shall be €Not Applicable.	1	item			
L	If insurance of the Works and other Risk Items is to include terrorism cover, the minimum sum insured shall be: €0.00	1	item			
M	The Contractor is not required to extend the insurance of the Works and other Risk Items for a Section that has reached Substantial Completion until the Employer's Representative issues the certificate of Substantial Completion for the whole Works.	1	item			
N	Required extensions to Insurance: N/A	1	item			
P	Professional Indemnity Insurance is required	1	item			
Q	If required, the Professional Indemnity Insurance is in place it must be kept in place for 12 years after Substantial Completion of the Works is certified by the Employer's Representative	1	item			
R	If required the minimum indemnity limit for professional indemnity insurance shall be €1,500,000 annual aggregate limit.	1	item			
S	The maximum excess shall be the greater amount of 2% of the Contractor's annual turnover or €5,000.	1	item			
				To Collection €		

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	2. CONTRACT (Cont)					
	E. Performance Bond (Sub-clause 1.5)					
	A performance bond is required					
A	The amount of the performance bond shall be 12.5% of the initial Contract Sum up to certification of Substantial Completion of the Works, and 6.25% of the initial Contract Sum for 450 days after that.	1	item			
	F(i). Collateral Warranties (Sub-clause 5.5)					
	Collateral Warranties are required from the following categories of Specialists, by the following dates; and the amount withheld from payments under sub-clause 11.4.1 area as follows:					
B	Not Applicable	1	item			
	F(ii). Ancillary Certificates (Sub-clause 5.8)					
	Ancillary Certificates are required from the following categories of Contractor's Personnel. The list reflects the works elements known at the time of tender but does not limit the Contractor's duties under sub-clause 2.3.1:					
C	Refer to list of Ancillary Certificates included in Volume B - Schedule Part 1 (Note: The contractor should note that the list is not exhaustive).	1	item			
	F(iii). Named Specialists (Sub-clause 5.4)					
D	Not Applicable	1	item			
	G. Dates for Substantial Completion, Sections, Liquidated Damages, Retention					
	The Works					
E	Date for Substantial Completion: Last day of 15 Months starting on the Contract Date	1	item			
F	Rate of Liquidated Damages: €See Sections as per below	1	item			
	Section 1 - Site Set-up & Construction of Portion of New Extension (Excluding link to Existing Building) and all associated Siteworks; all as detailed in Volume A Works Requirements					
G	Date for Substantial Completion: Last day of 15 Months starting on the Contract Date	1	item			
H	Rate of Liquidated Damages: €34,400.00 per month	1	item			
J	Reduction in retention on Substantial Completion of Section (%): 50%	1	item			
				To Collection €		

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	2. CONTRACT (Cont)					
	Section 2 - Construction of link between New Extension and Existing Building including M&E links through Existing Building; all as detailed in Volume A Works Requirements					
A	Date for Substantial Completion: Last day of 4 Month period (during summer shutdown) within 15 Month period starting on the Contract Date.	1	item			
B	Rate of Liquidated Damages: €34,400.00 per month	1	item			
C	Reduction in retention on Substantial Completion of Section (%): 50%	1	item			
	H. Early Completion (Sub-clause 9.6)					
D	The Employer's Representative is required to issue the certificate of Substantial Completion if the Works or a Section reaches Substantial Completion before its Date for Substantial Completion.	1	item			
	I. Defects Period					
E	The initial Defects Period is one year from the date of Substantial Completion of the Works	1	Item			
	J. Random Checks for Employment Records					
F	Sub-clause 5.3.3A(2) shall be part of the contract	1	Item			
	K. Delay Events, Compensation Events, Programme Contingency, Delay Costs, Adjustments (Sub-clauses 9.3,9.4, 10.1, 10.6, 10.7)					
G	Event Nr 17 (Compensation Event - Yes)	1	item			
H	Event Nr 18 (Compensation Event - Yes)	1	item			
J	Event Nr 19 (Compensation Event - Yes)	1	item			
K	Event Nr 20 (Compensation Event - Yes)	1	item			
L	Event Nr 21 (Compensation Event - No)	1	item			
M	Weather station for measurement of weather events: Dublin Airport weather station	1	item			
	In Sub-clause 9.4					
N	The first threshold is 10 Site Working Days of delay caused by Compensation Events	1	item			
P	The second threshold is 20 Site Working Days of delay caused by Compensation Events	1	item			
Q	In Sub-clause 10.6.4(3), the rates to be used to determine the cost of plant are the rates in: Not applicable	1	item			
				To Collection €		

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	2. CONTRACT (Cont)					
	Modified as follows:					
A	Rates will be treated as if in euro and any rates in the Pricing Document	1	item			
	In sub-clause 10.7, the amount to be added for delay cost is in accordance with sub-clause 10.7.1(2) the daily rate tendered by the Contractor in the Schedule, part 2D					
B	For the purposes of sub-clause 10.7, the Contractor is to tender in part 2D a single daily rate for delay costs	1	item			
	L. Payment Particulars (Clause 11)					
C	Period for interim payment is: Monthly	1	Item			
D	Minimum amount for interim payments, except release of retention, €5,000.00	1	Item			
E	Up to the percentage stated below of the Contract value of the following unfixed Works Items may be included in an interim payment in accordance with sub-clause 11.2:	1	Item			
F	On-Site Materials: None; % of Contract value: 90%	1	Item			
G	Off-Site Materials with Bond: None; % of Contract value: 90%	1	Item			
H	The retention percentage is 3%	1	Item			
	M. Cap on Liability (Sub-clause 3.10)					
J	€Equal to the Contract Sum	1	item			
	N. Conciliation, Adjudication and Arbitration (Sub-clauses 13.2, 13.3 and 13.4)					
K	For the purposes of resolution of a dispute by conciliation the parties to the contract shall agree on the appointment of: A Conciliator appointed for each conciliation	1	item			
L	Failing agreement, the conciliator (or Standing Conciliator) will be appointed by: The President of the RIAI	1	item			
M	The arbitration rules are the Capital Works Management Framework (CWMF) Arbitration Rules for use with Public Works and Construction Services Contracts (AR1)	1	Item			
N	The person or body to appoint the arbitrator, if not agreed by the parties, is The President of the RIAI	1	Item			
P	The person to appoint the adjudicator, if not agreed by the parties is Chairperson of the Panel of Adjudicators	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
	O. Rights in Contractor's Documents (Sub-clause 6.4)					
A	Copyright and all other rights in the following Contractor's Documents and Works Proposals described in sub-clause 6.4.2 transfers to the Employer in accordance with sub-clause 6.4: Nil	1	Item			
	P. IPI Measures (Sub-clause 10.10)					
B	Sub-clause 10.10 shall not apply.	1	Item			
	STATUTORY COMPLIANCE					
	Planning					
C	The Contractor is required to comply with the planning permission that is applicable to the Works including compliance in full with all conditions attached to the permission. Refer to The Grant of Planning Permission for this project is included in the Information Pack (Appendix 3 to ITT) and the Contractor shall include for any costs arising out of the conditions listed therein.	1	Item			
	Fire Safety					
D	The Contractor is required to comply with the Fire Safety Certificates(s) that are applicable to the Works including compliance in full with all conditions attached to these certificates.	1	Item			
E	The Contractor is solely responsible for all the costs required to comply with such conditions.	1	Item			
F	The contractor shall engage a third party fire safety certifier to provide Ancillary Inspection Completion Certificate (SI RIAI ACI 02) under SI 09 in relation to all of the construction elements of the building relating to Fire Safety and Compliance with Building Regulations Part B and the granted Fire Safety Certificate	1	Item			
	Disability Access Certificates (DAC)					
G	The Contractor is required to comply with the DAC(s) that are applicable to the Works including compliance in full with all conditions attached to these certificates.	1	Item			
H	The Contractor is solely responsible for all the costs required to comply with such conditions.	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
	Building Control (Amendment) Regulations 2014					
A	Please note that all references to 'Builder' refer to the Main Contractor		note			
B	The Contractor shall provide Certificates as required by The Building Control (Amendment) Regulations 2014, and shall comply with The Building Control (Amendment) Regulations 2014, and shall comply with The Code of Practice for Inspection and Certification issued by the Department of Environment, Community, and Local Government.	1	Item			
C	The Contractor shall be responsible for the serving of and compliance with all notices and the like required under the Building Control Act 1990, the current Building Regulations and the Building Control (Amendment) Regulations 2014 in connection with the execution of the works.	1	Item			
D	The Contractor shall comply with all Building Regulations over which he has control. The Main Contractor shall at Substantial Completion provide written confirmation signed by a Director of his company that he has so complied.	1	Item			
	1.0 Contract Requirements					
E	1.1 The Builder shall cooperate with the Assigned Certifier (AC) through the Employers Representative (ER) and coordinate the notifications and inspections	1	Item			
F	1.2 The Builder to provide all confirmations and / or documentation required for Interim & Final Certificate for Payments	1	Item			
G	1.3.1 No claims for delay and/or additional expense will be entertained under the contract due to delays by the builder in notifying all inspections	1	Item			
H	1.3.2 No claims for delay and/or additional expense will be entertained under the contract due to delays in completing builders inspections	1	Item			
J	1.3.3 No claims for delay and/or additional expense will be entertained under the contract due to delays caused by re-inspections or provision of records	1	Item			
K	1.3.4 No claims for delay and/or additional expense will be entertained under the contract - Contractor to use best endeavours to minimise any delays in inspection	1	Item			
L	1.3.5 No claims for delay and/or additional expense will be entertained under the contract - The Employer may employ and pay other persons to provide such records, certificates or confirmations and all costs incurred in connection therewith sall be recoverable from the Builder	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	1.4 Phased Construction: Section Completion - The Builder shall promptly provide the documentation set out in detail of this document for each individual phase or section of the works that is identified in the Preliminary Inspection Plan and Inspection Notification Framework. This project is to be constructed in two parts with sectional handover of the first part prior to commencement of construction of the second adjoining part. It will be necessary to complete BC(A)R separately for each section of the building.	1	Item			
	2.0 Builder (Main Contractor) Obligations All of the obligations in this document are deemed to form part of the works requirements/ building contract and are to be included in the Builders tender costs. The Builder shall cooperate and coordinate with the Assigned Certifier and shall confirm and /or provide the following:					
B	1. that they accept from the Building Owner the assignment to build and supervise the building or works and provide/sign the statutory forms (see Appendices A) identified in the Commencement Notice	1	Item			
C	2. that they have familiarised themselves with the drawings, specifications and documents lodged with the Commencement Notice	1	Item			
D	3. Agree the execution, Inspection milestones, sequence and programme of works with the CA/ ER & Assigned Certifier in advance of commencement of works	1	Item			
E	4. ensure Competent Person(s) are assigned to oversee the general construction works and/or specialist works. The specialist works and associated Assigned Certifiers which the Builder is responsible for are identified on a preliminary basis in the Inspection Notification Framework issued at tender	1	Item			
F	5. that they will co-operate at all times with the CA/ER, design team, the Assigned Certifier and other Ancillary Certifiers	1	Item			
G	6. ensure that the workmanship complies with the requirements of the Building Regulations	1	Item			
H	7. ensure that materials which they select and for which they are responsible comply with the requirements of the Building Regulations	1	Item			
J	8. Confirmation with documentation is provided at interim certificate stage if requested by the AC via the CA/ER	1	Item			
K	9. Provide a signed statutory form- Certificate of Compliance on Completion at handover	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	10. Promptly provide to the Assigned Certifier, via the CA/ER, all documents requested by the Assigned Certifier to enable the Assigned Certifier to collate particulars for the purposes of handover and certification, and/or for further submissions to the Building Control Authority	1	Item			
B	11. ensure the coordination and provision of all test certificates and confirmations to the Assigned Certifier via the ER/CA, to the satisfaction of the Assigned Certifier	1	Item			
C	12. co-ordinate the work of all specialist sub-contractors and designers to ensure the coordination and provision of all test certificates and confirmations to the designated inspectors, or Ancillary Certifiers, who are required to provide Ancillary Completion Certificates, as identified by the Assigned Certifier at any stage during the project. Refer to Works Requirements for list of Ancillary Certificates required.	1	Item			
D	13. ensure the coordination and provision of all test certificates and confirmations to the Assigned Certifier via the ER/CA, to the satisfaction of the Assigned Certifier	1	Item			
E	14. co-ordinate the work of all specialist sub-contractors and designers to ensure the coordination and provision of all test certificates and confirmations to the designated inspectors, or Ancillary Certifiers	1	Item			
F	15. Maintain records as detailed in the Works Requirements	1	Item			
G	16. Comply with the detailed requirements of the Preliminary Inspection Plan and Inspection Notification Framework as issued at tender, and as updated	1	Item			
H	17. Provide/furnish Ancillary Completion Certificates to the Assigned Certifier via the CA/ER for specialist works with design	1	Item			
J	18. Co-operate with the Assigned Certifier, in the lodgement of supplementary documentation to the Building Control Authority during the course of the works	1	Item			
K	19. Incomplete design work or specialist design that is not available for submission at commencement stage can be submitted to the Building Control Authority at a later stage	1	Item			
L	20. Between 3-5 weeks in advance of a nominated completion date, provide all completed or prospective documentation and confirmations for which the Builder is responsible for, to the Assigned Certifier.	1	Item			
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	2. CONTRACT (Cont)					
	3.0 Statutory BC(A)R Assigment & Certificate Forms					
A	3.1 In advance of the commencement of the works, in addition to and accompanying the commencement Notice, there are 2 statutory assignments and 3 statutory certificate's to be completed on-line using the Building Control Management System on-line system. The format for these are as per the Second Schedule, SI 9 2014. At completion, a 4th statutory certificate is completed on-line using the Building Control Management System on-line system. The format for these are as per the Second Schedule, SI 9 2014.	1	Item			
B	3.2. The two assignments, A1 and A2 as follows are submitted with the Commencement Notice; A.1) Notice of Assignment of Assigned Certifier (Notice of Assignment of Person to Inspect and Certify Works); A.2) Notice of Assignment of Builder	1	Item			
C	3.3 There are three statutory certificates F1, F2, F3 as follows to be submitted by the Building Owner with the Commencement Notice; F1) Design Certificate (Form of Certificate of Compliance-Design); F2) Undertaking by Assigned Certifier (Form of Certificate of Compliance); F3) Undertaking by Builder (Form of Certificate of Compliance)	1	Item			
D	3.4 The fourth statutory certificate, F4 is co-signed by the Assigned Certifier and Builder and submitted at project completion. F4) Certificate of Compliance on Completion	1	Item			
E	3.5 No works shall commence on site until a valid Commencement Notice, including all the associated uploaded documentation, has been submitted to, and successfully registered by the Building Control Management System.	1	Item			
	4.0 Ancillary Certifiers & Ancillary Completion Certificates					
F	4.1. The Builder shall co-coordinate the work of all specialist sub-contractors and all specialist subcontractors with design	1	Item			
G	4.2. The Builder shall coordinate the work of all the Ancillary Certifiers	1	Item			
H	4.3. Post Tender and prior to the issue of the Commencement Notice and subsequently as the works proceed, the Builder shall coordinate the notification of inspections and records with the Assigned Certifier and the Ancillary Certifiers in accordance with the Inspection Notification Framework	1	Item			
J	4.4. The forms of Ancillary Completion Certificate to be used are included in the Tender Documentation	1	Item			
	5.0 Builder (Main Contractor) and Specialist Sub-Contractor Supervision					
K	5.1. The Contractor shall ensure that there are at all times on the site sufficiently suitably qualified, experienced and competent staff to supervise all work carried out under the contract	1	Item			
L	5.2. Supervision of the works shall always be the responsibility of the Builder and where relevant, the specialist Sub-Contractor (s).	1	Item			
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	2. CONTRACT (Cont)					
A	5.3. Supervisors shall be provided both on and off the site that shall instruct the Sub- Contractor's tradesmen	1	Item			
B	5.4. Undertake all work with skill and care in order to produce work fit for its intended purpose and of good quality under the direct supervision	1	Item			
C	5.5. Sub-Contract pre-installation meetings shall be organised by the builder with the CA/ER, Assigned Certifier, Specialist Sub-Contractor, and Manufacturer's representatives, The Builder shall keep records of all such meetings	1	Item			
D	5.6. the Sub-Contractor shall notify the Builder the names of his appointed supervisors. No work shall be carried out unless one of the appointed supervisors is present	1	Item			
E	5.7. All work shall be carried out in accordance with the terms and requirements of the works requirements and approved submissions and samples.	1	Item			
F	5.8. The Architect or Assigned Certifier shall, if required, make random or periodic visits to suppliers premises to ensure that standards of manufacture and quality control are to their satisfaction.	1	Item			
	6.0 The Preliminary Inspection Plan					
G	6.1. The Preliminary Inspection Plan is a statutory document prepared by the Assigned Certifier that is has to be submitted to the Building Control Authority by the Employer with the Commencement Notice a minimum of 2 weeks and a maximum of 4 weeks in advance of the commencement of the works. At project completion the Inspection Plan as implemented is submitted to the Building Control Authority.	1	Item			
H	6.2. It is the responsibility of the Builder to employ competent persons to supervise the works. The inspection plan shall not in any way diminish the duty of the Builder to properly supervise, and any defective works, whether identified during or after the contract period, remain the sole responsibility of the Builder.	1	Item			
J	6.3. The Builder shall include with his tender submission a Method Statement and his own Preliminary Inspection Plan indicating his own inspection and supervision regime.	1	Item			
K	6.4. A copy of the Preliminary Inspection Plan is included within the Tender Documents	1	Item			
	7.0 The Inspection Notification Framework					
L	7.1. The Inspection Notification Framework identifies in detail and by trade/ stage and critical milestone what the Assigned Certifier, Builder, and Ancillary Certifiers (designers, specialist sub-contractors, suppliers, w/wo design) are required to inspect, when they are to inspect, and if records are required.	1	Item			
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	2. CONTRACT (Cont)					
A	7.2. The Builder shall have regard to the Inspection Notification Framework issued at tender with respect to programming of the works.	1	Item			
B	7.3. The tenderers are to include for all costs associated with the INF	1	Item			
C	7.4 . The Builder shall coordinate the inspections and provision of records of the Ancillary Certifiers for which he is responsible	1	Item			
D	7.5. The Builder shall at tender submit an associated method statement identifying on a preliminary basis how the INF and Inspection Protocols will be achieved	1	Item			
E	7.6. Project Specific Identified Risk Elements	1	Item			
F	7.7. Project Specific Tests Requirements	1	Item			
	8.0 Inspection Protocols					
G	8.1. The inspection requirements set out in this document do not in any way relieve, replace, or reduce the builders duty to supervise the works.	1	Item			
H	8.2. Coordination of tests, inspections & records: (a) the appointed Builder shall meet and coordinate and update the Inspection Notification Framework and preliminary Inspection Plan with the builders construction programme. (b) The Preliminary Inspection Plan is updated to show the agreed inspection milestones. (c) all elements identified in the Inspection Notification Framework to be made available for inspection at each milestone complete, not concealed and safely accessible. (d) The Builder shall facilitate random inspections by the Assigned Certifier or Ancillary Certifiers as if such inspections were identified in the Inspection Notification Framework. (e) The Builder to provide in a timely manner all certificates and tests for materials, products and assemblies	1	Item			
J	8.3. Advance notice and time for inspections: (a) Due consideration shall be given by the Builder for inspection notices. No claims for extension of time or financial claims shall be considered for delays arising out of inspection or re-inspection requirements. (b) The Builder shall ensure advance notifications are issued with respect to works to be inspected that are identified in the Inspection schedule. The minimum advance notice required for inspection of items of works is 5 working days.	1	Item			
K	8.4. Re-Inspections/Follow up inspections: (a) The minimum notice required for re-inspection of items of works not complete or requiring remedial works shall be 3 working days. (b) The Assigned Certifier shall without delay notify the Builder of any incomplete work at a given milestone identified in the Inspection Notification Framework. (c) The Builder shall diligently ensure that any incomplete areas of given milestones are completed and that such works are kept available for inspection again, or until a record of completion is furnished, as may by required by the Assigned Certifier.	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	8.5. The Builder shall diligently ensure that any areas of non compliance are rectified and that such works are kept available for inspection again, or until a record of rectification is furnished, as may by required by the Assigned Certifier. The Main Builder shall ensure all tests and certificates for materials, components and assemblies listed in the Inspection Notification Framework are undertaken in a timely way. Any test failure shall immediately be made known to the ER/AC, the materials/works in question shall be replaced/rectified and retested undertaken prior to proceeding with subsequent work. It is the responsibility of the Builder to coordinate and supervise the works and no claim for delay or cost shall arise from the requirement to re-inspect.	1	Item			
B	8.6. Non-Conformance: (a) Materials & Workmanship- contract clauses. (b) Contract /Works Requirements - contract clauses. (c) Missed Inspections - Ultimately they are recorded on the completed Preliminary Inspection Plan and registered with Building Control.	1	Item			
	9.0 Record Keeping (Builders Progress Records)					
C	9.1. The Builder shall maintain progress records and inspection records prepared by him prepared in accordance with the Method Statement submitted at tender as set out in this document.	1	Item			
D	9.2. The Tenderers shall include in their tender costs for the provision of progress records as the works proceed.	1	Item			
E	9.3. Method of Recording	1	Item			
F	9.4. Promptly provide a copy to the Assigned Certifier of all progress records and inspection records prepared by the Builder and the Ancillary Certifiers	1	Item			
G	9.5. At completion the Builder shall issue the AC a copy of the records prepared by the Builder and the Ancillary Certifiers.	1	Item			
H	9.6. The Builder shall also retain in his own central office all records prepared by the Builder and the Ancillary Certifiers for a minimum period of 6 years.	1	Item			
J	9.7 One hardcopy and/or softcopy of all records shall be issued 5 days in advance of the nominated completion date.	1	Item			
K	9.8. The record should include evidence of the successful execution of the Builders method statement on supervision including tests, check sheets, photographs and memos. All evidence shall be indexed by location and date.	1	Item			
L	9.9. Acceptance of such records shall not constitute approval or imply that their content has been examined.	1	Item			
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	2. CONTRACT (Cont)					
	10.0 Tender Submittal Requirements					
	The apparently successful tenderer shall submit the following documentation after tender. The submission of satisfactory documentation is precedent to the award of the contract.	1				
A	1.Builders Competence Assessment	1	Item			
B	2.Sub-Contractor/Specialist Competence (Ancillary Certifiers) Assessment	1	Item			
C	3.Builders Method Statement	1	Item			
	11.0 Completion					
D	11.1. Tenderers shall note that Substantial Completion for this contract is contingent upon the successful registration of the works on the Building Control Management System.	1	Item			
E	11.2. Tenderers shall note that this project shall require a Prior Notification of Completion to be submitted to the Building Control Authority in advance of completion.	1	Item			
F	11.3. The Builder shall provide 4/6 weeks in advance of the nominated completion date all completed and/or prospective documentation and confirmations for Registration. The Assigned Certifier and the Builder shall co-sign the Completion Certificate.	1	Item			
G	11.4. The Assigned Certifier and Builder shall then lodge/upload the documentation onto the Building Control Authority system.	1	Item			
H	11.5. Notwithstanding any statutory duty to retain same, in advance of project completion, the Builder shall issue to the Assigned Certifier a copy of all inspection records retained by the Builder during the course of the project.	1	Item			
J	11.6 Refer also to Sections 9 above for the project specific requirements for records and method for retaining records.	1	Item			
	12.0 Additional BC(A)R Requirements					
	Fire Protection Photographic Log					
	Refer to the Volume A Works Requirements for the following required for the entire fire protection installation throughout: fire barriers, cavity barriers, intumescent pillows, fire protection to steel, firestopping (doors to walls, head of compartment walls, opes in compartment walls/ floors) (non exhaustive)					
K	Inspect & photograph each and every element of fire protection during construction:	1	Item			
L	Provide a detailed report and photographic log upon completion with interim reports at each fortnightly site meeting	1	Item			
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	2. CONTRACT (Cont)					
A	Provide Cs Cert for supply & installation of firestopping	1	Item			
	Wall Ties Photographic Log					
B	Provide a detailed report and photographic log upon completion with interim reports at each fortnightly site meeting for the blockwork installation throughout. Report to update on ongoing measures to ensure quality of installation.	1	Item			
	COMPLIANCE WITH BUILDING CONTROL ACT 2007					
C	All building works to conform fully with the requirements of the Building Control Act 2007 (including current amendments, current statutory instruments and all current Building regulations) and specific items of works are to be executed strictly in accordance with the recommendations set out in the various current Technical Guidance documents A-M. A full set of the Technical Guidance Documents to be provided and kept on site at the Contractor's expense.	1	Item			
D	The Contractor on completion of the said Contract Works is to issue a certificate in a form acceptable to the Employer's Representative and Client confirming that all the Contract Works have been executed in accordance with the requirements of the Building Control Act 2007 and any amendments thereof.	1	Item			
	CONSTRUCTION CONTRACTS ACT 2013					
E	The Contractor shall comply with the Main Contractor requirements as set out in the Construction Contracts Act 2013 and shall include for all costs associated with same. The "payment claim date" shall fall within the final full calendar week of each month for the duration of the construction Contract until the Certificate of Practical Completion is awarded.	1	Item			
	2.2 Contractor's liability					
F	Contractors liability for risk or injury to persons and property and of damage to the works.	1	Item			
G	Provide for taking out and maintaining Public Liability and Employer's liability Insurances against injury to persons and property (minimum sum for Public Liability Insurances: (€6,500,000 for each and every claim; minimum sum for Employer's Liability Insurance €13,000,000) as required by the Conditions of Contract.	1	Item			
H	The Employer requires the Contractor to effect insurance in respect of the Contractor's liability for any such risk.	1	Item			
J	Provide for taking out and maintaining All Risks Insurance for the full value of the Works and ancillary items required by the Conditions of Contract.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor shall be held responsible for any damage to adjoining property and any other properties adjacent to the site, which may be caused by the execution of the works and he is to provide any necessary protection for this purpose and remove same when no longer required and make good any damage at his/ her own expense. He/she is to indemnity the Employer in respect of any claim for disturbance or damage arising out of the foregoing	1	Item			
B	Before site clearance commences, the developer shall submit proposals for the off-site disposal of waste excavation material, which shall only be disposed off to a site which has a current waste licence or waste permit in accordance with the Waste Management Act, 1996. The details shall be submitted to, and agreed in writing with, the Planning Authority	1	Item			
C	The prices and rates shall include for any costs arising from the Contractor's obligations under the Waste Management Act 1996. or any other environmental legislation, with particular regard to the holding, transport recovery and disposal of waste arising from the carrying out of the works.	1	Item			
D	Insurances provided by Contractors must be authorised for this jurisdiction.	1	Item			
E	Any insurance policies which are renewed on or after 01 January 2021 with a UK domiciled Insurer will not be permitted in the ROI.	1	Item			
F	Any insurance policies which were in force prior to 01 January 2021 with a UK domiciled Insurer will remain valid (solely for the purposes of paying claims) for a period of 15 years.	1	Item			
G	The Contractor will need to have evidence Employers Liability and Public/ Products/Pollution Liability insurances that cover the activities of Asbestos Handling/Removal and include both the Employer and the Main Contractor as additional Insureds and a Non-Vitiation clause under their Public/Products/ Pollution Liability insurance.	1	Item			
	2.3 Insurance liability of Employer					
H	The Employer shall have the risk of loss of and damage to its existing facilities and parts of the Works it uses or occupies, in accordance with sub-clause 3.8	1	Item			
	2.4 Local Authority fees and charges					
J	A Roads Opening Licence must be obtained from Louth County Council prior to the commencement of any works in the public domain in order to comply with the Roads Act 1993.	1	Item			
K	Contractor to seek local authority approvals/ licenses as neccessary to carry out the works through to completion.	1	Item			
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	2. CONTRACT (Cont)					
A	The contractor is obliged to provide for Road opening licence(s) and/or Temporary road closure licence(s) for the works in relation to works outside the boundary of the site in public roadways, footpaths, verges etc. The contractor must provide all information as requested by Louth County Council, the NRA and all other involved parties.	1	Item			
B	Louth County Council shall be consulted with regards to the amount of the fees to be paid. The Contractor must include herein for all associated fees and charges	1	Item			
C	The tendering Contractor is to visit the site and it's surrounding location (as indicated in the Works Requirements) to ascertain the exact length of road opening required and contact the Local Authority to ascertain the fees required in this regard.	1	Item			
	2.5 Obligations and restrictions imposed by the Employer					
	a) Access to and possession or use of the site.					
	Construction Access					
D	The Contractor will be responsible for providing, maintaining and removing all required pedestrian and vehicles access and egress points to the Works in accordance with the phasing drawings, the Traffic Impact Assessment Report, planning permission conditions, the preliminary Health & Safety Plan, the Safety, Health and Welfare at Work (Construction) Regulations 2013 and the Health and Welfare at Work (General Application) Regulations 1993. The Contractor is also responsible for providing, maintaining and removing all traffic management for all users of the public road and all college-related traffic as required by the phasing and construction of the Works. The Contractor shall pay particular care to avoid delay especially to neighbours and to users of the public road, including, where necessary, scheduling of deliveries to site outside of peak traffic periods, routing of site-related vehicles to avoid residential areas and existing schools, and, liaising with neighbours, other construction sites in the area, Local Authority Traffic and Roads Departments and local Gardai. All of the above provisions, and all others considered necessary for the safe execution of the Works, shall be outlined in a Construction Traffic Management Plan, which shall be made available to the ER prior to commencement on Site, and, be revised and maintained as required during the course of the Works.	1	Item			
E	Allow for all costs associated with providing temporary access to the existing college building by the Emergency Services, College staff and Pupils etc. and others whom require access to the College; provide necessary safe routes for both pedestrian and vehicular traffic; include for all necessary adjustment and maintenance of these routes to ensure the safety of all; include all making good work to areas disturbed	1	Item			
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	2. CONTRACT (Cont)					
A	Construction access to the proposed site area will be via the existing double gates to the North of the drop down area along The Twenties for both sections/ phases of the Works. Contractors are advised to carefully review the Volume A Works Requirements in this regards. No claims from a lack of understanding of site access or restrictions will be considered.	1	Item			
B	College and construction traffic are to be separate at all stages of construction. Construction traffic shall not park in the vicinity of the existing college buildings, or along The Twenties and surrounding residential developments/ streets. It is the responsibility of the Contractor to inform all subcontractors and suppliers of this restriction. This should be fully coordinated with the college before works commence.	1	Item			
C	The Contractor should note they are operating on the site of an occupied college. Contractor to allow for consulting the convenience of anybody who may be affected by the Works with regard to suitable times for carrying out works, making deliveries, etc. and include all necessary costs associated in complying with this requirement.	1	Item			
D	Pedestrian / Cyclists - Pedestrian routes around the construction site are to be segregated from the vehicular routes. The pedestrian routes will be demarcated with a timber post and chain or similar visual/wayfinding system. Task lighting will be provided on the site and car parking areas. An area for bicycle parking facilities is to be provided for construction personnel.	1	Item			
E	All deliveries shall be outside of peak dropping off and collection times for pupils.	1	Item			
F	The existing college emergency exits and entrances shall be maintained throughout the construction period.	1	Item			
	Construction Access Restrictions					
G	Construction Access is shown on the Architects Drawings and is to be described in the Contractor's method statement for Traffic Management of the Works. The area is to be maintained in a clean, safe, condition in full compliance with all applicable Health & Safety Regulations. The area is also to be secured against entrance by unauthorised persons including members of the public, adjoining residents, pupils, college staff etc.	1	Item			
H	The working space for the Contractor will be confined to the immediate sites of possession as shown on Architect's Drawing Nr. TD/0102. The Contractor should note that he or she will be required to keep the college and site and adjacent public areas free of debris, muck, dust and the like and shall control noise and vibration.	1	Item			
J	The Contractor is required to provide a secure, control gate access point to the site for all Phases of the Works.	1	Item			
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	2. CONTRACT (Cont)					
A	Disciplinary action may be taken against any person found entering or leaving (or attempting to enter or leave) the site other than by the designated gates or entrances. If the Contractor uses a gate or gates to gain access or egress from the site, the Contractor shall be responsible for securing such gate or gates at all times throughout the contract period.	1	Item			
B	The Contractor shall ensure that no damage is caused to the existing roads due to the delivery of materials or the removal of site materials, demolitions or rubbish. All vehicles entering or leaving the site carrying loads which constitute a potential dust or dirt nuisance such as aggregate, sand, gravel, soil or the like shall be secured so that no materials shall leave the vehicle.	1	Item			
C	The Contractor shall be responsible for keeping all roads adjacent to the site free from mud droppings or other materials which are due to his own and all other operations and safeguard the Employer from any liability resulting therefrom. The Contractor is expected to take reasonable care to ensure that all vehicles entering and leaving the site are free of mud on the wheels or tracks, and the loads are secure.	1	Item			
D	In the event of fouling of any roads due to any operations the Contractor will be expected to clean them expeditiously at their own expense to the satisfaction of the Employer`s Representative and/or Employer. The Contractor shall be entirely responsible for any damage due to his failure to comply with this clause.	1	Item			
E	Wheel Wash - During the bulk excavation stage, a wheel wash will be a requirement for all vehicles leaving the site. The wheel wash assists in reducing the displacement of materials onto the local road network.	1	Item			
F	Road Cleaning - The Construction Traffic Manager will ensure traffic management principles, and the mitigation measures are implemented and that the public road is kept clear of mud and debris through ensuring that loads are suitably sheeted and secured and undertaking regular street cleaning as necessary.	1	Item			
G	The Contractor shall confine his activities to the Works Area included in the contract and shall not allow his men to trespass on the other parts of the site or on the adjacent lands unless in direct execution of Works included in this Contract. In the event of any claims arising due to failure to comply with this clause, the Contractor shall be held entirely responsible and shall pay costs in connection therewith.	1	Item			
H	The Contractor shall provide and maintain a full time "log in and out system" for all persons entering the works.	1	Item			
J	The Contractor must not use the Site and Area Provided by the Employer for any other purpose other than complying with the Works Requirements;	1	Item			
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	2. CONTRACT (Cont)					
	Access for Employer Representative to Site and Workshops					
A	The Employer Representative and any person authorised by him shall at all times have access to the Works and to the Site and to all Workshops and places where work is being prepared or where materials, manufactured articles and machinery are being obtained for the Works and the Contractor shall afford every facility for and every assistance in or on obtaining the right to such access.	1	Item			
	b) Limitations of working space					
B	Provide for complying with the limitations of the Site area and working space.	1	Item			
C	The working space for the Contractor will be confined to the immediate sites of possession as shown on Architect's Drawing Nr. TD/0102. The Contractor should note that he or she will be required to keep the college and site and adjacent public areas free of debris, muck, dust and the like and shall control noise and vibration.	1	Item			
D	The Contractor must note that the works is to be carried out in / adjacent to a 'live college' and the existing college's daily activities will have to continue, along side the construction works, on an uninterrupted basis. The Contractor should undertake adequate research and visit the site to ensure he is fully aware of the existing routines of the college and its patrons at present. The Contractor must provide herein for all costs associated with ensuring the uninterrupted continued use of the college. No claims on the grounds of want of knowledge in this respect will be entertained whatsoever.	1	Item			
E	The majority of the works are to proceed during the academic year within a live college environment. The Contractor must note that a teaching / pupil presence will exist within the college at all times. The Contractor will be responsible for their control and safety both on the construction site and all boundaries and interfaces with the college and its activities. The Contractor shall respond and deal immediately with any reasonable safety issue that may be raised by the College during the building works. If the College raises any concern about safety, the Contractor's site manager shall respond promptly and address the issue satisfactorily within a reasonable time frame and take whatever measures are necessary to ensure such an issue does not occur again. A programme / sequence of works shall be agreed in coordination with the Employer's Representative and Drogheda Institute of Further Education.	1	Item			
F	The Contractor must confine his operation within the immediate area covered by the works and such other area as may be indicated on drawings and will make good at his own expense any damage to buildings, grounds, roads or shrubbery occasioned through negligence or non observance of this clause.	1	Item			
G	Only these areas are to be used for contractor facilities, storage of materials etc., necessary for the works and skips for waste/rubble removal etc and must also be used by all subcontractors.	1	Item			
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	2. CONTRACT (Cont)					
A	Where work is described as being beyond the boundary of the Site or in a Public Highway, the Contractor's prices shall be deemed to include for the following as required; adequate watching and lighting traffic signalling, temporary barricades, walking platforms and warning notices sufficient to ensure the safety of all persons and removing on completion, giving notice to the Local Authority, paying their fees and charges and carrying out the work to their satisfaction. The Contractor's prices shall also include for maintaining in working order all services, conduits, telephones cables, etc and for making good any damage done thereto, by reason of these Works, to the satisfaction of the Authority concerned.	1	Item			
B	Where work is described as being beyond the boundary of the Site or in a Public Highway, the Contractor's prices shall be deemed to include for all NRA obligations and requirements	1	Item			
C	The Contractor's attention is drawn to the restrictive nature of this site. He is referred to 'Works Requirements' and Architect's Drawings in this regard.	1	Item			
	c) Limitations of working hours.					
	The limitations on working hours will apply:					
D	The hours of operation on site shall be restricted to those outined in the Grant of Planning Permission. No works on Sundays, Bank Holidays or Public Holidays.	1	Item			
E	Cognisance should be taken of the requirement of BS 5228:2009 (Noise & Vibration Control on Construction & Open Sites) and have regard to the World Health Organisation (WHO) - Guidelines for Community Noise (1999).	1	Item			
F	If there is any occasion when works must be carried on outside daytime hours, the Environmental Health Officer, local residents, and businesses in areas which are likely to be affected by noise from the proposed works shall be notified in advance, e.g. by letter or leaflet or in advertisement form.	1	Item			
G	The Main Contractor should liaise with the Local Authority and local residents to avoid future noise and traffic issues	1	Item			
H	The contractor shall liaise with the college and agree reasonable time restrictions for any half days, proposed holidays and during exams periods etc.	1	Item			
J	All deliveries shall be outside of peak dropping off and collection times for pupils.	1	Item			
K	The Contractor should note they are operating on the site of an occupied college. Contractor to allow for consulting the convenience of anybody who may be affected by the Works with regard to suitable times for carrying out works, making deliveries, etc. and include all necessary costs associated in complying with this requirement.	1	Item			
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	2. CONTRACT (Cont)					
A	Further Time Constraints: Comply with any time constraints as set out in any relevant planning permissions; Comply with any college by college time constraints; Comply with any restrictions stated in, arising out of or implied because of the Sectional Completions	1	Item			
B	Contract Stated Time Constraints; The time constraints in this section come within clause 7.11 of the contract	1	Item			
C	The Contractor shall herewith allow for any costs involved in complying with the limitations noted under convenience of neighbours and occupants	1	Item			
D	The contractor should allow for all costs involved in maintaining public relations with adjoining property owners, especially in relation to working hours, deliveries, noise levels and interruptions.	1	Item			
E	Provide for liaising with the Employer's Representative to arrange suitable times for carrying out work.	1	Item			
F	Subject to any provision to the contrary contained in the Contract none of the permanent work should be carried out during the night or Sundays without the permission of the Employer's Representative except when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works in which case the Contractor shall immediately advise the Employer's Representative.	1	Item			
G	Any overtime working shall be in strict compliance with statutory requirements and any arrangements for such working shall require the Employer's Representative's prior agreement in writing.	1	Item			
	<u>d) Limitations on use operation of plant with respect to adjoining property</u>					
H	The Contractor shall consult the convenience of anybody who may be affected by the work with regard to the approaches to be used, suitable times for making deliveries and all other matters affecting them.	1	Item			
J	The Contractor should note they are operating on the site of an occupied college with pupils and staff and residential developments in close proximity. The Contractor shall include noise monitoring which shall a) establish current noise levels around the site and within the college and b) monitor noise levels within the college site and building during the various stages of the project. Noise during site clearance and construction shall not exceed 65 dB (A), Leq 30minutes and the peak noise shall not exceed 75 dB (A), when measured at any point off site.	1	Item			
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	2. CONTRACT (Cont)					
	e) The use or disposal of any material found on the site.					
A	No sand, ballast, gravel, coal or other useful material shall be removed from the Site, nor become the property of the Contractor, nor be used in the Works except on the express instructions of the Employer's Representative, in which case the quantity used, if any shall be measured and valued by the Quantity Surveyor and such value deducted from the Contract Sum.	1	Item			
B	Disposal of Toxic Items; Allow for the following in the event of encountering toxic matter on site: i. Specific safety plan for removal of asbestos ii. Prepare and keeping of occupational health register and workers' health assessment / surveillance iii. Specialist PPE / PPC iv. Separate cleaning / showering facilities, storage for clothes.	1	Item			
C	Pollution; Do not deposit deleterious material into surface water channels or lakes. Comply with the requirements of the Rivers Pollution Protection Act, the Public Health (Ireland) Acts, and the Fisheries Acts.	1	Item			
D	The Contractor shall not deposit deleterious material in drains: The Contractor shall comply with statutory requirements in respect of disposal of waste. The contractor shall implement an agreed waste management policy and keep records of the disposal of all waste material from the site.	1	Item			
	f) Hoardings, fences, screens, temporary roofs, temporary name boards and advertising rights.					
	Refer to Architect's Drawing Nr. TD/0102 'Site Layout' which indicates among others:					
E	- site boundary lines	1	Item			
F	- site access	1	Item			
G	It is a requirement that all protective measures necessary are provided by the contractor to ensure the safe construction of the works. Responsibility for the construction of the works in compliance with the Safety, Health and Welfare at Work (Construction) Regulations 2013 rests with the contractor.	1	Item			
H	The Contractor shall be deemed to have included in their tender for the protection of the site boundaries with the existing college, surrounding roads and the completed works. Prior to appointment the contractor shall provide a detailed construction management plan and before any works commence so as to ensure safe access is maintained at all times for pedestrians and vehicles in the vicinity.	1	Item			
J	The extent of the site area is clearly defined on Drawing Nr TD/0102. The Contractor shall mark all boundaries with warning signs to make clear that access to third parties is not allowed. The contractor shall erect 2.4m high, suitably solid and secure hoarding with independent posts to all boundaries. Hoarding is not to be fixed to existing fencing. All hoarding shall be to the contractor's temporary works design and coordinated with the PSDP.	1	Item			
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	2. CONTRACT (Cont)					
A	Hoardings at a minimum; Provide secure well marked temporary fencing, hoardings, planked footways, guard rails, as may be necessary to delineate the limits of the building site within the college area, to protect college personnel, members of the public and others, for the proper execution of the Works and to prevent unauthorised entry to or trespass beyond the boundaries of the site. The hoardings shall meet the requirements of the Local Authority. The Contractor is required to submit their hoarding design, design risk assessment, and HSA Temporary Works Design Certificate to the Employer's Representative, and PSDP, for approval prior to commencing construction works on site. NOTE: Harris fencing is not sufficient and not permitted.	1	Item			
B	Ensure that secure segregation between areas occupied by the Contractor and areas occupied by the college / public is maintained at all times. Hoardings shall be moved and adapted as necessary.	1	Item			
C	Ensure that the site is fully secure and that the public cannot encroach on areas occupied by the Contractor	1	Item			
D	Contractor to provide site signage indicating construction access / deliveries, access/ egress points and general public safety signage.	1	Item			
E	Directional Signage; Provide and erect temporary directional signage to identify the site and its access route.	1	Item			
F	Advertisements shall not be displayed on the site without the consent of the Employer's Representative.	1	Item			
G	Provide Project Display Board incorporating Employer, Contractor, Consultants panels and a 3D image of the completed project to be erected in the vicinity of the Site. The sign should be large enough to include the panels etc. noted and should be constructed of materials and erected to last for the duration of the Works. Boards are to be mounted on galvanised steel posts with concrete foundations including suitable steel bracing. Boards are to be located in positions to be agreed with the Employers Representative.	1	Item			
H	The location for the project display board is to be agreed with the Employer's Representative prior to installation and the sign must remain in position for the entire duration of the project and for the required period thereafter	1	Item			
J	Provide temporary fencing, hoardings, fans planked footways, guard rails, as may be necessary to protect the public and others, for the proper execution of the works and to prevent unauthorised entry to or trespass beyond the boundaries of the site. The scaffolding and hoardings shall meet the requirements of the Local Authority. Alter, shift and adapt as necessary, remove bills, notices etc from faces of hoardings.	1	Item			
	Dust Screens/ Dust Control Measures					
K	During construction phase, all necessary steps shall be taken to contain dust and airborne pollutants arising from the site and to prevent nuisance to persons in the locality. These steps shall include:	1	Item			
L	Covering slag heaps	1	Item			
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	2. CONTRACT (Cont)					
A	Netting of scaffolding	1	Item			
B	Regular road and pavement damping and sweeping	1	Item			
C	Use of water spray to supress dust	1	Item			
D	Proper paved or hard stand access for trucks and vehicles to and from site to prevent dirt and dust from the site being carried from the site into the public roads etc.	1	Item			
E	The Contractor is to be responsible for the supply and placing of all dust sheets necessary to protect all furniture and equipment that may be delivered to the buildings during the course of the work.	1	Item			
F	The Contractor is to be responsible for the supply, placing, removing and making good of all dust screens deemed necessary by the Employer's Representative.	1	Item			
G	The Contractor should include all costs associated with constructing dust proof partition walls (walls to achieve a U-value of 0.22 and provide 1 hour fire protection) at breakthrough points between existing and new buildings and within sections of the existing building where works are to take place.	1	Item			
H	Ensure that secure segregation between areas occupied by the Contractor and areas occupied by the college / public is maintained at all times. Hoardings shall be moved and adapted as necessary.	1	Item			
J	Ensure that the site is fully secure and that the public cannot encroach on areas occupied by the Contractor	1	Item			
K	Contractor to provide site signage indicating construction access / deliveries, access/ egress points and general public safety signage.	1	Item			
	g) The maintenance and protection of existing services on, under or over the site.					
L	All services and utilities serving the college are to be maintained at all times. The Contractor shall ensure that all Works are planned to allow for this requirement. Any disruption to college services and utilities should be the minimum disruption required to make tie-ins in a safe manner. The existing college security, fire safety alarms and electrical systems must be maintained at all times save for agreed (with the Employers Representative and College) programmed limited periods to allow tie-ins between 8am and 4pm Monday to Friday excluding public holidays.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor will be responsible for all costs associated with alterations to or additional provision of any utilities made necessary as a result of the Works and will assume all risk (including costs and any other financial consequence, whether incurred by the Contractor, the Authority or any existing college) in relation to any interruption in, failure of supply to or availability of services to the existing college arising as a result of any act or omission of the Contractor or the Contractors Personnel, including in relation to complying with its obligations under this Section.	1	Item			
B	Provide for maintaining the flow in all/any existing drain runs at all times.	1	Item			
C	Provide for protecting and maintaining all services under or over the site.	1	Item			
D	Provide for all costs involved in locating, protecting and work around existing services during the Works. Assume all excavations in this regard will be carried out by hand.	1	Item			
E	The Contractor should undertake adequate research and visit the site to ensure he is fully aware of all existing services present. The Contractor must provide for maintaining theses services if necessary. No claims on the grounds of want of knowledge in this respect will be entertained whatsoever.	1	Item			
F	The contractor is fully responsible for the management and disposal of all surface water and foul water from the construction site for the full duration of the works. The contractor shall note the Local Authority may not provide a temporary connection to the public system. The contractor shall allow for and provide measures necessary to deal with this restriction if it arises, including temporary tanks etc.	1	Item			
	Public and Private Services					
G	Notify all service authorities of the proposed works before commencing site operations. So far as reasonable, ascertain location of services or confirm that none exist in the vicinity of the works. Protect, uphold and maintain all services. Do not interfere with their operation without consent of the service authorities or private owners, or the Employer's Representative as appropriate.	1	Item			
H	Ensure that any work that may involve a risk to disruption to existing live services in the neighbourhood is agreed in advance with the local authority / neighbours. All such work shall, in any event, be pre-planned and agreed with the neighbours. Method Statements must be prepared, issued and agreed in advance of all work on or near live services.	1	Item			
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	2. CONTRACT (Cont)					
	Existing Pipelines and Utility Services					
A	Where the works involve the construction of connections and modifications to existing pipelines and utility services, maintain the flows in existing pipes, sewers and water courses disturbed in the course of construction of the Works, and shall provide all temporary works and pumping necessary to do so and where such works are outside of the site boundary the Contractor shall consult with the drainage department of the local authority and submit schedules and methods of his work for its approval prior to the execution of these works including connections.	1	Item			
B	It may be necessary to raise and relay some existing services during the course of the construction Works. The Contractor shall, in this event, conduct his operations in such a manner that the minimum disruption possible is caused to the normal working of these services. The Contractor shall consult the responsible Local Authority and submit schedules and methods of operation for approval prior to the execution of all such work.	1	Item			
C	The Contractor is responsible for all additional costs involved in the execution of this work and in providing temporary diversions, over pumping and other such means to maintain the required levels of service during the construction of the Works.	1	Item			
D	It may be necessary to raise and relay some existing cables, ducts, chambers and similar belonging to the E.S.B., Eircom, Board Gais or other utility providers or any existing Site power and control cables etc. in the path or adjacent to the line of the proposed construction Works. The Contractor shall consult the responsible utility provider prior to the commencement of excavations for pipe laying or similar operations and submit schedules and methods of operation for approval.	1	Item			
E	The Contractor shall be responsible for dealing with all aspects of work affected by water arising from all natural sources and causes as well as due to leakages from water or sewer mains adjacent to excavations of temporary and permanent Works.	1	Item			
	Services on and over the site					
F	The Contractor shall allow for all costs in connection with maintaining existing services during the works. The Contractor is referred to the Site Services layouts for locations of the various services infrastructure ducting/pipe runs and shall take all measures necessary to ensure that existing services remain uninterrupted, save for where connection or alteration works are required in which case the works shall be carried out with the minimum disruption possible.	1	Item			
	Planned Services Interruptions					
	The following measures are to be taken by the Contractor for planned services interruptions:					
G	1) The works are to be designed and method statements prepared by PSCS and issued to PSDP & Services Consultants for approval.	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	2) Risk Assessments and contingency plans to be issued and approved by the PSCS & PSDP.	1	Item			
B	3) Dates for carrying out the works to be agreed in advance.	1	Item			
C	4) Notification and regular written reminders to be issued to the Employers Representative in advance for the works being carried out.	1	Item			
	Existing Site Services - Survey					
D	The Contractor shall, as any record drawings of existing services are provided for guidance only and must be verified by the Contractor on site by whatever investigation means as is appropriate, be deemed to have allowed for all such investigation and possible delays in commencement of his excavation and other allied works in his work programme and consequential costs for such Works in his tender.	1	Item			
	Damage To Roads					
E	The Contractor shall be responsible for all damage to existing roads (private and/or public roads) caused by his own or Sub Contractor's or Suppliers' transport to and from the site. The approaches to the site shall be kept clear of mud and debris.	1	Item			
F	The Contractor shall be responsible for the maintaining and/or replacing of the existing bitmac access roads, carparking areas, footpaths and kerbs during the Contract and make good any damage caused by site traffic or site operations. The roads and carpark shall be kept free of mud and debris.	1	Item			
G	A full condition survey of the existing college access road shall be undertaken prior to commencement and issued to the ER for record. The Contractor is responsible for maintaining the surface of this shared access road throughout the construction period. This will include road surface repairs to potholes that develop whilst construction traffic use the shared access road. This road should be handed over in the same condition as before the commencement of the project.	1	Item			
H	The Contractor shall include for a photographic survey of the condition of the adjoining footpaths and roadways prior to starting onsite to negate later arguments with Louth County Council.	1	Item			
	h) The execution or completion of the work in any specific order or in sections or phases, including any coincidental work not at the discretion of the contractor.					
J	It is intended to construct the project in two main phases (Phase 1, & Phase 2), thus ensuring that the new build extension, alterations to existing and external works are delivered in a sequential manner in order to allow the existing college to operate as normal including providing adequate access to the site for parking and drop off (Refer to Volume A Works Requirements for details).	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	Section 1 - Site Set-up & Construction of Portion of New Extension (Excluding link to Existing Building) and all associated Siteworks; all as detailed in Volume A Works Requirements and in particular Architect's Darwing Nr. TD/1010 'Phasing Darwing'	1	Item			
B	Section 2 - Construction of link between New Extension and Existing Building including M&E links through Existing Building; all as detailed in Volume A Works Requirements and in particular Architect's Darwing Nr. TD/1010 'Phasing Darwing'	1	Item			
C	The contractor shall liaise with the college and agree reasonable time restrictions for any half days, proposed holidays and during exams. Reasonable flexibility will be required from the contractor at specific points during the contract where reduced noise may be needed by the college. To be by arrangement with the college and is dependent on the programme.	1	Item			
	Services Connections/ Diversions					
D	The works include the connection of new services, through the existing building - both temporary and permanent connections. This work is described in detail in the services drawings and specifications in Volume A Works Requirements. The contractor shall note that access through the existing college is not available during term time and during normal opening hours. The contractor shall programme all works within the existing college including connections and commissioning to take place during college holiday periods only.	1	Item			
E	The Contractor shall liaise with the existing college to ensure all existing services are maintained at all times, in particular where final connections to the diversion of existing services need to be completed. Final Connections shall take place outside of normal college hours, to avoid the loss of service to the college. The Contractor shall include this restriction within their contract programme and tender.	1	Item			
F	All site utilities are to be maintained by the Contractor for the duration the works and until the new extension has been handed over.	1	Item			
G	The Tenderer shall note the phasing requirements of the project and shall ensure that their tender amount includes for all costs associated with same (See Works Requirements)	1	Item			
H	It is envisaged that in broad terms, the works will be constructed in a number of sections as outlined on the Architect's drawings and within the Work Requirements. The Contractor must identify his methodology, in accordance with the WR, and agree same with the ER prior to commencement	1	Item			
J	The Contractor must allow for costs necessary and associated with dealing with the phasing of the works. If so required, the Contractor can contact the ER at tender stage in order to clarify any queries regarding phasing as no claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
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	2. CONTRACT (Cont)					
A	Where the Contractor is required to carry out work outside of the designated site area (e.g. within the existing neighbouring building, elsewhere on the college grounds, on the public road) the Contractor shall liaise with the relevant occupier to agree scope, extent & timing and shall submit area by area proposals in sufficient time, prior to the intended works, to the ER for the ER to review, comment, request changes and or accept.	1	Item			
B	Notwithstanding any ER agreement as to these time-to-time Contractor's proposals, the Contractor shall be wholly and solely responsible for the micro management of the elements of the Works as regards all aspects of the contract including, but not limited to, Health & Safety of public, pupils, staff and workers, while also maintaining public and or college access as necessary at all times. The Contractor should not expect to obtain vacant occupancy of these areas at any or all times.	1	Item			
C	Tenderers to allow for complying with all requirements as set out in Volume A Works Requirements concerning the Sequencing of Works:	1	Item			
D	- Temporary construction access roads	1	Item			
E	- Sequencing requirements	1	Item			
F	- Hoarding to be provided	1	Item			
G	- Existing Services/ utilities	1	Item			
	i) Maintenance of specific temperature and humidity levels.					
H	Provide all necessary temporary equipment, fuel and attendance for drying and controlling the humidity of the works to the complete satisfaction of the Employer's Representative and in sufficient time to ensure that completion of his own sub-contractors work is not delayed by failure to do so. Where the permission of the Employer's Representative is given to use the permanent heating system for drying and obtaining the necessary temperature and humidity levels, the Contractor shall allow for all costs related to this item including fuel and extending of warranties.	1	Item			
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	2. CONTRACT (Cont)					
	j) Temporary accommodation and facilities for the use of the Employer including heating, lighting, furnishing and attendance.					
A	Provide temporary offices for the use of the Employer's Site Representative/ Clerk of Works (the Employer reserves the right to appoint Clerks of Works on this project) and any other person acting on behalf of the Employer; the office shall be for at least 2 nr persons (office space) and be complete with ventilation, heating, power, lighting, broadband, telephone/ fax provision, 2No. desks with lock up drawers, 2No. operator chairs, 2No. filing cabinets, drawing rack, together with small meeting table and chairs. The office shall have a boarded floor, a cylinder latch on the door. The Clerk of Works shall be provided with a laptop including AutoCAD and Office 365 Software, Digital mobile phone with high resolution camera and iPad with hard protection case for recording defects and inspections on site, and thermometer. (Camera and laptop to be handed over to the Client on completion i.e. will become the property of the client). On completion the office shall be removed and the site made good. The Contractor must note that this office must be provided within one week of commencing on site.	1	Item			
B	Contractor to allow for the provision of the following specification for the COW laptop - HP ZBook Power G11 Mobile Workstation: Intel Core Ultra 7; 155H / up to 4.8 GHz; Win 11 Pro; RTX A1000; 32 GB RAM; 1 TB SSD NVMe, TLC; 16" IPS 920 x 1200; Ethernet, Fast Ethernet, Gigabit Ethernet, IEEE 802.11b, IEEE 802.11a, IEEE 802.11g, IEEE 802.11n, IEEE 802.11ac, IEEE 802.11ax (Wi-Fi 6E), Bluetooth Dual-Mode; Wi-Fi 6E, Bluetooth 5.3 wireless card; Unit Price €1,895.00; Revit LT Suite €733.00; MS Office 365 €127.00; Adobe Pro €300.00; Installation €120.00; Bag €30.00	1	Item			
C	Provide a temporary Meeting room for the use of the Employer, Employers Representative and the Design Team and any other person acting on behalf of the Employer; the meeting room shall be for at least 15 nr persons and shall be complete with heating, power, lighting, meeting table for (for 15 nr persons).The office shall have a boarded floor, a cylinder latch on the door. On completion the meeting room shall be removed and the site made good. The Contractor must note that this facility must be provided within one week of commencing on site. No payments will be made whatsoever until these facilities are in place.	1	Item			
D	The Contractor shall include a cost herein for providing within the temporary meeting room a full video conferencing platform to allow design team members to join site meetings remotely by Microsoft Teams, Zoom or similar. This should include wall mounted TV/ Monitor complete with camera, audio and speakers that can be linked to a laptop/ PC to facilitate such meetings. No claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
E	Provide separate lockable toilet facilities.	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
	k) Provision of connections to temporary voice and data communications systems for use of the Employer.					
A	Provide all neccessary temporary voice and data communications systems for use of the Employer and pay all fees and charges in connection therewith.	1	Item			
B	Provide for the installation of a data line or "wired" broad band connection for the ER's site office, band width to meet what would be reasonably expected for a commercial office.	1	Item			
C	Provide for 1No. laptop (to latest specification) with full email facility for the Clerk of Works	1	Item			
D	Provide for commercial office standard ink jet printer/ scanner for ER site office (A3 size)	1	Item			
E	The Contractor shall also provide 2 x office desks, 2 x chairs, 2 x filing cabinets and 1 x drawing rack for the ER's site office	1	Item			
	l) Periodic using and access charges on voice and data communications systems for use of the Employer and associated running costs.					
F	Pay all fees, charges and associated running costs for all voice and data communications systems, including telephones, mobile phones, fax machines, e-mails, internet access, broad-band, etc.	1	Item			
	m) Provision of the Project Supervisor Construction Stage services by the Contractor under the Safety, Health and Welfare at Works (Construction) Regulations.					
G	Prior to acceptance of the tenderer a ' Letter of Intent' will be issued by the Contracting Authority requesting the tenderer to comply with the following requirements:	1	Item			
H	(a) Execution of the Collateral Agreement (for the services of the Project Supervisor Construction Stage) Model Form 10 (See Volume A Works Requirements) which must be returned by return of post and	1	Item			
J	(b) The drawing up by the tenderer of a detailed safety plan as required under the Regulations	1	Item			
K	Compliance with these requirements will be necessary prior to issue of Letter of Acceptance	1	Item			
	The Main Contractor shall employ the following personnel, who should be the person proposed in the QW2 or meet at least the same standard as that to the person proposed. Any proposed change to personnel should be notified to the ER and PSDP and copies of the relevant CVs issued:					
				To Collection €		

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	2. CONTRACT (Cont)					
A	A competent Temporary Works Designer, who must take overall responsibility for the stability of the structure, including permanent and temporary works during the entire construction phase. The Temporary Works designer shall also take overall responsibility for the design of the demolition of any existing works, including all supports to partially demolished structures. This designer must be competent in temporary works design, and will be required to demonstrate that he/she has safely provided for the complex forces involved in temporary works/ permanent works interaction at the various stages of construction.	1	Item			
B	A suitably qualified site engineer who must assist the Temporary Works Designer in relation to site implementation issues highlighted above and who must liaise with the designer, the PSDP and the PSCS.	1	Item			
C	A competent temporary electrical services designer and temporary mechanical services designer who must take overall design responsibility for the safety of the electrical services installation and mechanical services installation during the entire construction phase. These will be required to liaise with the electrical services designer and the mechanical services designer, contractor, PSDP and PSCS. M+E Co-ordinator is required to be on site 100% of the time.	1	Item			
D	Subject to the Contractor satisfying the Employer as to having the resources and skills necessary to perform the duties of the Project Supervisor for the Construction Stage under the Regulation the Employer may appoint the Contractor to fulfil this function under the terms of a Collateral Agreement in the form of Model Form 10 (See Works Requirements) to be entered into between the parties.	1	Item			
E	Provide all costs in connection with the provision of the services of a Project Supervisor for the Construction Stage for the duration of the Contract.	1	Item			
F	The Contractor shall include for a competent person to act as and carry out duties of Project Supervisor as set out in the Safety, Health and Welfare at Work (Construction) Regulations, 2013 and should particularly note the following:	1	Item			
G	(i) Following appointment as PSCS, develop the Safety & Health Plan, including updating it with new/revised design information passed on by the PSDP. Following this the Contractor's designers' information will be coordinated with all of the other designers' information and any new information will be passed onto the PSCS for inclusion in the Safety and Health Plan.	1	Item			
H	(ii) The PSCS shall be obliged to advise the PSDP, as soon as is practical, of any changes arising from unforeseen conditions or eventualities which may affect design. This must be done in order to permit the PSDP to pass this information to all designers so that they can coordinate their designs and include the changes in their designs.	1	Item			
J	(iii) The PSCS shall ensure that all personnel on site have appropriate training, Safe Pass and CSCS where necessary, and that records of same, including copies of certificates/cards, shall be kept on a readily accessible file for inspection. Copies of the same shall be provided to designated Representatives of the Local Authority.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor shall include for developing before the commencement of the construction work, the Safety and Health Plan for the construction site already prepared on a preliminary basis.	1	Item			
B	The Contractor shall include for the Project Supervisor for the Construction Stage giving notice to the National Authority for Occupational Safety and Health prior to commencement of work on site in accordance with the First Schedule of the Safety, Health & Welfare at Work (Construction) Regulations 20013.	1	Item			
C	The Contractor shall procure the insurance cover required to be obtained and maintained by the Contractor pursuant to the provisions of the Main Contract shall provide indemnity in respect of any claim for bodily injury or property damage which the Contractor may incur by reason of the performance of the function and duties of the Project Supervisor for the Construction Stage for the Project.	1	Item			
D	The Contractor shall enter into a Collateral Agreement (Model Form 10) with the Employer for the Contractor's appointment as Project Supervisor for the Construction Stage. Provide for any costs arising hereunder not provided for elsewhere herein.	1	Item			
E	Further information about safety requirements may be obtained from the National Authority for Occupational Safety and Health.	1	Item			
	Safety Statement					
F	The Contractor shall provide a certificate to confirm that under the terms of the 2013 Safety, Health and Welfare at Work (Construction) Regulations the contracting firm is in possession of a written Safety Statement and that all employed and any other persons in the workplace who may be affected by risks to safety will be made aware of the contents of the Safety Statement and have access to it.	1	Item			
	SAFETY FILE					
G	The Contractor shall co-operate with the PSDP in the preparation of the Safety File and shall provide all relevant documentation in his possession, including all technical manuals and materials safety sheets. The Employer will be unable to take possession of the Works ('Substantial Completion' stage) unless he has received the information and documentation required to allow the Employer comply with his duties in respect of the safe operation of the premises under relevant statutory provisions.	1	Item			
H	All Safety file information must be completed and forwarded to the Project Supervisor Design Process (PSDP) at or before Substantial Completion.	1	Item			
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	2. CONTRACT (Cont)					
	Digital Project Safety File (DPSF) Coordinator - Role & Responsibility					
A	The DPSF and all its specified elements and requirements are to be collated and managed by a specialist DPSF Coordinator and are to be reviewed for any amendments/additions with the client, Project Supervisor Design Process (PSDP) and the Project Supervisor Construction Stage (PSCS) prior to handover and installation to the client.	1	Item			
B	The DPSF Coordinator shall provide a full professional technical service/ solution which will produce a comprehensive and project specific CLIENT Digital Project Safety File.	1	Item			
	Digital Project Safety File Software Application					
C	The DPSF is to be delivered in a proven software application format. Further, the DPSF shall be formatted to allow subsequent updating of information. The DPSF shall also incorporate detailed asset registers / digital images of all Building Fabric components & Building Services components. Furthermore the software shall allow secure (password protected) comprehensive control and tracking of the Handover Documentation to enable viewing / printing / access / editing / searching / updating and administration of the file. The DPSF is to have relevant metadata assigned to all construction handover documentation on the project and to structure all documents into a multi-level hierarchy for the project. The DPSF will have documents grouped, categorized or classified within the project based on a CLIENT standard approach, Documents are grouped by projects and by section and sub-sections as per the index or table of contents agreed for the project - by CLIENT, the DPSF system is to cater for over 20 concurrent users.	1	Item			
D	The software system/application shall provide for the potential future migration of data to a more advanced enterprise software application which is capable of providing remote internet/intranet access and acting as a platform technology for compliance with current and future regulations, the data format and structure shall comply with best practices and standards.	1	Item			
	Draft Reviews and Handover / Install of Digital Project Safety File:					
E	Complete draft of the DPSF must be submitted to the Contracting Authority 2 weeks before the final date for Practical Completion. The draft DPSF must be reviewed by the PSCS & PSDP and amended in light of any comments before a final revision is submitted to the CLIENT. The DPSF Coordinator will not proceed with production of the final copies of the File until authorised to do so by the PSDP. The scheduled handover programme shall be as follows:	1	Item			
F	1. A Draft DPSF will be presented to the PSDP and PSCS for review and comment at least 2 weeks before the final date for Practical Completion. This draft will include the latest list of any outstanding items so that these items can be agreed, documented, closed out and included.	1	Item			
G	2. A Final Draft DPSF will be delivered to the PSDP and the CLIENT for final review and sign off before a final revision of the DPSF is submitted to the CLIENT.	1	Item			
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	2. CONTRACT (Cont)					
A	3. A Final REVISION DPSF signed off will be handed over and installed on the CLIENT network by the DPSF Coordinator	1	Item			
B	IMPORTANT NOTE: It should be pointed out that the DPSF must be handed over to the ER at the handover of the building, i.e. on the day of Substantial Completion (SC). If any items are outstanding on the day of SC, they must be clearly itemised and listed along with a date when these items will be provided, these issues will be classified as defects. This DPSF Defects List must be provided in writing to the relevant Design Team members (PSDP) & the Employer before PC, for the ER's approval. If this list of defects is not approved by the ER then the Employer reserves the right to instruct the Design Team in relation to signing off SC.	1	Item			
C	The Project Supervisor Construction Stage shall supply all necessary safety file information to the PSDP which shall include the following items (list not exhaustive):	1	Item			
D	The Project Supervisor Construction Stage in co-operation with the Main Contractor shall ensure that the Safety File to be produced at the end of the project shall incorporate all issues identified in the Main Contractor's Method and Safety statement.	1	Item			
E	The Project Supervisor Construction Stage shall identify relevant information to be issued by the Project Supervisor Design Process and issue a request in time. This will allow the Project Supervisor Design Process to instruct the Design Team and Client to issue the necessary information to be included in the File	1	Item			
F	The Project Supervisor Construction Stage shall standardise the format for each Sub-contractor's information for the Safety file with the Client for ease of access of information and standard of information to be submitted by all Subcontractors.	1	Item			
G	The safety file shall be merged with all pre-existing safety file data and where drawings, certification or data is superseded, it shall be removed from the file to ensure an accurate representation of the whole building	1	Item			
H	Contractor to provide one full hardcopy sets of the safety files, and two full electronic copies to be uploaded to the CLIENTS online digital safety file system. The DSF software platform must be approved by the CLIENT & PSDP and shall be capable of the following in relation to Presentation & Format;	1	Item			
J	To be presented in a clear and easy to follow format and should provide a complete understanding of the works, its intended performance & systems and enable it to be operated & maintained efficiently and safely.	1	Item			
K	The Digital Safety File should be a web based application capable of being hosted either online (available 24hrs a day, 365 days of the year) or on the client's internal IT network with no loss of functionality.	1	Item			
L	Documentation should be held primarily in PDF format with all drawings also included as CAD files for future use	1	Item			
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	2. CONTRACT (Cont)					
A	The system will be capable of holding operation and maintenance documentation for a number of individual sites for the same client.	1	Item			
B	The file should be capable of being expanded to cater for existing projects and possible future expansion.	1	Item			
C	The system will be accessible through a front screen featuring each of the projects which will have links to the individual safety files of each individual project.	1	Item			
D	Access to the Digital Safety File should be restricted via password / username combinations. Individual usernames should be assigned to each user which can, in turn grant different levels of access. A variety of access levels should be available from 'read only' to full user access for editing and uploading. The system should not be restricted to a limited amount of users.	1	Item			
E	This application should facilitate the future uploading and editing of additional documentation by the client to any area of the file to ensure the file can be kept current and up to date by the user.	1	Item			
F	The system should facilitate the setting of permissions which can allow / restrict users when viewing certain documents.	1	Item			
G	A clear audit trail should be recorded for every document uploaded to the safety file. Time and date stamps should be applied to all documents when they are uploaded.	1	Item			
H	A comprehensive search engine is to be included to ensure easy and quick navigation to any document. Searching should be possible using key words, phrases and should be possible to restrict the search to specific areas of the Digital Safety File if required.	1	Item			
J	All documentation is to be submitted in PDF format to facilitate uploading to the builder's digital safety file.	1	Item			
K	Scanned documents are to be avoided except in the case of test certificates. Where scanned documents must be included, then a minimum setting of 400dpi in full colour shall be used.	1	Item			
L	Drawings are to be submitted in both PDF & CAD. CAD drawings should be presented in .dwg format and be fully bound to all external references.	1	Item			
	The Digital Safety File should be:					
M	The DPSF and all its specified elements and requirements are to be collated and managed by a specialist DPSF Co-ordinator who should include for the following:	1	Item			
N	Site attendance as necessary to agree client specific layout for Digital Safety File	1	Item			
P	Collate and manage all design and O&M documentation from relevant parties	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	Present for approval of design team / PSDP	1	Item			
B	Final handover to client including staff training	1	Item			
C	The DPSF Co-ordinator shall provide a fully professional technical service / solution which will produce a comprehensive and project specific Digital Project Safety File. The file is to be formatted to facilitate tracking, viewing, printing, access, editing, searching and updating of the file.	1	Item			
	Table of Contents					
D	The Digital Project Safety File Shall Consist Of The Following Four Sections, Sub Sectioned As Appropriate:	1	Item			
E	SECTION 1: GENERAL PROJECT INFORMATION: Content as described below. The information shall be provided to the DPSF coordinator from the Main Contractor and Design Team	1	Item			
F	SECTION 2: BUILDING FABRIC INFORMATION: Content as described below plus certain as-built drawings and other information provided to the DPSF coordinator from the Main Contractor and the Design Team	1	Item			
G	SECTION 3: BUILDING OPERATIONS SERVICES INSTALLATIONS: Content as described below, the information is provided to the DPSF coordinator through the Contractor by the Mechanical / Electrical / Lift Services Contractors subject to approval by the Services Consultants.	1	Item			
H	SECTION 4: PROJECT DRAWINGS & REPORTS: Content as described below.	1	Item			
	Section 1 Project Information must include:					
J	1. Project Description - A detailed description of the building project	1	Item			
K	2. Site Location	1	Item			
L	3. Planning Documents (Application, Grant, Drawings) - Site Location maps and drawings	1	Item			
M	4. Existing Environment (Surveys etc.)	1	Item			
N	5. Project Organisation (Contact List for Design Team & Construction Team) - Names address telephone/fax numbers, e-mail/website address of all design team members/nominated subcontractors / domestic subcontractors / suppliers / manufacturers	1	Item			
P	6. Health & Safety	1	Item			
Q	a. Preliminary Health & Safety Plan	1	Item			
R	b. Construction Health & Safety Plan	1	Item			
S	c. AF1 & AF2	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	d. Residual Risk Information - The PSCS must outline and identify to the client any residual hazards after the project completion that is likely to have an impact on the operation, maintenance or demolition of the structure.	1	Item			
B	7. Fire Certificate Documents (Application, Grant, Drawings) - Details of all Statutory Certificates and Legal Documentation for the building including fire safety certificate application detail plus copies of all consents and approvals obtained.	1	Item			
C	8. Disabled Access Certificate (Application, Grant, Drawings)	1	Item			
D	9. All ancillary certificates from Subcontractors	1	Item			
E	10. Works Requirements Document	1	Item			
	Section 2 Building Fabric Information (All Works Packages) must include:					
F	1. Architects Specifications & Schedules Design brief / specifications - Architect - overview / summary of how the building was constructed & how it is intended to achieve its performance and other objectives including specialist reports such as site surveys, topological surveys, asbestos survey reports, soil tests site investigation reports, tree surveys etc.	1	Item			
G	2. Civil & structural Specifications, Structural description & specifications along with surveys and, reports detailing all allowable loadings/restrictions/ pressures & structural maintenance requirements	1	Item			
H	3. Electrical Specifications, Details of all electrical construction packages relating to all nominated/domestic subcontractors - provision of a detailed description/scope of works for each specific works package/construction elements as well as specifics on materials or procedures which may present significant residual hazards with respect to cleaning, maintenance repair or deconstruction / recycling / demolition, this information must also be provided for all contractor designed work and performance specified work	1	Item			
J	4. Mechanical Specifications, Details of all mechanical construction packages relating to all nominated/domestic subcontractors - provision of a detailed description/scope of works for each specific works package/construction elements as well as specifics on materials or procedures which may present significant residual hazards with respect to cleaning, maintenance repair or deconstruction / recycling / demolition, this information must also be provided for all contractor designed work and performance specified work.	1	Item			
K	5. Fittings & component schedules: all final revision / as built fitting and component schedules to include but not limited to the following: sanitary ware schedule / signage schedule / ironmongery schedule / finishes schedules / door schedules / specialist equipment details	1	Item			
L	6. Planned preventative maintenance & cleaning procedure and frequency for each element / component	1	Item			
M	7. Site drainage report including drainage CCTV / other testing results	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	8. Copies of manufacturers current project literature specific for all products for which the particular proprietary brand has been chosen by the contractor including data sheets and manufacturers recommendations for cleaning and maintenance	1	Item			
B	9. Copies of all guarantees warranties and maintenance agreements offered by subcontractors and manufacturers	1	Item			
C	10. Copies of all product compliance test certificates and reports	1	Item			
D	11. The fire safety strategy for the building(s) including drawings showing emergency escape routes, location of emergency and fire fighting systems services shut-off valves switches etc.	1	Item			
E	12. The sustainability strategy for the building(s) including drawings, illustrations, diagrams, systems and components etc.	1	Item			
F	13. The universal access / emergency evacuation strategy for the building(s) including drawings, illustrations, systems and components etc	1	Item			
G	14. A list of any design risks / residual risks / hazards / maintenance considerations / disposal & recycling which will be relevant to the future operations and maintenance of the facility	1	Item			
H	15. Digital images of all buildings internally / externally and general site areas - progress photos shall also be taken at intervals to be agreed with the contracting authority	1	Item			
	Section 3 Building Services - Mechanical & Electrical O&M Manuals Building Operations [Services Information] must include:					
J	It is suggested that M&E manuals follow the same format to allow easy and quick navigation by the end user - sample template provided below:	1	Item			
K	Project Details:	1	Item			
L	General details regarding the project - job title, location, scope of works,	1	Item			
M	Contractor's details:	1	Item			
N	Supplier's Contacts	1	Item			
P	Contact details for all equipment suppliers - company name, equipment supplied, contact person, address, phone, fax, email & website.	1	Item			
Q	Description of Services - A full description of each of the systems installed written to ensure that the College's services department fully understand the scope and facilities provided	1	Item			
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	2. CONTRACT (Cont)					
A	Brief narrative of each service installed (water, heating, ventilation, lighting, power, access control etc). Give location of plant, areas served, method of control, set-points etc. Photographs of the plant and equipment in their installed position should be included in this section. A description on the operation of all systems including services capacity and restrictions / starting up operating and shutting down instructions for all equipment and systems installed.	1	Item			
B	Maintenance & Fault Finding. Recommended maintenance schedules for all items of plant (monthly, quarterly, annually). Fault finding guide for all major systems	1	Item			
C	Recommendations as to the preventative maintenance frequency and procedures to be adopted to ensure the most efficient and environmentally beneficial operation of the systems.	1	Item			
D	Planned maintenance programmes, service life costs/plan, repair replacement, lubrication schedules, deconstruction, recycling or disposal procedures for items of plant / equipment	1	Item			
E	A full list of spare parts for all plant.	1	Item			
F	Lubrication schedules for all lubricated items	1	Item			
G	A list of all plant that requires re-testing including when re-testing is required	1	Item			
H	Fire alarm strategy - including cause and effect table	1	Item			
J	Emergency & safety procedures for all installed plant including telephone numbers for emergency services	1	Item			
K	Asset Register	1	Item			
L	List of all plant and equipment installed. Each item to have individual tag references corresponding to reference on the 'as-built' drawings. Details which should be noted include model, manufacturer, duties, location and serial numbers.	1	Item			
M	The name address and telephone number of the manufacturer of every item of plant and equipment together with catalogue list numbers	1	Item			
N	Mechanical & electrical specifications - final revision	1	Item			
P	As Built Electrical Drawings (in .dwg and PDF format): The drawings shall clearly show all systems, plant, terminal points such as luminaries, sockets, isolators, etc. and distribution, circuit orientation and references. All sizes of tray, trunking and their routes shall be indicated. All plant shall be clearly referenced and shall be readily identifiable	1	Item			
Q	As Built Mechanical Drawings (in .dwg and PDF format format): The drawings shall clearly show all systems, plant, valves, dampers, etc. All plant & valves shall be clearly referenced and be readily identifiable and show a legend for all colour-coded services.	1	Item			
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	2. CONTRACT (Cont)					
A	The Candidate and his Contractor shall ensure that any services or systems, which are buried within the structure, or underground, are precisely located on the drawings, along with the precise position of entry of services to the building, isolating valves and cocks.	1	Item			
B	Control sequences for all systems installed	1	Item			
C	Diagrammatic drawings of each system indicating principal items of plant, equipment, valves etc. Legend for all colour-coded services	1	Item			
D	Plant Schedules (Plant /Asset Register - system by system) of plant equipment, stating their unique reference number, make, model, location, area served, as-built drawing reference	1	Item			
E	Manufacturer's specific technical literature for all items of plant and equipment assembled specifically for the project excluding irrelevant matter and including detailed drawings, electrical circuit details, and operating and maintenance instructions	1	Item			
F	A copy of all test /commissioning certificates (including but not limited to electrical circuit tests corrosion tests type tests Works tests start and commissioning tests) for the various elements of the installations.	1	Item			
G	A copy of all manufacturers, guarantees, warranties, and maintenance agreements offered by subcontractors and manufacturers	1	Item			
H	Schedules of all fixed and variable equipment settings established during commissioning and procedures for seasonal changeovers	1	Item			
J	Sample digital images for each key item of Mechanical, Electrical and Lift installations for use as cross reference photos within the various sections of the O&M Manuals	1	Item			
	Section 4: Project Drawings & Reports must include:					
K	Complete Register of all "As Built" drawings Architectural, Civil / Structural, Services, Specialist, Fire etc. & Reports. Note that each drawing register shall be provided electronically in spreadsheet or tabular format and shall include the following information in the following column order:	1	Item			
L	1. Drawing Number	1	Item			
M	2. Drawing Title / Description - this must contain enough key information about the content to allow the drawing register to be searched efficiently by the CLIENT when locating drawings on a day to day basis	1	Item			
N	3. Drawing Revision	1	Item			
P	4. Drawing Date - in XX/XX/XXXX format	1	Item			
Q	a. Note that the Filename of each drawing shall be the drawing number	1	Item			
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	2. CONTRACT (Cont)					
A	b. All Architectural, Civil / Structural, Services, Specialist, Fire "As Built" drawings to be in .dwg and PDF Format	1	Item			
B	c. As-built drawings (in .dwg and PDF Format) recording details of construction for all contractor designed work and performance specified work	1	Item			
C	5. Underground Site Services	1	Item			
D	a. Note that a separate drawing will be required for each service e.g. gas, drainage, telecommunications etc.	1	Item			
E	b. Drawings should be produced in a format that will allow the viewing of individual services, together with the option to show any combination of services on a drawing. Layering, line types etc. to be agreed in advance with the client	1	Item			
F	c. Note that the client requires the contractor to provide a final draft of each of the underground services drawings for their review and comment before the contractor issues the final revision of these drawings	1	Item			
G	d. Note that All underground "as built" site services drawings shall be delivered in .dwg and PDF Format	1	Item			
H	Contractors are contractually obliged to video record the handovers of the buildings and the demonstrations and these recordings will form part of the digital safety file.	1	Item			
J	The digital safety file is to be hosted as agreed with the CLIENT. 2 number DVD copies and one number hard copy of the file must be provided to the employer's representative and to the PSDP	1	Item			
	AS -INSTALLED DRAWINGS:					
K	The drawings shall be prepared by CAD to A0 or A1 size for inclusion in the Digital Project Safety File (s):-	1	Item			
L	Drawing shall be clearly marked "As-installed drawing"	1	Item			
M	As-installed drawings shall be executed by a competent draughtsman and shall contain sufficient detail to enable the Employer to maintain, dismantle, reassemble and adjust all parts of the works.	1	Item			
N	Lettering on drawings shall be to an approved lettering system and the title block shall be to the Engineer's approval.	1	Item			
P	The title block shall not contain any revision notes or references, nor shall the drawings contain any references to existing services or similar notes.	1	Item			
Q	The drawings shall clearly show all systems, plant, terminal points such as luminaires, sockets, isolators, etc. and distribution, circuit orientation and references. All sizes of tray, trunking and their routes shall be indicated. All plant shall be clearly referenced and shall be readily identifiable.	1	Item			
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	2. CONTRACT (Cont)					
A	The contractor shall ensure that any services which are buried within the structure, or underground, are precisely located on the drawings, along with the precise positions of entry of services to the building, giving their depth and the locations of the relevant pits, etc.	1	Item			
B	The drawings shall incorporate all building changes which may have occurred during the course of the contract.	1	Item			
C	The contractor shall provide the following for inclusion in the Digital Project Safety File (s):-	1	Item			
D	A schedule of record drawings, including those issued by manufacturers or suppliers during the course of the works, e.g. switchgear layout and control panel wiring diagrams	1	Item			
E	Any isometric or diagrammatic drawings.	1	Item			
F	Copies of distribution board identification charts.	1	Item			
G	The contractor shall provide one copy of each of the warning signs and safety charts, which shall be heat sealed or fixed in glazed hardwood frames, for installation in locations to be agreed on site.	1	Item			
	COMPLETION CERTIFICATES:					
H	The contractor shall submit the following certificates when the installation is completed and include in the Digital Project Safety File (s):-	1	Item			
J	All relevant BCAR certificates as listed in the Preliminary Inspection Plan.	1	Item			
K	ETCI certificate of entire installation.	1	Item			
L	Certificates for fire alarm and emergency lighting.	1	Item			
M	Lightning protection certificate.	1	Item			
N	Certificates from suppliers or manufacturers stating that equipment has been installed and commissioned satisfactorily and is operating in accordance with the design requirements.	1	Item			
P	ETCI sub-system certificates.	1	Item			
Q	All system testing and commissioning certificates and results.	1	Item			
R	An IOU (incomplete, outstanding or unsatisfactory work) shall be attached to a certificate in the event of any work not required at hand-over stage, and a programme agreed for the completion of works.	1	Item			
S	Compliance certificates as required by Building Control (Amendment) Regulations 2013	1	Item			
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	2. CONTRACT (Cont)					
	Temporary Works					
A	The contractor shall include a cost herein for employing a consulting engineer with PI of €6.5m to prepare their temporary works proposals for the support of any earthworks and any other permanent works to be executed that require temporary works.	1	Item			
B	The contractor shall include a cost herein for engaging a specialist geotechnical engineer to assess the existing ground conditions with regard to tempoarary works and allow for all measures necessary to ensure the stability of the existing ground above the excavations for the duration of the works.	1	Item			
C	All Temporary Works Designers are required to provide Design Risk Assessments to the PSDP for inclusion in the Preliminary Safety & Health Plan and / or the Safety File.	1	Item			
D	All Temporary Works Designers are required to provide a HSA 'Temporary Works Design Certificate' to the PSDP, for their element of the Works on the Project.	1	Item			
E	*NOTE: Temporary Works may include such matters as trench shoring, scaffolding, propping, working platforms, gangways and access stairs / ladders, etc. Persons who make decisions on site in respect of these may be deemed to be designers. Those employing, or in control of, people undertaking design work are themselves deemed to be designers.	1	Item			
F	The PSCS must also ensure that a copy of the signed Temporary Works Design Certificate is forwarded to the Employer's Representative, and Client's Health & Safety Advisor.	1	Item			
	FIRE SAFETY					
G	The Contractor shall ensure that fire brigade access is maintained to the Works and to existing buildings at all times. The Contractor shall consult with the fire authority as necessary and shall at all times carry out the Works with due regard for the fire safety of the Works and of any other buildings or users who may be affected by the Works. In particular the Contractor shall protect existing vehicular fire access and egress routes and access to fire hydrants.	1	Item			
H	The Contractor shall ensure that fire escape routes from existing buildings are maintained for the duration of the Works.	1	Item			
J	The Contractor shall take special precautions to avoid risk of fire and shall cease any work involving naked flames or sparks at least 45 minutes before work stops for the day. The Contractor shall not permit any accumulation of inflammable debris. The Contractor shall not take flammable liquids or gases onto the Works other than that needed for one day's work.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor shall employ (at the Contractor`s own cost) a recognised Fire Safety Consultant to check each section of the building twice during the construction process and again immediately prior to handover, to ensure that the building has being built in full compliance with Fire Safety Certificate documentation including confirmation that the cause and effect strategy has been complied with in terms of the M&E installation and for the Consultant to provide a Certificate to this effect. This Certificate of Compliance is to be included in the Safety File and issued with all other Certification by the Contractor on completion. The third party fire safety certifier to provide Ancillary Inspection Completion Certificate (SI RIAI ACI 02) under SI 09 in relation to all of the construction elements of the building relating to Fire Safety and Compliance with Building Regulations Part B and the granted Fire Safety Certificate.	1	Item			
	SECURITY					
B	On obtaining possession of the site, the Contractor shall immediately fence the site and secure the Contract work zone from trespass, with a hoarding as outlined in the drawings and elsewhere in this document.	1	Item			
C	The Contractor shall maintain the site in a secure and orderly condition, limiting free access to persons with accredited safety training and ensuring that all other persons whose presence on the site is required or necessary are accompanied by the site safety officer.	1	Item			
D	The Contractor shall ensure that the site is made secure from trespass at times when it is not in operation and shall provide such fencing, hoardings, enclosures, lighting and watching necessary to ensure this. The Contractor shall ensure in particular that all toxic and flammable materials are secure and that all access to scaffolds or unprotected areas is restricted.	1	Item			
E	The Contractor shall operate a 'sign-in' policy whereby all persons entering and leaving the site are required to sign in and out.	1	Item			
	ENVIRONMENTAL					
F	The Contractor shall not deposit deleterious material in drains: The Contractor shall comply with statutory requirements in respect of disposal of waste. The Contractor shall implement an agreed waste management policy and keep records of the disposal of all waste material from the site.	1	Item			
G	All refuelling shall take place in a designated refuelling area at least 30m from watercourses, details of same to be included in the Construction Environmental Management Plan (CMEP).	1	Item			
H	All hydrocarbons, chemicals, oils etc. shall be stored in a dedicated bunded area at least 30m from watercourses and capable of storing 110% of the container/ tank capacity.	1	Item			
J	The Contractor shall ensure an adequate suplly of spill kits and hydrocarbon absorbent pads are stocked on site.	1	Item			
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	2. CONTRACT (Cont)					
	Disposal of Toxic Items					
A	Allow for the following in the event of encountering toxic matter on site:	1	Item			
B	Specific safety plan for removal of asbestos;	1	Item			
C	Prepare and keeping of occupational health register and workers' health assessment / surveillance;	1	Item			
D	Specialist PPE / PPC; and	1	Item			
E	Separate cleaning / showering facilities, storage for clothes.	1	Item			
	Pollution					
F	Do not deposit deleterious material into surface water channels or lakes. Comply with the requirements of the Rivers Pollution Protection Act, the Public Health (Ireland) Acts, and the Fisheries Acts.	1	Item			
	Storage of Materials					
G	Store materials in a tidy manner. Separate different materials and protect them from dirt, physical damage, reaction with other materials marking or staining, micro-organisms, mildew, fungus and vermin. Do not store materials in ways which may cause damage to the Works, people or property.	1	Item			
	Cleaning					
H	Remove and dispose of all rubbish from the Works as it accumulates and maintain the Works in a clean and tidy condition for the duration of the Contract.	1	Item			
J	Clean the Works internally and externally, remove all rubbish and leave the entire Works in a tidy condition ready for occupation or use.	1	Item			
	CONCRETE WASHOUT					
K	Concrete washout is an alkaline material and must not be permitted to enter drains or watercourses. Concrete delivery trucks are to be washed down after each pour into an approved washout container and in accordance with a method statement developed by the PSCS. Wheelbarrows, hand tools and boots must also be washed down in an appropriate manner in accordance with a method statement.	1	Item			
	Project Supervisor for the Design Stage					
L	The Project Supervisor for the Design Process is Waterman Moylan.	1	Item			
M	Safety and Health Plan - Preliminary	1	Item			
N	The Preliminary Safety and Health Plan is included in Appendix 3 Information Pack of the Instructions to Tenderers	1	Item			
P	Project Supervisor for the Construction Stage	1	Item			
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	2. CONTRACT (Cont)					
A	The Project Supervisor for the Construction Stage (PSCS) shall be the Main Contractor appointed to carry out the Works.	1	Item			
	n) Any other obligation or restriction					
	Irish Water					
B	It is the responsibility of the main contractor to prepare and submit the Irish Water (IW) connection applications paperwork agreements and engage with all other stakeholders to ensure connections for all services are made within the project programme.	1	Item			
C	It is the responsibility of the main contractor to agree and receive all connection applications agreements to ensure connections for all services and road opening licenses are obtained within the project programme.	1	Item			
	Master Programme					
	In addition to the requirements in Clause 4.9.1 of the Contract any programme submitted by the Contractor under Clause 4.9.1 shall:					
D	- show individual critical paths for each Section	1	Item			
E	- link the Substantial Completion of each Section to the Substantial Completion of the Works showing which Section/s are on the critical path for the Substantial Completion of the Works and which Sections are non-critical to same;	1	Item			
F	- clearly identify the programme contingency referred to in Clause 9.4.2 of the Contract;	1	Item			
G	- clearly describe the preparation time for including obtaining relevant permission for making all services connections;	1	Item			
H	- clearly describe work to be undertaken during collegel holidays and the preparation work including materials ordering in preparation for these Works;	1	Item			
J	- be submitted in Microsoft Project (or Microsoft Project compatible) and PDF formats in a GANNT format; and	1	Item			
K	- take into account of all constraints included in the Works Requirements and the contract.	1	Item			
L	The Contractor will be required to prepare and submit detailed Testing & Commissioning programmes to the Employer's Representative for review prior to the commencement of Testing and Commissioning activities on each Section.	1	Item			
M	The Contractor's monthly progress reports shall include the current programme with actual and expected progress plotted under programmed durations for each task. The actual/expected start and finish dates shall also be stated for each task to allow comparison with the programmed start and finish dates.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor's monthly progress report shall include a register with details of the actual submission and response dates of each package and the status of each submission.	1	Item			
	Use of Services Prior To Handover					
B	The contractor shall cover the cost of all utilities used for construction and testing and commissioning purposes prior to handover of the building.	1	Item			
C	The contractor shall install any meters required to confirm usage and shall provide logs of meter readings. Alternatively the contractor shall only use energy between known times for testing and shall log energy use during those times.	1	Item			
D	Failure to adequately log construction energy costs shall result in the ER determining the amount to be deducted from the contractor and paid to the collegel. The decision of the ER in that scenario shall final.	1	Item			
E	The Contractor shall be fully responsible for providing and maintaining all services necessary for the proper execution and completion of the Works.	1	Item			
	Materials & Workmanship					
	Materials					
F	All construction products used must comply with the Construction Products Regulation (EU) No 305/2011.	1	Item			
G	British Standards (BS) and British Board of Agrement (BBA) certification are not acceptable methods of demonstrating compliance in accordance with Construction Products Regulation (EU) No 305/2011.	1	Item			
H	Any product specified to meet a conformity assessment procedure which requires or provides for third party certification must receive a certificate delivered by a body which is recognised as an EU Notified Body.	1	Item			
J	All products supplied which are subject to the Construction Products Regulation must be CE marked and be supplied with a Declaration of Performance.	1	Item			
K	Those for which there is an Irish Standard or Code of Practice are to comply therewith and shall bear the NSAI Irish Standard Mark or alternatively, shall be certified to a national standard of another member State of the European Union, which provides an equivalent guarantee of safety and suitability.	1	Item			
L	The Contractor shall provide proof of equivalence well in advance of required install date. Any delay due to insufficient information submittal for alternative materials or products will be borne by the Contractor.	1	Item			
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	2. CONTRACT (Cont)					
	Regulations & Current Standards					
A	The College is to be constructed, tested & commissioned in all respects in accordance with harmonised European and national statutes, regulations and standards, codes of practice and locally applied regulations (including planning, fire and DAC requirements).	1	Item			
B	Current Standards: References to national standards or codes of practice shall be to the latest relevant published version including any relevant amendments published at the date of tender. Where a standard code of practice has been superseded, the edition current at the date of invitation to tender shall apply. References to published documents are to the editions, including amendments and revisions, current on the date of the Invitation to Tender.	1	Item			
C	Compliance with these recognised standards, codes of practice and all statutory regulations is a minimum requirement. Plant, equipment and/or materials offered to other standards will be equal or superior in quality to those specified and full details shall be supplied to the ER to demonstrate compliance.	1	Item			
	Codes of Practice					
D	Codes of Practice: The Contractor shall provide copies of codes of practice, building regulations and applicable national standards and DoES TGDs for use by his site supervisory staff.	1	Item			
	Schedule of Samples					
E	Samples of Materials: Manufacturer's articles and executed work shall be submitted as required by the Works Requirements for review before incorporation into the Works and articles not accepted shall be removed, if directed by the ER. Comment on any materials or work will not relieve the Contractor from responsibility for Defects howsoever arising and for the need to comply with the Works Requirements. Sample products shall comply with specification requirements in respect of stated or implied characteristics. Samples shall be provided to suit the Works Programme. Orders shall not be placed until comment on the sample is obtained. Samples shall be removed from site when no longer required; this shall be undertaken in accordance with the provision of Clause 4.17 of the Contract.	1	Item			
F	Provide all samples of work as may be reasonably required by the ER. The cost of all reasonable tests are deemed included in the rates tendered in this document including all tests required to be undertaken to confirm compliance with the Works Requirements	1	Item			
G	The Contractor shall agree and maintain complete and current inspection and test procedures with the ER prior to commencement of the Works.	1	Item			
H	The Contractor shall supply, at his own expense samples of all materials manufactured articles and executed work, which the ER may request for comment before adoption. Such comment shall not relieve the Contractor from responsibility for any Defects.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor shall supply materials at his own expense, for all tests required by the Specification and such tests as the ER may direct under the Contract and execute all necessary arrangements, notices, removals and reinstatement in connection with such tests. Copies of the test results shall be issued directly to the ER.	1	Item			
B	All testing of civil and structural Works shall be in accordance with the Civil / Structural Materials & Workmanship Specification'.	1	Item			
C	All testing of mechanical and electrical Works shall be in accordance with the Mechanical and Electrical Materials & Workmanship Specification.	1	Item			
	Submittals					
D	The Contractor shall not commence the works without acceptance of the required submittals by the Employer's Representative.	1	Item			
E	Provide a schedule of submittals for agreement with the Employer's Representative. Schedule to indicate the dates on which the Employer's Representative shall receive the required submittals. Correlate the schedule with the master programme and allow a reasonable amount of time for the review of each submittal. Indicate critical decision dates for selection of finishes and colours. Revise the schedule of submittals and resubmit as necessary.	1	Item			
	Submission and Return of Working Drawings/ Documents:					
F	i) Allow for a sufficient period (a minimum of 10 (ten) working days) between the first submission of a drawing/ document and receipt of comments.	1	Item			
G	The order date should be included in the bi-weekly progress report and programme in accordance with Clause 4.10. Sufficient time should be allowed for 2-3 reviews (including 10 working days notice for each review) by the Employers Personnel of the Contractor's Submittal, which is deemed reasonable as the average responses required to obtain Status A.	1	Item			
	Responses to Contractor and Specialists drawings and submittals will be responded to under threeheadings:					
H	Returned With Comments (RWC) Status A - No further comments. Proceed with installation	1	Item			
J	Returned With Comments (RWC) Status B - Installation may proceed at Contractors risk provided that comments on submittal are fully complied with and performance requirements of contract documents are met. However, strongly advisable to resubmit to obtain Status A before proceeding.	1	Item			
K	Returned With Comments (RWC) Status C - Submittal not accepted. Resubmit demonstrating compliance with Contract documents.	1	Item			
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	2. CONTRACT (Cont)					
A	The ER will at all times endeavour to return submittals as soon as is practicable, without prejudice to the terms of clause 4.7 of the contract. Should the contractor only first provide a Submittal within less than 10 working days of ordering, without also providing adequate information to demonstrate compliance with the Works Requirements, any delay arising will be attributable entirely to the Contractor.	1	Item			
B	ii) Provide a list of Working Drawings proposed.	1	Item			
C	iii) Provide information specifically requested for each element of the works. Additional information may be required by the Employer on inspection of the Contractor's submittals to allow for accurate comments to be made.	1	Item			
D	Review: The Contractor's submittals will be reviewed by the Employer's Representative during the Evaluation, and any alteration and/ or agreements reached will be incorporated into the Contract documentation.	1	Item			
	Prototype Classroom/ Corridor					
E	Contractor is required as part of the contract to advance to a finished state an interior and exterior section of the college building to be agreed with the ER, ahead of the remainder of the college building for the puposes of approving samples in-situ and to assess overall workmanship quality. The contractor should include a cost herin if not included elsewhere.	1	Item			
	Storage of Materials					
F	All unfixed materials shall be carefully stored in accordance with the best practice and in a suitable position on site. Manufacturers or agents recommendations regarding storage, transportation, application, material compatibility, workmanship, health & safety, etc. shall be strictly observed.	1	Item			
	Workmanship					
G	All workmanship shall comply with current National Standards or European Standards (the Eurocodes) and be in accordance with Building Regulations Technical Guidance Document Part D.	1	Item			
H	Site Operatives shall be appropriately skilled and experienced for the type and quality of work proposed.	1	Item			
J	Products and materials shall be fixed, applied, installed or laid securely, accurately, plumb, neatly and in alignment. Do not use different colour batches where they can be seen together. Check on-site dimensions to ensure accurate fit. Finished work shall not be Defective, damaged, disfigured, dirty, faulty, or out of tolerance. Adjust any joints open to view so they are even, regular and true.	1	Item			
K	Do not scale dimensions, use figured dimensions only.	1	Item			
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	2. CONTRACT (Cont)					
	Method Statements					
A	Method statements on how the Contractor intends to achieve, construct, supervise, design, produce, co-ordinate, etc. shall be required.	1	Item			
	Contractor to include for all method statements required in the preliminaries, specifications and drawings. These include but not limited to:					
B	Supervision of overall works	1	Item			
C	Supervision of Building Regulation Compliance including Complianace with Building Control (amendment) Regulations 2014 Statements	1	Item			
	The following method statements are to be submitted when described in the speciifcation. Where not described submit to the ER a minimum of four weeks before the respective element of work has to be ordered (or where no order time is required, before the activity it is due to commence on site.):					
D	Controlling and checking deliveries to site to ensure that the correct products are supplied, delivered and checked, prior to incorporation into the works.	1	Item			
E	Structure including co-ordination of roof steel, walls and beams to allow correct installation of roof systems	1	Item			
F	Roofing (please note detail and number required)	1	Item			
G	Compliance and sign off of all penetrations through roof and walls	1	Item			
H	Drainage and below slab services	1	Item			
J	Radon barrier installation	1	Item			
K	Fire Safety Compliance including fire stopping / fire barriers, Fire rated doors and frames, ironmongery,	1	Item			
L	Fire stopping around services penetrations	1	Item			
M	Doors/ frames and ironmongery including TGD B & TGD M Compliance (required early in project)	1	Item			
N	Compliance of each staircase including risers, treads, widths, balustrades and escape heights	1	Item			
P	Floor finishes including anti slip testing and validation	1	Item			
Q	Acoustic compliance	1	Item			
R	Energy conservation including avoidance of cold bridges	1	Item			
S	Cavity wall work including blockwork, ties, insualtion, corners, jambs etc.	1	Item			
T	Durability, life expectancy and robustness of materials selected by the Contractor	1	Item			
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	2. CONTRACT (Cont)					
A	Air-tightness	1	Item			
B	Curtain walling/ windws	1	Item			
C	Doors	1	Item			
D	Painting	1	Item			
E	Services co-ordination	1	Item			
F	Services commissioning	1	Item			
G	Work to boundaries including adjoining owners	1	Item			
H	Landscaping including compliance of hard and soft landscaping with planning permission including species, girth, height, density, health etc.	1	Item			
	Building Fabric Standards; Air Tightness & Thermographic Survey					
J	Air Tightness; The building shall be required to achieve a low energy in use strategy. Air leakage shall be no greater than 3m3/h/m2 of measured envelope area at a test pressure of 50Pa shall be achieved. The measured envelope area shall be taken as the area of surfaces that make up the air seal boundary of the building; The integrity of each component, which forms part of the air tightness layer, is essential and the junctions between these components are critical. Care shall be taken at all envelope penetrations such as windows, doors and service entries applying appropriate sealing along the line of the airtight layer; The sequencing of all installations shall be carefully considered and co-ordinated when programming the work to achieve the air tightness requirements; A pressure test will be required to determine the building envelope performance and actual air leakage to verify compliance; The facilities provided must be wind and watertight, efficient to operate, durable, adaptable and fit for the intended purpose.	1	Item			
K	The Main Contractor is to employ (at their own cost) a recognised Energy Consultants to check the building once during the construction process and again immediately prior to handover, to ensure that the building has been built in full compliance with the air tightness documentation and criteria as laid down in the works requirements . The consultant to provide a certificate to this effect. This certificate of compliance is to be included in the Safety File and issued with all other certification by the contractor on completion. Energy Consultants is to be certified by NSAI to carry out air pressure tests. All blower door tests are carried out in accordance with IS EN13829.	1	Item			
L	Before testing the main building, it is a requirement to test the Sample Room - 2No. Tests Required: 1No. pressure test followed by 1No. smoke test; this will allow air intake/leaks along the external wall, floor and service points to be established thereby facilitating improved sealing of the building as it is finished out.	1	Item			
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	2. CONTRACT (Cont)					
A	The contractor shall employ a recognised specialist to carry out a thermographic survey of the completed building to prove continuity of insulation within all parts of the building fabric, and produce a thermographic survey report and schedule of remedial actions (if any). The Contractor shall include a cost herin if not included elsewhere	1	Item			
	Building Fabric Standards; Building energy rating					
B	The new build extension is to be built in compliance with Part L of the current building regulations 2011 including 2017 amendments (NZEB compliance) and to all to current building regulations	1	Item			
C	Assessment - The contractor is to employ a suitably qualified BER assessor to carry out a preliminary assessment upon commencement of the works to demonstrate compliance with the current Building Regulations (TGD Part L Conservation of Fuel and Energy). Contractor to provide a Building Energy Rating (BER) certificate for the new buiold extension at substantial completion stage inclusive of all registration fees with S.E.A.I. and all other office costs in accordance with the European Communities (Energy Performance of Buildings) Regulations 2006, SI. No. 666 of 2006 and the current TGD Part L (Conservation of Fuel and Energy). It is the contractor's responsibility to comply with all the design criteria and to provide his Assessor with all the accurate data particularly with regard to:	1	Item			
D	Insulation types used on site	1	Item			
E	Manufacturer's data sheets for heat pumps, boiler, solar collector, PV panels, cylinder type etc.	1	Item			
F	Air permeability pressure test results.	1	Item			
G	Independently certified u-values for windows /doors	1	Item			
H	Certification of ALL acceptable construction details used	1	Item			
J	The contractor's BER Assessor is required to liaise/consult with the council and confirm compliance with current TGD Part L (Conservation of Fuel and Energy) prior to registration with S.E.A.I. and also provide the BER data file if required. Should the contractor fail to achieve compliance with the current TGD Part L the contractor is obliged to carry out remedial works at his own cost.	1	Item			
K	Certificate - Include in building manual (BER Certificate and Part L Report)	1	Item			
L	Submittal date - Prior to completion of the Contract works	1	Item			
	Acoustic Testing					
M	The new build extension is to be built in compliance with Architect's Specification	1	Item			
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	2. CONTRACT (Cont)					
A	Upon completion of the construction of the college extension a complete series of sample acoustic tests will be completed in order to assess compliance with regulations. Testing to be carried out by an independent specialist acoustic consultant engaged by the Contractor when construction is finished, furnished for normal use but unoccupied - Date to be agreed with Architect.	1	Item			
	Radon Testing					
B	The contractor will employ an independent 3rd Party testing contractor as registered by the Environmental Protection Agency (EPA). The appointed testing contractor will have appropriate PI insurance.	1	Item			
C	It is the responsibility of the main contractor to ensure that the quality of workmanship for the Radon Barrier system is adequate and is installed to the manufacturers details and specifications. Where remedial action is required due to poor quality of workmanship, this will be done at the Main Contractor's own expense.	1	Item			
D	A radon test is required 6 months after Substantial Completion during the Defects Liability Period.	1	Item			
	CE Marking					
E	The EU Construction Products Regulation (No. 305/2011 - CPR) requires that construction products that are covered by a harmonised European product standard or are required to conform to a European Technical Assessments should normally have a CE marking. All products specified shall carry the appropriate CE marking as required by the EU Construction Products Regulation (No. 305/2011 - CPR). The CE marking shall include reference of the product standard and the levels or classes of performance being declared against some or all of the characteristics covered by the standard.	1	Item			
F	The CE marking shall be on the product, its label, packaging or accompanying documentation. Relevant documentary evidence (i.e. an EC Declaration of Conformity, must contain the following information: manufacturer's details (name and address, etc.); essential characteristics for the product; compliance with appropriate European standards and performance data; if relevant the identification number of the Notified Body; and a legally binding signature on behalf of the manufacturer.) shall be submitted to the ER on request and shall be incorporated into the O&M and H&S manuals upon project completion.	1	Item			
G	The CE marking shall be affixed visibly, legibly and indelibly to the construction product or to a label attached to it. Where this is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging or to the accompanying documents	1	Item			
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	2. CONTRACT (Cont)					
A	The CE marking shall be followed by the two last digits of the year in which it was first affixed, the name and the registered address of the manufacturer, or the identifying mark allowing identification of the name and address of the manufacturer easily and without any ambiguity, the unique identification code of the product-type, the reference number of the declaration of performance, the level or class of the performance declared, the reference to the harmonised technical specification applied, the identification number of the notified body, if applicable, and the intended use as laid down in the harmonised technical specification applied.	1	Item			
B	Note: An importer or distributor shall be considered a manufacturer for the purposes of EU Regulation No 305/2011 and shall be subject to the obligations of a manufacturer pursuant to Article 11 (obligations of manufacturers) of EU Regulation No 305/2011, where he places a product on the market under his name or trademark or modifies a construction product already placed on the market in such a way that conformity with the declaration of performance may be affected.	1	Item			
C	Items requiring CE marking shall be as follows: Pre-cast normal/lightweight/ autoclaved aerated concrete products, Doors, windows, shutters, gates and related building hardware, Membranes, including liquid applied and kits (for water and/or water vapour control), Thermal insulation products, Composite insulating kits/systems, Structural bearings, Pins for structural joints, Chimneys, flues and specific products, Gypsum products, Geo-textiles, geo-membranes and related products, Curtain walling/cladding/structural sealant glazing, Fixed fire-fighting equipment (fire alarm/detection, fixed fire fighting, fire and smoke control and explosion suppression product), Sanitary appliances, Circulation fixtures: road equipment, Structural timber products/ elements and ancillaries, Wood based panels and elements, Cement, building limes and other hydraulic binders, Reinforcing and pre-stressing steel for concrete (and ancillaries), Post Tensioning kits. Masonry and related products. Masonry units, mortars and ancillaries, Wastewater engineering products, Floorings, Structural metallic products and ancillaries, Roof coverings, roof lights, roof windows and ancillary products. Roof kits, Road construction products, Aggregates, Construction adhesives, Products related to concrete, mortar and grout, Space heating appliances, Pipes-tanks and ancillaries not in contact with water intended for human consumption, Construction products in contact with water intended for human consumption, Flat glass, profiled glass and glass block products, Power, control and communication cables, Sealants for joints, Fixings. Building kits, units, and prefabricated elements, Fire stopping, fire sealing and fire protective products. Fire retardant products	1	Item			
	BREXIT Implications on CE Marking					
D	The UK left the EU on the 31st January 2020. The Contractor shall be aware of the implications and non-compliance since this date for them or any of their subcontractors to install products which are CE marked under UK notified bodies. Post Brexit, UK notified bodies used for certification of conformity for 'CE' marking proposes have lost their status as EU Notified bodies and are/in the process of being removed from the EU Nando website. In such instances the manufacturer of the product now need to obtain alternatives for certification of conformity for 'CE' marking.	1	Item			
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	2. CONTRACT (Cont)					
A	The contractor shall be aware that any product CE marked under a UK notified body post Brexit will no longer be accepted. Any products failing to meet this requirement shall be removed and replaced on the project with EU conforming products. All costs associated with removal and reinstatement shall be the responsibility of the contractor. No claims for costs shall be considered.	1	Item			
	Testing and Commissioning					
B	In relation to testing and commissioning for Substantial Completion of each Section and the Works the Contractor's testing and commissioning proposals shall be approved shall be approved by the ER & Design Team and the testing and commissioning of the following elements as a minimum shall be witnessed by the relevant Contractor's design Specialist:	1	Item			
C	Fire alarm/emergency and security systems; Public address system; Final stage boiler commissioning tests; Final stage commissioning of BMS and other integral control systems; Final stage commissioning of all electrical, communication, security and IT systems; Demonstrations of satisfactory performance of lighting provisions (including emergency lighting); Final tests/inspections involving acceptance by third party utility providers (e.g., ESB, Bord Gais Eireann, other relevant 3rd parties etc.); Demonstrations/tests for acceptance of all major items of equipment; In-situ slip resistant tests on floors in wet areas; Confirmation of fitting of radon testing devices at SC with recordings to be taken during the Defects period; Site services including ducting, drains, watermains etc.; Lifts; CCTV; P.A.; Roofing systems; retesting of existing systems interfered with including PA, security alarms and CCTV, electrical and mechanical systems, bio-metric security I.D. systems; acoustics; air tightness; thermographics; daylighting; any water tests required by local authority; structural waterproofing installation; foul pumps and wastewater treatment equipment (where provided); and water tests of water retaining structures (where provided) and all tests to prove compliance with noise levels, Thermographic imagery and air-tightness tests to prove compliance with Volume A Works Requirements.	1	Item			
D	Records of tests and witnessing are to be maintained and made available for inspection and included in the Safety File.	1	Item			
	Quality Assurance and Quality Control Further to Clause 8.2 of the Contract the Contractor shall prepare, implement and update as necessary project specific quality assurance systems for itself and its sub-contractors. These systems shall include, inter alia, Quality Plans for the following:					
E	- Overall management, coordination and administration of the Works	1	Item			
F	- Managing safety and health and undertaking the statutory duties of Contractor and PSCS.	1	Item			
G	- Contractor's site supervision including details of procedures, roles, responsibilities and oversight, inspection and test plans, witness points, hold points and records to be kept. This should address:	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	- - Contractor's methodology for ensuring compliance with the design	1	Item			
B	- - Contractors methodology for confirming that all site operatives are trained to use the materials, equipment, or materials that they are installing and that relevant manufacturers recommendations are being followed;	1	Item			
C	- Contractor system for ensuring compliance with the Building Regulations and specifically the measures being taken by the Contractors management, to ensure compliance. This shall include, inter alia, all concealed Works site ,Fire Stopping / Fire Safety Compliance, compliance of fire door sets including frame and ironmongery, continuity of weathering surface including weathering of all penetrations and specifically roof penetrations, continuity of insulation , air-tightness, acoustic compliance, services testing, radon barrier compliance including at joints and penetrations, slips trips and falls including the accuracy of as installed stairs including risers, the off-site compliance of pre-cast concrete work before it is brought to site, drainage;	1	Item			
D	- Methodology to plan ahead including pre-ordering of materials to efficiently undertake Works required to existing building during holiday periods;	1	Item			
E	- Materials approval prior to use in the Works, including the role of the design Specialists in the approval process and the records to be kept.	1	Item			
F	- Concrete quality control on site, including initial delivery inspection, sampling, testing pre pour and post pour check procedures and the records to be kept.	1	Item			
G	- Control of sub-contractors including selection and appointment sub-contractors and monitoring sub-contractors work to ensure compliance with the Works Requirements;	1	Item			
H	- Testing and commissioning including identification of the systems and tests to be undertaken, the roles and responsibilities of the relevant Works sub-contractors in the testing and commissioning process and the records, which are to be kept. To include details of the process for general building and room inspections, snagging and sign off as well as the mechanical and electrical building services, water, waste water, foul systems etc.;	1	Item			
J	- Compilation of the Safety File.	1	Item			
K	- Undertaking decanting of fitted furniture and & equipment;	1	Item			
L	- Coordination of building services and utilities; and	1	Item			
M	- Stakeholder management.	1	Item			
N	These Quality Plans shall be submitted to the Employer's Representative for review.	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
A	Observation and Non-Conformance register; As part of its quality systems the Contractor is required to maintain an 'Observation and Non-Conformance Register' to record and track the close out of all observations and non-conformances raised by the Contractor's site team, the Employer's Representative and Design Team etc. These registers are to be kept up to date by the Contractor, submitted regularly to the Employer's Representative for review and shall be included in the Contractor's monthly progress report.	1	Item			
B	Corrective actions for all observations and non-conformances are to be determined by the Contractor for review by the Employer's Representative.	1	Item			
	Contractor's Monthly Progress Reports The Contractor should submit a progress report at least 2 days before the start of each site meeting. Notwithstanding the contractor's obligations under Clause 4.10.2 of the contract the report must include:					
C	- a progress statement by reference to the Master programme for the works	1	Item			
D	- details of any matter materially affecting the progress of the works	1	Item			
E	- sub-contractors and suppliers progress reports	1	Item			
F	- any requirement for clarification information/ drawings/ details to fulfil any obligations under the contract	1	Item			
G	- labour statistic report: daily record listing all management, skilled and unskilled labour on site, by trade	1	Item			
H	- plant report: weekly record listing significant elements of plant and machinery	1	Item			
J	- weather report: daily record listing part days/ days lost and identifying elements of work affected.	1	Item			
K	- schedule of work planned over next 2 weeks	1	Item			
L	- updated sample schedule in format prescribed in Architects schedule of samples.	1	Item			
M	- issue with BCAR inspections, reports, certification arising	1	Item			
N	- schedule of testing/inspection required over the next two weeks.	1	Item			
P	- Updated Inspection Plan (where applicable)	1	Item			
Q	- Progress photographs: fortnightly digital record photographs showing overview of progress on site and photographs of works completed since the previous site meeting (format: on disc) - Issue to Employers Representative. Minimum 40 photographs, unless by agreement with ER.	1	Item			
				To Collection €		

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	2. CONTRACT (Cont)					
	The Control of Noise					
A	The Contractor shall include noise monitoring which shall a) establish current noise levels around the site and within the college and b) monitor noise levels within the college site and building during the various stages of the project. Noise during site clearance and construction shall not exceed 65 dB (A), Leq 30minutes and the peak noise shall not exceed 75 dB (A), when measured at any point off site.	1	Item			
B	The Contractor shall provide and install sufficient sound monitors on the site to monitor the above requirement for the duration of the Contract. Recorded noise levels should be presented within the Contractor's monthly progress reports.	1	Item			
	Vibration Monitoring					
C	The Construction works shall be carried out in accordance with the noise guidance set out by BS 5228-1:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites and the NRA Guidelines for the tratment of Noise and Vibration in National Road Schemes.	1	Item			
D	Vibration monitors to be installed on each premises that adjoins the site boundary as well on buildings on site to be retained. To be monitored and reported on by the main contractor.	1	Item			
E	The Contractor shall monitor ground vibrations at selected locations specified by the Employer's Representative to the approval of the Employer's Representative on site during the progress of the works. Each vibrograph shall be certified as being in proper working order and shall unless otherwise approved, record vibrations in three directions simultaneously with a print-out showing the amplitude and frequency of the vibrations.	1	Item			
	Nuisance Precautions, Generally					
F	Take adequate precautions to protect persons and property from damage or nuisance caused by water, smoke, dust, rubbish, noise and otherwise. Execute any work which, in the Employer's Representative's opinion, is likely to cause annoyance or inconvenience to occupants of adjoining property at such times during working hours as the Employer's Representative may direct.	1	Item			
G	The Contractor shall appoint a liaison officer for all necessary communications with Drogheda Institure of Further Education and its representatives. The role of the liaison officer shall extend to communications with the adjacent residents/ occupants throughout the duration of the works. Details of the proposed liaison officer shall be agreed with the Employer's Representative prior to commencement.	1	Item			
H	The Contractor shall maintain a Complaints Register to record any complaints regarding but not limited to noise, odour, dust, traffic or any other environmental nuisance. The Complaints Register shall include details of the complaint and measures taken to address the complaint and prevent repetition of the complaint.	1	Item			
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	2. CONTRACT (Cont)					
	Tax Clearance					
A	It will be a condition precedent to the award of this contract that the Contractor must be able to produce promptly a Tax Clearance Certificate (unless he has a Sub-Contractor C2 Certificate). In the case of a non-resident, a statement from the Revenue Commissioners will be required.	1	Item			
B	Furthermore, it will be the responsibility of the successful Contractor to ensure that any Sub-Contractor employed by him on this contract is in possession of either a bona fide C2 Certificate or a Tax Clearance Certificate and to submit such certificate in each case for inspection by this office when required to do so. No claims for increased costs will be entertained in respect of contractor's compliance with this condition.	1	Item			
C	Payments under this contract will at all times be conditional on compliance with these requirements. It is emphasised that in the absence of a current C2 Certificate, tax must be deducted at a rate of 35% from payments due in accordance with Section 17 of the Finance Act 1970, notwithstanding that a Tax Clearance Certificate has been furnished by the Contractor.	1	Item			
	CIF Pension Sick Pay Scheme					
D	The Contractor shall be a contributor for the duration of the Contract, to a Contributory Pension and Sick Pay Scheme approved by the Revenue Commissioners in respect of all employees and must comply with the relevant labour agreements.	1	Item			
	Custom Duties					
E	The Contractor will be deemed to have included in his tender for all Customs and other duties legally payable.		Item			
	Value Added Tax (VAT)					
F	The tender shall be submitted on a VAT exclusive basis. However tenderers shall list separately the items included in the tender amount that are liable for VAT at rates other than the special building rate (13.5%) to allow for the calculation of the Employer's total VAT outlay on the contract. The Employer reserves the right to seek advice from the Revenue Commissioners on the accuracy of the VAT allocations shown and, in the event of a dispute, the opinion of the Revenue Commissioners on the VAT rate appropriate to any item of work shall be final (See Appendix A of this Pricing Document).	1	Item			
	During the Contract, payment amounts due to the Contractor shall be invoiced on the following basis:					
G	(a) the amount due to the Contractor that carries a VAT liability of 13.5% shall be invoiced separately from any other amounts due. This invoice shall be clearly marked with the statement 'VAT ON THIS SUPPLY TO BE ACCOUNTED FOR BY THE PRINCIPAL CONTRACTOR'	1	Item			
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	2. CONTRACT (Cont)					
A	(b) amounts due to the Contractor that carry no VAT liability, or are liable at rates other than 13.5%, shall be invoiced on a second invoice that identifies amounts due at the various VAT rates (apart from 13.5%), identifies the VAT due at the various rates and states the total amount due for payment.	1	Item			
B	Applications for payment and valuations of Compensation Events shall identify the items of work that carry a VAT liability at rates other than 13.5%, stating the rate applicable.	1	Item			
C	Where the cost of any items are VAT exempt or zero rated for VAT purposes the relevant items shall be itemised and the amount of the liability at this rate shall be clearly identified.	1	Item			
	Patent Rights and Royalties					
D	The Contractor shall save harmless and indemnify the Employer for and against all claims and proceedings for or on account of infringement of any patent rights, design, trademark or name of other protected rights in respect of any constructional plant, machine work or material used or in connection with the Works.	1	Item			
	Removal of Improper Work and Materials					
	The Employer's Representative shall have the power to order during the progress of the Works :					
E	(a) Removal from the site of any materials which, in his opinion, are not in accordance with the Contract.	1	Item			
F	(b) Substitution of proper materials.	1	Item			
G	(c) Removal and proper re-execution (notwithstanding any previous test thereof or interim payment there for) of any work which in respect of materials of work people is not in accordance with the Contract.	1	Item			
	Unfixed Works Items					
H	The Employers Representative may ask the Contractor for proof of full ownership (free from any lien or charge) in certain goods or materials delivered to the site to be embodied in the works in accordance with Clause 11 sub-clause 11.2. If this proof is not forthcoming the Employers Representative will be entitled to withhold certifying payment in respect of goods and materials in question. Payment for goods will be based on percentage value of 'material costs only' as stated within Contract Schedule 1 Part L.	1	Item			
	Other items for consideration					
J	Liaise and co-operate continuously with ER to ensure that the minimum disturbance and upset is caused to the adjoining college / neighbours. Transistor radios, cassette players or the like and singing are banned within all work areas.	1	Item			
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	2. CONTRACT (Cont)					
A	Ensure that each Section shall be operational and have been fully snagged in advance of requesting the Employer to certify Substantial Completion. For the purposes of achieving Substantial Completion the Contractor shall ensure that the Works in that Section have been carried out to such a stage that they can be immediately used by the Employer and the college for its intended purpose and that any items of work or supply then outstanding and any Defects then patent are of trivial nature only and are such that their completion or rectification does not interfere with or interrupt the use of that Section. Such outstanding items and Defects shall be proceeded with expeditiously and shall be finished or rectified within a reasonable time after the date of Substantial Completion;	1	Item			
B	Construction deliveries should not be made to site during the college morning start time or the afternoon college closing time to avoid conflict with other traffic.	1	Item			
	Site House Keeping					
C	Locate scaffolding, plant, chutes etc. to ensure all of the above requirements are complied with.	1	Item			
D	Air-borne dust should be prevented at all times	1	Item			
E	Ensure access for fire brigade and ambulances must be maintained at all times.	1	Item			
F	Ensure that the lighting of fires / burning of rubbish is not allowed on the site area.	1	Item			
G	Ensure that existing drains and sewers are kept clear and are in full use during the Works.	1	Item			
H	Ensure a safe working environment when working on roof areas or other heights	1	Item			
J	Ensure that all particularly noisy and disruptive work is carried out in accordance with good practice.	1	Item			
K	Road cleaning - All necessary measures shall be taken by the Contractor to prevent spillage or deposit of clay, rubble or other debris on adjoining roads during the course of the works. Ensure compliance with Planning Conditions including carrying out the works in such a manner as to ensure that the adjoining roads are kept clear of debris, soil and other material and if the need arises for cleaning works to be carried out on adjoining public roads, all this cleaning shall be at the Contractor's own expense.	1	Item			
	Archaeology					
L	There is always a possibility that archaeologically enriched soils, features or deposits indicating the presence of destroyed or buried Sites will be revealed during construction, even in areas in which no impact is predicted. In such an event, attention is drawn to the National Monuments Legislation (1930-2004), which states in the event of the discovery of archaeological finds or remains, The Department of Arts, Heritage and the Gaeltacht and the National Museum of Ireland should be notified immediately.	1	Item			
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	2. CONTRACT (Cont)					
	Levels survey					
A	Before commencement, the Contractor shall undertake a levels survey of areas within the site boundary. A copy for this survey shall be forwarded to the Employers Representative in Autocad.dwg and PDF format. Any discrepancies to be advised to the Employers Representative.	1	Item			
	Acoustic Testing					
B	The Main Contractor is to employ (at their own cost) a recognised Acoustic Consultant to check the building twice during the construction process and again immediately prior to handover, to ensure that the building has been built in full compliance with the Acoustic documentation, including for the consultant to provide a certificate to this effect. This certificate of compliance is to be included in the Safety File and issued with all other certification by the contractor oncompletion	1	Item			
	Radon Membrane Inspection and Integrity Testing					
C	Provide for independently validated testing of the gas barrier by a specialist consultant, MEC Environmental Ireland (+353 86 241 8783 - www.mecenvironmental.ie) or equivalent, by means of air lancing to ASRM D4437 or approved in line with CIRIA RP960 - 'Good practice on Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases'. Contractor to include a cost herein if not included elsewhere.	1	Item			
	Schedule of Dilapidations					
D	The Contractor, on taking possession of the site, shall submit to the ER a photographic record and a detailed schedule of dilapidation's of areas that will be affected by the execution of the Works Requirements. The agreed schedule will be held as a record on the condition of the existing roads and boundaries when possession was granted. The provision of this record does not mitigate the Contractor's insurance responsibilities under the Conditions of Contract. The Contractor shall also undertake and submit to the Employers Representative a photographic record and detailed schedule of adjacent buildings and roads.	1	Item			
E	Before starting deconstruction/ demolition work, the contractor shall examine all available information, and carry out a survey of: the structure or structures to be deconstructed/ demolished; the site on which the structure or structures stand, and; the surrounding area. A report and method statement(s) shall be submitted following this survey describing form, condition and details of the structure or structures, the site, and the surrounding area.	1	Item			
F	The Contractor, on taking possession of the site, shall submit to the ER a photographic record and a detailed schedule of dilapidation of areas (hedgerow, road surfaces, boundaries to the site) that will be affected by the execution of the Works Requirements. The agreed schedule will be held as a record of the condition of the existing roads and boundaries when possession was granted. The provision of this record does not mitigate the Contractor's insurance responsibilities under the Conditions of the Contract.	1	Item			
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	2. CONTRACT (Cont)					
	Third Party Fire Safety Certification					
A	The Contractor shall employ (at the Contractor`s own cost) a recognised Fire Safety Consultant to check each section of the building twice during the construction process and again immediately prior to handover, to ensure that the building has being built in full compliance with Fire Safety Certificate documentation including confirmation that the cause and effect strategy has been complied with in terms of the M&E installation and for the Consultant to provide a Certificate to this effect. This Certificate of Compliance is to be included in the Safety File and issued with all other Certification by the Contractor on completion. The third party fire safety certifier to provide Ancillary Inspection Completion Certificate (SI RIAI ACI 02) under SI 09 in relation to all of the construction elements of the building relating to Fire Safety and Compliance with Building Regulations Part B and the granted Fire Safety Certificate.	1	Item			
	Extended Guarantees					
B	Contractor to include a cost herein for all extended guarantees as outlined in the Architects Specification.	1	Item			
	Ecology					
C	No vegetation/ hedgerow should be cleared during the bird nesting season 1st March to 31st August inclusive until the vegetation is first checked for the presence of breeding birds, badgers and bats by a Qualified Ecologist engaged and employed by the Contractor.	1	Item			
	Existing Trees					
D	Before any construction works commence on the extension, the Contractor shall install protective fencing to create compounds around all existing trees and hedgerows designated for retention. The Contractor shall ensure that these protected areas remain free of all building materials, plant, machinery, fuels, lubricants, and construction waste for the duration of the Works.	1	Item			
	Articles of value					
E	All articles of value and of antiquarian or archaeological interest which may be found in the excavation or on the property of the Employer shall be handed over to the Employers Representative or the Employer.	1	Item			
	Historical Finds					
F	The Contractor accepts full responsibility for any archaeological remains found on any Site during the Works in accordance with Clause 7.8 (Archaeological Objects and Human Remains) of the Contract Conditions. All articles of value and of antiquarian or archaeological interest which may be found in the excavation or on the property of the Employer shall be handed over to the Employers Representative or the Employer.	1	Item			
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	2. CONTRACT (Cont)					
	Construction Environmental Management Plan (CEMP)					
A	The Contractor shall prepare a Construction Environmental Management Plan (CEMP) to be submitted to the Planning Authority before the commencement of any works on site. This document shall be treated as a live document and held onsite at all times for inspection. The CEMP shall include but not be limited to operational controls of dust, noise and vibrations, construction traffic management, waste management, protection of soils and groundwaters, protection of flora and fauna, site housekeeping, emergency response planning, site environmental policy, environmental regulatory requirements and project roles and responsibilities. The CEMP shall also address extreme weather (drought, wind, precipitation, temperature extremes) and the possible impacts of receptors and mitigation of same. The CEMP shall be treated as a live document.	1	Item			
	Construction and Demolition Waste Management Plan (CDWMP)					
B	The Contractor shall prepare a Construction Demolition and Waste Management Plan (CDWMP) for the proposed development and shall submit to the Planning Authority for written agreement prior to commencement of any site activity. This document will be treated as a live document and be held onsite at all times for inspection. The CDWMP shall be updated in accordance with the Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects (EPA, 2021) and new National Waste Management Plan (2024-2030). Wastes arising from demolition and construction works shall be managed on site in such a manner so as to avoid environmental pollution and/or the crea tion of nuisance pending removal off-site by permitted waste collection contractors only The CDWMP shall be treated as a live document and communicated to all relevant personnel.	1	Item			
C	All waste generated during construction, including surplus excavation material to be taken offsite, shall only be recovered or disposed of at an authorised site which has a current Waste Licence or Waste Permit in accordance with the Waste Management Acts, 1996 to 2008. All wastes shall be managed in accordance with the Resource and Waste Management Plan submitted to the Local Authority.	1	Item			
	Building Services The Contractor shall include for the provision of a dedicated Services Co-ordinator whose role shall include carrying out the following activities:					
D	- The proper and accurate co-ordination of services	1	Item			
E	- The preparation, co-ordination, and weekly updating of the Contractors Building Services Integration Matrices	1	Item			
F	- Agreement of service routes/builders work openings	1	Item			
G	- Liaise at all times with the Services Engineers and Services Sub Contractors	1	Item			
H	- Liaise with the specialist equipment installers during the works	1	Item			
J	- Liaise with the Utility companies (Power, telephone, gas, water, and the like) and co-ordinate all Works and connections to avoid delays to the project	1	Item			
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	2. CONTRACT (Cont)					
A	- Liaise with relevant Local Authority bodies and co-ordinate all Works and connections to avoid delays to the project;	1	Item			
B	- Ensure compliance with Building Regulations	1	Item			
C	- Ensure that all services equipment, parts, plant, components , fittings etc are ordered well in advance of the relevant works starting to avoid delays to the works	1	Item			
D	- Ensure proper and accurate co-ordination of all services	1	Item			
E	- Ensure proper and accurate system of final commissioning, testing and staff training	1	Item			
F	- Ensure full and accurate as-built drawings are prepared and signed off for inclusion in the O&M manual	1	Item			
G	- Ensure full and accurate as-built technical literature, maintenance instructions and guarantees	1	Item			
	Maintenance obligation on Mechanical and Electrical Installations for duration of Defects Period					
H	The Works Requirements include an obligation to maintain the mechanical and electrical installations, in addition to remedying defects, until the expiry of the Defects Period. This obligation shall include the provision of all consumables and disposal of used items / materials arising from the maintenance. 'Consumables' shall exclude fuel for mechanical installations, the purchase of which will be undertaken outside the scope of the Works Requirements. Fuel for testing of installations shall be deemed to be the responsibility of the Contractor and to be included for in the Contract Sum. The Contractor shall include a cost herein if not included elsewhere.	1	Item			
J	BMS contractor to provide two site visits during defects period for seasonal commissioning.	1	Item			
K	Datalogging - PC to be provided capable of storing archive data spreadsheets for at least 5 years.	1	Item			
	Landscaping					
L	The Contractor shall be responsible for the maintenance of all landscaping works during the One Year Defects Liability Period. The Contractor shall include all associated costs for this maintenance within this item, if not already provided elsewhere.	1	Item			
	Alternative Performance Specifications - Energy Performance Assurance					
	1. Alternative Proposals:					
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	2. CONTRACT (Cont)					
A	If the Contractor proposes any alternative materials, products, or performance specifications to those identified in the Contract Documents, such alternatives shall not be adopted without the prior written approval of the Employer's Representative/Design Team.	1	Item			
	2. Performance Verification:					
B	Where such alternatives are proposed, the Contractor shall provide a detailed, independently verifiable analysis demonstrating that the substitution will have no adverse effect on the final operational energy demand or thermal performance of the completed building.	1	Item			
	3. Calculation and Methodology:					
	The analysis shall:					
C	a. Be prepared by a suitably qualified professional (e.g., building services engineer or energy modeller);	1	Item			
D	b. Include all necessary calculations, simulations, and supporting data;	1	Item			
E	c. Be based on recognised methodologies and standards (e.g., CIBSE TM54, SAP, SBEM, or equivalent, as applicable); and	1	Item			
F	d. Demonstrate equivalence or improvement in predicted energy demand and carbon emissions relative to the specified design.	1	Item			
	4. Approval Requirement:					
G	No alternative materials or systems shall be incorporated into the Works until the Employer (or their Representative) has reviewed and accepted the Contractor's analysis in writing.	1	Item			
	5. Responsibility:					
H	Approval of any alternative proposal shall not relieve the Contractor of responsibility for ensuring that the completed Works meet all specified performance criteria, including energy and environmental performance targets.	1	Item			
	Schedule of Guarantees					
J	The contractor shall include a cost herein for providing all required Guarantees/ Insurance Back Guarantees for the various elements of works. as outlined in the Volume A Works Requirements. No claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
	Monthly Progress Photos/ Video					
K	The contractor shall provide 'Drone' aerial shots of the project on a monthly basis. The Contractor shall include for all costs deemed necessary in connection with these works. No claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
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	2. CONTRACT (Cont)					
A	The contractor shall provide a 10 minute walk through video of the building and siteworks to demonstrate progress on a monthly basis. The Contractor shall include for all costs deemed necessary in connection with these works. No claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
	Architectural Photography					
B	The contractor shall employ a company to provide professional photogaphs of the finished project including 'Drone' aerial shots. The Contractor shall include for all costs deemed necessary in connection with these works. No claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
	Works Proposals					
C	The Contractor shall include a cost herein for the preparation and submission of the Works Proposals as detailed in Volume D - Works Proposals (responses to the Technical Merit Criteria as outlined in Appendix 1 of the ITT document and the accompanying tender information).	1	Item			
	Pre-Substantial Completion Requirements/ Checklist					
	Contractor MUST ensure the following:					
D	1. Provide independent Fire Safety compliance report as per specification including specified fire door, screen and ironmongery information.	1	Item			
E	2. Provide independent airtightness certification as per Specification.	1	Item			
F	3. Provide thermographic report as per Specification.	1	Item			
G	4. Provide all information to BER assessor.	1	Item			
H	5. Provide letter of compliance of the construction of the works with the Building Regulations as per the Specification.	1	Item			
J	6. Provide the Safety file in compliance with the Specification and the requirements of the PSDP.	1	Item			
K	7. Provide a full itemised schedule for all M/E installations/ plant/ equipment etc that requires testing, commissioning and demonstration to the client prior to Substantial Completion. These are to be listed on a single document and signed and dated by the contractor, services consultant and Employer's Representative as a record that all took place and were clearly understood.	1	Item			
L	8. Provide original warranties for each piece of M&E equipment - as listed by Services Engineers and component of building envelope as per Architect's specification. State clearly the life of the warranty.	1	Item			
M	9. Provide original guarantees (insurance backed) for: roofing; flat roofing; windows.	1	Item			
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	2. CONTRACT (Cont)					
A	10. It is the contractor's responsibility to snag the building. Thorough snagging is to be carried out before presentation to the design team for checking prior to Substantial Completion. The contractor is to ensure that those elements of the building that will be closed up or inaccessible at Substantial Completion are snagged and inspected earlier in the programme.	1	Item			
B	11. 1 or 2 page summary to be provided at the front of the Safety/ O&M file listing all items of equipment that require regular maintenance or testing and the periods for same - also the date for the first inspection.	1	Item			
C	12. Handover of keys and fobs: provide - 'Key handover certificates' for the following - doors, furniture, electrical cabinets etc, note boards/ cabinets, windows, access panels (in ceilings and walls/ floors etc), lifts and manholes etc - including key or fob/ swipe card. All keys to be tagged. Two copies of each key to be provided.	1	Item			
D	13. .Drainage system to be pressure tested or ball-bearing/ CCTV tested to civil engineers requirements.	1	Item			
E	14. Draw ropes been left in all empty/ spare ducts and photographed/ recorded.	1	Item			
	Commissioning Plan					
F	Contractor to provide Commisioning Plan in advance of Substantial Completion. The sample shall demonstrate the Contractor's proposed approach to managing and delivering the commissioning process, including planning, coordination, testing, verification, and handover. The plan should outline key activities, roles and responsibilities, sequencing with the construction programme, and quality assurance measures to ensure that building services and systems achieve the specified performance outcomes. The submission will be assessed on the clarity, completeness, and suitability of the proposed methodology, and the Contractor's demonstrated understanding of best practice commissioning procedures in accordance with relevant standards.	1	Item			
	Handover Video					
G	As part of project completion and client handover, the Contractor shall produce a comprehensive handover video documenting the completed building. The video shall provide a clear visual and verbal overview of the building's key features, systems, and operation, including demonstration of principal building services, access routes, maintenance areas, and safety systems. The purpose of the video is to assist the Client's operational team in understanding the building's layout, functionality, and maintenance requirements. The video shall be of professional quality, approximately [10-20 minutes] in duration and shall be submitted in a standard digital format (e.g. MP4) as part of the final handover documentation. The Contractor shall obtain approval of the proposed content outline prior to filming and ensure that all information presented is accurate, concise, and aligned with the operation and maintenance manuals.	1	Item			
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	2. CONTRACT (Cont)					
	ADDITIONAL ENGINEERING PRELIMINARIES					
	Formation Levels					
A	- For all structures more than one storey or with a storey height exceeding 3m, the foundation formation levels shall be verified by way of bearing pressures.	1	Item			
B	- The design safe bearing pressures shall be as indicated on the Enginner's Drawings & Specification or issued otherwise.	1	Item			
C	- The Contractor shall engage the services of a competent Geotechnical Engineer to inspect and confirm the safe bearing pressures at the exposed formation levels. Tenderers should base their pricing on a minimum of 6 visits by a Geotechnical Specialist.	1	Item			
D	- The Contractor shall include the price of engaging the Geotechnical Engineer and any associated overhead costs. The submission shall cover such visits and extensions thereof as such is required for the certification of the works.	1	Item			
E	- Summary inspection reports shall be issued within two weeks of the substructure works being completed. The inspection reports shall summarise all principal issues that arose and the associated response actions.	1	Item			
F	- The Contractor shall also issue upon completion of the works, a representative batch of photographs covering the inspection of all principal locations.	1	Item			
	Notifications					
G	- The Contractor shall notify the Employers Representative on dates for foundation inspections. The Employers Representative reserves the right to make independent inspections. Such notifications shall be issued in writing at least five working days in advance of such works.	1	Item			
H	- No claims for delays arising from this requirement shall be entertained. The Contractor in the pricing proposal shall include this in the programme of works and all the relevant or associated costs.	1	Item			
J	- Notification for unexpected ground conditions shall be issued in writing to the Employers Representative within 24 hours of them becoming apparent.	1	Item			
	<u>Testing Requirements</u>					
	Testing of Sewers, Drains & Watermains					
K	The Contractor to include all costs associated with the testing requirements for watermains and sewers as outlined in the Civil Engineering Specification included in Volume A Works Requirements	1	Item			
L	The phasing and the testing of Watermains & Waste Water networks in line with the phasing requirements of the site are to be agreed between Irish Water and the Contractor.	1	Item			
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	2. CONTRACT (Cont)					
A	The Contractor shall refer to Sections 4.10 to 4.11 of the Irish Water 'Code of Practice for Waste Water Infrastructure' and include a cost herein for all works associated with testing of Foul Sewer.	1	Item			
B	The Contractor shall refer to Sections 4.10 to 4.15 of the Irish Water 'Code of Practice for Water Infrastructure' and include a cost herein for all works associated with testing of Watermains.	1	Item			
	Testing of All Sub-Grade					
C	The dry density moisture content of the compacted sub-grade shall be determined by means of the BS standard Compaction Test (Proctor Test) as described in BS 1377:1990.	1	Item			
D	Control of field compaction by use of this method of testing requires frequent determination of the density and moisture content of the compacted soil and also measurements of the moisture content of the excavated soil to assess its suitability as filling material. BS 1377 gives a number of standard methods of measuring the dry density the two most commonly used being the sand replacement method and the core cutter method. By measuring the moisture content of a representative sample the dry density can then be calculated. Standard cylinder penetration tests on samples of subgrade shall be carried out in order to determine the C.B.R. (California Bearing Ratio) value. Soils having C.B.R. values of less than 2% shall be removed to tip and replaced by selected filling material.	1	Item			
	Pyrite Testing Regime					
E	The contractor is to engage an independent testing company approved by the engineer (either Ground Investigations Ireland or IGSL or equivalent) to confirm that all the hardcore which has been supplied to the site is a suitable material with a negligible risk of swelling	1	Item			
F	The contractor to furnish proof by way of independent testing and certification that all the hardcore he is using passes the requirements of table 49, all other results are deemed failed.	1	Item			
G	The independent testing agency is to carry out the testing and provide a corresponding report confirming that all hardcore used on site is an acceptable material with a negligible risk of swelling.	1	Item			
	Testing of Concrete Blocks					
H	The Contractor shall include for independent testing of blocks carried out in accordance with IS EN 771-3:2011. At least 2 sets of block samples shall be tested during the course of construction. The maximum interval between sampling shall be 3 months. The engineer shall be notified to supervise the sampling.	1	Item			
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	2. CONTRACT (Cont)					
	Testing of Mortar					
A	The Contractor to include all costs associated with the testing of mortar requirements outlined in the Civil and Structural Specification included in Volume A Works Requirements	1	Item			
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2. CONTRACT (Cont)					
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2. CONTRACT **Carried to Summary**					

	3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY BY T					
	3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY BY THE EMPLOYER					
	3.1 Work by Novated Specialists and other Specialists					
A	n/a		Note			
	3.2 Work by Utility Providers					
B	Capital contributions to utility providers for the permanent connections and permanent supply (e.g Irish Water, ESB, Bord Gais, Eir, etc.) will be paid by the Employer.	1	Item			
C	The Contractor, however, will be required to organise and manage the implementation of such works, as if they were part of the contract works. In this regard, therefore the contractor must allow in his tender price, and in his programme of works, for liaising with the Employer/Employer's Representative and the outside body concerned, for giving adequate notice to the Employer to pay for this work, for giving all notices required, for ensuring that the work concerned is carried out at the appropriate time/times to enable him (the contractor) to carry out and complete the overall project works in compliance with his contractual obligation, and for meeting any reasonable managerial / supervisor requirements that may be asked of him by the parties involved in the process.	1	Item			
D	The capital contribution costs and all other costs associated with all temporary diversions and temporary connections and supplies required for completion of the Works shall be borne by the Contractor.	1	Item			
E	All Works in relation to utility installations & diversions are to be in accordance with the Works Requirements	1	Item			
F	The tender sum is to include for all costs in connection with water & sewer connections incl. all fittings. The contractor is responsible for coordinating timescale with all service providers e.g. Irish Water, Roads and other agencies such as ESB, Public Lighting Designers/Providers, Eir and to ensure that all necessary licences, agreements and permissions such as for water & sewer connections including road openings are in place prior to commencement of any works.	1	Item			
G	ESB Networks installation: as per the Electrical Engineer's ESB Networks site layout drawing and specifications included in the Works Requirements. All costs including supply to buildings, all necessary ducting, mini/micro pillars to be borne by Contractor. The contractor is required to liaise with the ESB and ascertain all ESB requirements prior to tender and include all costs in his tender.	1	Item			
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	3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY BY T					
A	Site lighting installation: as per the Electrical Engineer's electrical services site lighting site layout drawings and specifications included in the Works Requirements. All costs including all necessary ducting, boxes, mini/micro pillars, lamp standards etc. to be borne by the contractor. All site lighting in compliance with ESB requirements, SEAI LED Lantern Specification for Public Sector Exterior Lighting .	1	Item			
B	Contractor to liaise with ESB and coordinate timescale for re-routing existing overhead power lines and underground power lines where applicable.	1	Item			
C	All electrical works to be in accordance with all relevant current legislation and statutory requirements and with ETCI and ESB standards including all necessary ETCI completion certificates for internal and external electricity wiring and other electricity installations. All electrical sub-contractors to be RECI or equivalent approved.	1	Item			
D	Eir installation: as per the Electrical Engineer's electrical services Eir site layout drawings and specifications included in the Works Requirements. All costs and supply to building to be borne by Contractor. Contractor is responsible for liaising and coordinating timescale with Utilities Personnel. All ducts, boxes and equipment to be supplied by contractor.	1	Item			
E	Irish Water: It is the responsibility of the main contractor to prepare and submit the Irish Water (IW) connection applications paperwork agreements and engage with all other stakeholders to ensure connections for all services are made within the project programme. It is the responsibility of the main contractor to agree and receive all connection applications agreements to ensure connections for all services and road opening licenses are obtained within the project programme.	1	Item			
	3.3 Work by others engaged directly by the Employer					
F	The Employer intends to appoint contractors for the provision of loose furniture, IT end user equipment and other specialist services and specialist equipment and the Contractor will be required to facilitate the work of these Contractors as Artists and Tradesmen. Contractor to allow for providing facilities for these Contractors and for insurance indemnifying the Contractor against claims arising from such Employment.	1	Item			
	The Contractor must provide:					
G	Special attendances	1	Item			
H	General attendances	1	Item			
J	Additional insurances	1	Item			
K	Storage	1	Item			
L	Positioning all equipment	1	Item			
				To Collection €		

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	3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY BY T					
A	Removing all packaging and disposing of same	1	Item			
B	Lifting, Positioning and commissioning large heavy specialist equipment (similar in size and complexity to a kiln)	1	Item			
	The fit-out of employer-supplied loose furniture and equipment will commence prior to the Substantial Completion, during the construction programme. The contractor will be required to facilitate the delivery of the loose furniture and equipment by others and the fixing and commissioning of equipment before Substantial Completion. In particular:					
C	Facilitate delivery of loose furniture supplied by the employer, and facilitate distribution of furniture by the Employer's Personnel in locations around the new facility	1	Item			
D	Facilitate delivery of fixtures, fittings and equipment as supplied by the employer and fix in locations as advised by the ER, and as indicated on Architects room layout drawings included in Volume A3, including white boards, interactive white boards, pin boards, toilet roll holders, soap dispensers.	1	Item			
E	Facilitate delivery of IT equipment as supplied by the employer and commissioning of same prior to Substantial Completion.	1	Item			
F	Facilitate the delivery of white goods, appliances and specialist equipment as supplied by the employer and fix, wire, plumb and commission in locations as advised by the ER and indicated on the Architects Room Layout drawings included in Volume A3.	1	Item			
G	Facilitate the Artist completing the % for art, and provide access to the works as required.	1	Item			
H	The main contractor is responsible to ensure their insurance's includes for the above items and covers all Employers Personnel, including those indicate above.	1	Item			
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3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY BY T					
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3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY **Carried to Summary**					

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	4. GENERAL FACILITIES AND OBLIGATIONS					
	4. GENERAL FACILITIES AND OBLIGATIONS					
A	Maintaining temporary works, adapting, clearing away and making good shall be deemed to be included with the following items Under 4. (General Facilities And Obligations). Notices and fees to statutory Authorities or Public of Private Utility Providers or Undertakings and related to the preceding items shall be deemed to be included with those items. No claims in this regard will be entertained whatsoever.	1	Item			
	a) Supervision and co-ordination of the Works.					
	Generally					
B	General: Accept responsibility for coordination, supervision and administration of the Works including Building Regulation Compliance, including subcontracts.	1	Item			
C	Coordination: Arrange and monitor a programme with each subcontractor, supplier, local authority and public service company/ authority. Obtain and supply information as necessary for coordination of the work.	1	Item			
	"The building control process, in order to be effective, requires an Inspection Plan of appropriate intensity and frequency. However, it is not practicable for every item of work to which the Building Regulations relate to be examined. The supervision by the Builder is, therefore, of critical importance." - Code of Practice for Inspecting and Certifying Buildings or Works issued by the Department of the Environment Community and Local Government (February 2014)					
	The Contractor shall;					
D	(a) accept from the Building Owner the assignment to build and supervise the building or works outlined in the Commencement Notice;	1	Item			
E	(b) familiarise themselves with the drawings, specifications and documents lodged with the Commencement Notice;	1	Item			
F	(c) ensure a competent person is assigned to oversee the Construction works;	1	Item			
G	(d) co-operate with the design team, the Assigned Certifier and other certifiers;	1	Item			
H	e) ensure that the workmanship complies with the requirements of the Building Regulations;	1	Item			
J	(f) ensure that materials which they select and for which they are responsible comply with the requirements of the Building Regulations;	1	Item			
K	(g) sign the Certificate of Compliance (completion);	1	Item			
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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	(h) provide to the Assigned Certifier, such documents for which they are responsible, as may assist the Assigned Certifier to collate particulars for the purposes of handover and certification, and/or for further submissions to the Building Control Authority;	1	Item			
B	(i) ensure the coordination and provision of all test certificates and confirmations to the satisfaction of the Assigned Certifier or other designated inspectors or certifiers providing Ancillary Certificates; and	1	Item			
C	(j) maintain records.	1	Item			
D	The Contractor is required to submit a method statement describing how they will ensure compliance with the Building Regulations. This will include:	1	Item			
E	The Provision of Certificates of Compliance with Building Regulations by the Contractor, with supporting certificates by all relevant specialists including Consultants, sub-contractors, suppliers, manufacturers and all relevant Contractors with a design element to their works in the form described in the Works Requirements , or where the requirement is set out in the Inspection Plan	1	Item			
F	In the method statement the Contractor must describe how they will ensure compliance with works on site including independent tests to be provided to confirm compliance with the Regulations	1	Item			
G	The method statement should confirm the Contractor's management system for ensuring compliance with the Building Regulations. The method statement should name the individuals on site, in the Contractors Organisation (and direct employment) who are responsible for supervising the works to ensure compliance with the Building Regulations and the Inspection Plan. This particularly applies for elements of repetitive work that may be concealed between site inspections.	1	Item			
	These elements include but is not limited to;					
H	Foundations	1	Item			
J	Services below the slab	1	Item			
K	Continuity of radon barrier system using materials from one supplier only,	1	Item			
L	Continuity of radon barrier system and sealing around penetrations	1	Item			
M	Compliance of concrete with specified strengths.	1	Item			
N	The installation of all structural fixings	1	Item			
P	Steel connections, bolts, fixings	1	Item			
Q	That pre-cast concrete reinforcing has been correctly installed in the suppliers workshop prior to site delivery	1	Item			
R	Continuity of insulation with no gaps, including at jambs, corners, and at the base adjacent dpc / slab	1	Item			
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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Cleanliness of cavities including blockwork cavity walls,	1	Item			
B	Correct location of cavity ties	1	Item			
C	Installation and continuity of air-tightness seals and membranes	1	Item			
D	Installation of fire stopping and acoustic barriers and seals	1	Item			
E	Installation of fire rated and acoustic door frames and their ironmongery to ensure compliance with their test certificates and to comply with the works requirements.	1	Item			
F	Installation of services systems including fire safety systems	1	Item			
G	The installation of roof fixings, the sealing of roof joints	1	Item			
H	The weather proofing of each penetration through walls, floors, and roofs,	1	Item			
J	How they are ensure that all roofing systems are being installed fully in accordance with the manufacturers recommendation and the Works Requirements	1	Item			
K	The construction of all steps and stairs so that all risers and goings, and escape widths and heights are compliant with the Building Regulations, and that the first step matches the other steps	1	Item			
L	The method statement should confirm the Contractors methodology for how they are selecting and appointing sub-contractors to comply with the works requirements including Building Regulation compliance	1	Item			
M	It should also describe how the Contractor is directly supervising the work to ensure compliance.This should include named individuals who are responsible for the compliance of their respective element of the work.The purpose of this requirement is to ensure that a culture of Building Regulation compliance is clearly demonstrated across the full Construction team from the selection of the sub-contractor, site tool box briefing on compliance etc.	1	Item			
N	Where non-compliance occur the Contractor will be responsible for taking a photographic record of how defective work has been removed and remedial / new work carried out to close out the non-compliance. Non-compliance is defined as works which have not been carried in accordance with the Building Regulations and/or Works requirements	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Supervision (See Clause 4 Management)					
A	The Contractor shall provide adequate supervisory staff (including a representative with full authority to act on behalf of the Contractor and a full time supervisor of all the Contractors activities on the Site required by Clause 4.2 of the Standard Conditions) on the site constantly to supervise and direct the work and to ensure the good progress of the various trades and sub Contractors and in their proper sequence for the completion of the Contract by the Date for Substantial Completion. The type and qualifications of this supervisory staff shall be approved before commencement of the work by the Employers Representative who shall be empowered to make reasonable demands as to qualifications in accordance with the extent and complexity of the work.	1	Item			
B	Include cost of all personnel as required by the conditions of contract.	1	Item			
C	Include cost of general foreman or foremen capable of managing both structural and finishes elements of the project or site agent as required by the conditions of contract.	1	Item			
D	Provide for all on and off site costs required for the supervision and co-ordination of all aspects of the works including the co-ordination of services and work of statutory bodies.	1	Item			
E	The Contractor shall give and provide all necessary personal superintendence during the execution of the works and for as long thereafter as the Employer's Representative may consider necessary. It shall include person(s) with first class experience in this type of work.	1	Item			
	The Contractor must provide a team to complete the works and this team must include, at a minimum, the following personnel:					
F	i) Contracts Manager	1	Item			
G	ii) Site Engineer	1	Item			
H	iii) General Foreman	1	Item			
J	iv) Finishing Foreman	1	Item			
K	v) Services Co-ordinator	1	Item			
L	vi) BCAR Supervisor/ Coordinator	1	Item			
M	vii) COVID-19 Supervisor (s)	1	Item			
N	viii) Temporary Works Engineer	1	Item			
	The Contractor shall include in this item for engaging the services of a competent temporary works designer whose functions shall include:					
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Organise and co-ordinate the design of all temporary works carried out by the contractor, his subcontractors and suppliers including specialist subcontractors and suppliers and his temporary works contractors and suppliers on the works	1	Item			
B	Act as a liaison with the Project Supervisor for the Design Process and the permanent and specialist works designers with respect to co-ordinating their design with that of the temporary works designers including co-ordinating and organising the exchange of necessary information between them for the completion of the design of temporary and permanent works and for the provision of necessary information on the relevant statutory provisions for the health and safety plan and the safety file	1	Item			
C	Provide temporary works design where required on the project unless already provided elsewhere by the contractor, his subcontractors, suppliers, and his temporary works subcontractors and suppliers	1	Item			
	b) Plant, tools and vehicles					
D	The Contractor shall provide all and every kind of transport, plant, tools, hoists, cranes, vehicles and everything else necessary for the proper and expeditious completion of the Works and temporary works; also for all transport and freightage costs, charges and expenses necessary for the proper completion of the works. Labour, supervision, transport to and from the site and other things of every kind required for the construction, completion and maintenance of the works. The Contractor shall provide for all freightage charges, costs and expenses incidental to the complete performance of the Works unless special exemption shall have been made by the Employer.	1	Item			
	The Contractor shall allow for:					
E	- bringing all such plant to site and removing on completion	1	Item			
F	- maintaining on site for the duration of the works.	1	Item			
	Removal of Plant					
G	Plant / scaffolding etc. shall not be removed until so agreed by the Employer Representative and when ordered to do so it shall be removed expeditiously. Request for removal to be presented to the Employer Representative two weeks prior to the proposed removal date.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	c) Scaffolding					
A	Provide as necessary all general scaffolding, personnel hoists, working platforms, etc required for the execution of the works which shall comply with all applicable statutory requirements and current codes of practice, and be carried out by persons with current certification or registration cards in accordance with the Regulations.	1	Item			
B	Special scaffolding required by Contractor and Sub-Contractors.	1	Item			
C	Provide for scaffolding externally to all external elevations of the proposed building to eaves level for the duration of the contract.	1	Item			
D	Provide for enclosing all external scaffolding with propriety dust screening.	1	Item			
E	Provide for Bringing all scaffolding to site, erecting and removing on completion	1	Item			
F	Provide for Adjusting and maintaining all scaffolding on site for the duration of the works	1	Item			
	d) Site administration including the provision and keeping of all statutory records.					
G	Provide site administration and security, including watching, lighting and protection during the progress of the works and be responsible for any damage occasioned by want of sufficient watching, lighting or protection.	1	Item			
H	All areas to be photographed prior to construction start and the photographs given to the ER ((in JPG format, compression level 8, Minimum 1800x1200 pixels @ 300dpi)) and agreed with the ER as a record of the true existing condition prior to construction start.	1	Item			
J	Provide all on and off site management including authorised agent (Contracts Director).	1	Item			
	Site Records					
K	Provide for maintaining a full set of site records of all labour, materials and their deliveries and plant used on the works tot he approval of the Employer's Representative.	1	Item			
L	Provide for maintaining a full set of records of all site tests.	1	Item			
	Progress Records					
M	Maintain an up-to-date record at bi-weekly intervals. Display progress on the site office copy of the progress chart.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Progress Meetings					
A	The Contractor, or a responsible official from his organisation, shall attend progress meetings which will be held at fortnightly (as appropriate to the stage of the works) intervals. Inform such sub-contractors and suppliers as are necessary that their attendance at progress meetings shall be required.	1	Item			
	Valuations					
B	Submit when applicable, up to date detailed claims and supporting documents in accordance with the Conditions of Contract	1	Item			
	Method Statement and Construction Management Plan					
	The Contractor must provide, a minimum of one month, before start date for any section method statements for works in proximity to the college, for:					
C	- fire safety	1	Item			
D	- Asbestos Management	1	Item			
E	- traffic management	1	Item			
F	- road cleaning	1	Item			
G	- compliance with planning conditions	1	Item			
H	- obtaining a road licence	1	Item			
J	- Building Services Integration, including tie-ins, and statutory suppliers / Local Authority supplies	1	Item			
K	- site security	1	Item			
L	- measures to mitigate impact on adjoining properties including housing	1	Item			
M	- Programming of the Works to include ordering of all materials, components, and equipment in good time to meet the programme requirements.	1	Item			
N	The method statement is also to include how work Sections are to be undertaken. The method statements should be co-ordinated with the construction management plan.	1	Item			
P	A detailed method statement shall be provided describing how the planning of the Works including pre-ordering of all materials including ceilings, flooring, furniture, kitchens, structural steels, roof-lights, new internal and external doors, and services routes and installations to facilitate a fully co-ordinated, effective and well planned Site start. This will include a detailed weekly programme and shall identify all necessary service tie-ins and shall be co-ordinated with the Building Services Integration Matrices.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	e) Security					
A	On obtaining possession of the site, the Contractor shall immediately fence the site and secure the contract work zone from trespass, with a hoarding as outlined in the Works Requirements and elsewhere in this document.	1	Item			
B	The Contractor shall maintain the site in a secure and orderly condition and must put into action a security system that prevents access by anyone other than authorised persons at ALL times throughout the construction project.	1	Item			
C	The contractor shall ensure that the site is made secure from trespass at times when it is not in operation and shall provide such fencing, hoardings, enclosures, lighting and watching necessary to ensure this. The contractor shall ensure in particular that all toxic and flammable material are secure and that all access to scaffolds or unprotected areas is restricted.	1	Item			
D	The contractor shall operate a sign-in. policy whereby all persons entering and leaving the site are required to sign in and out.	1	Item			
E	The contractor shall provide a flagman to safely direct vehicles onto, and off, the site.	1	Item			
F	Watching, lighting, hoarding etc. necessary for the protection of the public and for the protection of the site and the works against trespass and interference.	1	Item			
G	The contractor, when necessary, is to make arrangements with the Garda and Local Authorities to provide access for lorries, plant etc to and from the site and arrangements must be made to limit obstruction to general public and existing college traffic. The contractor shall comply with all Garda regulations	1	Item			
H	The contractor is responsible for safeguarding the works, materials and plant against damage and theft, including providing all necessary watching and lighting for the security of the works and the protection of the public	1	Item			
J	The contractor shall ensure that reasonable precautions to prevent workmen, including those employed by the subcontractors, from tresspassing on adjoining employer's property or any parts of the site which are not affected by the works	1	Item			
	f) Provision of clearly identifiable site perimeters and surroundings.					
K	Tenderers should note that all site accommodation, material storage, contractor welfare and car parking, set down, wheel-wash and all other facilities necessary to undertake the works are to be located within the construction site allocated area, the position of each are to be agreed with the ER prior to their implementation	1	Item			
L	The contractor will be deemed to have visited the site and ascertained the facilities of access thereto and the general convenience of working. He shall be taken to have acquainted himself with the nature of the soil and other features of the site, all existing buildings on or adjacent to the site and all other things insofar as they may have any connection with or affect the works	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The compound area is to be located within the boundary of the site in a suitable location. Such compound should be fully secure. The contractor shall provide all necessary hardstanding for site compounds, material storage areas and set-down areas, including all maintenance, repair, relocation as necessary during the works and removal on completion	1	Item			
B	The contractor must allow of the removal of all construction materials, debris, temporary hardstandings etc from the Site Compound and the reinstatement of the site compound area on completion of the works	1	Item			
	g) Provisions for protection of the public from site operations and arrangements for protection of third parties and visitors to the site in accordance with all statutory requirements.					
C	Watching, lighting, hoarding etc. necessary for the protection of the public from site operations and all neccessary arrangements for the protection of third parties and visitors to the site in accordance with all statutory requirements	1	Item			
	h) Transport for work people.					
D	Provide all necessary transport to and from the site as required.	1	Item			
	i) Protecting the works from inclement weather					
E	Effectively protect the works from inclement or unsuitable weather, including providing and fixing all necessary temporary coverings, screens, rainwater disposal systems and the like.	1	Item			
F	Water-proof and frost-proof coverings, temporary shelter, temporary drainage and any other necessary protection for this purpose	1	Item			
	j) Water for the works.					
G	The contractor shall arrange for his own clean, fresh water for use on the works, pay all charges in connection therewith, provide all temporary storage, plumbing services, pipes, connections, taps, hoses, valves, stand pipes etc and clean away and make good on completion	1	Item			
H	The contractor shall note that Irish Water may not provide a temporary connection to the public system. The contractor shall allow for and provide measures necessary to deal with this restriction if it arises.					
				To Collection €		

4. GENERAL FACILITIES AND OBLIGATIONS (Cont)

A	The Contractor shall allow for the site water supply being metered individually and metering system proposed being approved in writing by the Employer's Representative in consultation with the Building Services Engineer. The metering system, connections etc. proposed must also be in accordance with all current regulations, legislation and Health and Safety requirements. The Contractor must pay all costs and charges associated with these connections	1	Item			
B	The Contractor shall allow for all temporary plumbing work etc. necessary and shall make his own arrangements for the supply of water for the works.	1	Item			
C	Provide clean water for the works including the works of all sub-contractors, form temporary connections, provide services for distribution about the site and storage and pay all fees and charges in connection therewith.	1	Item			
	k) Temporary lighting and power for the works.					
D	The contractor shall provide electricity for use on the works and pay all charges in connection therewith. The Contractor shall provide all artificial lighting and power for the works, provide for distribution about the site and all temporary connections, leads, fittings etc and clear away and make good on completion	1	Item			
E	It shall be the contractor's responsibility to ascertain the level of supply required by all his subcontractors and to have this available prior to them commencing work on site	1	Item			
F	The contractor shall note that ESB may not provide a temporary connection to the public system. The contractor shall allow for and provide measures necessary to deal with this restriction if it arises.					
G	The Contractor shall allow for the site ESB supply being metered individually and metering system proposed being approved in writing by the Employer's Representative in consultation with the Building Services Engineer. The metering system, connections etc. proposed must also be in accordance with all current regulations, legislation and Health and Safety requirements. The Contractor must pay all costs and charges associated with these connections	1	Item			
H	The Contractor shall be permitted to connect into existing utility services (if available) subject to each utility being metered individually and metering system proposed being approved in writing by the Employer's Representative in consultation with the Building Services Engineer. The metering system, connections etc. proposed must also be in accordance with all current regulations, legislation and Health and Safety requirements. The Contractor will be fully responsible for paying any fees, contection charges and costs associated with same.	1	Item			
J	The Contractor shall provide all necessary supplies of electricity and other services necessary for the execution of the Works, shall pay all charges in connection therewith and shall ensure that all temporary installations are made in a safe and proper manner and cleared away and made good upon completion.	1	Item			

To Collection €

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Temporary Utilities (water, electricity, gas, telecommunications, etc.)					
A	The Contractor shall be fully responsible in providing all the neccessary utilities to complete the works in accordance with the Works Requirements. The Contractor's tender must include for all costs (connection fees, connection, standing charges, bills, disconnection, reinstatement), and for complying with all requirements.	1	Item			
	I) Temporary roads, hardstandings, crossing and similar items.					
B	Contractor to provide site set-up, compound, parking and traffic route drawings.	1	Item			
	Temporary Access					
C	Provide for access facilities to the site, including, if and where appropriate, forming or enlarging openings in boundaries and for making good on completion. The Contractor must visit the site and examine the drawings to ascertain his requirements in this regard.	1	Item			
	Temporary road, hardstandings, crossings and similar items.					
D	Provide and maintain all necessary temporary roads and hardstandings, complete with adequate temporary drainage on and adjacent to the site as deemed necessary for the execution of the works, including the works of all sub-contractors; re-instate the ground on completion. No claims on the grounds of want of knowledge will be entertained whatsoever.	1	Item			
E	The contractor should note the restrictive nature of the site in this regard.	1	Item			
	Traffic Management					
F	The Contractor shall at all times during the execution, completion and maintenance of the Works, keep open and free from obstruction, all existing footpaths and roadways, adjacent to or near the site. The Contractor shall also arrange to carry out the work in a manner that will cause the least possible interference with the flow of traffic on all roadways.	1	Item			
G	The Contractor must ensure that suitable mobility management measures are in place for its staff to prevent obstructive parking behaviour on nearby residential streets.	1	Item			
H	The Contractor shall submit a traffic management plan prior to commencement on site in order to set out proposal for flag men, traffic lights etc. to be agreed with the Employers Representative, after being assessed and approved by the PSDP & PSCS.	1	Item			
J	All works outside the hoarding to be agreed with the Employers Representative in advance	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Car Parking					
A	The Contractor shall make adequate provision for car parking for site operatives and shall require that all site operatives, whether his own Employees or those of subcontractors, park within his Contract Areas. Where the site area is too small the contractor must make alternative arrangements which do not involve parking in the surrounding streets, roads, or similar areas causing nuisance to residents and other users.	1	Item			
B	The Contractor shall note that no contractor parking will be permitted on the live college site, outside the designated contract area.	1	Item			
	Parking facilities for Employer & Design Team					
C	The Contractor shall provide a suitable area of hardstanding adjacent to the works and site hut for the parking of employers and Design Team cars. Suitable temporary roads shall be provided from the entrance to the site to the hardstanding carpark and these shall be suitably signposted. On completion of the contract all roads and hardstandings shall be removed as required and areas disturbed made good.	1	Item			
	m) Temporary accommodation for the use of the Contractor.					
	Welfare Facilities					
	Provide all temporary sheds, shelters, storage for workmen's clothing, offices, meeting room, mess and rest room rooms and sanitary accommodation required for the Contractors own use and for use by sub-Contractors in compliance with the Regulations including:					
D	- Shelters and accommodation for clothing and taking meals.	1	Item			
E	- Changing rooms and lockers.	1	Item			
F	- Washing facilities	1	Item			
G	- Sanitary Conveniences	1	Item			
	Provide, erect, maintain, adapt, move as and when required					
H	Provide temporary offices for the use of the Contractor and sub-contractors and any other person acting on behalf of the Contractor; the offices shall be complete with heating, lighting, desks and chairs; computer (with Auto Cad facilities); phone lines (one being ISDN) and facsimile, e-mail facilities and at least one office must have a A1 plotter for printing drawings.	1	Item			
J	The Contractor should note that all drawings (including revisions) will be forwarded to site via e-mail and then the Contractor will be expected to print himself the appropriate number of copies required. The Contractor must include here for all costs associated with the foregoing	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Provide suitable separate sanitary convenience(s) for the work people in an appropriate place on the site and to the approval of the Employer's Representative. They shall be maintained by the Contractor at all times in a clean and hygienic condition and removed on completion of the Works the site being made good and deodorized where necessary. The Contractor must provide these facilities within one week of commencing work.	1	Item			
B	Provide offices for the Contracts Managers, Foremen or Site Agents in charge of the works.	1	Item			
C	The contractor should note the restrictive nature of the site in this regard.	1	Item			
	n) Temporary storage areas including suitable and separate storage for dangerous materials or substances.					
D	Store materials in a tidy manner. Separate different materials and protect them from dirt, physical damage, reaction with other materials marking or staining, micro organisms, mildew, fungus and vermin. Do not store materials in ways which may cause damage to the works, people or property.	1	Item			
E	Provide suitable temporary sheds, offices, messrooms, sanitary accommodation and other buildings required for the use of the Contract and remove on completion.	1	Item			
F	Suitable sheds for use of the work people and the storage of materials shall be provided by the Contractor, maintained during the progress of the work and removed on completion, the site thereof being made good. Stores for cement are to be watertight and are to have raised floors to the approval of the Employer's Representative.	1	Item			
	o) Temporary telephones for the use of the Contractor.					
G	Provide all Contracts Managers, Foremen or Site Agents with telephones, fax machines and mobile phones.	1	Item			
	p) Traffic regulations					
H	Provide all costs in complying with all traffic regulations affecting the Works, the Contractor shall comply therewith and shall be responsible for the observance of this condition by his sub-contractors.	1	Item			
J	The Contractor shall include for all necessary costs associated with the implementation of a traffic management system should he consider it necessary for the safe execution of works to be carried out. This should be considered especially but not solely for works in connection to the access and egress from the site.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractors attention is drawn to the fact that during the term time, students will be passing the site entrance. The Contractor is to ensure that adequate supervision is in place at this area and that no vehicles obstruct this area	1	Item			
	q) Welfare facilities for work people to be in compliance with the fourth schedule of the Safety Health and Welfare at Work (Construction) Regulations.					
B	Include herein for providing all Welfare facilities for work people, in compliance with the fourth schedule of the Safety Health and Welfare at Work (Construction) Regulations.	1	Item			
	r) Safety Health and Welfare at Work provisions including items for the following:-					
C	i. The operation of the requirements of the SAFE PASS and CONSTRUCTION SKILLS CERTIFICATES schemes.	1	Item			
D	ii. Safety Officers and all safety supervisors, first aiders, inspectors and certifiers required.	1	Item			
E	iii. Tests and certifications on plant and equipment	1	Item			
F	iv. Safety signs and signals	1	Item			
G	v. Provision of Personal Protective Clothing and Personal Protective Equipment (PPE) for all, including full PPE for the Employers use for at least 6 visitors (including hats, vests, jackets, boots, etc.)	1	Item			
H	vi. Provision and maintenance of emergency routes and exits and designated personnel responsible for emergency procedures	1	Item			
J	vii. Energy distribution installations	1	Item			
K	ix. Maintenance of appropriate working conditions and work stations	1	Item			
L	x. Provision and maintenance of on site traffic routes	1	Item			
M	xi. Provision of first aid equipment and first aid room as appropriate	1	Item			
N	The Contractor shall include here for any additional cost in relation to Health & Safety etc. arising from Volume A1	1	Item			
P	The Contractor shall comply in all respects with the Safety, Health & Welfare at Work Act, 2005 and with any relevant Statutory Instruments or Regulations issued thereunder. In particular, the Contractor shall comply in all respects with the Health, Safety & Welfare at Work (Construction) Regulations, 20013	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractor shall comply in all respects with the Factories and Safety in Industry Acts and any other Acts amending those Acts and with any Statutory instruments or regulations issued thereunder.	1	Item			
	Overhead Lines					
B	The Contractor must ensure that adequate safety precautions are taken when working in the vicinity of overhead lines. These may include the provision of goal post type barriers on each side of the overhead line and the non-use of scaffolding or ladders within 10 meters of the overhead line.	1	Item			
	COVID-19 "Work Safely Protocol"					
C	The Contractor shall include all costs associated with the requirements of the Work Safely Protocol (the "Protocol"), published jointly by the Department of Business, Enterprise and Innovation and the Department of Health in consultation with the Labour Employer Economic Forum on 9th May 2020.	1	Item			
D	(i) Augmenting site infrastructure and welfare facilities such as toilets, canteen, isolation spaces, and access, egress and circulation routes to meet the standards set out in the Protocol.	1	Item			
E	(ii) Providing cleaning to the standard required in the Protocol.	1	Item			
F	(III) Providing Covid-19 supervisor role(s) as necessary to meet the requirements of the Protocol.	1	Item			
G	(iv) Providing Covid-19 Personal Protective Equipment (PPE) to meet the requirements of the Protocol.	1	Item			
H	(v) Ensuring social distancing to meet the requirements of the Protocol.	1	Item			
J	(vi) Any other measures/ operational procedures necessary to meet the requirements of the Protocol.	1	Item			
K	The Contractor shall note, while it is expected that realistic prices will be included against preliminary items based on (i) to (vi) above, the Contract Sum will be deemed to include for the implementation of all measures - including hygiene, access management, materials procurement and delivery, work sequencing and work practices - required to construct the work safely and to minimise the risk of disease contagion for the Contractor's Personnel, the Employer's Representative, Employer's Personnel and third parties visiting the site.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractor shall note, as the project involves an extension and/or alterations to an existing live college, additional precautions will be required in relation to Covid-19 to ensure the safety of students and staff (e.g. if access is shared between the College personnel and Contractor's personnel, if Contractor's personnel are required to enter the college building area, either internally or externally, for particular tasks, or if Contractor's personnel have to undertake works in the college after college hours). Such precautions would involve, at a minimum, maintaining social distancing between Contractor's personnel and College personnel, wearing of appropriate PPE and sanitising any work areas in the college on a daily basis in preparation for college activities on the following morning.	1	Item			
B	The Contractor's sole remedies for a Covid-19 Mandatory Closure shall be those stated in sub-clause 9.3 for a Delay Event under the Schedule Part 1K Event 15 and Site Closure Costs under Clause 14 of the Contract. The provisions of clause 10 shall apply in respect of any extension of time to the Date of Substantial Completion under sub-clause 9.3 for a Delay Event under the Schedule Part 1 K Event 15 and an adjustment to the Contract Sum for the Site Closure Costs under clause 14 in respect of a Covid-19 Mandatory Closure.	1	Item			
C	In the event of a Covid-19 Mandatory Closure there shall be added to the Contract Sum the Site Closure Costs for the period of the Covid-19 Mandatory Closure[s], excluding the first [7] days in total of the Covid-19 Mandatory Closure or where there is more than one Covid-19 Mandatory Closure, the Covid-19 Mandatory Closures.	1	Item			
D	The Site Closure Costs for the period of the Covid-19 Mandatory Closure[s] will be based on the Site Closure Costs Supplement (Model Form MF-1.31) as included in the Volume A1 Project Particulars.	1	Item			
	s) Disbursements arising from the employment of work people					
E	The Contractor shall allow for all payments to workpeople, including payments additional to the recognised Trade Union rates and emoluments and for the cost of any special working conditions, overtime working, site agreements or otherwise and for any additional costs involved to obtain workpeople or to bring workpeople from one area to another. All Contractors workpeople to be part of the CIF pension scheme. A signed declaration on compliance to the above, in the form of the Public Works Model Form 13 will be required from the Contractor, with each monthly progress application.	1	Item			
F	No extra will be allowed where the working of overtime is made a condition of employment in any particular trade or is necessary to achieve the Programme. Claims for overtime will be entertained only when authorised, in writing by the Employer's Representative as an extra to the Contract.	1	Item			
G	Provide for all costs in respect of employing Work People.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	None but fully qualified competent workpeople shall be employed on the Works and the Contractor shall furnish such evidence as the Employer's Representative may require as to the qualifications and competence of any work person. The Employer's Representative shall have the power to have dismissed from the site any work person who misconducts him/her self or who is incompetent of negligent. The Contractor shall be responsible for keeping all workpeople under his control and within the confines of the site.	1	Item			
B	The Contractor shall pay rates of wages in accordance with current CIF directions/recognised rates and minimum wages shall be paid in accordance with Government Directives.	1	Item			
C	Provide for all costs in respect of labour including costs of for example:	1	Item			
D	Social Welfare Acts	1	Item			
E	Conditions of Employment Acts	1	Item			
F	Insurance (Intermittent Employment) Act	1	Item			
G	Holiday (Employers) Act	1	Item			
H	Redundancy Payments Acts	1	Item			
J	Industrial Training Acts	1	Item			
K	Factories Act, Building (Safety, Health & Welfare) Regulations	1	Item			
L	Travelling time, expenses, fares, transport	1	Item			
M	Guaranteed time	1	Item			
N	SOLAS Levy	1	Item			
P	Monitoring Agency Levy	1	Item			
Q	Any other disbursements arising from the employment of labour	1	Item			
R	Non productive overtime and other expenses in connection with overtime	1	Item			
S	Incentive and bonus payments	1	Item			
T	Sick Pay Disbursements	1	Item			
U	Country Money	1	Item			
V	Pensions	1	Item			
W	AnCo Levy	1	Item			
X	Working Rule Agreement	1	Item			
Y	The Contractor shall adhere to the requirements of Clause 5.3.3 of the contract.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Give the Employer's Representative each week a daily return of the number and description of tradesmen and general labourers employed on the Works.	1	Item			
B	The Contractor shall maintain proper wage books and time sheets showing the wages paid and the time worked by all work people in the execution of the contract. Such wages books should show the PRSI number of each work person. The Contractor shall produce such wages books and time sheets whenever required for the inspection of any person authorised by the Employer	1	Item			
C	When the working of overtime is made a condition of employment in any particular trade no claim for extra payment will be allowed under this heading. Claims for overtime will not be entertained whatsoever	1	Item			
D	The contractor must include in his rates for all overtime deemed necessary to achieve the completion date	1	Item			
E	Persons engaged upon the Works should, insofar as practical and without affecting the efficiency of the work, be recruited from the local offices of SOLAS to the extent that the total labour requirement of the contract exceeds the contractor's core work-force	1	Item			
	Industrial Relations					
F	The Contractor shall be responsible for ensuring a good industrial relations climate on site. He shall not hire any labour directly at the site.	1	Item			
G	In the event of a dispute arising, the Contractor shall take all precautions to avoid a strike situation and in the event of a strike taking place shall ensure that the main entrance is not picketed.	1	Item			
	t) Maintenance of public and private roads					
H	The Contractor will be responsible for providing, maintaining and removing all required pedestrian and vehicles access and egress points to the Works in accordance with Drawings, planning permission conditions, the preliminary Health & Safety Plan, the Safety, Health and Welfare at Work (Construction) Regulations 2013 and the Health and Welfare at Work (General Application) Regulations 2007.	1	Item			
J	The Contractor is also responsible for providing, maintaining and removing all traffic management for all users of the public road and all college-related traffic as required by the phasing and construction of the Works. A banks man shall be provided at each vehicle entrance and exit to ensure that priority is always given to users of the public road. The Contractor shall pay particular care to avoid delay to users of the public road, including, where necessary, scheduling of deliveries to site outside of peak traffic periods and pick-up and drop-off times, routing of site-related vehicles to avoid residential areas and existing schools, and, liaising with other construction sites in the area, Local Authority Traffic and Roads Departments and local Gardai	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractor shall keep the access points to the site free from obstruction and shall maintain this area clean and clear of debris and make good any works disturbed to this area.	1	Item			
B	The Contractor is to comply fully with all Planning Conditions regarding this element of the Works.	1	Item			
C	All areas to be photographed prior to construction start and the photographs given to the ER ((in JPG format, compression level 8, Minimum 1800x1200 pixels @ 300dpi)) and agreed with the ER as a record of the true existing condition prior to construction start.	1	Item			
D	Road Maintenance/Wheel Wash/Road Sweeper; The Contractor shall maintain all existing roads and footpaths during the Contract and make good any damage caused by site traffic or site operations. The roads shall be kept free of mud and debris. The Contractor shall provide for all temporary roads, tracks, entrances, hard standings and crossings as required in order to carry out and complete the works. The Contractor shall remove, reinstate and make good all temporary access routes and Installations on completion of the Project. A wheel wash shall be provided at the exit from the site. Road sweeping shall be carried out daily on existing public roads. This is a minimum requirement see also planning conditions for individual sites.	1	Item			
E	Provide for maintaining and making good damage, if any, to roads, paths, services and other property public or private, caused by or attributable in any way to the cartage of plant, materials, or personnel or the execution of the Works by the Contractor and for indemnifying the Employer against loss, damage, claim or proceedings by any Local Authority, Statutory Undertaking or others.	1	Item			
	u) Removing rubbish, protective casings and coverings and cleaning the works on completion					
F	Provide for removing from the site from time to time or as necessary and on completion of the works all rubbish, debris, surplus materials etc.	1	Item			
G	On completion leave the works clean and tidy and to the satisfaction of the Employer's Representative.	1	Item			
H	On completion of the Works and as and when directed by the Employer's Representative, the Contractor shall clear away and removed from the site all constructional plant surplus materials, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a workmanlike condition to the satisfaction of the Employer's Representative.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractor shall keep the site clean and tidy and make arrangements to the regular disposal of rubbish. The Contractor shall clean by brushing and hosing all walkways and roadways used by his crews and vehicles at least one per day and/or as often as necessary to keep the roadways free of dirt, dust and mud. Contractors will provide their own hoses and connections to water supply points approved by the Local Authority/Employer. The Contractor will be required to clear away any builders rubble, debris or waste upon completion of the the contract works and make good and reinstate to their original condition any areas disturbed during the course of construction.	1	Item			
B	Provide for removing all rubbish, protective casings and covering etc arising from his own or any of his sub-contractors operations from the site both as it accumulates from time to time and on completion.	1	Item			
C	Provide for clearing the building on completion, inside and out, removing stains and touching up paintwork and polished work, washing all floor and glass and leaving the whole of the works clean and fit for immediate occupation to the satisfaction of the Employer's Representative.	1	Item			
D	Clean the works internally and externally remove all rubbish and leave the entire works in a tidy condition ready for occupation or use.	1	Item			
E	Use cleaning material only as recommended by the relevant manufacturers and in the absence of such recommendations, the material and methods must be approved by the Employer's Representative	1	Item			
F	Remove all temporary markings, coverings and protective wrappings unless otherwise instructed	1	Item			
G	The contractor is to touch up minor faults, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks of junctions	1	Item			
H	Adjust, ease and lubricate all doors, windows, drawers, ironmongery, appliances controls and other moving parts as necessary to ensure easy and efficient operation	1	Item			
	v) Compliance with waste management statutory requirements					
	Waste Management					
J	The Contractor must provide the Employer's Representative with a Waste Management Plan, in accordance with the Health and Safety Plan, prior to disposal of any materials.	1	Item			
K	The European Waste Catalogue and Hazardous Waste List includes bituminous mixtures containing coal tar under the classification of hazardous waste.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Waste Management (Hazardous Waste) Regulations (2004) implement provisions relating to hazardous waste. The collection and transfer of Hazardous Wastes are governed by separate legislation this being the Movement of Hazardous Waste Regulations, 2004. These Regulations set down procedures to track and monitor the movement of hazardous waste and make the local authority in whose functional area the waste originates responsible for the supervision and control of the waste.	1	Item			
B	Disposal of hazardous waste can only be undertaken at a licensed hazardous waste facility. Transfer of the hazardous material off-site requires the Contractor to obtain a waste collection permit and a consignment note (C1 Form) from the local authority.	1	Item			
C	Materials excavated from the site shall unless expressly stated otherwise be removed from site and disposed of at a tip/waste facility to be provided by the Contractor. The contractor shall ensure that all waste is removed from site by approved waste disposal contractors to approved facilities. Details of the final destination of all waste shall be furnished to the Employer's Representative quoting the reference number of the Waste Collection Permit issued under the Waste Management (Collection Permit) Regulation 2004	1	Item			
D	The contractors attention is drawn to the document "Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects". The contractor shall take these guidelines as mandatory and included in his tender for complying with them in full	1	Item			
E	The Contractor shall prepare a Construction Environmental Management Plan (CEMP) to be submitted to the Planning Authority before the commencement of any works on site. This document shall be treated as a live document and held onsite at all times for inspection. The CEMP shall include but not be limited to operational controls of dust, noise and vibrations, construction traffic management, waste management, protection of soils and groundwaters, protection of flora and fauna, site housekeeping, emergency response planning, site environmental policy, environmental regulatory requirements and project roles and responsibilities. The CEMP shall also address extreme weather (drought, wind, precipitation, temperature extremes) and the possible impacts of receptors and mitigation of same. The CEMP shall be treated as a live document.	1	Item			
F	The Contractor shall prepare a Construction Demolition and Waste Management Plan (CDWMP) for the proposed development and shall submit to the Planning Authority for written agreement prior to commencement of any site activity. This document will be treated as a live document and be held onsite at all times for inspection. The CDWMP shall be updated in accordance with the Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects (EPA, 2021) and new National Waste Management Plan (2024-2030). Wastes arising from demolition and construction works shall be managed on site in such a manner so as to avoid environmental pollution and/or the crea tion of nuisance pending removal off-site by permitted waste collection contractors only The CDWMP shall be treated as a live document and communicated to all relevant personnel.	1	Item			
				To Collection €		

4. GENERAL FACILITIES AND OBLIGATIONS (Cont)

A	All waste generated during construction, including surplus excavation material to be taken offsite, shall only be recovered or disposed of at an authorised site which has a current Waste Licence or Waste Permit in accordance with the Waste Management Acts, 1996 to 2008. All wastes shall be managed in accordance with the Resource and Waste Management Plan submitted to the Local Authority.	1	Item		
	w) Drying the works				
B	The Contractor is fully responsible for drying out the works and for providing all the necessary plant or equipment to achieve this. The Contractor must included here for all costs associated with drying out the works. (The Contractors attention is drawn to his responsibility for the adequate drying of floors to receive new finish).	1	Item		
C	Provide all temporary equipment, fuel and attendance and dry out and control the humidity of the works to facilitate progress and to prevent damage to or deterioration of the works.	1	Item		
D	When the heating installation is complete, tested and ready for operation, the Employer's Representative may grant permission to the Contractor to make arrangement with the Heating Sub Contractor for the use of the permanent heating installation to dry and control the humidity of the works; the contractor shall meet all costs in connection with use of the permanent heating installation for such purposes including insurance, fuel supplied and current consumed and shall accept liability for damage, disturbance, wear and tear however arising from such use and the maintenance, reinstatement and making good to the satisfaction of the Employer's Representative; should the Contractor elect to use the permanent installation for the purposes described above this shall not affect nor diminish his responsibility to maintain suitable temperature and humidity levels.	1	Item		
E	The contractor shall ensure that the laying of the floors which are to receive finishes are programmed to afford adequate time for drying in accordance with the various specification requirements. Should the required relative humidity level not be reached, therefore not allowing the floor finishes to be laid in accordance with the manufacturers instructions, then the Contractor shall, at his own expense apply a liquid damp proofing membrane. This liquid damp proofing membrane is to be laid after written confirmation has been received from the floor finish supplier that they are in agreement to the use of such membrane and that the membrane will in no way affect the quality, finish, warranty and use of their product. This written confirmation is to be copied to the ER as soon as it is received from the supplier.	1	Item		

To Collection €

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	x) Temporary fencing, hoardings, gates, doors, screens, fans, planked footways, guardrails, gantries, floor, stair, roof edge protection, and protection of openings, safety nets and similar items					
A	Provide for maintaining all temporary fencing, hoardings, fans, planked footways, guard-rails, gantries and the like as may be necessary for protecting the public, for the proper execution of the Works and for meeting the requirements of any local or other authority, including all lighting.	1	Item			
B	An appropriate hoarding is to be erected on the entire length of the entrance road in order to provide a safe environment for pedestrians and motorists sharing the road with the contractor. The contractor should include here for all costs in this regard.	1	Item			
C	Advertisements shall not be displayed on the site without the consent of the ER.	1	Item			
D	Provide secure well marked temporary fencing, hoardings, planked footways, guard rails, as may be necessary to delineate the limits of the building site within the college area, to protect college personnel, members of the public and others, for the proper execution of the Works and to prevent unauthorised entry to or trespass beyond the boundaries of the site. The hoardings shall meet the requirements of the Local Authority.	1	Item			
E	The Contractor is required to submit their hoarding design, design risk assessment, and HSA Temporary Works Design Certificate to the Employer's Representative, and Employer's PSDP, for approval prior to commencing construction works on site.	1	Item			
F	The Contractor shall provide all tempoarry works items included in the Preliminary Health & Safety Plan - Refer to Appendix 3 of the ITT- Information Pack.	1	Item			
G	The Contractor shall allow a cost herein if not included elsewhere for all temporary works required to enable the existing college to remain fully operational; include for all necessary temporary access roads, carparking, fencing, hoardings, fans, planked footways, guardrails, gantries, stairs, entrances, exits, lighting, data/ communications/ power/ fire alarm/ water/ heating links between existing building, temporary accommodation and new extension and anything else that will be required to maximise above operational requirements and ensure safety of college users and the public at large, for the proper execution of the works and meeting the requirements of any Local or other Authority; maintain and adjust all as necessary.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractor shall provide fully weathered (fully flashed, independently drained), insulated, acoustically treated and fire rated partitions (60/60/60 fire rating and 50dBA acoustic separation) between the existing college and the new works in each location that an interface is required. These temporary partitions shall also prevent dust migrating from the construction area into the occupied college. This may require to be placed in a number of locations over the course of the construction stage and may require different versions for different phases. When weathering has been completed, the acoustic and fire related element of these partitions will still be required until substantial completion. Contractor to include herein all costs associated with this requirement and the design of these temporary works.	1	Item			
	y) Control of noise, pollution and compliance with statutory obligations					
	Noisy Work/Disturbance					
B	Noisy demolition/structural work shall be carried out during working hours to be agreed with Employers Representative or at week-ends, e.g. core drilling, use of kango hammers and heavy drills. The contractor shall note the limitations on working hours.	1	Item			
C	The Contractor shall inform the Employers Representative at least one week in advance of his intention to carry out work of an excessively noisy nature.	1	Item			
D	Due to the close proximity of adjacent live college buildings to the works at a number of the site locations, the Contractor shall take all necessary measures to minimise noise levels. No radio or sound equipment is to be allowed on site.	1	Item			
E	The Contractor shall take all necessary measures to minimise noise levels when carrying out works in the vicinity and adjacent to the existing College buildings.	1	Item			
	Dust Control					
F	All necessary measures must be taken by the Contractor to minimise / eliminate dust from the site by means of watering the works.	1	Item			
G	A construction management plan shall be submitted by the Contractor for the development which will include details of measures to be taken to minimise dust and noise disturbance.	1	Item			
	Reducing the Risk of Pest Infestation					
H	The Contractor shall ensure that proposed building works shall protect against and not contain or provide harbourage for infestation by vermin or insects.	1	Item			
J	The Contractor shall ensure and take account of all provision of Digest 415 produced by the Building Research Establishment entitled "Reducing the Risk of Pest Infestations: Design Recommendations and Literature Review".	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Waste Water / Surface Water Run-Off					
A	Surface water run-off associated with the development is not permitted to discharge onto adjoining lands.	1	Item			
B	The Contractor shall provide a method statement for the collection, treatment, disposal / discharge of waste and surface water from the site and water that may infiltrate the excavations. A large mobile centrifuge pump may be required to clean the water prior to its discharge. Waste water shall be discharged through the sewers.	1	Item			
	Vibrations					
C	The contractor shall not allow vibration to emanate from the site and/or works which may cause nuisance to adjacent premises	1	Item			
D	Vibration monitoring should be carried out in accordance with ISO recommendations R1996/1, 2 & 3 "Description and Measurement of Environmental Noise" as appropriate. With regard to construction activities, reference will be made to BS 5228: Noise Control on construction and open sites, which offers detailed guidance on the control of noise and vibration from demolition and construction activities	1	Item			
	Pollution					
E	Do not deposit deleterious material into surface water channels or lakes. Comply with the requirements of the Rivers Pollution Protection Act, the Public Health (Ireland) Acts and the Fisheries Acts.	1	Item			
	Clean Site					
F	The site surrounds must be kept clean of debris, dust and materials at all times. Special attention should be paid to ensure a secure, safe and clean site on a daily basis.	1	Item			
G	The main roads, access roads and laneways will be in constant use throughout the duration of the works and these are to be kept clean of debris and materials at all times. A suitable wheel wash should be installed at site entrances and provision should be made for mechanised road cleaning as deemed necessary.	1	Item			
	z) protection of the works					
H	Provide all costs in accordance with protecting the Works.	1	Item			
J	All work shall be adequately protected during the Works by temporary casings or otherwise as required	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Provide for carefully covering and protecting the works at all times against damage from inclement weather, impact or any other cause. The Contractor will also provide all necessary protection to prevent any damage to existing buildings, fences, gates, walls, roads, services, sewer pipes, tanks etc paved areas, trees, general planting and any other site features which are to remain in position during the execution of the works	1	Item			
	Safeguard Against Damage					
B	Safeguard the site, the works, materials and plant against unauthorised entry, damage and theft. Make good any damage caused by ineffective protection. Provide watching and lighting necessary for the security of the works.	1	Item			
	Protection of Finished Work					
C	Keep finished surfaces clean as work proceeds and protect from dirt, staining and physical damage. All new floor finishes to be covered with durable material until handover.	1	Item			
	ADDITIONAL PRELIMINARIES					
	Statutory Obligations					
D	The Contractor shall comply with all Statutory Regulations as they apply to the works, including the control of noise and pollution.	1	Item			
	General Attendance on Specialist Sub-Contractors					
E	Provide General Attendances on Specialist Sub-Contractors, including the use of Contractors temporary roads, pavings and paths, standing scaffolding, standing power operated hoisting plant, the provision of temporary lighting and water supplies, clearing away rubbish, provision of space for the Sub-Contractors own offices and for the storage of his plant and materials and the use of messrooms, sanitary accommodation and welfare facilities.	1	Item			
	Site dimensions					
F	Take all necessary site dimensions before any work is carried out; any discrepancy with figured dimensions on the drawings should be notified to the ER prior to works commencing	1	Item			
				To Collection €		

4. GENERAL FACILITIES AND OBLIGATIONS (Cont)

	Contractor to take charge				
A	Take entire charge of the building works until handed over to the Employer and be responsible for, and make good, all injuries and damages occasioned to the said works by causes over which the Contractor has control. He shall take the proper precautions to prevent such happenings and accept liability for all risks and hold the Employer harmless from any claims for injuries to persons, animals or things, or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the Contractor or anyone in his employment during the execution of the works.	1	Item		
B	The Contractor shall prevent trespass outside the boundaries of the site allotted to him either by those engaged upon or in connection with the works except by written permission of adjoining owners.	1	Item		
	Sub-Contractor's work and the like				
C	Correlate the work of all the various Sub-Contractors to ensure proper progress in the appropriate order for completion of the whole project by the due date. Any additional costs caused by incorrect or insufficient information being given or by the Contractor not keeping Sub-Contractors informed of all alterations shall be borne by the Contractor.	1	Item		
D	Obtain full particulars from all Sub-Contractors of their requirements for chases, recesses, holes and other items of builder's work at an early stage and supply them with all necessary dimensions and other information so that subsequent cutting and alterations may be avoided. Any alterations caused by failure on the part of the of the Contractor to do this will be carried out at his own expense.	1	Item		
E	Obtain guarantees of materials and workmanship normally issued by a Sub-Contractor for periods in excess of the Contract Defects Liability Period and forward to the Employers Representative. The Contractor shall at his own expense perform any duties and carry out any work necessary to obtain such guarantees.	1	Item		
F	Obtain certificates of fire resistance for all fire-resisting doors and fire stopping materials and forward to the ER.	1	Item		
G	The Contractor is required to ensure that any electrical work is carried out by members of the Connect Union. A signed declaration of compliance to the above will be required from the contractor.	1	Item		
	Certificates of Substantial Completion				
H	Prior to the issue of the Substantial Completion Certificates or at a later date (subject to agreement with the Employers Representative) the Contractor shall furnish Certificates of Compliance confirming that the works have been built in accordance with the requirements of the Building Regulations.	1	Item		

To Collection €

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Modifications to Entrances					
	Contractor to make alterations to accommodate temporary access to and from existing buildings, to include but not limited to:					
A	- All necessary grubbing up, levelling and disposal of existing road surfaces, island, paths and walls.	1	Item			
B	- Re-alignment of road edges to provide a safe entrance / exit to the college	1	Item			
C	- Provision of safe crossing points for pedestrians and cyclists.	1	Item			
D	- Provision of all necessary temporary safety/ directional signage to notify changes to the Public.	1	Item			
E	All material to match and tie in with existing.	1	Item			
	Protection of Trees					
F	The Contractor shall include for providing special protection to all existing trees to be retained in accordance with the specifications and drawings.	1	Item			
G	Prior to the commencement of construction of the extension, the Contractor shall construct fenced compounds around all trees and hedges to be retained and shall ensure that no building materials, plant machinery, fuels, lubricants or construction waste are stored within these fenced compounds to existing trees and hedges.	1	Item			
	Setting Out					
H	The contractor shall set out the Works and keep them correct. Opening up and excavation shall not be commenced until the Employer's Representative has inspected the setting out. The checking of any setting out or any line or level by the Employer's Representative shall not relieve the Contractor of his responsibility for the correctness thereof.	1	item			
J	All setting out is to Architect's Dimensions only.	1	item			
	Bench Marks					
K	Establish a master bench mark on the site for the duration of the Contract.	1	item			
	Tolerances					
L	Unless otherwise detailed on the drawings and specification the tolerances to be adhered to are those set out in the most recent publication of the Irish Building Specification Manual and Guidance Notes.	1	item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Measurements					
A	Do not scale the drawings. Use dimensions figured on the drawings for setting out the works. Check all dimensions both on drawings and site, particularly the correlation between components and the work in place.	1	item			
	Existing Levels					
B	Signify in writing any disagreement as to the correctness of the existing ground levels, as indicated on the the drawings, before the commencement of the works and before the existing ground is disturbed.	1	item			
	Notice to Employer's Representative for Inspection					
C	Before placing foundations, laying drains, filling trenches pouring reinforced concrete or otherwise proceeding work that will cover and conceal previous work, the Contractor shall give early notice in writing to the Employer's Representative and shall afford him an opportunity of inspecting the previous work. Approvals given at such inspections will not relieve the Contractor from full responsibility for the quality of the work throughout.	1	item			
	Notices					
D	Give all notices required by any Local or Public Service Authority relating to the execution of the works.	1	item			
	Completion Date					
E	Notify the Employer's Representative in writing of the date on which it is considered Substantial Completion has been achieved and have a date agreed and certified in writing by the Employer's Representative.	1	Item			
	Completion, Maintenance Instructions					
F	Give to the Employer's Representative, at Substantial Completion, two hard copies and one cd copy of all manufacturer's suppliers or Sub Contractors maintenance instructions.	1	Item			
G	The Certificate of Substantial Completion will not be issued until all O&M Manuals, as-built drawings and CCTV footage of foul and surface drainage pipelines (including an accurate record on SUS 25 format for manholes and pipelines) are submitted to and approved by the Employer's Representative which manuals are to be submitted 10 days in advance of the Certificate.	1	Item			
H	Prior to the Certificate of Substantial Completion, the Contractor shall provide the Employer's Representative with full plans, drawings and details of the entire development as completed. These drawings and plans shall be in hard copy and digital format and be compatible with AUTOCAD.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Making Good Defects					
A	Make arrangements with the Employer's Representative and give reasonable notice of the precise dates for access to the various parts of the works for purposes of making good defects. Make good all such defects.	1	Item			
	Access for Employer's Representative to Site and Workshops					
B	The Employer's Representative and any person authorised by him shall at all reasonable times have access to the Works and to the site and to all workshops and places where work is being prepared or where materials, manufactured articles and machinery are being obtained for the Works and the Contractor shall afford every facility for and every assistance in or obtaining the right to such access.	1	Item			
	PRIVATELY & PUBLICLY OWNED SERVICES & SUPPLIES					
C	The Contractor shall make arrangements with the Statutory Undertakers and others concerned, for the co-ordination of his work with all work which needs to be done by them or their contractors concurrently with the Works. Compliance with the periods of notice given does not relieve the Contractor of his obligations.	1	Item			
D	Private Services to individual properties have not generally been listed or shown on the drawings. The Contractor shall make arrangements with the Statutory Undertakers and others concerned for the phasing of all necessary disconnections and diversions of private services affected by the Works.	1	Item			
E	Disconnected apparatus can be removed by the Contractor only with the prior approval of the Authority concerned.	1	Item			
F	The Contractor shall carry out any trial pits required to determine the extent of these services. The Contractor should note that the exact extent of the works involved shall be dependent on the findings of trial hole operations.	1	Item			
G	All work on new and existing services to be in accordance with the specific requirements and carried out in the presence of an Inspector from the relevant Statutory Undertaker.	1	Item			
	TRAFFIC SAFETY & MANAGEMENT					
	General Requirements					
H	The Contractor must ensure that the personnel (Contractor and/or subcontractor) carrying out any works outside the boundary of the site have the relevant experience and are approved by Louth County Council and by the NRA	1	Item			
J	The Contractor shall comply with the requirements of Traffic Signs Manual - Chapter 8 - Temporary traffic measures and signs for Road works" Department of Transport, November 2010 and Guidance for the control and management of Traffic at Road works - Department of Transport, NRA and Local Government Management Services Board, November 2010.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The Contractor's Temporary Traffic Management Designer shall prepare a Detailed Temporary Traffic Management Plan for all locations where works are planned on any Public Road. The Detailed Temporary Traffic Management Designs shall be prepared in accordance with Traffic Signs Manual Chapter 8 (2008 revision) and the Design Process Traffic Management Plan.	1	Item			
B	The Operational Traffic Management Plan is prepared by the PSCS through further assessment and development of the Detailed Temporary Traffic Management Plans. The PSCS shall coordinate the implementation of the developed traffic management plan during the works and the Contractor's Temporary Traffic Operations Supervisor should oversee the implementation of the traffic management plan and should immediately notify the PSCS of any problems with the plan.	1	Item			
C	Traffic Management Designer (TMD) - The TMD is a member of the Engineers Design team who is responsible for designing the Design Process Traffic Management Plan	1	Item			
D	Temporary Traffic Management Designer (TTMD) - The TTMD is appointed by the Contractor and is responsible for the Design of the Detailed Temporary Traffic Management Plan.	1	Item			
E	Temporary Traffic Operations Supervisor (TTOS) - The TTOS is appointed by the Contractor and shall have direct responsibility for the implementation of the Operational Traffic Management Plan during construction, including, installing, maintaining, modifying and removing the temporary traffic management arrangements.	1	Item			
F	The Contractor shall consult all interested parties, including (but not limited to) the IDA, Garda Siochana and the Local Authority with respect to traffic management proposals. The Contractor shall submit his proposed Operational Traffic Management Plan for approval by the Engineer and the Local Authority before commencing any works on site. The Contractors programme of work shall allow two weeks for approval by the Local Authority of the Operational Traffic Management Plan and shall allow in his programme for other time limits specified in this Specification	1	Item			
G	The Guidelines as specified in the current Department of Transport Traffic Signs Manual, Chapter 8 should be used in conjunction with the Design Process Traffic Management Plan for signage, layout of road works and traffic management. This Section sets out the additional requirements over those stated in the Department of Transport Traffic Signs Manual, Chapter 8.	1	Item			
H	Where the Works are on or adjacent to Public Roads or Streets, the Contractor shall first view the Works from as many directions as traffic shall approach, plan his work sequence and his proposed traffic layout and then select the type of control devices. A full list of sign and device requirements shall be established before any site works commence.	1	Item			
J	The operational traffic management plan should include the following information as a minimum. Drawings/schedules indicating traffic management layout including the following as appropriate:	1	Item			
K	Phasing of works at each location	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Geometric design	1	Item			
B	Extent of existing trafficked road being interfered with,	1	Item			
C	Position of traffic signals/signalment	1	Item			
D	Working areas	1	Item			
E	Width of Lanes	1	Item			
F	Barriers	1	Item			
G	Safety zones	1	Item			
H	Provision for pedestrians	1	Item			
J	Access and exit locations for construction	1	Item			
K	Provision for emergency services	1	Item			
L	Timing of Operations	1	Item			
M	Road Lighting/ Temporary Lighting	1	Item			
N	Routes of proposed diversions	1	Item			
P	Road Signage, Cones, Temporary Marking, etc.	1	Item			
Q	The Contractor may prepare and submit to the Engineer for his approval revisions to the Operational Traffic Management Plan during the course of the Works. The Operational Traffic Management Plan and revisions to that plan shall be submitted at least 7 days prior to the date on which the Contractor proposes to implement any element of the plan. The Contractor shall not commence any work, which affects vehicular, pedestrian or cycle movements without the prior written approval of the Engineer to the proposed Operational Traffic Management Plan. The Contractor shall regularly review the Operational Traffic Management Plan measures and prepare alternative plans where he considers it necessary or desirable to alter those measures. The Contractor shall not implement any alterations or revisions to the Operational Traffic Management Plan measures without the prior written consent of the Engineer.	1	Item			
R	The plan shall indicate traffic lane closures where required for the safe construction of the works or for the safety of personnel involved in construction activities and alternative arrangements for routing traffic. The plan shall be presented with a written description setting out the proposed sequence of traffic management measures and associated construction activities. The plan shall have regard to any concurrent Traffic Safety and Control measures in use adjoining or in close proximity to the proposed Works.	1	Item			
S	The Contractor shall submit with this Traffic Management proposals, full details of the timings of all operations. Such details will require the approval of the Engineer and An Garda Siochana.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	The 'Traffic Control Area' shall be the area between the 'Roadworks Ahead' sign and the 'Roadworks End ' sign at each end of Works.	1	Item			
B	The 'Work Area' shall be the overall area of the Highway within which the works are executed.	1	Item			
C	The Contractor shall cover (in a manner approved by the Engineer) and uncover all existing signs and temporary signing which become inaccurate as a result of the introduction of any traffic management measure.	1	Item			
D	When directed by the Engineer or An Garda Siochana the Contractor shall:	1	Item			
E	(a) remove loads or debris which have accidentally fallen onto the operational Traffic lanes within the Traffic Control Area, from whatever source	1	Item			
F	(b) accommodate the routing of abnormal loads through the Traffic Control Area	1	Item			
G	Under such circumstances the Contractor shall submit to the Engineer within 48 hours a full record of the plant, labour and materials used in the operation.	1	Item			
H	Any damage caused to the carriageway as a result of the establishment or removal of traffic safety and control measures shall to be made good to the satisfaction of the Engineer at the Contractors Cost.	1	Item			
J	The Contractor shall ensure that carriageways and footways are swept clean before being opened to traffic. This includes prior to the establishment of any traffic control phase.	1	Item			
K	Any permanent road markings damaged during any traffic control phase shall be replaced or brought back to the specified standard.	1	Item			
L	Meetings to discuss the schemes of Traffic Management shall be held as required by the Engineer between the Contractor and An Garda Siochana. The Contractor shall be responsible for co-ordinating these meetings.	1	Item			
M	Traffic Signs and Management Apparatus	1	Item			
N	Traffic signs shall not be erected on scaffolding.	1	Item			
P	The Contractor shall ensure continuous inspection of all traffic control equipment in use and replace any defective equipment as soon as practicable. An adequate supply of replacement equipment shall be available at all times.	1	Item			
Q	The Contractor shall keep clean and legible at all times all traffic signs, cones, road markings, barriers and lamps and ensure that all equipment is in its correct position at all times.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
	Notice Requirements					
A	Minimum notice required by the Local Authority to consider a Contractor's application (on appropriate pro-forma and with plans where necessary) for:-	1	Item			
B	(i) Amending or making traffic orders - 8 weeks	1	Item			
C	(ii) Authorising of non-prescribed signs - 1 week	1	Item			
D	(iii) Authorising temporary traffic signals - 7 working days	1	Item			
E	(iv) Moving signs to be compatible with the state of the Works - 4 working days	1	Item			
F	The Local Authority will invoice the Contractor for current charges in respect of work of (i) and (iv) as a result of his applications. Such costs are not reimbursable under the Contract.	1	Item			
G	Applications for (i) must provide:	1	Item			
H	Names of Roads	1	Item			
J	Details of alternative routes being suggested	1	Item			
K	Accurate description of sections to be closed	1	Item			
L	Periods of required closure, terminations, traffic directions, times of operation	1	Item			
M	Details of access availability for frontages, emergency services, pedestrians, construction traffic, other purposes	1	Item			
N	All illustrated with suitable plans.	1	Item			
P	For the purpose of (i), (ii), (iii) and (iv) above, the appropriate Authority is Louth County Council.	1	Item			
	ROUTING OF VEHICLES					
	Permitted Access Routes to and from the Site					
Q	The permitted access route to and from the site shall be as indicated on the Architect's drawings. Any other route to and from the site shall be prohibited, without prior written approval of the County Council and the ER	1	item			
R	The Contractor shall erect adequate signing to the permitted access point, and take any other measures necessary to ensure that vehicles are properly routed tot and from the site.	1	Item			
S	All signing shall comply with the traffic signs regulations and general directions.	1	Item			
T	The use of Permanent Works by Construction Traffic	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Sub-formation:	1	Item			
B	The Contractor shall take suitable measures to protect the sub-formation when used by the construction traffic. The Contractor shall provide details to the Engineer of his method of protection prior to bringing any area of sub-formation into use by construction traffic. These details shall include the loading on the layer, the material to be used, the thickness and width of the layer and calculations to support the choice of any of these parameters.	1	Item			
	Sub base:					
C	The Contractor shall take suitable measures to protect the sub-base when used by construction traffic. The Contractor shall provide details to the Engineer of his method of protection prior to bringing any area of sub-base into use by construction traffic.	1	Item			
D	Where this is to be an over-thickening of the sub-base the Contractor shall provide calculations to support the choice of the depth of thickening which he has chose to use to protect the sub-base. The thickening shall extend across the full width of the carriageway.	1	Item			
	Substances Hazardous to Health					
E	The Contractor shall take appropriate measures to prevent injuries from substances hazardous to health which include:	1	Item			
F	(i) Culvert and waterproofing agents	1	Item			
G	(ii) Paints	1	Item			
H	(iii) Any dust in substantial concentrations	1	Item			
J	(iv) Excavated contaminants	1	Item			
K	(v) Working adjacent to live foul sewers	1	Item			
L	Nothing contained in these Preliminaries shall relieve the Contractor of his obligations under the Contract.	1	Item			
	Measures to be taken to Protect Members of the Public					
M	The Contractor shall advise the Engineer of the measures he proposed to take to safeguard the general public and the owners and occupiers of property adjacent to the Works, from the effects of hazardous materials.	1	Item			
	Hazardous Materials					
N	Should hazardous materials be discovered during the course of the works they shall be dealt with by the contractor. The site shall be secured and protected and arrangements for disposal to a licensed tip shall be agreed with County Council prior to any disposal taking place.	1	Item			
				To Collection €		

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	4. GENERAL FACILITIES AND OBLIGATIONS (Cont)					
A	Under the guidance of an environmental consultant, the main contractor shall carry out characterisation of the soil in accordance with the 2015 EPA Guidelines "Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous", in addition to WAC testing to determine what facility the waste can go to.	1	Item			
	Radon					
B	The radon barriers, together with sumps, vents and the like has been selected with a view to reducing radon levels to below the recommended active level of 200Bq/m3. The radon barriers should be installed and certified by a radon specialist (e.g. a member of the Radon Council of Ireland) as complying with best practice (if such best practice involves installation different to that described in the contract documents, then the contractor should install in accordance with best practice) current at the time of installation. The works will not be considered as having reached Substantial Completion, in accordance with the contract if the certificate of best practice is (as described above) not handed over to the Design Team.	1	Item			
C	In the week prior to Substantial completion the contractor shall have adequate radon detectors installed in each building by the Radiological Protection Institute of Ireland (RPII) in accordance with the protocol agreed between the RPII and DoEY. If for any reason the RPII are unable to install the radon detectors, the radon detectors are to be installed by a competent radon contractor as listed on the RPII website. The detectors are to be installed in each occupied room at ground floor level and in locations as selected by the radon contractor or as agreed with the Design Team. The contractor shall provide to the Employer's Representative, a schedule of the recorded radon levels from all detectors at intervals of four, eight and eleven and a half months form date of Substantial Completion. Should the maximum individual detector readings exceed the active level of 200Bq/m3 then the contractor shall remediate the radon protection system to achieve the active level of 200Bq/m3 at his own cost.	1	Item			
D	The contractor will employ an independent 3rd Party testing contractor as registered by the Environmental Protection Agency (EPA). The appointed testing contractor will have appropriate PI insurance.	1	Item			
E	It is the responsibility of the main contractor to ensure that the quality of workmanship for the Radon Barrier system is adequate and is installed to the manufacturers details and specifications. Where remedial action is required due to poor quality of workmanship, this will be done at the Main Contractor's own expense.	1	Item			
F	A radon test is required 6 months after Substantial Completion during the Defects Liability Period.	1	Item			
				To Collection €		

4. GENERAL FACILITIES AND OBLIGATIONS (Cont)

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4. GENERAL FACILITIES AND OBLIGATIONS (Cont)

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4. GENERAL FACILITIES AND OBLIGATIONS
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SUMMARY	**Page No.**		
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3. WORK BY NOVATED SPECIALISTS, SPECIALISTS, WORK BY UTILITY PROVIDERS AND WORK BY OTHERS ENGAGED DIRECTLY BY THE EMPLOYER	Preliminaries/101		
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TOTAL AMOUNT CARRIED TO GENERAL SUMMARY			
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BUILDING

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	(10) DEMOLITIONS AND ALTERATIONS						
	DEMOLITION & ALTERATIONS						
	GENERAL						
A	1. THE ONUS IS ON THE CONTRACTOR TO VISIT THE SITE OF THE WORKS AND TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF THE WORKS AND ALL OTHER MATTERS THAT MIGHT INFLUENCE HIS PRICE OR TIME FOR COMPLETION OF THE WORKS (ARRANGEMENTS TO VISIT THE SITE SHOULD BE MADE WITH THE EMPLOYER'S REPRESENTATIVE). THE CONTRACTOR MUST INCLUDE WITHIN HIS PRICE FOR ALL WORKS IN CONNECTION WITH THE DEMOLITION WORKS AND WORKS TO THE EXISTING BUILDINGS, WHICH COULD BE REASONABLY FORESEEN OR IMPLIED BY THE TENDER DOCUMENTS. NO CLAIMS ON THE GROUNDS OF WANT OF KNOWLEDGE IN RESPECT OF THE ABOVE WILL BE ENTERTAINED WHATSOEVER.		note				
B	2. All demolition work is to be carried out in accordance with the appropriate Health and Safety Executive Guidance Notes; All operatives must be appropriately skilled and experienced for the type of work and must hold or be training to obtain relevant CITB Certificates of Competence; All site staff responsible for supervision and control of work are to be experienced in the assessment of the risks involved and in the methods of demolition to be used.		note				
C	3. No demolition shall proceed in advance of consultation and sign off by relevant consultants. All conservation reports must be taken into account with respect to demolition works; The Contractor must include herein for all costs associated with same.		note				
D	4. Demolition work is to be entrusted only to workmen with experience in this type of work, and all precautions must be taken to avoid accidents and to safeguard persons and property.		note				
E	5. All excess builders rubble, topsoil, demolished materials etc, that is to be disposed off site, must be disposed in a licensed landfill site approved by the local authority.		note				
F	6. The Contractor shall provide and maintain all necessary temporary fencing, hoarding, fans, planked footways, gaurdrails, gantries and the like for the protection of the Public and meeting the requirements of the Local Authority.		note				
G	7. The Contractor is to include for all necessary scaffolding, hoisting and other facilities required for carrying out the works. Contractor also to make provisions for adequately supporting all structures if required.		note				
H	8. The Contractor should include herein for all costs associated with obtaining the appropriate licences, as these must be undertaken prior to any works being carried out		note				
J	9. The Contractors attention is drawn to the presence of existing services; due care must be taken when excavating in the proximity of existing buildings and boundaries		note				
					To Collection €		

(10) DEMOLITIONS AND ALTERATIONS (Cont)

A	10. When pricing the following items, the Contractor's attention is drawn to the information contained in the Works Requirements & Appendices of this Pricing Document. The Contractor's rates are to include for all items specifically referred to or implied therein. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
B	11. The Contractor must provide a method statement to the Architect for approval, outlining in detail the manner in which he proposes to carry out the removal of the demolition materials contained within the site.		note			
C	12. The Contractor should include herein for all costs associated with the removal of contaminated earth arising from the demolition of existing buildings; the contractor shall include for disinfecting the material as required by the Local Authority.		note			
D	13. The Contractor shall report to the Employer's Representative any bench marks or other survey information found on any structures that are to be demolished; any bench marks or information found must not be removed or destroyed unless instructed by the Employer's Representative		note			
E	14. The Contractor must note that any work carried out to or which affects new or existing services must be in accordance with the byelaws or regulations of the relevant statutory authority		note			
F	15. The Contractor should include herein for all costs associated with the locating and marking the positions of services affected by the demolition work; Contractor shall arrange with the appropriate authorities for the locating and marking of the positions of the mains services		note			
G	16. The Contractor must arrange with the appropriate authorities, before demolition is commenced, for the disconnection of services and removal of fixtures, fittings, furniture and equipment		note			
H	17. The Contractor must take adequate precautions to prevent fire or explosion caused by gas or vapour		note			
J	18. The Contractor must reduce dust by periodically spraying general demolition works with water during any alteration works to masonary etc.		note			
K	19. The Contractor must take adequate precautions to protect site operatives and the general public from health hazards associated with dangerous fumes and dust arising during the course of the works		note			
L	20. The Contractor should include herein for all costs associated with the temporary support and protection of adjoining property and buildings; Contractor must repair any damage caused at his own expense; Contractor must not leave any unnecessary or unstable projections and report any exposed or apparent defects to the Employer's Representative		note			
M	21. The Contractor must illuminate and protect and dangerous openings as necessary		note			

To Collection €

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	(10) DEMOLITIONS AND ALTERATIONS (Cont)					
A	22. The Contractor should include herein for all costs associated with the removal of timber infected by fungal/insect attack; the timber must be removed from the building and destroyed as soon as possible		note			
B	23. The Contractor must include herein for submitting to the Architect / Engineer, prior to commencement, the order and method of each operation. This is to include proposed methods of propping, shoring, protection of adjoining properties, areas, etc.		note			
C	24. The demolition shall be carried out without damage to adjoining properties. If such damage should occur, the Contractor shall reinstate and make good at his own expense.		note			
D	25. The Contractor shall ensure the safety of works and public during demolition works. Demolition work should be carried out so as to cause minimum inconvenience to the public and to adjoining owners.		note			
E	26. The Contractor shall include herein for clearly indicating, in writing, the manner of demolition i.e. machine, mechanical tools, piece by piece hand method etc. for each area		note			
F	27. The Contractor must note that no method of demolition which will transmit vibration into adjoining properties shall be permitted.		note			
G	28. The contractor must peruse the Architects and Engineers drawings and check all dimensions on site. No claim on the grounds of discrepancies between on site dimensions and drawings, in regards to demolition and associated works, will be entertained whatsoever.		note			
H	29. The contractor must include herein for ensuring that all services, electricity, gas, telecomunications, water, sewage, etc., are made safe prior to demolition		note			
J	30. The contractor is to report to the Architect / Engineer details of any underground chambers, vaults, walls, etc., discovered during demolition work.		note			
K	31. The contractor must prevent access to unauthorised persons to partly demolished structures and must leave the site safe at close of each days work.		note			
L	32. Care must be taken to prevent debris from overloading any part of the structure		note			
M	33. The Contractor shall ensure that the impact of the works on the surroundings are in accordance with the set maximum levels for vibration and noise as defined in the guidelines presented in the relevant codes of practice.		note			
				To Collection €		

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	(10) DEMOLITIONS AND ALTERATIONS (Cont)					
	Demolitions					
	Demolishing Parts of Structures					
	Demolition / Removal of parts of existing structure within the existing building; disposal of all materials off site; complete; all in strict accordance with the Work Requirements					
A	Demolition of wall; External cavity parapet wall construction; 400mm thick; Approx 8900mm long x 1300mm high; disposal of all materials off site; make good reveals. Tendering Contractor to visit the site in accordance with the Invitation To Tender to assess the full extent of the works to be completed. No claims on the grounds of want of knowledge will be entertained whatsoever; refer to Architects Drawing 0101 and Specification and Engineers Drawings and Specification	1	item			
	Making good remaining structures					
	Making good finishes					
B	All works are to be carried out without damage to adjoining work and if such damage should occur in the carrying out of the demolition, the Contractor shall reinstate and make good the same at his own expense. All making good is to be executed with the best materials and workmanship with regard to the existing structure and is to be properly bonded etc to surrounding work.		note			
C	Making good existing building (structure and finishes - note new floor and ceiling finishes to existing school measured elsewhere); location: at External cavity parapet Level; refer to Architects Drawings; external cavity block wall construction; refer to Architects Drawing 0101 and Specification and Engineers Drawings and Specification	1	item			
	Support of existing structures					
D	Contractor to note that the design of all temporary works is the responsibility of the Contractor and that the Contractor shall ensure that all temporary works supports etc are detailed and designed and carried out in accordance with best building practice and in a safe and secure manner.	1	item			
E	It is for the Contractor to judge whether or not any necessary removal or demolition gives rise to the need for temporary shoring or props. He shall be deemed to exercise expert judgement in this matter. The Engineer may be consulted but the decision to use or not to use shoring or props rests with the Contractor who shall be solely liable for the proper design of any shoring or props and shall be liable for any damage resulting from the failure to use temporary supports in any situation where common practice and prudent judgement indicates that they are required to be used.	1	item			
				To Collection €		

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	(10) DEMOLITIONS AND ALTERATIONS (Cont)					
	All necessary shoring and propping to existing structures; including providing and erecting; adapting as necessary; maintaining for duration required and making good all work disturbed					
A	Location: at External cavity parapet Level; refer to Architects Drawings; external cavity block wall construction; refer to Architects Drawing 0101 and Specification and Engineers Drawings and Specification	1	item			
	Temporary Screens					
B	Noise and disturbance shall be reduced to a minimum and all old materials etc, shall be regularly sprinkled with water so as to keep down dust. All proper screens and protection shall be provided to the satisfaction of the Architect. The Contractor must allow here for 2.4m high continuous timber hoardings around all working areas at all times.	1	item			
C	The Contractor is to ensure that all areas under where existing roof coverings are removed are subjected to minimum possible exposure time to the elements. Temporary weatherproof coverings are to be employed where considered necessary. Any damage caused due to insufficient protection being provided will be made good at the Contractor's own expense.	1	item			
	Erect dust proof hoarding between working area and existing internal areas. A detailed method statement is to be provided outlining how the existing building is to be maintained in operation and comply with Health and Safety requirements while the new works are being carried out					
D	Location: at External cavity parapet Level; refer to Architects Drawings; external cavity block wall construction; refer to Architects Drawing 0101 and Specification and Engineers Drawings and Specification	1	item			
	Alterations					
	Removing					
	Fittings and Fixtures					
E	Existing External double doors, fanlight and frame; approx 2100mm wide x 4250mm high; include all fittings, architrives, liners etc; diposal of all material off site	1	nr			
F	Existing Windows, complete; Approx size 1400mm wide x 450mm high overall; include all fittings, cills, frames etc; disposal off site and making good existing structure to receive new	4	nr			
G	Existing Window Boards, complete; include all fittings; disposal off site and making good existing structure to receive new	6	m			
H	Existing Window & External Door Liners, complete; include all fittings; disposal off site and making good existing structure to receive new	20	m			
				To Collection €		

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	(10) DEMOLITIONS AND ALTERATIONS (Cont)					
	Removal; Plumbing and Engineering Installations					
A	Existing Mechanical Services	1	item			
B	Existing Electrical Services	1	item			
	Removing Finishes					
C	Existing plasterboard ceiling finishes to certain locations within existing building; disposal of all materials off site; prepare ceilings to receive new finishes	91	m2			
D	Existing suspended ceiling finishes to certain locations within existing building; disposal of all materials off site; prepare ceilings to receive new finishes	444	m2			
E	Removal of suspended ceiling tiles to allow M & E Services route through, set aside, refix upon completion make good ready to refix existing (Contractor to allow for any new ceiling tiles required if damaged during removal and refixing); all to Architect's Specification and Drawing 0101 and M & E Drawing 6001	243	m2			
	Building up					
	Openings or recesses in existing structures					
F	Build up existing ope in existing external cavity (Following removal of window - measured elsewhere), 400mm thick, approx 1400mm wide x 450mm high; built up with blockwork to include tying into existing complete; make good all surrounding areas; refer to Architects Drawing 0101 and Specification and Engineers Drawings and Specification	4	nr			
G	Build up existing ope in existing external cavity (Following removal of external door - measured elsewhere), 400mm thick, approx 2100mm wide x 1430mm high; with 60min rated studwork - 50c metal stud with two layers of 12.5mm platerboard to each side, skimmed to include tying into existing complete; make good all surrounding areas; refer to Architects Drawing 0101 and Specification and Engineers Drawings and Specification	1	nr			
				To Collection €		

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(10) DEMOLITIONS AND ALTERATIONS (Cont)					
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Page No. Building/6					
(10) DEMOLITIONS AND ALTERATIONS **Carried to Summary**					

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	(19) SUBSTRUCTURE					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	2. Please refer to Consulting Engineers and Architect's Specification and Drawings		note			
E	3. In exceptional cases where it has not been possible to specify a generic element and a specific product has been named, an equivalent product to that specified is acceptable where it meets the technical, functional and aesthetic standards of that specified: the onus is on the contractor to ensure that an equivalent product to that specified meets the standard by means of an agreement cert, insurance backed guarantee or warranty, detailed specifications, fire test certificates where applicable, brochure and other means of proof of compliance. Notwithstanding this, the appropriate foregoing documentation and samples are to be provided to the architect prior to being incorporated into the construction		note			
	EXCAVATION AND EARTHWORK					
	Ground Investigation					
	Excavation					
	Excavation; refer to structural specification ref "230079-X-X-X-XX-SP-DBFL-SE-0001 C & S Specifications" and site investigation report ref "GI Report" for additional requirements					
	Foundation Pits					
F	Depth not exceeding 2.00m	45	m3			
	Foundation Trenches					
G	Depth not exceeding 2.00m	209	m3			
	Soft spots					
H	Depth not exceeding 2.00m	26	m3			

To Collection €

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	(19) SUBSTRUCTURE (Cont)					
	Extra on Excavation Items for:					
	Below Ground Water Level					
A	Generally	28	m3			
	Around Existing Services					
B	Eircom; parallel to excavations	25	m			
C	ESB; parallel to excavations	25	m			
D	Watermains; parallel to excavations	25	m			
E	Street Lighting; parallel to excavations	25	m			
F	Gas Main; parallel to excavations	25	m			
G	Eircom; crossing excavations	10	nr			
H	ESB; parallel to excavations	10	nr			
J	Watermains; parallel to excavations	10	nr			
K	Street Lighting; parallel to excavations	10	nr			
L	Gas Main; parallel to excavations	10	nr			
	Breaking up existing					
M	Rock; include for all necessary trimming	28	m3			
	Working Space					
	Foundations Pits					
N	Depth not exceeding 2.00m; backfilling trenches with Annex E of SR 21 hardcore	54	m2			
	Foundations Trenches					
P	Depth not exceeding 2.00m; backfilling trenches with Annex E of SR 21 hardcore	356	m2			
	Disposal					
	Water					
Q	Surface	1	item			
R	Ground	1	item			
				To Collection €		

	(19) SUBSTRUCTURE (Cont)				
	Excavated material; All surplus materials to be disposed of off-site to a licensed waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations				
A	Disposal off site; Disposal to a suitable licensed waste disposal facility; to pits	45	m3		
B	Disposal off site; Disposal to a suitable licensed waste disposal facility; to trenches	209	m3		
C	Disposal off site; Disposal to a suitable licensed waste disposal facility; to soft spots	26	m3		
	Filling with blinded and hardcore compacted fill to be obtained off-site; 'T1 Struct' in compliance with NSAI SR21:2014 + A1:2016 (ANNEX E). installed and compacted in layers in accordance with the latest ISEN 13242; depositing in 200mm layers maximum thickness; compacting				
	To make up levels				
D	Average thickness exceeding 250mm	970	m3		
	Filling with blinded and hardcore compacted fill to be obtained off-site; 'T2 Perm' in compliance with NSAI SR21:2014 + A1:2016 (ANNEX E). installed and compacted in layers in accordance with the latest ISEN 13242; depositing in 200mm layers maximum thickness; compacting				
	To make up levels				
E	Average thickness exceeding 250mm	172	m3		
	To excavations				
F	Average thickness exceeding 250mm	82	m3		
	Surface Treatments				
	Blinding filling; 'T3 Blind' in compliance with SR21:2014 & A1:2016 (ANNEX E); compacting				
G	Generally; 50mm thick	856	m2		

To Collection €

	(19) SUBSTRUCTURE (Cont)					
	CONCRETE WORK					
	In-situ Concrete					
	Concrete cubes for testing					
	Provide for making sampling and testing procedures shall comply with IS EN 12350 Testing Fresh concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification Section - 4.13					
A	Size 150 x 150 x 150mm	58	nr			
	Blinding/Lean mix concrete; Mix reference: C12/15; nominal maximum aggregate size: 20mm (I.S. EN 206); refer Engineer's Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 4.15.					
	Bulk filling under foundations					
B	Generally; poured on or against earth or unblinded hardcore	352	m3			
	Bulk filling to soft spots					
C	Generally; poured on or against earth or unblinded hardcore	26	m3			
	In-situ Concrete; Reinforced					
	Structural concrete; designed concrete; Strength class C40/50; exposure class XC2 tol.S. EN 206 and the Irish National Annex; nominal maximum aggregate sizeDmax 20 mm; GGBS addition complying with I.S. EN 15167-1:2006 and providingnot less than 30% Portland-cement clinker replacement by mass; CEM I-onlyconcrete not permitted except where prior written approval is obtained inaccordance with the specified supply-chain contingency provisions; all inaccordance with drawing 230079-X-95-X-F01-DR-SE-7000, Engineer's Specification Clause 4.3.1, Engineer's Specification Table 4.11-2 and theConcrete Work Project-Specific Preamble					
	Foundations					
D	Generally; Reinforced	218	m3			
	Pad Foundations					
E	Generally; Reinforced	27	m3			
	Beds					
F	Exceeding 150mm; reinforced	129	m3			
G	Extra over for forming recess in concrete for matwells; recessed 20mm	45	m			

To Collection €

					€	c
	(19) SUBSTRUCTURE (Cont)					
	Concrete Grade; C32/40					
	Columns					
A	Cross-sectional area exceeding 0.10m2; Reinforced	2	m3			
	Upstand					
B	Cross-sectional area not exceeding 0.10m2; Reinforced	1	m3			
	Sundries on In-situ Concrete					
	Designed Joints; refer Engineer's Drawings and Specification					
	Isolated Joint (IJ); approved joint sealant; 20mm thk, Compressible Filler board with 20mm Polysulphide Sealant; all in strict accordance with Detail on Engineer's Drawing 230079-X-X-X-L00-DR-DBFL-SE-1002					
C	Width not exceeding 150mm; Depth 150 - 300mm	576	m			
	Saw cut joint; approved joint sealant; 5x30mm thk, all in strict accordance with Detail on Engineer's Drawing 230079-X-X-X-L00-DR-DBFL-SE-1002					
D	Width not exceeding 150mm; Depth 150 - 300mm	8	m			
	30mm expanding material to prevent load transfer to existing foundation; all in strict accordance with Detail on Engineer's Drawing 230079-X-X-X-L00-DR-DBFL-SE-5000					
E	Width not exceeding 150mm; Depth 150 - 300mm	24	m			
	Waterstops; Sikaproof A, waterbar or equivalent; strictly in accordance with the manufactures instructions					
F	Generally; straight runs; 215mm wide	8	m			
G	Extra over for angles	4	nr			
	Surface Finishes					
	Powerfloating					
H	Generally	856	m2			
	Trowelling					
J	Tops of foundations	423	m2			
K	Tops of columns	3	m2			
				To Collection €		

					€	c
	(19) SUBSTRUCTURE (Cont)					
	Reinforcement					
	Bar reinforcement; Hot rolled high yield steel bars shall comply with ISO9001/ CARESISEN10080/ BS4449 except that no bar shall contain a flash weld. All bars shall be cut and bent in accordance with BS 8666 ; must be free of loose millscale and thoroughly cleaned to remove all loose rust, oil, grease or other harmful matter prior to being placed in position with and including all necessary laps, spacers, chairs and tying wire; all in strict accordance with the Engineers Drawings; refer to Engineer's Specification Section 4.30					
	Bar; straight or bent; Pad					
A	12mm - 25mm diameter	1.23	t			
	Bar; straight or bent; Column					
B	Nominal size not exceeding 12mm diameter	0.11	t			
C	12mm - 25mm diameter	0.11	t			
	Bar; straight or bent; Upstand					
D	Nominal size not exceeding 12mm diameter	0.03	t			
E	12mm - 25mm diameter	0.05	t			
	Steel fabric reinforcement shall comply with the requirements of IS EN 10080:2005 and BS 4449 (Grade B500B or B500C) and shall be obtained from and cut and bent by a firm holding a valid CARES (or equivalent scheme) certificate of approval for production and supply of steel for the reinforcement of concrete; The reinforcement shall be cut, cold bent and hooked to the dimensions shown on the drawings and schedules or to such other dimensions as may be directed; All in strict accordance with the Engineers drawings and Engineering Specification Section 4.30					
	Reference A393; 400mm side laps; 400mm end laps					
F	Horizontal	2,430	m2			
	Reference A142 mesh; 400mm side laps; 400mm end laps					
G	Horizontal	856	m2			
				To Collection €		

					€	c
	(19) SUBSTRUCTURE (Cont)					
	Formwork					
	Formwork; Design and construction of falsework and formwork shall be in accordance with C & S Specification; Type A Finish;This finish is obtained by the use of properly designed formwork or moulds of timber, plywood, plastics, concrete or steel. Small blemishes caused by entrapped air or water may be expected, but the surface should be free from voids, honeycombing and other blemishes.; All as per accordance with Engineer's Drawings and Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 P01 Section 4.21 & 4.22 & 4.27					
	Sides of foundations					
A	Height or width 250-500mm	615	m			
	Sides of pad foundations					
B	Height or width 250 - 500mm	75	m			
	Edges of Beds					
C	Height or width not exceeding 250mm	137	m			
	Sides of upstands and steps in top surfaces					
D	Height or width between 250-500mm; Upstand	9	m			
E	Height or width not exceeding 250mm; for 20mm recess for matwells	45	m			
	Columns					
F	Isolated; rectangular; height not exceeding 4.00m; cross sectional area not exceeding 0.10m2; Columns	13	m2			
	Kickers					
G	Column; rectangular	18	nr			
	Precast Lintels: Standard: To IS EN 845-2; complete all as per Architects and Engineer's Drawings and Specification					
	Lintels					
H	215mm wide x 65mm deep x 800mm long	134	nr			

(19) SUBSTRUCTURE (Cont)

BRICKWORK AND BLOCKWORK

Blockwork

Aggregate concrete blocks; Manufacturer: To Structural Engineers Specification. Standard: To BS EN 771-3. Block description: To Structural Engineers Specification. Compressive strength: 13N, Characteristic value: To Structural Engineers Specification. Thermal conductivity: To I.S. EN 1745 Masonry and masonry products-Methods for determining design thermal values. table A3. Reaction to fire: Class A1. Euro code 6 # I.S. EN 1996 Design of Masonry Structures # Part 1-2: General Rules # Structural Fire Design, defines the methods and calculations to determine the fire resistance of concrete block walls. Execution: Pr_20_93_52/625 Brickwork and blockwork appearance; Pr_20_93_52/690 Laying brick and block masonry units generally; Pr_20_93_52/635 Brickwork and blockwork pointing; Pr_20_93_52/630 Brickwork and blockwork bond; As per Architects Specification Pr_20_93_52_01.

Walls

A	100mm thick	68	m2		
B	215mm thick	169	m2		
C	550mm thick	53	m2		

Labours

D	On blockwork; generally	1	item		

Autoclaved aerated concrete (AAC) blocks Thermal Blocks; Manufacturer: Roadstone Ltd; Product reference: Roadstone Thermal Liteblock System. Category 1 unit in accordance with EN 771-3. CE marked. Or equivalent; Thickness: as required; Standard: To BS EN 771-4; Junctions: Provide expanded metal at junction of different types of blockwork to ensure no cracking at junctions; Mean compressive strength 13N (minimum): Category: To Structural Engineers Specification; Freeze/ thaw resistance: Deemed to satisfy national requirements when used and rendered in accordance with SR 325; Thermal conductivity (maximum): 1.01 - 1.19 W/mK (?10,dry) to I.S. EN 1745 Annex A; Accessories or special shapes: Type: Coursing blocks; Tolerance category: D1 (+3mm, -5mm); Density: >1900kg/m3; Reaction to fire: to BS EN 13501-1: A1; Execution: CE Marking, NSAI certificate required; refer to section Pr_20_93_52_05 of Architect's Specification.

Walls

E	215mm thick	74	m2		

Labours

F	On blockwork; generally	1	item		

To Collection €

(19) SUBSTRUCTURE (Cont)

Ancillaries to Brickwork/Blockwork

Phenolic foam boards Cavity Wall Insulation; Description: Bio enhanced high performance partial fill wall insulation. Manufactured to EN 13165:2012+A2:2016 by Kingspan, comprising of a rigid modified Polyisocyanurate (PIR) core between textured foil facings and engineered shiplap jointing. The Kooltherm K8 100mm with a declared Lambda value of 0.021 W/mK to achieve a U-Value of 0.17W/m2K for the wall element. To be installed in accordance with instructions issued by Kingspan. Certification: BS EN ISO 9001. BS EN ISO 14001. Manufacturer: Unilin or equivalent. Product reference: Kooltherm K8 or equivalent. Min. U-Value: 0.17 W/m2K. Standard: To BS EN 13166. Fire performance: Class F to BS EN 13501 : 2007. Thermal conductivity (maximum): 0.021 W/mÚK; Compressive strength (minimum) at 10% compression: 100kPa. Thickness: 100mm. Face size (length x width): 1200mm x 450mm. Jointing: All board joint junctions to be taped with aluminum foil insulation tape. or equivalent approved. Edges: Rebated on all four edges. Facing: Faced on both sides with a low emissivity composite foil, autohesively bonded to the insulation core during manufacture. This reflective, low emissivity surface improves the thermal resistance of any unventilated cavity adjacent to the board; including Cavity wall ties. Product reference: To Structural Engineers Specification. Standard: To BS EN 845-1. Execution: Pr_20_85_84/610 Fixing ties in masonry cavity walls; As per Architect's Specification Pr_25_71_63_59 & Pr_20_85_84_19

Forming cavities; between new walls

A	150mm wide cavity; 100mm insulation as specified	49	m2		

Gas-resistant damp-proof courses Type A; Manufacturer: Necoflex; Product reference: Easi-Load# Radon DPC or equal approved; Easi-Load# Radon Corner Assembly: Required; refer to section Pr_25_57_21_35 of Architect's Specification

Damp proof courses

B	Width not exceeding 225mm; laps 150mm; horizontal	220	m		
C	Width exceeding 225mm; laps 150mm; stepped	118	m2		

To Collection €

(19) SUBSTRUCTURE (Cont)

ROOFING, CLADDING AND WATERPROOFING

Mastic Asphalt, Waterproof and Gas proof Non-Metal Flexible Sheet Coverings

Plastics sheets Radon Membrane; Description: Loose laid polyethylene gas retardant damp proofing radon membrane; Manufacturer: Necoflex Ltd., Radon Control Systems, Unit 3 Orion Business Campus, Northwest Business Pk., Dublin 15. Tel: +353 (0)1 802 3333 Fax: +353 (0)1 803 6060. Or equivalent; Product reference: Monarflex RMB400 gas membrane or equivalent; Material: Three layers of virgin low-density polyethylene (LDPE) with a 9 x 12mm multi-filament polyester (1670 dtex) reinforcing grid between; Performance characteristics : Tensile strength (minimum): >600N/50mm, Tear resistance: >425N, Elongation to break: <19%; Water vapour resistance (minimum): 1024 MNúsúg-1; Anti-static properties: Required; Physical properties: Colour: Red; Weight (minimum): 407 g/m2; Dimensions : Thickness (minimum): 410 microns, Width (minimum): 2.0 m ; 4.0 m, Roll length (minimum): 25 m; Accessories: Pr_25_57_21_35 Gas-resistant damp-proof courses; ; refer to section Pr_25_57_65_60 of Architect's Specifications

Damp Proofing

A	Horizontal; Width not exceeding 300mm; dressing to internal wall	220	m		
B	Horizontal; Width exceeding 300mm	856	m2		
C	Horizontal; Width not exceeding 300mm; dressing to external wall	191	m2		

Extra Over For

D	Radon detailing to External Walls, complete, including easi-load radon DPC detail, folding radon membrane, Monobond double sided tape etc, all as per Architects Detail on Drawing 23-16-8001 and Specification	138	m		
E	Radon detailing to Internal Walls, complete, including easi-load radon DPC detail, folding radon membrane, Monobond double sided tape etc, all as per Architects Detail on Drawing 23-16-8001 and Specification	220	m		

Collars around pipes, standards and the like; allow for dressing radon barrier around; including all additional radon membrane, additional tanking items, radon tape, collars etc.

F	Size of pipes; 110mm diameter; Height of Collar; 300mm	34	nr		

Depressurization sumps; Description: Radon Sump; Manufacturer: Necoflex Easi-Sump or equivalent; Material: Rigid PVC; Shape: Square; Size: 380x380; Sump height (nominal): 124; Inlets/ outlets: Number of inlets/ outlets: 4, Diameter: 124; refer to section Architect's Specification

Gas proofing; Sumps

G	Generally	4	nr		

To Collection €

					€	c
	(19) SUBSTRUCTURE (Cont)					
	Gas proofing; Radon vent pipework; interconnecting					
A	110mm dia.	57	m			
B	100mm Dia Radon Vent stack - Wavin Osmasoil or equivalent to be solvent welded	2	nr			
C	Cap Link; including pvc cover, frame, coupling with gas seals top and bottom	2	nr			
	SikaProof A+ 12 is a polyolefin (FPO) based sheet membrane for below ground waterproofing of reinforced concrete structures. To conform to CE Marking and Declaration of Performance to EN 13967 - Flexible sheets for waterproofing # Damp proofing and basement tanking Watertightness of a Surface Sealing System; All as per detail drawing no 8002 - Construction Details 02					
	Tanking					
D	Horizontal; Width exceeding 300mm; to lift pit wall	10	m2			
E	Vertical; Width exceeding 300mm; to lift pit wall	13	m2			
F	Horizontal; Width not exceeding 300mm; to perimeter edge base and wall	25	m			
	Sika Drain-850 Geo is a high-density polyethylene (HDPE), heavy duty drainage and protection sheet with 10 mm high dimples on the bottom layer and a bonded geotextile (PP) filtration layer on the top layer. Conforms to the requirements of EN 13252:2016 # Geotextiles and geotextile-related products intended -For use as filtration and separation (F+S+D) in drainage systems; geotextile membrane infiltration layer to specialist design and recommendation; All as per detail drawing no 8002 - Construction Details 02					
	Tanking					
G	Width exceeding 225mm; vertical	13	m2			
				To Collection €		

(19) SUBSTRUCTURE (Cont)

WOODWORK

Ironmongery, Accessories and Sundries

Phenolic foam boards Ground Floor Insulation; Description: K103, PIR ground floor insulation. Manufactured to EN 13166 by Kingspan Insulation, comprisingPremium performance rigid thermoset phenolic insulation - thermal conductivity of 0.019 W/mK.core. It is faced on both sides with a glass tissue based facing, autohseively bonded to the insulation core during manufacture. Lambda value as low as 0.019 W/mK to achieve a U-Value of 0.14W/m2K for the floor element. To be installed in accordance with instructions issued by Kingspan Insulation; Manufacturer: Kingspan Insulation; Product reference: Kingspan Kooltherm K103 Floorboard (Kingspan Kooltherm K103 Floorboard - 100 mm. Standard: To BS EN 13166; Third-party certification: British Board of Agreement (BBA) certification; Fire performance: Euroclass RtF C-s2,d0 to BS EN 13501-1: 2018; Thermal conductivity (maximum): 0.019 W/múK; Water permeability: Manufacturer's standard; Water vapour permeability: Manufacturer's standard; Compressive strength (minimum) at 10% compression: 120 kPa; Cross section: Uniform thickness; Thickness: 100 mm; Face size (length x width): 2400 x 1200 mm; Recycled content: 0% (minimum) to BS EN ISO 14021; Edges: Square; Facing: Glass tissue based facing; Core: Rigid thermoset fibre-free phenolic insulant; Fire performance: Class F to BS EN 13501 : 2007; ; refer to section Pr_25_71_63_59 of Architect's Specifications

Insulation; Thermal

A	Horizontal; width exceeding 300mm	856	m2		
B	Vertical; width not exceeding 300mm	576	m		

Extruded polystyrene (XPS) boards Lift pit; Description: High performance rigid extruded polystyrene (XPS) insulation board with a high compressive strength and a closed cell structure that resists water absorption and water vapour passage for lift pit walls and floor. Kingspan GreenGuard GG300 is manufactured under a management system certified to ISO 9001: 2015 (Quality management systems. Requirements),ISO 14001: 2015 (Environmental Management Systems. Requirements), ISO 45001: 2018 (Health and Safety Management Systems. Requirements with guidance for use) and ISO 50001: 2018 (Energy management systems. Requirements) and ISO 37301: 2021 (Compliance management systems. Requirements with guidance for use).Manufacturer: Kingspan Insulation; Product reference: Kingspan GreenGuard GG300 (Kingspan GreenGuard GG300 Rebated (R) - 30 mm); Standard: To BS EN 13164; Third-party certification: British Board of Agreement (BBA) Certificate; Fire performance: To BS EN 13501-1: 2018, Euroclass RtF F; Compressive strength (minimum) at 10% compression: 300 kPa; Thermal conductivity (maximum): 0.033 W/múK; Thickness: 80 mm. Lift pit wallsr; Face size (length x width): 1250 x 600 mm; Facing: Smooth, dense skin; Edges: Rebated; Cross Section: Uniform thickness; Core: Fibre-free rigid extruded polystyrene insulant; Refer Architect's Specification Pr_25_71_63_29.

Insulation; Thermal

C	Width not exceeding 225mm; vertical	13	m2		

					€	c
	(19) SUBSTRUCTURE (Cont)					
	Extruded polystyrene (XPS) boards Lift pit; Description: High performance rigid extruded polystyrene (XPS) insulation board with a high compressive strength and a closed cell structure that resists water absorption and water vapour passage for lift pit walls and floor. Kingspan GreenGuard GG300 is manufactured under a management system certified to ISO 9001: 2015 (Quality management systems. Requirements),ISO 14001: 2015 (Environmental Management Systems. Requirements), ISO 45001: 2018 (Health and Safety Management Systems. Requirements with guidance for use) and ISO 50001: 2018 (Energy management systems. Requirements) and ISO 37301: 2021 (Compliance management systems. Requirements with guidance for use).Manufacturer: Kingspan Insulation; Product reference: Kingspan GreenGuard GG300 (Kingspan GreenGuard GG300 Rebated (R) - 30 mm); Standard: To BS EN 13164; Third-party certification: British Board of Agreement (BBA) Certificate; Fire performance: To BS EN 13501-1: 2018, Euroclass RtF F; Compressive strength (minimum) at 10% compression: 300 kPa; Thermal conductivity (maximum): 0.033 W/múK; Thickness: 100 mm. Lift pit wallsr; Face size (length x width): 1250 x 600 mm; Facing: Smooth, dense skin; Edges: Rebated; Cross Section: Uniform thickness; Core: Fibre-free rigid extruded polystyrene insulant; Refer Architect's Specification Pr_25_71_63_29.					
	Insulation; Thermal					
A	Width not exceeding 225mm; vertical	13	m2			
	FLOOR WALL AND CEILING FINISHES					
	Insitu Finishes					
	PROPRIETARY QUICK DRYING LEVELLING SCREED; 65mm thick, Isocrete Fast-K Screed, Product reference: Isocrete Fast-K Screed. Bonding agent: None. Fast-K Screed type: Standard. Reinforcement: Isocrete PP fibres throughout mix, with strip of D49 steel fabric reinforcement at day joints. Other requirements: Pipe ducts, as section P31. Movement joints as Clause 468. Provide 10mm Flexcell around perimeter of each room to ensure that screed does not bond to walls - continue this detail across door thresholds so that each room is independant of the next; all in accordance with Drawings and Specification					
	Floors; Liquid Screed					
B	Exceeding 300mm; to falls	856	m2			
	DRAINAGE					
	Drainage Below Ground - Foul					
	Pipe; hard uPVC pipework and fittings; BS 4660					
	Pipes; loose couplers and ceiling ring joints in the running length					
C	110mm dia foul drainage; "Pop Ups"	34	nr			

					€	c
	(19) SUBSTRUCTURE (Cont)					
	Services Below Ground - M & E Services					
	Excavation					
	Excavating trenches to receive pipes / ducts not exceeding 250mm diameter, earthwork support to sides of trenches; grading bottoms of excavations; backfilling with hardcore (e.m.); disposal of surplus spoil off site					
A	Average Depth 500 - 1000mm	50	m			
	Graded Gravel					
	Beds and Surrounds					
B	550 x 550mm to 150mm diameter pipe	50	m			
	Hardcore filling; backfill trenches with fill complying with Clause 804; Granular material Type B or equal and approved; compacted in layers not exceeding 225mm; as per Engineer's Specification and Drawing					
	Backfilling; to top of trench; above concrete or graded gravel					
C	Average thickness 250 - 500mm; compacting in 150mm layers; average depth 500 - 1000mm	50	m			
	PVC marker tape "Heptape" or equivalent					
D	Continuous strip laid during trench backfill, 100mm above pipework	50	m			
	Ductwork; "Wavinduct" or equivalent					
	100mm dia.; include for draw-wire					
E	Laid in trenches	50	m			
	MISCELLANEOUS WORKS					
	Contractor to allow for an independent tester to undertake pyrite tests of the stone material to be used in the hardcore build up under the ground floor to verify that the hardcore material used on site complies with the chemical requirements in BS EN 13242 & S.R. 21 Annex E (The percentage of Total Sulphur content in hardcore shall be limited in accordance with S.R. 21). Hardcore material to be stockpiled on site and a composite sample taken. Hardcore is not to be placed prior to the testing of the site material to be used. (See Engineers Specification)					
F	Generally	1	item			
				To Collection €		

					€	c
	(19) SUBSTRUCTURE (Cont)					
	TEMPORARY WORKS					
	Contractor to include for all necessary temporary works to Contractor's own design; include for all propping, shoring, concrete foundations etc.; refer to indicative details shown on Engineer's drawings					
A	Generally	1	item			
				To Collection €		

				€	c
(19) SUBSTRUCTURE (Cont)					
COLLECTION					
Page No. Building/8					
Page No. Building/9					
Page No. Building/10					
Page No. Building/11					
Page No. Building/12					
Page No. Building/13					
Page No. Building/14					
Page No. Building/15					
Page No. Building/16					
Page No. Building/17					
Page No. Building/18					
Page No. Building/19					
Page No. Building/20					
Page No. Building/21					
Page No. Building/22					
(19) SUBSTRUCTURE **Carried to Summary**					

					€	c
	(21) EXTERNAL WALLS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	CONCRETE WORK					
	Precast Concrete					
	Prestressed concrete lintels; Description: To Structural Engineers Specification. Standard: To BS EN 845-2. Execution: Pr_20_85_48/620 Installing lintels; As per Architects Specification Pr_20_85_48_67.					
	Lintels L2; 215 x 215mm Deep precast lintel; inner leaf of external wall					
C	To suit 1140mm wide ope	1	nr			
	Lintels L6; 215 x 215mm Deep precast lintel; inner leaf of external wall					
D	To suit 1360mm wide ope	1	nr			
E	To suit 2035mm wide ope	1	nr			
	Lintels L6; 100 x 215mm Deep precast lintel; outer leaf of external wall					
F	To suit 1360mm wide ope	1	nr			
G	To suit 2035mm wide ope	1	nr			
	Lintels L7; 100 x 65mm Deep precast lintel; outer leaf of external wall					
H	To suit 910mm wide ope	4	nr			
J	To suit 2035mm wide ope	1	nr			
	Lintels L8; 100 x 65mm Deep precast lintel; outer leaf of external wall					
K	To suit 910mm wide ope	3	nr			
	Lintels L17; 100 x 215mm Deep precast lintel; outer leaf of external wall					
L	To suit 910mm wide ope	2	nr			

To Collection €

					€	c
	(21) EXTERNAL WALLS (Cont)					
	BRICKWORK AND BLOCKWORK					
	Brickwork					
	Clay bricks; Description: Clay Facing Bricks. Manufacturer: Ibstock Brick Ltd. Product reference: Staffordshire Blue Brindle Smooth - Clay bricks. Standard: To BS EN 771-1. Brick description: Facing brick. Work size (length x width x height): 215 x 102 x 65 mm. Tolerances Mean value: T2. Range: R1. Compressive strength Mean compressive strength (minimum): 75 N/mm2. Durability designation: F2-S2. Density Gross dry: 1650 kg/m3. Water absorption: 7%. Configuration: Vertically perforated. Thermal conductivity: 1.19 K. Appearance: Brick Colour To Match Existing External grey concrete blocks. Work size (length x width x height): 215 x 102 x 65 mm; As per Architects Specification Pr_20_93_52_15.					
	Walls					
A	102.5mm thick	134	m2			
	Labours					
B	On brickwork	1	item			
	Extra over for special bricks					
C	Extra Over for Reveals	18	m			
	Blockwork					
	Aggregate concrete blocks Fair Faced Blocks; Description: Fine texture paint grade concrete blocks to internal walls. Manufacturer: Roadstone or equivalent. Standard: To BS EN 771-3. Compressive strength 7.5N/mm2. Freeze/ thaw resistance: Frost resistant. Thermal conductivity: I.S. EN 1745 Masonry and masonry products-Methods for determining design thermal values . table A3. Thermal resistance: Tolerance category: D2. Reaction to fire: Class A1 to BS EN 13501-1; all as per Architects and Engineers Drawings and Specification Pr_20_93_52_01					
	Walls					
D	215mm thick (inner leaf); comprising of 1nr 100mm thick fair faced block to one side & 1nr solid common block to one side; Provide 10mm max full horizontal M4 mortar bed and 25mm wide fully filled vertical M4 mortar between the two separate leaves; Vertical collar joints between the two leaves are to be solidly filled with M4 mortar as the works proceed; (Bed Joint Reinforcement measured elsewhere)	1,033	m2			
	Labours					
E	On blockwork	1	item			
F	On fairfaced blockwork	1	item			
				To Collection €		

					€	c
	(21) EXTERNAL WALLS (Cont)					
	Extra over for special blocks					
A	Concrete U-blocks for Cills; Blocks: to IS EN 771-3:2011+A1:2015; Category: Category 1; Manufacturer: to be approved before placing order; Type: U-block; Average compressive strength (min): 10.5N/mm2; Work sizes: 440 x 215 x 215mm; Mortar: Strength Class M6; Mix: 1:1:5-6 group 1; Bond: half lap stretcher; as per Engineers Structural Specification, include for reinforcement (measured elsewhere) and concrete filling in accordance with Engineers Drawings; complete; all as per Engineers Drawings	89	m			
B	Concrete U-blocks to new build: to IS EN 771-3:2011+A1:2015; Category: Category 1; Manufacturer: to be approved before placing order; Type: U-block; Average compressive strength (min): 10.5N/mm2; Work sizes: 440 x 215 x 215mm; Mortar: Strength Class M6; Mix: 1:1:5-6 group 1; Bond: half lap stretcher; as per Engineers Structural Specification, include for reinforcement (measured elsewhere) and concrete filling in accordance with Engineers Drawings; complete; all as per Engineers Drawings	121	m			
	Aggregate concrete blocks; Manufacturer: To Structural Engineers Specification. Standard: To BS EN 771-3. Block description: To Structural Engineers Specification. Compressive strength 7.5N/mm2, Characteristic value: To Structural Engineers Specification. Thermal conductivity: To I.S. EN 1745 Masonry and masonry products-Methods for determining design thermal values. table A3. Reaction to fire: Class A1. Euro code 6 # I.S. EN 1996 Design of Masonry Structures # Part 1-2: General Rules # Structural Fire Design, defines the methods and calculations to determine the fire resistance of concrete block walls. Execution: Pr_20_93_52/625 Brickwork and blockwork appearance; Pr_20_93_52/690 Laying brick and block masonry units generally; Pr_20_93_52/635 Brickwork and blockwork pointing; Pr_20_93_52/630 Brickwork and blockwork bond; As per Architects Specification Pr_20_93_52_01.					
	Walls					
C	100mm thick	900	m2			
	Labours					
D	On blockwork	1	item			
	Extra over for special blocks					
E	Extra over for extract vent grill- 900mm long x 600mm high	4	nr			
				To Collection €		

					€	c
	(21) EXTERNAL WALLS (Cont)					
	THERMAL BLOCKWORK; Autoclaved aerated concrete (AAC) blocks Thermal Blocks; Manufacturer: Roadstone Ltd, Product reference: Roadstone Thermal Liteblock System Or equivalent Category 1 unit in accordance with EN 771-3. CE marked. Thickness: as required, to BS Standard: BS EN 771-3. Junctions: Provide expanded metal at junction of different types of blockwork to ensure no cracking at junctions. Freeze/ thaw resistance: Deemed to satisfy national requirements when used and rendered in accordance with SR 325. Thermal conductivity (maximum): 1.01 - 1.19 W/mK (?10,dry) to I.S. EN 1745 Annex A Type: Coursing blocks. Tolerance category: D1 (+3mm, -5mm) Density: >1900kg/ml Reaction to fire: to BS EN 13501-1: A1. Execution: CE Marking, NSAI certificate required. all as per Architects and Engineers Drawings and Specification Pr_20_93_52_05.					
	Walls					
A	215mm thick	39	m2			
	Ancillaries to Brickwork/Blockwork					
B	Forming cavities; 150mm wide cavity; Phenolic foam boards Cavity Wall Insulation; Description: Bio enhanced high performance partial fill wall insulation. Manufactured to EN 13165:2012+A2:2016 by Kingspan, comprising of a rigid modified Polyisocyanurate (PIR) core between textured foil facings and engineered shiplap jointing. The Kooltherm K8 100mm with a declared Lambda value of 0.021 W/mK to achieve a U-Value of 0.17W/m2K for the wall element. To be installed in accordance with instructions issued by Kingspan. Certification: BS EN ISO 9001. BS EN ISO 14001. Manufacturer: Unilin or equivalent. Product reference: Kooltherm K8 or equivalent. Min. U-Value: 0.17 W/m2K. Standard: To BS EN 13166. Fire performance: Class F to BS EN 13501 : 2007. Thermal conductivity (maximum): 0.021 W/múK; Compressive strength (minimum) at 10% compression: 100kPa. Thickness: 100mm. Face size (length x width): 1200mm x 450mm. Jointing: All board joint junctions to be taped with aluminum foil insulation tape. or equivalent approved. Edges: Rebated on all four edges. Facing: Faced on both sides with a low emissivity composite foil, autohesively bonded to the insulation core during manufacture. This reflective, low emissivity surface improves the thermal resistance of any unventilated cavity adjacent to the board; including Cavity wall ties. Product reference: To Structural Engineers Specification. Standard: To BS EN 845-1. Execution: Pr_20_85_84/610 Fixing ties in masonry cavity walls; As per Architect's Specification Pr_25_71_63_59 & Pr_20_85_84_19					
	Cavities between new walls					
C	150mm wide cavity	1,033	m2			

(21) EXTERNAL WALLS (Cont)

CAVITY CLOSERS; to heads and jambs of openings; Rigid Pvc-U Profile Containing Mineral Wool Insulation Forming A Continuous Fire Related Cavity Closer Around Door And Window Openings. Suitable For First And Second Fix Applications. Used With Dtu Ties Every 225 Mm (100 Ties Per Pack). All Dacatie Products Are Manufactured To Bs Iso 9001 Quality Management And Iso 14001 Environmental Standards. All Dacatie Products Are Chlorofluorocarbon (Cfc) Hydro-chlorofluorocarbon (Hcfc) Free And Have Zero Ozone Depletion Potential (Odp) And Low Global Warming Potential (Gwp). Manufacturer: Dacatie Building Solutions, Product Brand Of Quantum Profile Systems Ltd or equivalent , Product Reference: Dacatie Tfr2000 Cavity Closer 160, 30 Minute Fire Rated, For Window And Door Reveals or equivalent. Non Fire Rated Elsewhere, thermal Conductivity (K-Value):: 0.036 W/MúK, Thermal Resistance (R-Value):: 1.694 M#K/W. all in accordance with the Architect's Drawings and Specification Pr_35_90_50_64

Cavity Closers

A	To suit 150mm wide cavity; Horizontal	119	m		
B	To suit 150mm wide cavity; Vertical	256	m		

CAVITY CLOSERS to heads of cavity walls; Cavity Closer, Rigid PVC-U profile containing mineral wool insulation forming a continuous fire related cavity closer around door and window openings. Suitable for first and second fix applications. Used with DTU ties every 225 mm (100 ties per pack). All Dacatie products are manufactured to BS ISO 9001 Quality Management and ISO 14001 Environmental standards. All Dacatie products are chlorofluorocarbon (CFC) Hydro-chlorofluorocarbon (HCFC) free and have zero ozone depletion potential (ODP) and low global warming potential (GWP). Manufacturer: Dacatie Building Solutions or equivalent, product brand of Quantum Profile Systems Ltd or equivalent. Product reference: Dacatie TFR2000 Cavity Closer 160, 30 Minute Fire Rated, for window and door reveals or equivalent.. Thermal conductivity (K-value): 0.036 W/mK.. Thermal resistance (R-value): 1.694 m2K/W.. Fire performance:: Fire rating to BS 476. 30 mins fire integrity/ 30 mins fire insulation. Euroclass Reaction to Fire classification: A1. Environmental:: Zero ozone depletion potential (ODP) and zero global warming potential (GWP). ISO 14001 environmental. Stock length: 2.4 m. Accessories: Integral insulation. To fit cavity width: 160 mm; all in accordance with the Architect's Drawing 5.07 and Specification Pr_35_90_50_64

Cavity Closers

C	To suit 150mm wide cavity	129	m		

CAVITY CLOSERS to heads of cavity walls; Slate Tile or similar, bedded in mortar to close cavity; as per Architect's Detail 07 on Drawing 23-16/TD-8004; complete as per Architect's Drawing and Specification

Cavity Closers

D	To suit 150mm wide cavity	129	m		

To Collection €

(21) EXTERNAL WALLS (Cont)

Sleeved mineral wool small cavity barriers Type A; Manufacturer: ROCKWOOL Ltd. Product reference: ROCKWOOL PWCB Cavity Barrier. To suit cavity width: 150 mm; As per Architect's Specification Pr_25_80_80_79.

Cavity Barrier; 60 minutes fire rated

A	To suit 150mm cavity; horizontal	181	m		
B	To suit 150mm cavity; vertical	82	m		

Mastic seal; Sealing gap between screen frames and blockwork walls; gap to be sealed on both sides with mastic seal; all in strict accordance with Architect's Details drawing 8006 and Specification

Sundries; Seals

C	10 x 5mm wide	374	m		

Gas-resistant damp-proof courses. Product reference: Easi-Load Radon Hyload Gastite DPC or equivalent. Easi-Load Radon Corner Assembly: Required; all as per Architects Drawings and Specification Pr_25_57_21_35

Damp proof courses

D	Width not exceeding 225mm; Horizontal to window cill	80	m		
E	Width not exceeding 225mm; vertical	256	m		
F	Width exceeding 225mm; stepped	266	m2		

Preformed cavity trays; Third-party certification: British Board of Agreement. Material: Polyethylene. To fit cavity width: 150 mm. Height: 150 mm. Length (effective): 830 mm. Attached lead flashings: Required. Accessories: Joint supports. Fixing strip. Execution: Pr_25_57_21/600 Installing sill dpcs; Pr_25_57_21/640 Installing preformed cavity trays; Pr_25_57_21/645 Installing preformed dpc, cavity tray junction cloaks and stop ends; Pr_25_57_21/615 Installing cavity trays over openings and other cavity bridgings; As per Architect's Specification Pr_25_57_21_66.

Cavity Closers

G	Cavity trays; 900mm wide overall; stepped; above openings	119	m		

Preformed cavity tray junction cloaks/ stop ends; High-bond strength, Easi-Load Radon Hyload Gastite DPC or equivalent; size to suit 150mm cavity; fixing in strict accordance with Manufacturer's written recommendations; to Architect's Drawings and Specification Pr_25_57_21/645

Cavity Closers

H	Cavity trays; 750mm wide overall; stepped	78	nr		

To Collection €

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	(21) EXTERNAL WALLS (Cont)					
	Selected DPC Tray Across Cavity Taken 225mm Past Each Jamb and Fixed to Concrete Inner Leaf. Proprietary Weep-holes at 900c/c to External Leaf Everywhere DPC Tray occurs; As per Architect's Deatil Drawing 23-16/TD-8005					
	Sundries					
A	DPC Trays; generally	137	m			
	Joint reinforcement for blockwork walls; blockwork bed joint reinforcement; Bed joint reinforcement for collar-jointed walls shall have 20mm x 3mm ties at 50mm centres be certified to comply with IS EN 845-1 and IS EN 845-3; As per Engineer's Specification 6.23.					
	Joint Reinforcement					
B	To suit 215mm thick internal leaf blockwork	2,214	m			
	Plaster crack control Joint; complete, including caulking/sealant with backing rod in open/open block joint and expamet stop bead to external render; all in strict accordance with manufacturer's recommendations and Architects & Engineers Drawings number 23-16/TD-2001					
	Design Joints					
C	100mm thick walls; generally	99	m			
	Perpend Joint Plastics Weep holes at 900mm centres; immediately above the base of the cavity, external openings and stepped dpcs; all to Architect's Drawings 23-16/TD-8003					
	Sundries					
D	Generally	597	nr			

					€	c
	(21) EXTERNAL WALLS (Cont)					
	ROOFING, CLADDING & WATERPROOFING					
	Flexible Sheet Metal Coverings					
	Aluminum flashing systems; Description: Plasmet secret fix coping system or equal approved, comprising of 3mm thick aluminum polyester powder coated coping secured by the SF600 aluminum support clipCover to external wall parapets. System performance: Plasmet secret fix coping system or equal approved, comprising of 3mm thick aluminum polyester powder coated coping secured by the SF600 aluminum support clipCover to external wall parapets. clipCover to external wall parapets. Ss_32_30_30/205 Flashing system design; Ss_32_30_30/255 Integrity of flashing system; Ss_32_30_30/260 Water resistance; Ss_32_30_30/265 Durability; Ss_32_30_30/270 Aesthetic performance. Aluminum: Polyester powder coated aluminum; Aluminum to EN485 in 4015 H12 series alloy. Fasteners: No exposed fixings. Coping secured by hooking over secret fix support straps. Plasmet SF600 proprietary extruded aluminum fixing clip, typically at 1000mm centres, with anti rattle EPDM extrusions. No sealants or mastics to be used. Aluminum levelling fixing brackets. Execution: Ss_32_30_30/610 Wedge fixing into joints and chases; Ss_32_30_30/612 Wedge fixing into damp-proof course joints. System completion: Ss_32_30_30/810 Cleaning and maintenance of flashing and weathering systems; As per Architect's Specification Ss_32_30_30_03.					
	Coping					
A	Girth not exceeding 600 - 750mm, two times bent; all to Architect's Drawings	129	m			
B	Girth not exceeding 900 - 1050mm, six times bent; all to Architect's Drawings	129	m			
	Aluminium trim at junction of brick and blockwork; as per Detail 34 and Architects Drawing 23-16/TD-8012					
	Flashings					
C	Girth 150mm - 300mm; three times bent; all to Architect's Drawings	114	m			
	WOODWORK					
	Ironmongery, Accessories and Sundries					
	Plastics sheets Air-tightness tape around external windows & doors. Manufacturer: Siga or equivalent. Product reference: Siga-Fentrim 20 or equivalent. Material: Special film/fleece combination (that can be plastered over) made of PO with SIGA high performance adhesive. Purpose: To achieve a building air tightness of 3m3 @50pa. Third party certification: British Board of Agreement (BBA) Certificate. Tensile strength (minimum): 220 N/ 50 mm lengthwise, 140 N/ 50 mm crosswise. Execution: Pr_25_57_65/610 Installing vapour control layers; all as per Architects Drawings and Specification Pr_25_57_65_60					
	Sundries; Seals					
D	Width not exceeding 225mm, horizontal	119	m			
E	Width not exceeding 225mm, vertical	256	m			

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	(21) EXTERNAL WALLS (Cont)					
	Mineral wool insulation infill; As per Architect's Detail 21 on Drawing 23-16/ TD-8008					
	Insulation; Thermal					
A	Exceeding 300mm	74	m2			
	High Performing mineral wool insulation; fixed tightly behind door liner; As per Architect's Detail12 on Drawing 23-16/TD-8006					
	Insulation; Thermal					
B	Not exceeding 300mm	375	m			
	METALWORK					
	Non Structural					
	Steel lintel; Keystone SB/K Lintel or similar approved single leaf lintel; As per Engineer's Drawing 230079-X-X-X-L01-DR-DBFL-SE-1003.					
	Lintels L2; keystone lintel; outer leaf of external wall					
C	To suit 1140mm wide ope	1	nr			
	Lintels L11; keystone lintel; outer leaf of external wall					
D	To suit 910mm wide ope	3	nr			
	Lintels L13; keystone lintel; outer leaf of external wall					
E	To suit 2035mm wide ope	2	nr			
F	To suit 2710mm wide ope	1	nr			
	Insect Guard Mesh; fixed to openings; complete, maximum 2mm holes, including all fixings and accessories necessary as per Architects Drawing 8005 and Specification					
	Bars, rods and the like; Insect Mesh					
G	50mm wide, horizontal	119	m			
H	50mm wide, vertical	256	m			
				To Collection €		

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(21) EXTERNAL WALLS (Cont)					
COLLECTION					
Page No. Building/24					
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Page No. Building/27					
Page No. Building/28					
Page No. Building/29					
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(21) EXTERNAL WALLS **Carried to Summary**					

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	(22) INTERNAL WALLS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	CONCRETE WORK					
	Precast Concrete					
	FAIRFACED Prestressed concrete lintels; Description: To Structural Engineers Specification. Standard: To BS EN 845-2. Execution: Pr_20_85_48/620 Installing lintels; As per Architects Specification Pr_20_85_48_67.					
	Lintels L4; 215 x 215mm Deep precast concrete lintel bearing minimum 150mm at each end					
C	To suit 900mm wide ope	2	nr			
D	To suit 1000mm wide ope	17	nr			
E	To suit 1360mm wide ope	2	nr			
F	To suit 1810mm wide ope	11	nr			
G	To suit 2035mm wide ope	3	nr			
H	To suit 2260mm wide ope	1	nr			
	Lintels L6; 215 x 215mm Deep precast concrete lintel bearing minimum 150mm at each end					
J	To suit 1100mm wide ope	1	nr			
K	To suit 2035mm wide ope	1	nr			
				To Collection €		

	(22) INTERNAL WALLS (Cont)					
	BRICKWORK AND BLOCKWORK					
	Blockwork					
	Aggregate concrete blocks Fair Faced Blocks; Description: Fine texture paint grade concrete blocks to internal walls. Manufacturer: Roadstone or equivalent. Standard: To BS EN 771-3. Compressive strength 7.5N/mm2. Freeze/ thaw resistance: Frost resistant. Thermal conductivity: I.S. EN 1745 Masonry and masonry products-Methods for determining design thermal values . table A3. Thermal resistance: Tolerance category: D2. Reaction to fire: Class A1 to BS EN 13501-1; all as per Architects and Engineers Drawings and Specification Pr_20_93_52_01					
	Walls					
A	100mm thick; collar bonding	431	m2			
B	215mm thick; collar bonding; comprising of 1nr 100mm thick fair faced block to each side; Provide 10mm max full horizontal M4 mortar bed and 25mm wide fully filled vertical M4 mortar between the two separate leaves; Vertical collar joints between the two leaves are to be solidly filled with M4 mortar as the works proceed; (Bed Joint Reinforcement measured elsewhere)	1,666	m2			
	Labours					
C	On blockwork	1	item			
	Bonding to other work; new block wall to existing block wall; Pocket requirements- Width: Full thickness of new wall. Depth (minimum): 100 mm. Pocket vertical spacing - Brick to brick: 4 courses high at 8 course centres, Block to block: Every other course. Pocket joints: Fully filled with mortar: as per manufacturers information and to be fitted to manufacturers instructions; all in strict accordance with manufacturer's recommendations and Engineer's Drawings and Specification					
	Bonding to other work; new blockwork to existing blockwork					
D	Vertically; 215mm thick walls	23	m			
	Ancillaries to Brickwork/Blockwork					
	Joint reinforcement for blockwork walls; blockwork bed joint reinforcement; Bed joint reinforcement for collar-jointed walls shall have 20mm x 3mm ties at 50mm centres be certified to comply with IS EN 845-1 and IS EN 845-3; As per Engineer's Specification 6.23					
	Joint Reinforcement					
E	To suit 100mm thick collar jointed internal blockwork	958	m			
F	To suit 215mm thick collar jointed internal blockwork	3,692	m			

To Collection €

(22) INTERNAL WALLS (Cont)

Acrylic construction joint sealants; Manufacturer: British Gypsum or equal approved. Product reference: Gyproc Sealant. Application: To clean, dry and dust free surfaces as a continuous bead with no gaps Standard: To BS EN ISO 11600. Sealant type: Mastic. Colour: White. Fire performance Fire resistance: Fire rating of resistant sealant to match fire rating of wall. Submit relevant third party certified BS 476-20 test results. Execution: Pr_30_31_76/630 Applying joint sealants; Pr_30_31_76/620 Joint preparation for sealant application; Pr_30_31_76/610 Suitability of joints for sealant application; As per Architect's Specification Pr_30_31_76_02.

Designed Joints

A	100mm thick walls; generally	80	m		
B	215mm thick walls; generally	301	m		

Sundries

Fireproofing

C	Fire stopping; filling any gaps around pipework wider than 25mm with Firepro In-tumescent sealant; to be fitted in accordance with manufacturer's recommendations; all as per Architects Drawings and Specification	1	item		
D	Fire stopping; cable trays to be fitted with Firepro Multi cable Firestop; to be fitted in accordance with manufacturer's recommendations; all as per Architects Drawings and Specification	1	item		
E	Fire stopping; filling any gaps between fire door frames and fire rated walls and gaps between walls and doors of any room with acoustic sensitivity with Fire Pro Fire and Acoustic Foam; to be fitted in accordance with manufacturer's recommendations; all as per Architects Drawings and Specification	1	item		
F	Fire stopping; filling any gaps in floors at vertical service penetration, sealed with 60 minute fire rated flooring compound (integrity and insulation) with smooth trowel finish. Load bearing, non-shrinking with airtight seal; all as per Architects Drawings and Specification	1	item		
G	Fire stopping; filling any gaps in walls at high level for service penetrations, sealed with 2 no layers of high density fibreboard coated with fire rated acrylic. All fibres exceed 3 microns thickness and 200 microns in length. Non hazardous. All joints sealed with In-tumescent sealant and panel finished with fibre retardant aqueous polymer emulsion; all as per Architects Drawings and Specification	1	item		

To Collection €

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	(22) INTERNAL WALLS (Cont)					
	FLOOR, WALL & CEILING FINISHES					
	Board finish					
	Fire Stopping: Steel Columns within Internal Block walls; 1nr layer of Glasroc F fireline board or similar or equal approved installed per manufacturers instruction to overlap wall 50mm each side and achieve a fire rating of 60min; As per Architect's Detail Drawing 23-16/TD-8013					
	Like items; casing to steel columns					
A	girth 900 - 1200mm; casing to UC203X203	143	m			
	Fire Stopping: Steel Beam - Intermediate Floor; Steel encased in Glasroc F fireline board or similar or equal approved installed per manufacturers instructions; As per Architect's Detail Drawing 23-16/TD-8013					
	Like items; casing to steel beams					
B	girth 600 - 900mm; Casing to UC203X203	106	m			
C	girth 600 - 900mm; Casing to UC254X254	9	m			
D	girth 900 - 1200mm; Casing to UC305X305	16	m			
	Stud Partitions					
	Gypsum board partition systems General Specification; Description: Stud wall partitions - refer to Architectural drawings for wall types & locations.100mm plasterboard wall; 70mm Metal studs at 600mm centres complete including head and sole plate; boarded one side with single layer of 15mm thick wallboard fixing with drywall screws; minimum 6mm thick skim coat ARDEX A826 finish or equivalent; staggered tap; including all metal beads, angles and stop beads as required; include for 50mm rockwool batt insulation fixed between studs; all fixed in accordance with the manufacturers instructions; all as per Architect's Drawings and Specification Ss_25_10_30_35					
	Partitions; boarded one side; to social space					
E	3750mm high	23	m			
	Extra Over for					
F	Forming opening overall size; 1800mm wide x 2100mm high	1	nr			
G	Abutments to other finishes	5	nr			
H	Angles to partitions	2	nr			

To Collection €

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(22) INTERNAL WALLS (Cont)					
COLLECTION					
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Page No. Building/37					
(22) INTERNAL WALLS **Carried to Summary**					

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	(23) FLOORS, GALLERIES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	2. Please refer to Consulting Engineers and Architect's Specification and Drawings		note			
E	3. In exceptional cases where it has not been possible to specify a generic element and a specific product has been named, an equivalent product to that specified is acceptable where it meets the technical, functional and aesthetic standards of that specified: the onus is on the contractor to ensure that an equivalent product to that specified meets the standard by means of an agreement cert, insurance backed guarantee or warranty, detailed specifications, fire test certificates where applicable, brochure and other means of proof of compliance. Notwithstanding this, the appropriate foregoing documentation and samples are to be provided to the architect prior to being incorporated into the construction		note			
	CONCRETE WORK					
	In-Situ Concrete; Reinforced					
	Concrete cubes for testing					
	Provide for making sampling and testing procedures shall comply with IS EN 12350 Testing Fresh concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification Section - 4.13					
F	Size 150 x 150 x 150mm	14	nr			
				To Collection €		

(23) FLOORS, GALLERIES (Cont)

Cement:sand screeds refer to Architect and Engineers Drawings; Substrate: Precast concrete slab; Screed construction: Floating, as clause 290; Refer to Engineers Drawings; Thickness: Nominal: 75mm, Minimum: 75mm; Aggregates: Standards as clause 305; Proportions (cement:sand): To BS 8204-1; Admixture: As clause 307; In situ crushing resistance (ISCR) category: As clause 335; Mass of test weight: 4 kg; Flatness/ Surface regularity class: Maximum permissible deviation when measured as clause 355: SR1; Finish: Smooth floated; All as per Architect's and Engineers Drawings & Specification

Other Items; Screed

A	Generally	58	m3		

Concrete infill ; Concrete grade; C30/37; to end of hollowcore slab min 35N concrete; all as per detail & drawing no 230079-X-X-X-RF-DR-DBFL-SE-5020

Other Items; Infill concrete

B	Generally	12	m3		

Surface Finishes

Powerfloating

C	Generally	770	m2		

Reinforcement

Bar reinforcement; Hot rolled high yield steel bars shall comply with ISO9001/ CARESISEN10080/ BS4449 except that no bar shall contain a flash weld. All bars shall be cut and bent in accordance with BS 8666 ; must be free of loose millscale and thoroughly cleaned to remove all loose rust, oil, grease or other harmful matter prior to being placed in position with and including all necessary laps, spacers, chairs and tying wire; all in strict accordance with the Engineers Drawings; refer to Engineer's Specification Section 4.30

Bar; straight or bent; Slab extra bar reinforcement

D	12mm - 25mm	1.96	t		

Steel fabric reinforcement shall comply with the requirements of IS EN 10080:2005 and BS 4449 (Grade B500B or B500C) and shall be obtained from and cut and bent by a firm holding a valid CARES (or equivalent scheme) certificate of approval for production and supply of steel for the reinforcement of concrete; The reinforcement shall be cut, cold bent and hooked to the dimensions shown on the drawings and schedules or to such other dimensions as may be directed; All in strict accordance with the Engineers drawings and Engineering Specification Section 4.30

Reference A142 mesh; 400mm side laps; 400mm end laps

E	Horizontal; to floors screed	770	m2		

To Collection €

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	(23) FLOORS, GALLERIES (Cont)					
	Precast Concrete					
	Design, supply and install precast slab units; All precast concrete elements and assemblages shall be designed in accordance with ISEN 1992-1-1; all relevant Standards to support dead loads & superimposed loads as Engineers details; including all fixings, angles, bolts and the like as necessary to attach to surrounding structure; all joints between precast concrete units to be grouted with and including concrete as a separate operation prior to placing of RC topping (RC topping measured elsewhere); all in strict accordance with the Engineers Drawing & Engineering Specification Section-5					
	Floor slabs; 250mm thick					
A	Span not exceeding 5.00m	423	m2			
B	Span between 7.00 - 9.00m	348	m2			
	WOODWORK					
	Ironmongery, Accessories and Sundries					
	50mm Kingspan Kooltherm K3 or similar or equivalent Phenolic foam board with a thermal conductivity of 0.021w/m2k.; all as per Architects Drawings and Specification					
	Insulation; Thermal					
C	Generally	770	m2			
	500 gauge Polythene sheet with min 150mm overlaps and turned up at wall 100mm; all as per Architects Drawings and Specification					
	Insulation; Vapour Barrier					
D	Generally	770	m2			
	FLOOR WALL AND CEILING FINISHES					
	Insitu Finishes					
	PROPRIETARY QUICK DRYING LEVELLING SCREED; 65mm thick, Isocrete Fast-K Screed, Product reference: Isocrete Fast-K Screed. Bonding agent: None. Fast-K Screed type: Standard. Reinforcement: Isocrete PP fibres throughout mix, with strip of D49 steel fabric reinforcement at day joints. Other requirements: Pipe ducts, as section P31. Movement joints as Clause 468. Provide 10mm Flexcell around perimeter of each room to ensure that screed does not bond to walls - continue this detail across door thresholds so that each room is independant of the next; all in accordance with Drawings and Specification					
	Floors; Liquid Screed					
E	Exceeding 300mm; to falls	770	m2			

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(23) FLOORS, GALLERIES (Cont)					
COLLECTION					
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Page No. Building/41					
(23) FLOORS, GALLERIES **Carried to Summary**					

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	(24) STAIRS, RAMPS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	CONCRETE WORK					
	Precast Concrete					
	PRE-CAST STAIRS: Type of construction: Pre-cast Concrete; Overall depth (excluding finishes): To be confirmed by manufacturer; Span: Varies, refer to drawings for profile and locations; Finish to soffit: Smooth; Finish to top surface: Smooth; as per Architect's Drawings 7001 and 7002 and Specification					
	Staircase; complete					
C	Staircase 1 flights; 1400mm wide; 175mm waist; 300mm treads; 15nr risers, 160mm high; span of flight 5114mm; 1nr edge abutting/set into walls	1	nr			
D	Staircase 1 flights; 1400mm wide; 175mm waist; 300mm treads; 10nr risers, 160mm high; span of flight 3409mm; 1nr edge abutting/set into walls	1	nr			
E	Staircase 2 flights; 1400mm wide; 175mm waist; 300mm treads; 10nr risers, 160mm high; span of flight 3409mm; 1nr edge abutting/set into walls	1	nr			
F	Staircase 2 flights; 1400mm wide; 175mm waist; 300mm treads; 3nr risers, 160mm high; span of flight 1023mm; 1nr edge abutting/set into walls	2	nr			
G	Staircase 2 flights; 1400mm wide; 175mm waist; 300mm treads; 9nr risers, 160mm high; span of flight 3069mm; 1nr edge abutting/set into walls	1	nr			
	Landings					
H	Staircase 1 Half Landings; finished size approx 3835mm x 1650mm x 200mm thick; rectangular shape; edges abutting/set into walls - 2nr; all in accordance with Architect's Drawing 7001	1	nr			
J	Staircase 2 Half Landings; finished size approx 1200mm x 1400mm x 200mm thick; rectangular shape; edges abutting/set into walls - 2nr; all in accordance with Architect's Drawing 7002	1	nr			
K	Staircase 2 Half Landings; finished size approx 1437mm x 1400mm x 200mm thick; rectangular shape; edges abutting/set into walls - 2nr; all in accordance with Architect's Drawing 7002	1	nr			
				To Collection €		

					€	c
	(24) STAIRS, RAMPS (Cont)					
A	Staircase 2 Half Landings; finished size approx 1700mm x 1500mm x 200mm thick; rectangular shape; edges abutting/set into walls - 2nr; all in accordance with Architect's Drawing 7002	1	nr			

To Collection €

(24) STAIRS, RAMPS (Cont)

COLLECTION

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(24) STAIRS, RAMPS
Carried to Summary

					€	c
	(25) AIR TIGHTNESS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	AIR TIGHTNESS					
C	1. Not withstanding that this Bill of Quantities is measured in accordance with the Agreed Rules of Measurement, the tenderer should note the following works measured are not in accordance with ARM. The Air Tightness specialized design packages are priced in accordance with the Works Requirements and the relevant co-ordination is to include for all works there in contained.		note			
D	2. Ensuring the airtight quality of the buildings is a key element of the low energy strategy applied in the design of this building. Care has been taken by the designers in specifying the materials and systems and in providing construction details that are capable of achieving the specified level of air permeability.		note			
E	3. The contractor shall be responsible for ensuring that the building complies with the specified level of air permeability.		note			
F	4. When tested the building shall achieve an air permeability of 3m3/hr/m2 @50 Pa building pressure or less.		note			
G	5. Refer to Section A33 of Architects Specification for this Section		note			
	The contractor shall include the cost of carrying out the following works if not included elsewhere in this Pricing Document.					
	The main elements of the building construction providing protection against air infiltration (the seal boundary) are typically:					
H	1. U/s of WPB ply to flat roof	1	item			
J	2. U/s of composite deck roof	1	item			
K	3. Taped Insulation to external face of blockwork/concrete walls	1	item			
L	4. Fibre cement cladding system	1	item			
M	5. Tapes/seals at the glazing system	1	item			
N	6. Radon membrane	1	item			
P	7. Ventilation dampers	1	item			
				To Collection €		

					€	c
	(25) AIR TIGHTNESS (Cont)					
A	8. Seals/grommits to all penetrations through the external wall/floor roof/ envelope.	1	item			
B	9. Membranes within cavities and seals to steel structures.	1	item			
C	The sealing of the construction junctions between these elements is a critical aspect of the airtight design. It is essential that the air seal boundary is continuous and is not breached in any location. All service penetrations which cross the line of the air seal boundary also must be comprehensively sealed to maintain continuity of the airtight barrier, with proprietary products as per the general specification.	1	item			
	Quality Management					
D	Effective and thorough quality management is essential if the specified level of air permeability is to be achieved.	1	item			
E	If the integrity of the air seal boundary is broken then it must be repaired. Particular care must be taken when constructing joints and junctions in the building envelope to ensure continuity of the air seal boundary. Repairs using unsuitable tape, Rockwool and expanding foam are not acceptable.	1	item			
F	In addition to the continuity of the air seal boundary, care must be exercised at all envelope penetrations for windows, doors, rooflights, services, cables etc applying appropriate sealing and draught barriers and sealing junctions between the air seal boundary and these elements.	1	item			
G	For the low air permeability strategy to be successful it is vital that all site workers are aware of the importance of maintaining the integrity of the air seal boundary. All subcontractors are to be briefed on the strategy and encouraged to report damage of the air seal boundary on a "no fault" basis.	1	item			
	The main contractor shall take overall responsibility for co-ordination of and maintaining continuity of the air seal boundary. One member of the contractor's site team is to be nominated as the 'air leakage officer', whose role shall include the following;					
H	Develop the project air leakage prevention plan	1	item			
J	Identify all significant potential sources of air leakage and the methods to be used to minimize leakage	1	item			
K	Ensure that all tapes and sealants used to minimize air leakage are fit for purpose and offer a long term protection to air leakage over the buildings lifetime	1	item			
L	Ensure that all equipment and components procured offer the required standard of air leakage	1	item			
M	Ensure that all sub contractors understand the importance of minimizing air leakage in this building and take appropriate measures to minimize it	1	item			
				To Collection €		

					€	c
	(25) AIR TIGHTNESS (Cont)					
A	Undertake regular inspections of the building as it is constructed to ensure that air leakage paths are minimized	1	item			
B	Ensure that no elements of the construction are concealed without their air leakage integrity being considered and inspected	1	item			
C	Program the air test and prepare the building for its test	1	item			
D	Supervise the test procedure, including ensuring that all required temporary seals are applied to allow the test to take place	1	item			
E	Identify sources of leakage during the test procedure and their potential resolution in the event that the target air tightness is not achieved	1	item			
F	The main contractor shall ensure coordination of work between different work packages/ specialist sub-contractors in defining responsibility for sealing at junctions between different construction elements.	1	item			
	Areas critical in maintaining the air seal boundary include (but are not limited to):					
G	Monitoring and maintaining levels of construction quality	1	item			
H	Roof/ wall junctions	1	item			
J	Ground floor/ wall junction	1	item			
K	Changes in roof section	1	item			
L	Windows, doors and rooflights	1	item			
M	Service penetrations	1	item			
N	All materials systems junctions	1	item			
	Airtightness Specialist					
P	The contractor shall employ a recognized specialist approved by the Employer's Representative to carry out an airtightness test at a point in the construction programme when all elements of the external envelope/ air seal boundary are complete including all services penetrations.	1	item			
Q	The specialist must have had previous experience in the testing of buildings to IS EN 13829 2001 that have achieved the target set out below or improved on it, in at least one building of a similar size and complexity.	1	item			
R	The specialist shall provide a rig capable of testing the entire building as a single element. If the air test results show that the rig was unable to maintain a pressure of 50Pa at the required test result, the test will be deemed non-compliant	1	item			
				To Collection €		

					€	c
	(25) AIR TIGHTNESS (Cont)					
	The air test shall be carried out as detailed within the following standards:					
A	IS EN 13829:2001 "Determination of air permeability in buildings - fan pressurization method"	1	item			
B	CIBSE TM23:2000 "Testing buildings for air leakage"	1	item			
C	ATTMA TS1 July 2007 "Measuring air permeability of building envelopes"	1	item			
D	All instruments and equipment used must comply with the accuracy and tolerance requirements set down by these standards.	1	item			
E	The air test specialist must be accredited through INAB or UKAS to carry out air tightness testing of buildings in accordance with ISO 17025 - proof of this accreditation must be issued by the contractor to the ER and approved in writing, prior to appointment.	1	item			
F	The contractor shall also include for a minimum of 2 no site inspection from the accredited testing specialists during the course of construction.	1	item			
	Briefing Meeting					
G	Upon approval and appointment of the air testing specialist by the contractor, and at an appropriate time in the building programme, the specialist shall hold a briefing meeting with the contractors staff and the design team. Prior to this meeting, the contractor shall identify any points in the building that have a high risk of air leakage and shall detail the proposed sealing method with the air test specialist.	1	item			
H	The air test specialist shall also use this opportunity to detail the testing procedure and work required in preparation for the test.	1	item			
	Preliminary Smoke Test					
J	Once the glazing is installed, the contractor shall employ the air test specialist to carry out a smoke test on 3 no. typical rooms in the building, of differing sizes, scales and complexities, in order to identify any potential weaknesses in the installation that can be rectified before the full test is carried out.	1	item			
K	Note that an amount of temporary sealing will be required to prevent smoke escaping internally during the testing of this room.	1	item			
L	The contractor shall contact the local fire department in advance of the test and inform them that the smoke test may take place in order to prevent false alarms.	1	item			
				To Collection €		

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	(25) AIR TIGHTNESS (Cont)					
	Test Preparation					
	The contractor shall include all attendances associated with the airtightness testing including building preparation which shall typically include:					
A	(a) all external windows, trickle vents, smoke vents and doors must be closed (but not sealed)	1	item			
B	(b) all internal doors must be wedged open	1	item			
C	(c) all drainage traps must be filled with water. If traps have not been fitted then drainage pipes must be sealed with tape	1	item			
D	(d) all mechanical ventilation systems must be shut down and intake/ exhaust louvers sealed with tape/ polythene sheeting / compriband. This is most effectively achieved by sealing the intake and exhaust louvers for each fan or system	1	item			
E	(e) any combustion appliances within the airtight building envelope should be turned off and their flues sealed	1	item			
F	(f) the ground floor internal and external area within 5m of the fan equipment/ doorway must be clean and clear of all loose material	1	item			
G	(g) the contractor must ensure that no external doors/ windows/ trickle vents are opened for the duration of the test	1	item			
H	(h) some temporary minor carpentry works may be required to the doorway in which the fan equipment is mounted	1	item			
J	(j) notices must be posted at all entry and exit points to the building; "AIRTIGHTNESS TEST IN PROGRESS DO NOT OPEN".	1	item			
K	(k) remove suspended floor and ceiling tiles (where applicable) around the perimeter of the building	1	item			
L	(l) contractor to advise the employers representative of the proposed test date one month prior to the test date, weekend days may not be acceptable	1	item			
M	(m) Air test may only be carried out during appropriate weather conditions	1	item			
N	(n) contractor to obtain a list of test condition requirements from the air leakage test specialist four weeks prior to carrying out the air test	1	item			
P	(o) The building shall be brought up to normal working temperature 6 hours before the test is due to take place and maintained at the working temperature during the air and thermo graph tests	1	item			
Q	Note that no additional taping or sealing of any building component must be undertaken without prior agreement from the client's representative.	1	item			
				To Collection €		

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	(25) AIR TIGHTNESS (Cont)					
A	No less than three weeks before the test is due to commence, the contractor shall measure the surface area that is proposed for use in the test and send the calculation to the clients representative for agreement.	1	item			
	The Test					
B	The building shall achieve an air leakage level of 3m3/h/m2 at a test pressure of 50Pa, or less. (Where the area used is the true internal exposed area of the walls, roof, window, and ground floor surfaces).	1	item			
	The air test shall be carried out as detailed within the following standards:					
C	IS EN 13829:2001 "Determination of air permeability in buildings - fan pressurization method"	1	item			
D	CIBSE TM23:2000 "Testing buildings for air leakage"	1	item			
E	ATTMA TS1 July 2007 "Measuring air permeability of building envelopes"	1	item			
F	All instruments and equipment used must comply with the accuracy and tolerance requirements set down by these standards.	1	item			
G	The test must be witnessed by the Employers Representative. The contractor shall give sufficient notice to enable this to happen.	1	item			
H	The air testing specialist must produce a full detailed report of the air test on completion, identifying the area used for the test, the result achieved, and confirmation of any deviations from the standard test procedure	1	item			
J	In the event the test is failed the contractor shall carry out a full building smoke test to identify sources of leakage. The smoke test shall be carried out by filling the building with a smoke type that is harmless to the building and its systems and leave no residues within the building. During this test the contractor shall make a detailed list of all leakage points.	1	item			
K	The contractor shall promptly carry out all necessary remedial works and, cover all costs of further air and smoke tests required to prove compliance with the test standard.	1	item			
L	The contractor shall remove all building elements required to correctly seal the building and re-instate them to allow the further testing of the building until compliance is achieved.	1	item			
	Thermo graphic Survey					
M	The contractor shall employ a recognized specialist to carry out a Thermo graphic survey of the completed building to prove continuity of insulation within all parts of the building fabric.	1	item			
N	The survey shall be conducted in accordance with the requirements and recommendations of TN 9/2002 'Thermal Imaging of Buildings'.	1	item			
P	The survey shall be carried out by a Level III certified thermographer.	1	item			

To Collection €

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	(25) AIR TIGHTNESS (Cont)					
A	In the event that the specified continuity of thermal insulation is not achieved the contractor shall open up the works and make good the deficiency. A further Thermo graphic survey of the relevant areas is to be carried out to complete the demonstration of compliance with the specification.	1	item			
B	Any opening up or remedial works required are to be carried out at the contractors' expense until the specified performance is achieved.	1	item			

To Collection €

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(25) AIR TIGHTNESS (Cont)					
COLLECTION					
Page No. Building/46					
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Page No. Building/49					
Page No. Building/50					
Page No. Building/51					
Page No. Building/52					
(25) AIR TIGHTNESS **Carried to Summary**					

					€	c
	(27) ROOF					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	2. Please refer to Consulting Engineers and Architect's Specification and Drawings		note			
E	3. In exceptional cases where it has not been possible to specify a generic element and a specific product has been named, an equivalent product to that specified is acceptable where it meets the technical, functional and aesthetic standards of that specified: the onus is on the contractor to ensure that an equivalent product to that specified meets the standard by means of an agreement cert, insurance backed guarantee or warranty, detailed specifications, fire test certificates where applicable, brochure and other means of proof of compliance. Notwithstanding this, the appropriate foregoing documentation and samples are to be provided to the architect prior to being incorporated into the construction		note			
	CONCRETE WORK					
	In-Situ Concrete; Reinforced					
	Concrete cubes for testing					
	Provide for making sampling and testing procedures shall comply with IS EN 12350 Testing Fresh concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification Section - 4.13					
F	Size 150 x 150 x 150mm	13	nr			
				To Collection €		

					€	c
	(27) ROOF (Cont)					
	Structural concrete; designed concrete; Strength class C40/50; exposure class XC2 tol.S. EN 206 and the Irish National Annex; nominal maximum aggregate sizeDmax 20 mm; GGBS addition complying with I.S. EN 15167-1:2006 and providingnot less than 30% Portland-cement clinker replacement by mass; CEM I-onlyconcrete not permitted except where prior written approval is obtained inaccordance with the specified supply-chain contingency provisions; all inaccordance with drawing 230079-X-95-X-F01-DR-SE-7000, Engineer's Specification Clause 4.3.1, Engineer's Specification Table 4.11-2 and theConcrete Work Project-Specific Preamble					
	Beams					
A	Cross-sectional area not exceeding 0.10m2; Reinforced; RC Beams to Roof	21	m3			
	Column					
B	Cross-sectional area not exceeding 0.10m2; Reinforced; RC Column to Roof	1	m3			
	Structural concrete; designed concrete; Strength class C32/40; exposure class XC2 tol.S. EN 206 and the Irish National Annex; nominal maximum aggregate sizeDmax 20 mm; GGBS addition complying with I.S. EN 15167-1:2006 and providingnot less than 30% Portland-cement clinker replacement by mass; CEM I-onlyconcrete not permitted except where prior written approval is obtained inaccordance with the specified supply-chain contingency provisions; all inaccordance with drawing 230079-X-95-X-F01-DR-SE-7000, Engineer's Specification Clause 4.3.1, Engineer's Specification Table 4.11-2 and theConcrete Work Project-Specific Preamble					
	Upstand and the like					
C	Cross-sectional area exceeding 0.10m2; Reinforced; RC Upstand	5	m3			
	Floor screed; Grade: C25/30, XC1; Maximum water/cement ratio : 0.65; to IS EN 206; Minimum cement content kg/m3 : 270; Permitted additions : Min 30% GGBS; approved concrete mix with a minimum characteristic strength of 35N/mm2 unless otherwise noted. The maximum aggregate size shall be reduced to 10mm; refer Engineer's Specification Section- 4.11					
	Other Items; Floor Screed					
D	75mm thick; to falls; reinforced	30	m3			
	Concrete infill ; Concrete grade; C30/37; to end of hollowcore slab min 35N concrete; all as per detail & drawing no 230079-X-X-X-RF-DR-DBFL-SE-5021					
	Other items; Infill concrete					
E	Generally	6	m3			
				To Collection €		

					€	c
	(27) ROOF (Cont)					
	Surface Finishes					
	Powerfloating					
A	Generally	395	m2			
	Troweling					
B	Generally; to tops of beams	37	m2			
	Reinforcement					
	Bar reinforcement; Hot rolled high yield steel bars shall comply with ISO9001/ CARESISEN10080/ BS4449 except that no bar shall contain a flash weld. All bars shall be cut and bent in accordance with BS 8666 ; must be free of loose millscale and thoroughly cleaned to remove all loose rust, oil, grease or other harmful matter prior to being placed in position with and including all necessary laps, spacers, chairs and tying wire; all in strict accordance with the Engineers Drawings; refer to Engineer's Specification Section 4.30					
	Bar; straight or bent; Beam					
C	Nominal size not exceeding 12mm diameter	1.35	t			
D	12mm - 25mm diameter	1.24	t			
	Bar; straight or bent; Column					
E	Nominal size not exceeding 12mm diameter	0.03	t			
F	12mm - 25mm	0.05	t			
	Bar; straight or bent; Slab extra bar reinforcement					
G	12mm - 25mm	0.89	t			
	Steel fabric reinforcement shall comply with the requirements of IS EN 10080:2005 and BS 4449 (Grade B500B or B500C) and shall be obtained from and cut and bent by a firm holding a valid CARES (or equivalent scheme) certificate of approval for production and supply of steel for the reinforcement of concrete; The reinforcement shall be cut, cold bent and hooked to the dimensions shown on the drawings and schedules or to such other dimensions as may be directed; All in strict accordance with the Engineers drawings and Engineering Specification Section 4.30					
	Reference A142 mesh; 400mm side laps; 400mm end laps					
H	Horizontal; to floors screed	395	m2			

					€	c
	(27) ROOF (Cont)					
	Formwork					
	Formwork; Design and construction of falsework and formwork shall be in accordance with C & S Specification; Type B Finish; This finish can only be obtained by the use of high quality concrete and formwork. The concrete should be thoroughly compacted and all surfaces should be true, with clean arises. Only very minor surface blemishes should occur, with no staining or discolouration from the release agent; All as per accordance with Engineer's Drawings and Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 P01 Section 4.21 & 4.22 & 4.27					
	Beams					
A	Isolated; rectangular; soffit height not exceeding 4.00m; cross sectional area not exceeding 0.10m2; RC Beams	59	m2			
B	Isolated; rectangular; soffit height not exceeding 4.00m; cross sectional area exceeding 0.10m2; RC Beams	175	m2			
	Sides of Upstand and steps in top surface					
C	Height/Width exceeding 500mm	38	m2			
	Kicker					
D	Column; rectangular	5	nr			
	Column					
E	Isolated; rectangular; soffit height not exceeding 4.00m; cross sectional area not exceeding 0.10m2; RC Column	7	m2			
	Precast Concrete					
	Design, supply and install precast slab units; All precast concrete elements and assemblages shall be designed in accordance with ISEN 1992-1-1; all relevant Standards to support dead loads & superimposed loads as Engineers details; including all fixings, angles, bolts and the like as necessary to attach to surrounding structure; all joints between precast concrete units to be grouted with and including concrete as a separate operation prior to placing of RC topping (RC topping measured elsewhere); all in strict accordance with the Engineers Drawing & Engineering Specification Section-5					
	Floor slabs; 200mm thick					
F	Span not exceeding 5.00m	358	m2			
G	Span Between 7.00 - 9.00m	38	m2			

To Collection €

					€	c
	(27) ROOF (Cont)					
	ROOFING, CLADDING AND WATERPROOFING					
	Rigid Sheet Coverings and Sheeting					
	Metal Sheet Decking; Tata steel D60 deck; End laps; Configuration: Standard end lap; Side Lap: Standard side lap Arrangement; Span configuration: Multi span condition; Supporting structure: Structural steel shear studs; Accessories: As per Manufacturer's standard details and recommendations; all to Manufacturer's Recommendations; all as per Engineer's Drawing 230079-X-X-X-L01-DR-DBFL-SE-1003 & Specification					
	Decking					
A	Horizontal; Area exceeding 300mm wide	61	m2			
	WOODWORK					
	Ironmongery, Accessories and Sundries					
	Thermal Break insulation to Architects Specification and Drawing 230079-X-X-X-RF-DR-DBFL-SE-1004					
	Insulation					
B	Generally	6	nr			
	STEELWORK					
	Structural Steelwork					
	Fabricated, welded steel; Steel shall be minimum grade S275 JR to ISEN 10025 and ISEN 10210 (hot rolled) and minimum grade S355 JO (cold formed); ; all as per Engineers Drawings & Structural Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 Section 8					
	Beams					
C	UC; Weight not exceeding 25kg/m	1.80	t			
D	UC; Weight Between 25-50kg/m	3.80	t			
E	UC; Weight Between 50-100kg/m	8.60	t			
F	UC; Weight Between 100-200kg/m	5.30	t			
G	PFC; Weight not exceeding 25kg/m	3.10	t			
H	PFC; Weight between 25-50kg/m	2.70	t			
	Column					
J	UC; Weight Between 25-50kg/m	1.70	t			

					€	c
	(27) ROOF (Cont)					
	Angle					
A	RSA; Weight not exceeding 25kg/m	2.10	t			
B	UEA; Weight not exceeding 25kg/m	1.70	t			
	Fittings					
C	General; including caps, bases, haunches, gussets, end plates, splice plates, cleats, brackets, stiffeners, distance pieces and the like	6.16	t			
	Kingspan or equivalent Purlins; fixed in accordance with Manufacturer's instructions; As per Structural Engineers Drawings & Specification.					
	Cold Rolled Members; Purlins / cladding rails; to canopy roofs					
D	M175065150 Purlin at the requisite centres: fixed to steel beam	0.30	t			
E	M265065250 Purlin at the requisite centres: fixed to steel beam	2.80	t			
	Bolts					
	Bolts; 2No. M20 Bolt; All to Engineer's Drawings ref 230079-X-X-X-L01-DR-DBFL-SE-5020.					
F	Generally	4	nr			
	Bolts; 4No. M16 Bolt; All to Engineer's Drawings ref 230079-X-X-X-L01-DR-DBFL-SE-5021.					
G	Generally	32	nr			
	Site welding					
	Isolated connections					
H	10mm thick plate welded to top and bottom flange at 500mm c/c to receive relieving angle; All as per drawing no 230079-X-X-X-RF-DR-DBFL-SE-5021	25	nr			
	Protective coatings					
	Surface treatments off site; Steelwork to be shot-blasted to standard Sa 2# of IS EN ISO 8501-1 and unless specified otherwise, hot dip galvanized to a thickness of 140 microns thick and in accordance with IS EN ISO 1461; Remove all traces of loose rust, grit, etc by compressed air hose or careful clean dry brushing. Inspect for laminations and remove by careful grinding leaving a smooth surfaces; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 Section 8.15					
	Steelwork					
J	General surfaces	36.96	t			
				To Collection €		

					€	c
	(27) ROOF (Cont)					
	Surface treatments off site; Priming of the clean blast steel should be carried out within 2 hours of shot-blast. The blast primer shall be a 2-pack epoxy zinc rich primer applied by airless spray to give a minimum dry film thickness of 25 microns; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 Section 8.15					
	Steelwork					
A	General surfaces	36.96	t			
	Surface treatments off site; The site holding primer shall be a high-build zinc phosphate modified alkyd primer applied by airless spray to give a minimum dry film thickness of 75 microns; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 8.15					
	Steelwork					
B	General surfaces	36.96	t			
	Spot primer after fabrication; After erection all site contaminants shall be removed and the steelwork shall be patch primer if required with the specified primer. All nuts and bolts shall be degreased and coated with one coat of the primer; Also remove all dust dirt grease etc. Wash with White Spirit where necessary. Then spot - prime all bare metal with Blast Primer.Allow to dry over night; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 8.15					
	Steelwork					
C	General surfaces	36.96	t			
	Steel to be hot dip galvanized to a thickness of 140 microns thick and in accordance with IS EN ISO 1461; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 Section 8.15					
	Steelwork					
D	General surfaces	1.60	t			
	METALWORK					
	Non Structural					
	Relieving angle bolted to rc upstand; all in strict accordance with the Engineer's details and Drawings 230079-X-X-X-RF-DR-DBFL-SE-5021					
	Bars, Rods and the like					
E	Support Angles	39	m			
				To Collection €		

					€	c
	(27) ROOF (Cont)					
	PAINTING AND DECORATING					
	Painting					
	After galvanizing pre-treat steelwork with a T-wash modified zinc phosphate solution (or its proprietary equivalent) in accordance with manufacturers# instructions. Allow minimum recommended drying time prior to application of primer and decoration paint. Ensure maximum recommended drying time is not exceeded between T-wash application and paint application.After the application of each coat of paint and before the application of any subsequent coats, the Contractor shall ensure that the paint coat has been applied to the required dry film thickness (DFT) by the use of the methods in BS 3900: Part C5 for measuring dry film thickness. The paint system used shall be approved by the Engineer prior to application; Subsequent to erection touch up damaged areas with 2-pack epoxy micaceous iron oxide; all as per engineer drawings & Engineering Specification.					
	Structural Metalwork; members of roof trusses, purlins, rails, lattice girders and the like					
A	Girth exceeding 300mm	299	m2			
B	Intumescent coating systems; Intumescent coating to all steelwork as required; System performance: Ss_40_90_40/210 Fire resistance; Ss_40_90_40/205 Design submittals; Ss_40_90_40/290 Compliance with performance requirements; Ss_40_90_40/215 Durability; System manufacturer: Submit proposals; System application: Steel must be prepared, usually by blast cleaning, in order to remove mill scale and rust and provide good adhesion for the fire protection system; Pre-treatment: Where steel is galvanized, its surface must be deactivated using a chemical commonly known as 'T wash' or 'mordant solution'. This will ensure adhesion of intumescent coatings; Primer: Pr_35_31_66_94 Water-based acrylic primers - Manufacturer: Bostik Ltd or equivalent; Product reference: Bostik Screedmaster Universal Primer or equivalent; Intumescent coat: Pr_35_31_68_43 Intumescent protective coatings - Manufacturer: Sika Limited or equivalent; Product reference: Unitherm Fire Protection System or equivalent; Intumescent coat; Type: Unitherm 38091 Interior; Top coat: Unitherm 7854; Execution: Ss_40_90_40/670 Inspection; System completion: Contractor to clean and test the installed system; Contractor to submit DOP, ancillary cert and operation and maintenance manual; as per Architects Specification SS_40_90_40_42					
	Structural Metalwork; members of roof trusses, purlins, rails, lattice girders and the like					
C	Girth exceeding 300mm	299	m2			

To Collection €

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(27) ROOF (Cont)					
COLLECTION					
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Page No. Building/56					
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Page No. Building/60					
Page No. Building/61					
(27) ROOF **Carried to Summary**					

					€	c
	(28) FRAME					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	2. Please refer to Consulting Engineers and Architect's Specification and Drawings		note			
E	3. In exceptional cases where it has not been possible to specify a generic element and a specific product has been named, an equivalent product to that specified is acceptable where it meets the technical, functional and aesthetic standards of that specified: the onus is on the contractor to ensure that an equivalent product to that specified meets the standard by means of an agreement cert, insurance backed guarantee or warranty, detailed specifications, fire test certificates where applicable, brochure and other means of proof of compliance. Notwithstanding this, the appropriate foregoing documentation and samples are to be provided to the architect prior to being incorporated into the construction		note			
	CONCRETE WORK					
	In-Situ Concrete; Reinforced					
	Concrete cubes for testing					
	Provide for making sampling and testing procedures shall comply with IS EN 12350 Testing Fresh concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification Section - 4.13					
F	Size 150 x 150 x 150mm	3	nr			
				To Collection €		

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	(28) FRAME (Cont)					
	In-situ Concrete; Reinforced					
	Structural concrete; designed concrete; Strength class C40/50; exposure class XC2 tol.S. EN 206 and the Irish National Annex; nominal maximum aggregate sizeDmax 20 mm; GGBS addition complying with I.S. EN 15167-1:2006 and providingnot less than 30% Portland-cement clinker replacement by mass; CEM I-onlyconcrete not permitted except where prior written approval is obtained inaccordance with the specified supply-chain contingency provisions; all inaccordance with drawing 230079-X-95-X-F01-DR-SE-7000, Engineer's Specification Clause 4.3.1, Engineer's Specification Table 4.11-2 and theConcrete Work Project-Specific Preamble					
	Beams					
A	Cross-sectional area not exceeding 0.10m2; Reinforced; RC Beams	2	m3			
	Grade C32/40					
	Upstand and the like					
B	Cross-sectional area not exceeding 0.10m2; Reinforced; RC Upstand	1	m3			
C	Cross-sectional area exceeding 0.10m2; Reinforced; RC Upstand	3	m3			
	Reinforcement					
	Bar reinforcement; Hot rolled high yield steel bars shall comply with ISO9001/ CARESISEN10080/ BS4449 except that no bar shall contain a flash weld. All bars shall be cut and bent in accordance with BS 8666 ; must be free of loose millscale and thoroughly cleaned to remove all loose rust, oil, grease or other harmful matter prior to being placed in position with and including all necessary laps, spacers, chairs and tying wire; all in strict accordance with the Engineers Drawings; refer to Engineer's Specification Section 4.30					
	Bar; straight or bent; Beam					
D	Nominal size not exceeding 12mm diameter	0.40	t			
E	12mm - 25mm diameter	0.40	t			
				To Collection €		

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	(28) FRAME (Cont)					
	Formwork					
	Formwork; Design and construction of falsework and formwork shall be in accordance with C & S Specification; Type B Finish; This finish can only be obtained by the use of high quality concrete and formwork. The concrete should be thoroughly compacted and all surfaces should be true, with clean arises. Only very minor surface blemishes should occur, with no staining or discolouration from the release agent; All as per accordance with Engineer's Drawings and Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 P01 Section 4.21 & 4.22 & 4.27					
	Beams					
A	Isolated; rectangular; soffit height not exceeding 4.00m; cross sectional area exceeding 0.10m2; RC Beams	22	m2			
	Sides of Upstand and steps in top surface					
B	Height/Width between 250 - 500mm	5	m			
C	Height/Width exceeding 500mm	28	m2			
	STEELWORK					
	Structural Steelwork					
	Fabricated, welded steel; Steel shall be minimum grade S275 JR to ISEN 10025 and ISEN 10210 (hot rolled) and minimum grade S355 JO (cold formed); ; all as per Engineers Drawings & Structural Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_ Section 8					
	Beams					
D	UC; Weight between 25-50kg/m	3.60	t			
E	UC; Weight between 50-100kg/m	13.10	t			
F	UC; Weight between 100-200kg/m	5.50	t			
G	SHS; Weight between 25-50kg/m	2.40	t			
H	Flat Plate; Weight between 25-50kg/m	3.00	t			
	Column					
J	UC; Weight between 50-100kg/m	10.00	t			
	Angle					
K	RSA; Weight between 25-50kg/m	3.60	t			
				To Collection €		

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	(28) FRAME (Cont)					
	Fittings					
A	General; including caps, bases, haunches, gussets, end plates, splice plates, cleats, brackets, stiffeners, distance pieces and the like	8.09	t			
	Protective coatings					
	Surface treatments off site; Steelwork to be shot-blasted to standard Sa 2# of IS EN ISO 8501-1 and unless specified otherwise, hot dip galvanized to a thickness of 140 microns thick and in accordance with IS EN ISO 1461; Remove all traces of loose rust, grit, etc by compressed air hose or careful clean dry brushing. Inspect for laminations and remove by careful grinding leaving a smooth surfaces; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 8.15					
	Steelwork					
B	General surfaces	48.55	t			
	Surface treatments off site; Priming of the clean blast steel should be carried out within 2 hours of shot-blast. The blast primer shall be a 2-pack epoxy zinc rich primer applied by airless spray to give a minimum dry film thickness of 25 microns; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 8.15					
	Steelwork					
C	General surfaces	48.55	t			
	Surface treatments off site; The site holding primer shall be a high-build zinc phosphate modified alkyd primer applied by airless spray to give a minimum dry film thickness of 75 microns; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 8.15					
	Steelwork					
D	General surfaces	48.55	t			
	Spot primer after fabrication; After erection all site contaminants shall be removed and the steelwork shall be patch primer if required with the specified primer. All nuts and bolts shall be degreased and coated with one coat of the primer; Also remove all dust dirt grease etc. Wash with White Spirit where necessary. Then spot - prime all bare metal with Blast Primer.Allow to dry over night; all as per engineer drawings & Engineering Specification 230079-X-X-X-XX-SP-DBFL-SE-0001_Section 8.15					
	Steelwork					
E	General surfaces	48.55	t			

					€	c
	(28) FRAME (Cont)					
	Bolts					
	4no M16 resin anchor Bolt with min 150mm embedment; all as per engineer's drawing & Specification					
A	Generally	76	nr			
	Holding down assemblies					
B	Baseplate; 300x300x12mm steel baseplate with 2no M16 resin anchor Bolt with min 150mm embedment; all as per engineer's drawing & Specification	19	nr			
C	Galvanized plate 6mm thick; Approx 800-1000mm; all as per structure drawing no 8006 - Construction Details 06 - Ext. Opes 1.	27	nr			
D	135x100x10mm MS plate with neoprene gasket bolt fixed to slab with countersunk fixing; All as per drawing number 23-16/TD - 7003	10	nr			
E	160x100x10mm MS plate with neoprene gasket bolt fixed to slab with countersunk fixing; All as per drawing number 23-16/TD - 7003	8	nr			
F	203 x 203 x 10mm thick plate welded to top and bottom flange at 500mm c/c to receive relieving angle; All as per drawing no 230079-X-X-X-L01-DR-DBFL-SE-5020	25	nr			
	METALWORK					
	Non Structural					
	Relieving angle fixed back to UC & SHS(Ancon optima or similar approved angle); Outer leaf support system for 150mm cavity to include all fixings etc; all in strict accordance with the Engineer's details and Drawings 230079-X-X-X-L01-DR-DBFL-SE-1003					
	Bars, Rods and the like					
G	Support Angles	102	m			

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	(28) FRAME (Cont)					
	PAINTING AND DECORATING					
	Painting					
	After galvanizing pre-treat steelwork with a T-wash modified zinc phosphate solution (or its proprietary equivalent) in accordance with manufacturers# instructions. Allow minimum recommended drying time prior to application of primer and decoration paint. Ensure maximum recommended drying time is not exceeded between T-wash application and paint application.After the application of each coat of paint and before the application of any subsequent coats, the Contractor shall ensure that the paint coat has been applied to the required dry film thickness (DFT) by the use of the methods in BS 3900: Part C5 for measuring dry film thickness. The paint system used shall be approved by the Engineer prior to application; Subsequent to erection touch up damaged areas with 2-pack epoxy micaceous iron oxide; all as per engineer drawings & Engineering Specification.					
	Structural Metalwork; members of roof trusses, purlins, rails, lattice girders and the like					
A	Girth exceeding 300mm	464	m2			
B	Intumescent coating systems; Intumescent coating to all steelwork as required; System performance: Ss_40_90_40/210 Fire resistance; Ss_40_90_40/205 Design submittals; Ss_40_90_40/290 Compliance with performance requirements; Ss_40_90_40/215 Durability; System manufacturer: Submit proposals; System application: Steel must be prepared, usually by blast cleaning, in order to remove mill scale and rust and provide good adhesion for the fire protection system; Pre-treatment: Where steel is galvanized, its surface must be deactivated using a chemical commonly known as 'T wash' or 'mordant solution'. This will ensure adhesion of intumescent coatings; Primer: Pr_35_31_66_94 Water-based acrylic primers - Manufacturer: Bostik Ltd or equivalent; Product reference: Bostik Screedmaster Universal Primer or equivalent; Intumescent coat: Pr_35_31_68_43 Intumescent protective coatings - Manufacturer: Sika Limited or equivalent; Product reference: Unitherm Fire Protection System or equivalent; Intumescent coat; Type: Unitherm 38091 Interior; Top coat: Unitherm 7854; Execution: Ss_40_90_40/670 Inspection; System completion: Contractor to clean and test the installed system; Contractor to submit DOP, ancillary cert and operation and maintenance manual; as per Architects Specification SS_40_90_40_42					
	Structural Metalwork; members of roof trusses, purlins, rails, lattice girders and the like					
C	Girth exceeding 300mm	464	m2			

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(28) FRAME (Cont)					
COLLECTION					
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(28) FRAME **Carried to Summary**					

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	(31) EXTERNAL WALL; COMPLETIONS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	ROOFING, CLADDING AND WATERPROOFING					
	Flexible Sheet Metal Coverings					
	External cills; Description: Aluminum Window Cills; Manufacturer: Seamless Aluminum Group; Product reference: Aluminum Window Cill. Material: Aluminum. Finish: Mill. Polyester powder-coated. Section size: Fixings: Secret fix brackets. Type: Fire rating: Non-combustible to EN 13501-1. Size Thickness (minimum): 2/3 mm; As per Architects Specification Pr_25_93_52_28.					
	Cills					
C	300 - 450mm girth; four times bent	89	m			
	WOODWORK					
	Boarding and Second Fixings					
	Window Liners; General requirements: Ac_05_50_91/340 Timber sourcing Type A; Manufacturer: Medite FR Clear or equal approved; Standard: To BS EN 942; Fire rating: To class 0 as defined in Building Regulations; Class: To BS EN 622-5, Class E1 formaldehyde content; Moisture content at time of fixing: 9#13%; Profile: As per Architects Details; Finished size: As per Architects Details; Finish as delivered: Sanded; Execution: Pr_35_90_43/606 Installing wood mouldings and trims Type A; as per Architects Specification Pr_35_90_43_87 & Drawing 8006					
	Second Fixings; Window Boards					
D	320mm x 20mm thick; square edges; fixing to and including 2nr 44 x 18mm softwood shims/timber battens mechanically fixed to blockwork	89	m			
	Second Fixings; Window Liners					
E	320mm x 20mm thick; square edges; fixing to and including 2nr 44 x 18mm softwood shims/timber battens mechanically fixed to blockwork	291	m			
	Second Fixings; Curtain wall Liners					
F	180mm x 20mm thick; square edges; fixing to and including 2nr 44 x 18mm softwood shims/timber battens mechanically fixed to blockwork	84	m			

To Collection €

	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
	Ironmongery, Accessories And Sundries					
	Supply and fix the following ironmongery items; Manufacturer: Contractor to submit proposals for approval; including all necessary fixings; fixing in strict accordances with the Architects specification and manufacturer's printed instructions; refer to Ironmongery Schedule 23-16/TD-6402					
	Ironmongery; to doors					
A	Electrical provisons and wiring to be provided by the Electrical Contractor		note			
B	Ironmongery Set 01- Type A	4	nr			
C	Ironmongery Set 01- Type B	3	nr			
D	Ironmongery Set 01- Type C	1	nr			
E	Ironmongery Set 01- Type D	1	nr			
	METALWORK					
	Non-Structural					
	External Door System; External doors [Min. u-value 1.2 W/m2K]; 28mm Double glazed low 'E' argon filled aluminum framed thermally broken external doors with polyester powder coating interpon D or synthapulvin finish, applied by qualicoat approved applicator using a standard RAL colour in matt finish. Colour to be confirmed by architect; all in accordance with Architect's specification Ss_25_30_95_26 and drawing 6102					
	Composite Items; Doorsets Type 01; Double Door, Side Screens & Fanlight; Associated Frame Sets; to Architect's Schedule 6102					
F	Door Type DX01; Double Door with Side Screens & Fanlight; Overall nominal size (including frame) 2935mm wide x 3045mm high; comprising 1nr double door size 2130mm x 2100mm high; 1nr side screen size 380mm x 3045mm high; 1nr side screen size 425mm x 3045mm high; 1nr glazed unit fanlight size 2130mm x 945mm high; complete	1	nr			
G	Extra over for Safety Glass - Class 1B1	4	nr			
H	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	1	nr			
	Composite Items; Doorsets Type 02; Double Door & Fanlight; Associated Frame Sets; to Architect's Schedule 6102					
J	Door Type DX02; Double Door & Fanlight; Overall nominal size (including frame) 2035mm wide x 2820mm high; comprising 1nr double door size 2035mm x 2100mm high; 1nr fanlight size 2035mm x 720mm high; complete	1	nr			
K	Extra over for Safety Glass - Class 2B2	2	nr			
L	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	1	nr			

To Collection €

(31) EXTERNAL WALL; COMPLETIONS (Cont)

Composite Items; Doorsets Type 03; Double Door; Associated Frame Sets; to Architect's Schedule 6102

A Door Type DX03; Double Door & louvre unit; Overall nominal size (including frame) 2485mm wide x 3720mm high; comprising 1nr double door size 2485mm x 2600mm high; 1nr louvre unit size 2485mm x 1120mm high; complete — 1 nr

B Extra over for 1nr louvre unit size 2485mm x 1120mm high — 1 nr

Composite Items; Doorsets Type 04; Double Door; Associated Frame Sets; to Architect's Schedule 6102

C Door Type DX04; Double Door & Fanlight; Overall nominal size (including frame) 2035mm wide x 3795mm high; comprising 1nr double door size 2035mm wide x 2295mm high; 1nr coloured panel size 2035mm wide x 855mm high; 1nr fanlight size 2035mm wide x 645mm high; complete — 1 nr

D Extra over for Clear Glass — 1 nr

E Extra over for Colour Spandrel Panel — 1 nr

Composite Items; Doorsets Type 05; Single Door; Associated Frame Sets; to Architect's Schedule 6102

F Door Type DX05; Single Door; Overall nominal size (including frame) 1135mm wide x 2100mm high; complete — 1 nr

Composite Items; Doorsets Type 06; Single Door; Associated Frame Sets; to Architect's Schedule 6102

G Door Type DX06; Single Door; Overall nominal size (including frame) 800mm wide x 2145mm high; complete — 1 nr

To Collection €

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	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
	Aluminum window units; Description: The proposed window system is the APA ST70HI high performance casement window system, or equal approved. Supply and fit of aluminum alloy windows are to be in accordance with BS4873: 2009 Specification for Aluminum Alloy Windows. The window supplier shall submit evidence that the windows offered conform to the standard. External window & door systems must comply with the Department of Education technical guidance document TGD 21-1 For windows that are intended to be openable, the opening sashes however designed shall move freely and smoothly without hindrance throughout their intended range of movement. The range shall be restricted to an opening for child safety and to ensure adequate free openable area. Manufacturer: Submit proposals. Dimensions and configurations: Refer to Architects drawings; Product performance: Weather performance Air permeability: EN 12207:2000, Class 3 at 600Pa. or better. Watertightness: BS EN 12208:2000, Test Class 9A at 600Pa. or better. Resistance to wind load: IS EN 12211: 2000, P1= 1600Pa, P2 = 800Pa, P3 =2400Pa. Environmental: Background ventilation: 650 mm2/m2 of floor area. Where indicated on window schedule, each window shall incorporate a Ventilator and shall be polyester powder coated offering a single colour facility to match the window profiles. They should be fitted with an external, aluminum hood. The glazed in vents should be fitted with rod control. Each vent must be capable of providing a minimum free airflow in accordance with Part F of the current Building Regulations. Vents shall be tested to BS6375 Part 1. Background ventilation calculations must be provided with the shop drawings, in line with Department of Education guidance. Acoustic performance rating: BS EN ISO 140 The Rw sound reduction index for the Glazing should not be less than 27db. Frame Profile: All profiles to be extruded from aluminum alloy 6063 T6, to BS EN 12020-2; 201601 / BS EN 755-9; 201601 and with polyamide thermal break sections manufactured from glass reinforced nylon sections, rigid foam core capable of withstanding temperatures in excess of 200 degree C. When ancillary components such as sills, couplings etc. are formed from sheet materials they shall be fabricated from designated alloys 1200, 3103, 5005 or 5251 conforming to BS EN 485-2:1995 in temper suitable for the particular type of application and degree of forming to be adopted. Finish as delivered: Coating: Powder coating to BS EN 12206-1. Glazing or infill Standard: Glazing to BS 6262-1:2005. All safety Glazing to conform to 6262- and to achieve min. u value of 1.2 W/m2K; Spandrels Panels: Pilkington Spandrels Glass Enameled or similar approved. Hardware: BS EN 1670: 1998 Building Hardware. Fixing features: When the completed window is tested in accordance with BS 6375-1 and BS 6375-2, there shall be no degradation of the sealing or the operational function of the window due to failure of the sealing materials. Execution: Pr_30_59_98/635 Fixing of aluminum frames; As per Architects Specification Pr_30_59_98_02. Composite items; Window Type 1.1; to Architect's Window Schedule 6101					
A	Window Type 1.1; Overall size (including frame) 910mm x 3795mm high; comprising 1nr hinged glazed unit; 1nr fixed glazed unit; 1nr louvre unit; complete	8	nr			
B	Extra over for Window remote manual openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	8	nr			
				To Collection €		

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	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
A	Extra over for Sand Blasted Glass	8	nr			
B	Extra over for Sand Blasted Safety Glass - Class 2B2	8	nr			
C	Extra over for louvre unit size 910mm wide x 585mm high	8	nr			
	Composite items; Window Type 2.1; to Architect's Window Schedule 6101					
D	Window Type 2.1; Overall size (including frame) 5525mm x 2785mm high; comprising 6nr hinged glazed unit; 2nr fixed glazed unit; 1nr coloured spandrel panel; 2nr louvre unit; complete; to Architect's Window Schedule	8	nr			
E	Extra over for Window remote manual openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	48	nr			
F	Extra over for Clear Glass	64	nr			
G	Extra over for Colour Spandrel Panel	8	nr			
H	Extra over for louvre unit size 1045mm wide x 610mm high	16	nr			
	Composite items; Window Type 3.1; to Architect's Window Schedule 6101					
J	Window Type 3.1; Overall size (including frame) 2710mm x 2785mm high; comprising 4nr hinged glazed unit; 1nr fixed glazed unit; 1nr coloured spandrel panel; 1nr louvre unit; complete; to Architect's Window Schedule	10	nr			
K	Extra over for Window remote manual openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	40	nr			
L	Extra over for Clear Glass	50	nr			
M	Extra over for Colour Spandrel Panel	10	nr			
N	Extra over for louvre unit size 1045mm wide x 610mm high	10	nr			
	Composite items; Window Type 4.1; to Architect's Window Schedule 6101					
P	Window Type 4.1; Overall size (including frame) 1360mm x 2785mm high; comprising 2nr hinged glazed unit; 1nr louvre unit; complete; to Architect's Window Schedule	1	nr			

To Collection €

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	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
A	Extra over for Window remote manual openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	2	nr			
B	Extra over for Clear Glass	2	nr			
C	Extra over for louvre unit size 1360mm wide x 575mm high	2	nr			
				To Collection €		

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(31) EXTERNAL WALL; COMPLETIONS (Cont)					
Curtain Walling Systems; Aluminum curtain wall frame sections; Standard: To relevant parts of BS EN 515, BS EN 573, BS EN 755 and BS EN 12020; Alloy, temper and thickness: Suitable for the application and finish; Structural members: To BS EN 1999-1-1, BS EN 1999-1-3 and BS EN 1999-1-4; Finish; Coating: Powder coating to BS EN 12206-1; Colour: To be agreed with ER; Texture: Matt; Accessories: External cover caps. Pressure plates; Aluminum structural sealant glazing sub-frames; Standard: To relevant parts of BS EN 515, BS EN 573, BS EN 755 and BS EN 12020; Alloy, temper and thickness: Suitable for the application and finish; Structural members: To BS EN 1999-1-1, BS EN 1999-1-3 and BS EN 1999-1-4; Finish; Coating: Powder coating to BS EN 12206-1; Colour: To be agree with ER; Texture: Matt; Glass generally; Selection standards: To BS 6262-1 for vertical glazing; Classification standard and product labelling: To BS 952-1 and BS 952-2; Composition standards; Basic soda lime silicate glass: To BS EN 572-1 and relevant parts of BS EN 572; Basic borosilicate glass: To BS EN 1748-1-1 and BS EN 1748-1-2; Basic alkaline earth silicate glass: To BS EN 14178-1; Ceramic glass: To BS EN 1748-2-1 and BS EN 1748-2-2; Definition and product standards; Toughened or strengthened glasses; Heat strengthened soda lime silicate glass: To BS EN 1863-1 and BS EN 1863-2; Thermally toughened soda lime silicate safety glass: To BS EN 12150-1 and BS EN 12150-2; Chemically strengthened soda lime silicate glass: To BS EN 12337-1 and BS EN12337-2; Thermally toughened borosilicate safety glass: To BS EN 13024-1 and BS EN 13024-2; Heat soaked thermally toughened soda lime silicate safety glass: To BS EN 14179-1 and BS EN 14179-2; Coated glasses: To BS EN 1096-1 and BS EN 1096-4; Panes and sheets; Glass quality: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects; Laminated glass sheets; General requirements: Pr_25_71_33/305 Glass generally;Third party accreditation: Third party accredited by UKAS approved/ recognized body. All glazing to display Kitemark Certified and display mark to be displayed on all glazing installed on site; Laminate glass type: Safety Glass in accordance with BS 6262; Sealing: At perimeter to prevent deterioration due to water or glass joint sealant; Body colour: Clear; Aluminum long strips Type A; Standards; Sheet, strip and plate: To BS EN 485-1; Chemical composition and form: To BS EN 573-3; Temper: To BS EN 515; Identification: Stamp or label with alloy designation, temper, finish and thickness; Polyurethane (PUR) expanding foam fillers Type A; Description: Foam filler to be used around perimeter of all curtain wall, window & door opes; Material: One part polyurethane expanding foam; Colour: Natural.; Pr_30_31_76_84 Structural sealant glazing bonding sealants; Standard: To BS EN ISO 11600; Sealant type: Designed and manufactured for bonding of structural sealant/ bonded glazing; Compatibility: Compatible with contact and close proximity products and finishes; Execution: Pr_30_31_76/610 Suitability of joints for sealant application Type A; Pr_30_31_76/620; joint preparation for sealant application Type A; Pr_30_31_76_85 Structural sealant glazing weather sealants; Standard: To BS EN ISO 11600; Sealant type: Designed and manufactured for weather sealing of structural sealant/ bonded glazing; Execution: Suitability of joints for sealant application Type A; Pr_30_31_76/620; Joint preparation for sealant application Type A; Powder coatings; Standard: To BS EN 12206-1; Powder formulation: Suitable for urban environment. Suitable for marine environment; Execution: Pr_35_31_68/620 Application of powder coating; Cover caps; Material: Pr_25_71_51_02 Aluminum long strips Type A; Profile: Rectangular; Purpose: Mullions;					

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	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
	Transoms; Finish: Powder coating to BS EN 12206-1.; Colour: To be agreed with ER; Sheen: Matt.; Fixing: Pressure clip; Pr_35_90_33_20 Curtain wall glazing and panel gaskets; Material: To BS 4255-1, black EPDM rubber; Gasket type: Glazing; Corners: Factory moulded corner joints.; Ethylene propylene dine monomer (EPDM) rubber section glazing trims; Standard: To BS 4255-1; Colour: Black; Product samples; Submittals: Each type of curtain wall, door, window fastener, with details of methods of adjustment and tolerances; Purpose: For use as a reference sample; Labelling: Clearly label all submitted samples; Timing: Before ordering and in line with ER material submission requirements. Keep on site until project completion; Custom made opening lights; Standard: To CWCT Standard for systemised building envelopes, clause 4.2 and Department of Education Technical Guidance document TGD-21-1; Framing members; Material: Aluminum; Coating: Pr_35_31_68_66 Powder coatings; Colour: To be agreed with ER; Glazing; Product: Pr_25_71_33_46 Laminated glass sheets; Glazing accessories: Pr_35_90_33_20 Curtain wall glazing and panel gaskets; Opening lights restrictive catches: Refer to Architects window & external door schedules; Fasteners: Concealed multi point, operated by an internal handle; Custom made door-sets; Standard: To CWCT Standard for systemised building envelopes, clause 4.3 and Department of Education Technical Guidance document TGD-21-1; Framing members; Material: Aluminum; Coating: Pr_35_31_68_66 Powder coatings; Colour: To be agreed with ER; Glazing; Product: Pr_25_71_33_46 Laminated glass sheets; Glazing accessories: Curtain wall glazing and panel gaskets; Doors designated for use by disabled persons: As Door schedule; Durability: To BS EN 12400, class 6; Custom made integrated access equipment; Standard: To CWCT Standard for systemised building envelopes, clause 4.8; Component; Material: Aluminum; Coating: Pr_35_31_68_66 Powder coatings; Colour: To be agreed with ER; as per Architect's Specification Pr_20_76_51_02 and Ss_25_10_20_85.					
	Composite items; Aluminum Curtain Walling Type 01; as per Architect's Drawings 6102					
A	Aluminum Curtain Wall Type CW01; overall size (including frame and 1nr double door) 2035mm long x 7845mm high; comprising 4nr hinged glazed unit; 3nr fixed glazed units; 1nr fixed unit; 1nr fixed spandrel unit; complete	2	nr			
B	Extra over for double door 2035mm long x 2100mm high	2	nr			
C	Extra over for Window Remote Manual Openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	6	nr			
D	Extra over for Window Electronic Telescopic Opening Device; Actuator with Local Switch	2	nr			
E	Extra over for Clear Glass	14	nr			
F	Extra over for Safety Glass - Class 2B2	4	nr			
G	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	2	nr			
				To Collection €		

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	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
A	Extra over for Colour Spandrel Panel	1	nr			
	Composite items; Aluminum Curtain Walling Type 02; as per Architect's Drawings 6102					
B	Aluminum Curtain Wall Type CW02; overall size (including frame and 1nr double door) 3560mm long x 3045mm high; comprising 4nr hinged glazed unit; 5nr fixed glazed units; complete	1	nr			
C	Extra over for double door 2285mm long x 2100mm high	1	nr			
D	Extra over for Window Remote Manual Openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	4	nr			
E	Extra over for Clear Glass	8	nr			
F	Extra over for Safety Glass - Class 2B2	4	nr			
G	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	1	nr			
	Composite items; Aluminum Curtain Walling Type 03; as per Architect's Drawings 6102					
H	Aluminum Curtain Wall Type CW03; overall size (including frame) 4935mm long x 3045mm high; comprising 4nr hinged glazed unit; 5nr fixed glazed units; complete	1	nr			
J	Extra over for Window Remote Manual Openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	4	nr			
K	Extra over for Clear Glass	6	nr			
L	Extra over for Safety Glass - Class 2B2	3	nr			
M	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	1	nr			
	Composite items; Aluminum Curtain Walling Type 04; as per Architect's Drawings 6102					
N	Aluminum Curtain Wall Type CW04; overall size (including frame and 2nr double door) 11890mm long x 3050mm high; comprising 7nr hinged glazed unit; 18nr fixed glazed units; complete	1	nr			
P	Extra over for double door 2200mm long x 2100mm high	2	nr			
				To Collection €		

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	(31) EXTERNAL WALL; COMPLETIONS (Cont)					
A	Extra over for Window Remote Manual Openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	7	nr			
B	Extra over for Clear Glass	17	nr			
C	Extra over for Safety Glass - Class 2B2	12	nr			
D	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	2	nr			
	Composite items; Aluminum Curtain Walling Type 05; as per Architect's Drawings 6102					
E	Aluminum Curtain Wall Type CW05; overall size (including frame and 1nr single door) 2805mm long x 2935/3720mm high; comprising 5nr hinged glazed unit; 1nr fixed glazed units; 1nr fixed unit; 2nr fixed spandrel unit; complete	1	nr			
F	Extra over for single door 800mm long x 2100mm high	1	nr			
G	Extra over for Window Remote Manual Openers; Description: Telescopic remote opening device to be Teleflex gear or BJP window controls or equivalent; Stroke: All manual openers to achieve a stroke opening of 450mm minimum; Operation; Operating mechanism: Detachable turn handle; To suit windows: Top hinged. Centre pivoted; Execution: Pr_30_36_59/610 Fasteners for hardware Type A; as per Architects Specification Pr_30_36_59_97	5	nr			
H	Extra over for Clear Glass	6	nr			
J	Extra over for Safety Glass - Class 2B2	1	nr			
K	Extra over for glazing manifestation located between 850-1000mm and 1400-1600mm	1	nr			
L	Extra over for Colour Spandrel Panel	2	nr			

To Collection €

(31) EXTERNAL WALL; COMPLETIONS (Cont)

PAINTING & DECORATING

Painting

Waterborne finishes to internal joinery; Description: Dulux Easycare Satinwood paint to all Internal MDF and non-resinous softwood / hardwood; Manufacturer: Dulux Paints Ireland or equivalent; Product reference: Dulux Easycare Satinwood (satin finish); Coverage: 12m2/litre; Preparation: To get the best results with Dulux Easycare Satinwood, make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry); Remove all loose and defective paint; Colour: to be agreed; Execution: Pr_35_31_22/703 Applying coating Internal woodwork; as per Architects Specification Pr_35_31_22_95

General Surfaces

A	Girth not exceeding 300mm; Window Boards, reveals, head liners etc.	84	m		
B	Girth exceeding 300mm; Window Boards, reveals, head liners etc.	122	m2		

To Collection €

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(31) EXTERNAL WALL; COMPLETIONS (Cont)					
COLLECTION					
Page No. Building/70					
Page No. Building/71					
Page No. Building/72					
Page No. Building/73					
Page No. Building/74					
Page No. Building/75					
Page No. Building/76					
Page No. Building/77					
Page No. Building/78					
Page No. Building/79					
Page No. Building/80					
(31) EXTERNAL WALL; COMPLETIONS **Carried to Summary**					

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	(32) INTERNAL WALL; COMPLETIONS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	WOODWORK					
	Boarding and Second Fixings					
	Wood architraves; Manufacturer: Medite FR Clear or equal approved. Standard: To BS EN 942. Fire rating: To class 0 as defined in Building Regulations. Class: To BS EN 622-5, Class E1 formaldehyde content. Moisture content at time of fixing: 9#13%. Profile: As per Architects details. Finished size: As per Architects details. Finish as delivered: Sanded. Execution: Pr 35 90 43/606 Installing wood mouldings and trims; As per Architects Specification Pr 35 90 43 87.					
	Second Fixing; Architraves					
C	75mm wide x 18mm thick; fixed to blockwork; to jambs and heads of Internal Doors; all in strict accordance with Drawings 8014	381	m			
	Wood Quadrant Beading; Manufacturer: Medite FR Clear or equal approved; Standard: To BS EN 942; Fire rating: To class 0 as defined in Building Regulations; Class: To BS EN 622-5, Class E1 formaldehyde content; Moisture content at time of fixing: 9-13%; Profile: As per Architects details; Finished size: As per Architects details; Finish as delivered: Sanded; Execution: Pr 35 90 43/606 Installing wood mouldings and trims; as per Architects Specification Pr 35 90 43 87					
	Second Fixing; Architraves					
D	18mm wide x 18mm thick; fixed to blockwork; to jambs and heads of Internal Doors / Screens; all in strict accordance with Drawings 8014	381	m			
				To Collection €		

(32) INTERNAL WALL; COMPLETIONS (Cont)

Composite Items

Wood Doorsets; Description: Factory manufactured solid core doorsets. All doorsets to be laminate faced with factory primed and painted hardwood slips, framing, architraves and trims finished prior to arrival on site; Third party accreditation: European recognized certification, Trada, Certifier or Equivalent; Standard: Internal non-fire rated door-set third party accredited.Internal fire rated door-set to BS 8214 and third party accredited; Wood in joinery standard: To BS EN 942.; Configuration: Varies - Refer to Architects internal door schedule; Door-set size: Varies - Refer to Architects internal door schedule; Format: Varies - Refer to Architects internal door schedule; Performance; Fire performance; Fire integrity: To BS 476-22, 30 minutes. To BS 476-22, 60 minutes. Varies - Refer to Architects internal door schedule; Fire insulation: To BS 476-22, 30 minutes. To BS 476-22, 60 minutes. Varies - Refer to Architects internal door schedule; Smoke control: To BS EN 13501-2, class Sa. All fire doors require smoke control; Reaction to fire: To BS EN 13501-1, class B-s3, d2 or better; Acoustic performance: To BS EN ISO 10140-2, sound reduction index Rw 30 dB minimum; Strength and durability: To BS EN 1192, Class 3; Frame; Material: Hardwood; Species: Iroko; Appearance class: J40; Perimeter seals or inserts: Acoustic seals. Fire and smoke seal; Finish: Full paint finish; Colour: To be agreed with ER; Frame accessories: Refer to Architects door and ironmongery schedules; Door leaf; Thickness: 44mm for non-fire rated doors. 56mm for fire rated doors; Core: Solid core. Appearance class: J40. Panel details: Refer to Architects door schedule. Facings: VGS grade laminate. Lippings: Hardwood, painted. Perimeter seals: Acoustic, Fire and smoke; In accordance with Architects door schedule; Finish: sanded sealed and varnished. Free from splinters; Glazing: Type: Refer to Architects door schedule. All glazing to be clear. Fire-resisting safety glazing in accordance with BS 6262-4. Clear single safety glazing in accordance with BS 6262-4. All glazing to display stamp for Kite mark certification; Manifestation: Refer to Architects door schedule; Beading; Material: Softwood for non-fire rated doors. Hardwood for fire rated doors. In accordance with manufacturers third party

certification; Fixing: In accordance with manufacturers third party certification; Door accessories: Refer to Architects door & ironmongery schedules; Planted stops; Wood species: Iroko; Appearance class: J40; Finish: Full paint finish; Colour: To be agreed with ER; Hardware: Refer to Architects door & ironmongery schedules; Architraves; Material: Medite Clear MDF; Wood appearance class: To BS EN 942, Class J40; Finish: Primed ready for site finish; Accessories: Refer to Architects door & ironmongery schedules; Execution: Pr_30_59_23/630 Installing hardware; Pr_30_59_23/640 Workmanship in joinery; as per Architect's Specification Pr_30_59_24_97 and Ss_25_30_20_25.

To Collection €

(32) INTERNAL WALL; COMPLETIONS (Cont)

Wood Doorsets; Description: Factory manufactured solid core doorsets. All doorsets to be laminate faced with factory primed and painted hardwood slips, framing, architraves and trims finished prior to arrival on site; Third party accreditation: European recognized certification, Trada, Certifier or Equivalent; Standard: Internal non-fire rated door-set third party accredited.Internal fire rated door-set to BS 8214 and third party accredited; Wood in joinery standard: Configuration: Varies - Refer to Architects internal door schedule; Door-set size: Varies - Refer to Architects internal door schedule; Format: Varies - Refer to Architects internal door schedule; Performance; Fire performance; Fire integrity: To BS 476-22, 30 minutes. To BS 476-22, 60 minutes. Varies - Refer to Architects internal door schedule; Fire insulation: To BS 476-22, 30 minutes. To BS 476-22, 60 minutes.

- Refer to Architects internal door schedule; Fire insulation: To BS 476-22, 30 minutes. To BS 476-22, 60 minutes. Varies - Refer to Architects internal door schedule; Smoke control: To BS EN 13501-2, class Sa. All fire doors require smoke control; Reaction to fire: To BS EN 13501-1, class B-s3, d2 or better; Acoustic performance: To BS EN ISO 10140-2, sound reduction index Rw 30 dB minimum; Strength and durability: To BS EN 1192, Class 3; Frame; Material: Hardwood; Species: Iroko; Appearance class: J40; Perimeter seals or inserts: Acoustic seals. Fire and smoke seal; Finish: Full paint finish; Colour: To be agreed with ER; Frame accessories: Refer to Architects door and ironmongery schedules; Door leaf; Thickness: 44mm for non-fire rated doors. 56mm for fire rated doors; Core: Solid core. Appearance class: J40. Panel details: Refer to Architects door schedule. Facings: VGS grade laminate. Lippings: Hardwood, painted. Perimeter seals: Acoustic, Fire and smoke; In accordance with Architects door schedule; Finish: sanded sealed and varnished. Free from splinters; Glazing: Type: Refer to Architects door schedule. All glazing to be clear. Fire-resisting safety glazing in accordance with BS 6262-4. Clear single safety glazing in accordance with BS 6262-4. All glazing to display stamp for Kite mark certification; Manifestation: Refer to Architects door schedule; Beading; Material: Softwood for non-fire rated doors. Hardwood for fire rated doors. In accordance with manufacturers third party certification; Fixing: In accordance with manufacturers third party certification; Door accessories: Refer to Architects door & ironmongery schedules; Planted stops; Wood species: Iroko; Appearance class: J40;

Finish: Full paint finish; Colour: To be agreed with ER; Hardware: Refer to Architects door & ironmongery schedules; Architraves; Material: Medite Clear MDF; Wood appearance class: To BS EN 942, Class J40; Finish: Primed ready for site finish; Accessories: Refer to Architects door & ironmongery schedules; Execution: Pr_30_59_23/630 Installing hardware; Pr_30_59_23/640 Workmanship in joinery; as per Architect's Specification Pr_30_59_24_97 and Ss_25_30_20_25.

Door Type 1.1; Single Door and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201

A	Overall opening size 800mm wide x 2145mm high; comprising of 1nr single door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	18	nr			

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	(32) INTERNAL WALL; COMPLETIONS (Cont)					
	Door Type 1.2; Single Door and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
A	Overall opening size 880mm wide x 2145mm high; comprising of 1nr single door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	4	nr			
	Door Type 1.3; Single Door and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
B	Overall opening size 1010mm wide x 2145mm high; comprising of 1nr single door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	6	nr			
C	Overall opening size 1135mm wide x 2145mm high; comprising of 1nr single door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	1	nr			
	Door Type 1.4; Single Door and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
D	Overall opening size 1350mm wide x 2145mm high; comprising of 1nr single door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	1	nr			
	Door Type 1.5; Single Door and Associated Frame Sets; 60 minute fire rated; to Architect's Door Schedule 6201					
E	Overall opening size 1010mm wide x 2145mm high; comprising of 1nr single door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	9	nr			
	Door Type 1.6; Single Door and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
F	Overall opening size 1010mm wide x 2145mm high; comprising of 1nr single door, incorporating 1nr vision panel size 210mm wide x 1660mm high; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	2	nr			
G	Extra over for vision panel size 210mm wide x 1660mm high	2	nr			
	Door Type 2.3; Single Door and Associated Frame Sets; 60 minute fire rated; to Architect's Door Schedule 6201					
H	Overall opening size 1010mm wide x 2145mm high; comprising of 1nr single door, incorporating 1nr vision panel size 210mm wide x 1660mm high; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	5	nr			
J	Extra over for vision panel size 210mm wide x 1660mm high	5	nr			
				To Collection €		

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	(32) INTERNAL WALL; COMPLETIONS (Cont)					
	Door Type 4.2; Single Door & Side Screen and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
A	Overall opening size 1360mm wide x 2145mm high; comprising of 1nr single door, incorporating 1nr vision panel size 210mm wide x 1660mm high; 1nr side screen size 325mm wide x 2145mm high; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	1	nr			
B	Extra over for vision panel size 210mm wide x 1660mm high	1	nr			
C	Extra over for Safety Glazing - 2B2 Class B	2	nr			
D	Extra over for manifestation to glazing located between 850-1000mm and 1400-1600mm	1	nr			
	Door Type 4.3; Single Door & Side Screen and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
E	Overall opening size 1810mm wide x 2145mm high; comprising of 1nr single door, incorporating 1nr vision panel size 210mm wide x 1660mm high; 1nr side screen size 775mm wide x 2145mm high; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	7	nr			
F	Extra over for Safety Glazing - 2B2 Class B	14	nr			
G	Extra over for manifestation to glazing located between 850-1000mm and 1400-1600mm	7	nr			
	Door Type 7.1; Double Door and Associated Frame Sets; 60 minute fire rated; to Architect's Door Schedule 6201					
H	Overall opening size 1810mm wide x 2145mm high; comprising of 1nr double door; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	1	nr			
	Door Type 12.2; Double Door and Associated Frame Sets; 60 minute fire rated; to Architect's Door Schedule 6201					
J	Overall opening size 2035mm wide x 2145mm high; comprising of 1nr double door; incorporating 2nr vision panel size 210mm wide x 1660mm high; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	3	nr			
K	Extra over for Safety Glazing - 2B2 Class B	6	nr			
	Door Type 14.1; Door and a Half with Fanlight and Associated Frame Sets; 30 minute fire rated; to Architect's Door Schedule 6201					
L	Overall opening size 1810mm wide x 2820mm high; comprising of 1nr single door incorporating 1nr vision panel size 720mm wide x 1660mm high and 1nr half door incorporating 1nr vision panel size 360mm wide x 1660mm high; 1nr fanlight; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	1	nr			
				To Collection €		

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	(32) INTERNAL WALL; COMPLETIONS (Cont)					
A	Extra over for Safety Glazing - 2B2 Class B	2	nr			
B	Extra over for manifestation to glazing located between 850-1000mm and 1400-1600mm	1	nr			
	Door Type 14.2; Door and a Half with Fanlight and Associated Frame Sets; 30min fire rated; to Architect's Door Schedule 6201					
C	Overall opening size 1810mm wide x 2820mm high; comprising of 1nr single door incorporating 1nr vision panel size 720mm wide x 1660mm high and 1nr half door, incorporating 1nr vision panel size 360mm wide x 1660mm high; 1 nr upper screen incorporating 1nr glazed panel; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	3	nr			
D	Extra over for Safety Glazing - 2B2 Class B	3	nr			
E	Extra over for manifestation to glazing located between 850-1000mm and 1400-1600mm	3	nr			
	Door Type 14.2; Door and a Half with Fanlight and Associated Frame Sets; non-fire rated; to Architect's Door Schedule 6201					
F	Overall opening size 2035mm wide x 2820mm high; comprising of 1nr single door incorporating 1nr vision panel size 720mm wide x 1660mm high and 1nr half door incorporating 1nr vision panel size 580mm wide x 1660mm high; 1nr fanlight; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	2	nr			
G	Extra over for Safety Glazing - 2B2 Class B	2	nr			
H	Extra over for manifestation to glazing located between 850-1000mm and 1400-1600mm	2	nr			
	Door Type 15.1; Double Door with Side Screen & Fanlight and Associated Frame Sets; 30 minute fire rated; to Architect's Door Schedule 6201					
J	Overall opening size 2710mm wide x 2820mm high; comprising of 1nr double door, incorporating 2nr vision panel size 520mm wide x 1660mm high; 1nr side screen size 955mm wide x 2820mm high and 1nr fanlight size 1755mm wide x 720mm high; including all acoustic seals, fire resistant channel and all In-tumescent seals, strips etc	1	nr			
K	Extra over for Safety Glazing - 2B2 Class B	3	nr			
L	Extra over for manifestation to glazing located between 850-1000mm and 1400-1600mm	1	nr			
				To Collection €		

(32) INTERNAL WALL; COMPLETIONS (Cont)

Vision panels; Description: Glass shall be selected by the contractor to achieve the required performance as specified in the fire certificate drawings, technical report and tender drawings. Georgian wire is not acceptable. Size of glazing units shall be as per the door schedule elevations with glazing in accordance with BS 6262-4: 2005 & BS 8214: 2008 and shall not exceed the permitted sizes specified in the glass technical literature. Glazing elements to be factory fitted. Glazing will not be allowed on site. Only complete tested glazing systems shall be used. These should identify the glass product type and thickness, glazing seals, beads and fixings. Components within a glazing system should not be interchanged without relevant test evidence. Written test certification shall be provided for verification purposes. Glazing to be set in Lorient In-tumescent glazing system channel to match door fire rating fitted to vision panel with ancillary beading; Manufacturer: Pyroguard UK Ltd; Product reference: Pyroguard Rapid Plus EI (EI60 INT, 23 mm); Third-party certification: CE certified, UKCA certified; Laminate glass type: Fire and safety; Thickness: 23 mm; Outer leaf: Laminated glass; Inner leaf: Laminated glass; Interlayer to glass leaves: Silicate; Body colour: Clear; Performance requirement; Fire resistance; Integrity: To BS EN 13501-2, E 60 minutes; Insulation: To BS EN 13501-2, EI60 minutes; Impact resistance: To BS EN 12600, 181; Product reference: Pyroguard Firesafe E, EW (T-EW60/6); Third-party certification: CE certified, UKCA certified; Laminate glass type: Fire and Safety; Thickness: 12mm; Performance requirements: Integrity: To BS EN 13501-2, E 60 minutes. To BS EN 13501-2, E 30 minutes; Insulation: To BS EN 13501-2, EI30 minutes. To BS EN 13501-2, EI60 minutes; as per Architects Specification Pr_30_59_97_94

Composite Items; Screens; to Architect's Screen Schedule 6201

A	Internal Screen ST-3.1; overall size (including frame) 2035mm long x 1245mm high; comprising 1nr fixed glazed units; complete	2	nr		
B	Extra over for safety glass - Class 2B2	2	nr		

Ironmongery, Accessories And Sundries

Supply and fix the following ironmongery items; Manufacturer: Contractor to submit proposals for approval; including all necessary fixings; fixing in strict accordances with the Architects specification and manufacturer's printed instructions; refer to Ironmongery Schedule 23-16/TD-6401

Ironmongery; to doors

C	Electrical provisons and wiring to be provided by the Electrical Contractor	1	note		
D	Ironmongery Set 01	1	nr		
E	Ironmongery Set 02	7	nr		
F	Ironmongery Set 03	14	nr		
G	Ironmongery Set 04	4	nr		
H	Ironmongery Set 05	3	nr		

To Collection €

					€	c
	(32) INTERNAL WALL; COMPLETIONS (Cont)					
A	Ironmongery Set 06	4	nr			
B	Ironmongery Set 07	9	nr			
C	Ironmongery Set 08	1	nr			
D	Ironmongery Set 09	7	nr			
	Sealing gap between door frames and blockwork walls; gap to be filled to full width of frame with ram packed mineral wool; all in strict accordance with Architect's Drawing 8014					
	Sundries; Seals					
E	10mm wide	381	m			
	Sealing gap between door frames and blockwork walls; gap to be sealed on both sides with non-hardening sealant; all in strict accordance with Architect's Drawing 8014					
	Sundries; Seals					
F	10mm wide	762	m			
	Acoustic seal between door & door frames; Batwing perimeter seal to frame with threshold seal to door base (measured elsewhere); all in strict accordance with Architect's Drawing 8014					
	Sundries; Seals					
G	Batwing acoustic seal	381	m			
	Acoustic seals to internal doors; Threshold seal to bottom of doors; fire rated acoustic drop seal (max drop 15mm); fitted in accordance with manufacturer's instructions; all in strict accordance with Architect's Drawing 8014					
	Sundries; Seals					
H	Generally	79	m			
				To Collection €		

					€	c
	(32) INTERNAL WALL; COMPLETIONS (Cont)					
	METALWORK					
	Non-Structural					
	Roller shutter doorset systems Servery; Description: Powder coated single skin steel roller shutter door. System manufacturer: UK Roller Shutters Ltd. Product reference: FR-1H Single Skin Fire Resistant Roller Shutter; Opening sizes: 1250 x 2260mm. Format: Thermally insulated. Arrangement: Vertical. Shutter curtain. Lath material: Galvanized steel. Profile: Curved. Finish and colour: Polyester powder coated, RAL colour. Frame and guides Material: Steel. Finish: Polyester powder coated. Operation Mode: Automatic, single-phase tubular motor. Control: Push button. Fire interface panel: SF-01NRG. Fire integrity: To BS EN 476-22, 60 minutes. Surface: Single phase power: 10 m2; 3-phase power: 50 m2. Barrel: Manufactured from seamless mild steel tube to BS4760 Grade 50 degree C. Guide channels depth: 65 - 100 mm. Guide channels: Bolted to fixing angles or steel box sections. Enclosure material: 0.9 mm galvanized steel sheet. End caps: Fabricated from 5 mm+ steel; As per Architects Specification Ss_25_30_20_74.					
	Composite items; Roller Shutter					
A	Roller shutter RS-001; overall size 2260mm long x 1250mm high	1	nr			
	Sliding folding doorset systems; Description: Movable Wall System Library; System performance: Ss_25_30_20/205 Design submittals Type A; Ss_25_30_20/240 Acoustic performance Type A; System manufacturer: KCC Group; Product reference: KW-Palace 110SI/E160. Parthos movable wall system. Panel thickness: 110mm. Panel Height: 3100mm. Frame: Aluminum and steel; Finish: To be confirmed with Architect; Track: Concealed ceiling track with pressure seals to ceiling and floor. Vertical Profiles: Anodized aluminum with magnetic strips, concealed seal and concealed fire protection strips. Fire Performance: 30 minutes. Acoustic Performance: 55 dB Rw; As per Architects Specification Ss_25_30_20_78.					
	Composite items; Sliding Folding Wall					
B	Sliding folding wall; overall size 7650mm long x 3140mm high	2	nr			
	PAINTING & DECORATING					
	Painting					
	Waterborne finishes to internal joinery; Description: Dulux Easycare Satinwood paint to all Internal MDF and non-resinous softwood/hardwood; Manufacturer: Dulux Paints Ireland; Product reference: Dulux Easycare Satinwood (satin finish); Coverage: 12m2/litre; Preparation: To get the best results with Dulux Easycare Satinwood, make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry). Remove all loose and defective paint; Colour: to be agreed; Execution: Pr_35_31_22/703 Applying coating Internal woodwork; as per Architects Specification Pr_35_31_22_95					
	General Surfaces					
C	Girth not exceeding 300mm; Architraves, Quadrant beading	762	m			

					€	c
	(32) INTERNAL WALL; COMPLETIONS (Cont)					
A	Girth exceeding 300mm; Woodset Doors	174	m2			
B	Glazed Doors and Screens					
C	Girth exceeding 300mm; Woodset Doors and Internal Screens	193	m2			

To Collection €

				€	c
(32) INTERNAL WALL; COMPLETIONS (Cont)					
COLLECTION					
Page No. Building/82					
Page No. Building/83					
Page No. Building/84					
Page No. Building/85					
Page No. Building/86					
Page No. Building/87					
Page No. Building/88					
Page No. Building/89					
Page No. Building/90					
Page No. Building/91					
(32) INTERNAL WALL; COMPLETIONS **Carried to Summary**					

					€	c
	(33) FLOOR COMPLETIONS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	METALWORK					
	Non-Structural					
	Balustrade and guarding systems external terrace; Selected metal railing to be galvanized and powder coated min overall height of 1100mm - 50x12mm MS flat upright and top and bottom bars with 12mm rod welded upright between flat upright section max 100mm apart; as per Architects Detail Drawing 23-16/TD-8004 Rev A					
	Composite Item; Balustrades					
C	Horizontal; to blockwork or concrete base; 1100mm high above FFL	15	m			
D	Extra over balustrade for Ends	2	nr			
E	Extra over balustrade for Bends	1	nr			
				To Collection €		

					€	c
	(33) FLOOR COMPLETIONS (Cont)					
	PAINTING AND DECORATING					
	Painting					
	Solvent-borne gloss finishes Interior & Exterior Metal Paint; Manufacturer: Dulux Trade or equivalent; Product Information: : Typical Use Suitable for use on interior and exterior wood and metal surfaces; Surface Preparation: To get the best results, ensure surfaces to be painted are sound, clean and dry (new surfaces particularly must be fully dry), and free from all defective or poorly adhering material, dirt, grease and wax. New or bare surfaces should be primed with an appropriate Dulux; Trade primer. Treat any knots in wood with an appropriate knotting solution. Thoroughly rub down previously painted surfaces, using #wet flatting# methods where possible, then wipe off with a damp, lint free cloth. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead. Any surface defects should be filled with the appropriate Polycell Trade Polyfilla System Information: Stir thoroughly before use. Apply 1 coat of the appropriate coloured Dulux Trade Undercoat, followed by 2 coats of Dulux Trade High Gloss. Allow a minimum of 6 hours for the undercoat to dry before applying the gloss finish. Where a second coat of Dulux Trade High Gloss is required, allow a minimum of 16 hours between coats; Application Method: Brush or roller only. For Health & Safety reasons relating to all solvent-based paints, spray application is not recommended; As with other solvent-based paints, do not apply in temperatures below 5sC (as recommended by British Standard BS 6150); Sheen: High Gloss; Colour: To be agreed with Architect; Execution: Pr_35_31_22/703 Applying coating Internal & External Metalwork; as per Architects Specification Pr_35_31_22_80 Balustrades					
A	Exceeding 300mm wide	32	m2			

				€	c
(33) FLOOR COMPLETIONS (Cont)					
COLLECTION					
Page No. Building/93					
Page No. Building/94					
(33) FLOOR COMPLETIONS **Carried to Summary**					

					€	c
	(34) STAIRS COMPLETIONS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	METALWORK					
	Non-Structural					
	Stainless steel handrails; Description: Handrails to internal stairs - refer to Architects detailed drawings; Manufacturer: Submit proposals; Standard: To BS EN 10088-2, Grade 1.4301 (304); Diameter: 50 mm / 35mm; Cross section: Circular; Finish: To BS EN 10088-2, 1K/ 2K Satin polished; Accessories; Materials generally: To match handrail; Adapters and panel clips: Handrail tube saddle with adjustable flat top, size to suit handrail diameter. Handrail tube connector, size to suit handrail diameter. Diameter handrail tube panel clip to suit to 1.5#4 mm panels, size to suit handrail diameter; Brackets: Handrail tube bracket with straight flat top, size to suit handrail diameter.Handrail tube wall bracket with adjustable top, size to suit handrail diameter. Handrail tube circular pattern, side fix, size to suit handrail diameter; Posts: Refer to Architects Stair details; Baseplates and covers: Base plate, size to suit handrail diameter. Cover for base plate, size to suit handrail diameter; End caps: Handrail tube scroll, size to suit handrail diameter; Angles and tees: Handrail tube fixed 90ø elbow, size to suit handrail diameter; as per Architects Drawing 7001 & 7002 and Specification Pr_25_30_36_84					
	Composite Items; Handrails, Complete					
C	Raking; to blockwork or concrete base; fixed 950mm high above FFL	17	m			
D	Horizontal; to blockwork or concrete base; fixed 950mm high above FFL	14	m			
E	Extra over handrails for Ramps	6	nr			
F	Extra over handrails for Ends; handrail to extend 300mm beyond last step and turn down 150mm	4	nr			
G	Extra over handrails for Bends	4	nr			
H	Extra over handrails for Wreath	6	nr			
	Composite Items; Handrails & Balustrades, Complete					
J	Raking to concrete base; 1100mm high above FFL	17	m			

To Collection €

					€	c
	(34) STAIRS COMPLETIONS (Cont)					
A	Horizontal; to concrete base; 1100mm high above FFL	5	m			
B	Extra over balustrade for Ramps	6	nr			
C	Extra over balustrade for Ends; handrail to extend 300mm beyond last step and turn down 150mm	3	nr			
D	Extra over balustrade for Bends	6	nr			
E	Extra over balustrade for Wreath	6	nr			
F	Horizontal; to concrete base; 1400mm high above FFL	6	m			
G	Extra over balustrade for Ends; handrail to extend 300mm beyond last step and turn down 150mm	4	nr			
	PAINTING AND DECORATING					
	Painting					
	Solvent-borne gloss finishes Interior & Exterior Metal Paint; Manufacturer: Dulux Trade or equivalent; Product Information: Typical Use Suitable for use on interior and exterior wood and metal surfaces; Surface Preparation: To get the best results, ensure surfaces to be painted are sound, clean and dry (new surfaces particularly must be fully dry), and free from all defective or poorly adhering material, dirt, grease and wax. New or bare surfaces should be primed with an appropriate Dulux; Trade primer. Treat any knots in wood with an appropriate knotting solution. Thoroughly rub down previously painted surfaces, using #wet flatting# methods where possible, then wipe off with a damp, lint free cloth. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead. Any surface defects should be filled with the appropriate Polycell Trade Polyfilla					
	System Information: Stir thoroughly before use. Apply 1 coat of the appropriate coloured Dulux Trade Undercoat, followed by 2 coats of Dulux Trade High Gloss. Allow a minimum of 6 hours for the undercoat to dry before applying the gloss finish. Where a second coat of Dulux Trade High Gloss is required, allow a minimum of 16 hours between coats; Application Method: Brush or roller only. For Health & Safety reasons relating to all solvent-based paints, spray application is not recommended; As with other solvent-based paints, do not apply in temperatures below 5sC (as recommended by British Standard BS 6150); Sheen: High Gloss; Colour: To be agreed with Architect; Execution: Pr_35_31_22/703 Applying coating Internal & External Metalwork; as per Architects Specification Pr_35_31_22_80					
	Handrails					
H	Not exceeding 300mm wide	31	m			

					€	c
	(34) STAIRS COMPLETIONS (Cont)					
	Balustrades					
A	Exceeding 300mm wide	62	m2			
				To Collection €		

(34) STAIRS COMPLETIONS (Cont)

COLLECTION

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(34) STAIRS COMPLETIONS
Carried to Summary

					€	c
	(37) ROOF; COMPLETIONS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	METALWORK					
	Non-Structural					
	Roof light systems; System performance: Ss_30_30_72/205 Design submittals for rooflights, roof windows and roof ventilators; Ss_30_30_72/210 General system performance of rooflights, roof windows and roof ventilators; Ss_30_30_72/227 Durability of rooflights, roof windows and roof ventilators; Ss_30_30_72/252 Weathertightness of rooflights, roof windows and roof ventilators by test standard; Ss_30_30_72/254 Avoidance of condensation on rooflights, roof windows and roof ventilators; Ss_30_30_72/255 Solar energy transmittance (solar factor) of rooflights, roof windows and roof ventilators; Ss_30_30_72/280 Thermal transmittance (U-value) of rooflights, roof windows and roof ventilators; Ss_30_30_72/260 Safety performance of rooflights, roof windows and roof ventilators; Ss_30_30_73/270 Acoustic performance of rooflights, roof windows and roof ventilators # weighted sound reduction index; System manufacturer: Velux or equivalent; Roof light: Pr_30_59_72_31 Framed rooflights Roof light with polycarbonate cover; Installation fasteners: Pr_20_29_03_28 Expansion anchors; Execution: Ss_30_30_72/610 Preconstruction survey for rooflights, roof windows and roof ventilators; Ss_30_30_72/615 Workmanship for rooflights, roof windows and roof ventilators generally; Ss_30_30_72/605 Preliminary installation of rooflights, roof windows and roof ventilators; Ss_30_30_72/620 Protection of Roof light, roof window and roof ventilator components; Ss_30_30_72/625 Plastics, metal and board glazing sheet protection for rooflights, roof windows and roof ventilators; Ss_30_30_72/640 Roof preparation for rooflights, roof windows and roof ventilators; Ss_30_30_72/645 Forming kerbs for rooflights, roof windows and roof ventilators; System completion: Ss_30_30_72/815 Documentation relating to roof glazing systems; as per Architects Specification Ss_30_30_72_72					
	Composite Item; Rooflight Type A					
C	Overall size 4300 x 1500mm	3	nr			
				To Collection €		

(37) ROOF; COMPLETIONS (Cont)

Access Panels Roof Access Hatch & Ladder; Aluminium thermally broken sing leaf roof access hatch with structural opening of 1250x1000mm. Gas spring assisted opening to double skinned aluminium lid in corp safety hold open stay. Heavy duty grade 316 stainless steel slam action cablock 0.26W/m2k. Jakdor or similar approved polyster coated ceiling access panel installed in accordance with manufacturers recommendations. Size 1250x100mm. Selected ladder system fitted to manufacturers instructions Zip retractable ladder suitable for proposed ceiling heights with plywood back board with adjustable counterbalance spring in pivot bracket - Jakdor or similar or equal approved; as per Architects Detail Drawing 23-16/TD-8010 Rev A

Composite Item; Roof Access Hatch

A	Overall size 1250 x 1000mm	1	nr		
B	Extra over for access ladder; 4050mm high to roof	1	nr		

Roof Edge Protection Guardrails; Description: Side fixed Guardrail; System manufacturer: Select Access Premier Solutions or equivalent approved; Product reference: VA-C; Arrangement: As drawing. Contractor to submit proposals; Finish/ Colour: Anodized; System reference: https://nbs.fyi/YKIcMI; as per Architects Specification Ss_80_30_25_35

Composite Item; Balustrades

C	Horizontal; to blockwork or concrete base; 935mm high above FFL	9	m		
D	Extra over balustrade for Ends	4	nr		

50mm dia Galvanized steel guardrail to access hatch with access gate perimeter fixed back to concrete slab to engineers spec and detail to a min height if 1000mm; as per Section Drawing 23-16/TD-8010 Rev A

Composite Item; Balustrades

E	Horizontal; to blockwork or concrete base; 1100mm high above FFL	8	m		
F	Extra over balustrade for Bends	4	nr		

To Collection €

					€	c
	(37) ROOF; COMPLETIONS (Cont)					
	Ascent access ladder & cage; Description: Fixed vertical ladder & cage between roof levels. In accordance with BS 4211, BS EN ISO 3834-2 and BS EN 1090-1; Manufacturer: Eurosafe Solutions Ltd; Product reference: Ascent Access Ladders; Rungs: Required; Platforms; Material: Aluminum; Safety cage: Required; Assembly connectors: Assembly fixings supplied; Execution: Installation of ladder and stair systems generally; Head layout: Platform; Step down: Required; Base fixing: To concrete block parapet wall; Safety: Fall protection system; Width: 400 mm; Height: 1737#1967 mm; Execution; See Ss_80_30_25/610 Suitability of structure and fabric in Ss_80_30_25_35 Guided type fall arrest systems; as per Architects Specification Pr_25_30_85_90					
	Composite Item; Ladder					
A	Generally	2	nr			
	Kee Walk KWM5 - 3m traverse Module 7.5-12.5 degree or similar or equal approved rooftop walkway to extent as shown with guardrail. Kee walk compliant to EN516. Guardrail compliant to BS EN 14122-3 / BS EN 13374; as per Architects Specification and Drawing 1007					
	Fall Prevention System; Walkway					
B	Generally	39	m2			

(37) ROOF; COMPLETIONS (Cont)

Guided type fall arrest systems; Description: Roof mounted Fall Arrest System with cables, anchors & ladders; System performance: Ss 80 30 25/205 Design submittals; System manufacturer: Skyway Safe Access Equipment or equivalent; Pre-installation survey: Ss 80 30 25/610 Suitability of structure and fabric; Minimum Sub-Contractor Standard: This equipment is highly specialized and the Tendering Sub- Contractor must provide the following information with the Tender failure to provide this information will disqualify the Tenderer; Evidence of sub contractor's Professional Indemnity Insurance, €6.5 million minimum. Professional Indemnity Insurance provided by third parties will not suffice; Evidence of ISO9001 & OHSAS 18001 Quality Systems Accreditation; The name of the Health & Safety Manager within the organization and evidence of qualifications; Confirmation that the Tenderers Cable Support Posts are strictly as per Clause 210 below;

Confirmation that the Tendering company has been in the fall prevention industry for at least 10 years; On request of the architect / design team the Tenderer must forward confirmation of the following; Employers Liability Insurance to €13m; Public Liability Insurance to €13m; Products Liability Insurance to €13m; Appropriate Professional Indemnity Insurance to €6.5m as above; Membership of CIRI; Membership of Irish Health and Safety associations like NISO, ISHA etc; Membership of an Irish based Trade Union; Membership of the CFOPS pension / CIF sick pay scheme; Names of the proposed installation crew and proof that they are trained as banksmen and have training in Work at Height, particularly Rescue from Height; Name of company Safety Representative along with copies of their certification / qualifications; Name and qualifications of the companys FETAC Level 6 Trainer on staff to undertake handover training; Names of three projects of equal size completed in Ireland in the last 3 years along with contact names and numbers for reference checks; Contact names and telephone numbers for the facilities manager in charge of each of the above three projects, (to check that on-going maintenance contracts are in place and that the installations are fit-for-purpose).

To Collection €

(37) ROOF; COMPLETIONS (Cont)

Reference Documents: The schedule of references is not exhaustive and shall also be supplemented by those listed under each related work section. Note that where a standard comprises a number of parts, the latest issues and amendments of each part shall apply; The Sub-contractor must comply with all relevant standards, etc. at the time of supply; EN and B.S. Documents Referred to in this Section Include; EN 795 1997 Personal Protective Equipment against Falls from a Height - Anchor Devices - Requirements and Testing; (Note; 2012 Version of the EN795 Standard is not Harmonized as yet due to international objections to test methods); BS7883 2005: Application and Use of Anchor Devices Conforming to BS EN 795; EN 354 2002: Personal Protective Equipment against Falls from a Height - Lanyards; EN 355 2002: Personal Protective Equipment against Falls from a Height - Energy Absorbers; EN 358 2000: Personal Protective Equipment against Falls from a Height - Work Positioning Systems; EN 361 2002: Personal Protective Equipment against Falls from a Height - Full Body Harnesses; EN 363 2008: Personal Protective Equipment against Falls from a Height - Fall Arrest Systems; EN 365 2004: Personal Protective Equipment against Falls from a Height - General Requirements for Instructions for Use and for Marking; BS8437 2005: Code of Practice for Selection, Use and Maintenance of Personal Fall Protection Systems and Equipment for use in the Workplace; EN970 1997: Non-destructive Examination of Fusion Welds. Visual Examination. HSA documents referred to in work section N25 are: Health, Safety and Welfare at Work Act 2005 and Regulations as follows; Construction Regulations 2013; General Applications Regulations 2007; Part 4 Working at Height.

Type(s) of System/Equipment; GUIDED TYPE FALL PREVENTION SYSTEM FOR: PITCHED AND FLAT ROOF AREAS; Refer to Architects Roof Plans; Manufacturer Skyway Safe Access Equipment +353 469241771 or equivalent; Anchorage device: 8mm Stainless steel cable; Overall system length: as sub-contractors design; Anti-Pendulum Anchors as required by the design to prevent swing-fall; Intermediate support spacing: as sub-contractors design; Accessories/other requirements: as subcontractors design; System to be installed in accordance with the BS 7883 and EN 795 by the system manufacturer or a contractor approved by the system manufacturer; System must be continuous at all intermediate and corner brackets users must not have to detach from the system to bypass brackets; Cable system to be supported on posts as below. Sub-contractor to prove the roof can take the loads from the posts. Posts may deform in the event of a fall but must not come apart i.e. must be fully welded with no internal spring or other active mechanisms; Composite Panel Roofs; Stainless steel posts to attach to the top skin of composite roof panels; Membrane on Insulation on Timber, Concrete or Metal Deck; Stainless steel posts to sit on top of finished roof membrane and attached to deck with stainless steel toggle bolts after the membrane is complete. Weathering by others; Design/Layout of Systems; The Tenderers submission must allow for 100 percent safe access to all roof areas unless strictly specified otherwise by the Client; The Tenderer must, if necessary, advise that equipment is required in areas where the architect or design team may have missed potentially hazardous areas; Furthermore, the Tenderer must highlight on a drawing or in writing any areas of the roof that are not covered by the Tenderers design with a reason why these areas are not included; AutoCAD Drawings must be submitted to the design team for approval. However, note that the architect is not an approving authority. The architect may comment on drawings as submitted for approval but it remains the responsibility of the Tenderer to meet the design requirements of all Health & Safety Regulations and Standards as listed above.

To Collection €

(37) ROOF; COMPLETIONS (Cont)

Testing of Cabling Systems; Tenderer to provide a copy of their in-house policies and procedures document on proof testing of the swag joints on site using Hydrajaws Cable Test Equipment; No less than 8 swages or a minimum of 50% of all swages, which ever is greater, including splices must be proof tested on site to 10kN; At least one test must be witnessed by the contractor / client; Personal Fall Protection Equipment (PFPE): Unless specified otherwise in the Bill of Quantities supply the following for storage on site and used by trained personnel only;

2 Skyway Full Body Harness; 2 Skyway Standard 2m shock absorbing lanyards; 2 Skyway 10m Rope & Grabs; 2 Skyway Cable Shuttles; Accessories/Other requirements: as per Bill of Quantities Description. Note all PFPE must be CE marked however CE marking does not apply to the elements fixed to the building (posts, cables etc); Information to be provided with the Tender: Submit the following; General arrangements drawing(s) at suitable scales showing the proposed layout of access/safety equipment; Proposed details of all necessary fixings and abutments with the building fabric; Location, direction and magnitude of all significant loads imposed on the building structure/fabric by the equipment; Schedule of builders work, with drawings as necessary, showing extent and details of all work associated with the installation for which the equipment manufacturer/supplier is not contractually responsible; Schedule of special provisions and special attendances by others; Confirmation that 100% of the roof areas are covered if this is not the case the reasons why must be highlighted. Refer to Clause 215 above. No extra work/variations will be entertained by the client/design team at a later stage; Information to be provided after acceptance of Tender: Detailed AutoCAD drawings to fully describe fabrication and installation as follows: Drawing content; Contractors name and contact number; If third party manufacturers are used provide their name along with model numbers of equipment proposed; General arrangement of the complete installation; Detailed description on how initial access to the roof is achieved; Restricted areas/ other areas not covered by the design and reasons why; Proposed details on how each element (posts etc) are attached to the building; Full Design Notes with design loads (as applied to the building), notes on use, installation and certification of the systems.

Design/Performance Requirements: WIND LOADING; General: Design the access/ safety system to withstand specified wind loads with equipment in position of maximum exposure and in parked position; Wind loads: Severe; FINISHING; General: The equipment as installed must have no irregularities/ projections capable of inflicting personal injury; Finished surfaces and edges of all accessible parts: Regular and smooth; DESIGN LIFE/ MAINTENANCE PROGRAMME; Design life of access/ safety system: Not less than 30 years; Schedule for maintenance and for replacement of components: Submit; ASSESSMENT/ TESTING OF FIXING POINTS FOR ANCHOR DEVICES; Design and installation of fixings in steelwork or timber: Verified by calculation to be capable of sustaining the relevant static and dynamic test forces specified in BS EN 795, clause 4.3; Fixings in other materials: Verify suitability by carrying out a test in a sample of the material. The sample must be capable of sustaining the relevant static and dynamic test forces specified in BS EN 795, clause 4.3. Thereafter, each structural anchor installed in that material must be subjected to an axial pull out force of 6 kN to confirm the soundness of the fixing. The structural anchor must sustain the force for a minimum of 15 seconds; Fabrication, Assembly & Installation:

To Collection €

(37) ROOF; COMPLETIONS (Cont)

FABRICATION AND ASSEMBLY GENERALLY; Machine cutting, drilling and assembly. Carry out as much as possible in the workshop; Obtain approval for any reassembly on site; Dissimilar metal surfaces of assembly components/ supports/ fixings: Isolate to prevent electrolytic or bi-metallic corrosion; General: Do not deliver to site any components or assemblies that cannot be installed immediately or unloaded into a suitable well protected storage area; SUITABILITY OF STRUCTURE/ FABRIC; Visual, geometric and structural survey of supporting structure and fabric: Carry out before commencing installation of access/ safety system. Report immediately if structure/ fabric will not allow required accuracy or structural adequacy or security of fixing; MECHANICAL FIXINGS; Materials: Unless otherwise recommended by equipment manufacturer; Connecting bolts and other fixings fully accessible for inspection: Mild steel hot dip galvanized to BS 7371-6. Nuts: Tapped after galvanizing; Cast-in anchors and other fixings not accessible for routine inspection: Zinc plated or austenitic stainless steel, grade 1.4401 (316) to BS EN 10088-1; FIXINGS FOR SECURING EQUIPMENT; Adjustment capability: Adequate three dimensional adjustments to accommodate building structure/ fabric irregularities; FIXING ANCHOR INSTALLATION; Site drilling or cutting into structure/ fabric: Permitted only in approved locations; Distance between all fixing devices and edges of supporting material: Not less than recommended by fixing manufacturer.

IDENTIFICATION AND REGISTRATION LABELS FOR FALL PREVENTION SYSTEMS; Provision: Provide and fix to each piece of equipment a permanent label giving; Manufacturer's name, address and telephone number; Name and/ or reference code of installation/project; Maximum number of users that may be sustained by the equipment; Confirmation if Fall Arrest or Fall Restraint system; Name of certifying engineer and date of certification; Indicate restriction of use by pictogram or other suitable marking; Any other special features or restrictions; Location: In positions such that labels can be easily read prior to attachment to the system; SERVICE/ MAINTENANCE OF FALL PREVENTION SYSTEM; General: Following acceptance of the completed installation, service and maintain the equipment for the period stated below as and at intervals recommended by the manufacturer. Such maintenance to include a 'call-out' service during normal working hours to maintain the equipment in an acceptable and safe condition; Service/ Maintenance period: As recommended by manufacturer but not more than 12 months between certification visits; OPERATING INSTRUCTIONS; Equipment and accessories: Where appropriate, mark in such a way that it is possible to identify the correct mode of operation for their safe use; OPERATING AND MAINTENANCE MANUAL (SAFETY FILE); General: Before Completion provide, for inclusion in the Building Manual/Safety File, printed instructions and recommended procedures to be established by the Employer for operating and routinely maintaining the equipment. Provide diagrams where appropriate; Content; As-built drawings as per clause 840 below; Instructions for pre-use inspections and attachment to equipment; Comprehensive operating/use instructions, including training required and safety/emergency procedures; Certificates showing that all equipment is certified to governing standards and is fit for use; Servicing and planned maintenance procedures, including assembly instructions where maintenance necessitates dismantling of parts; List of replacement parts, with references if necessary; Recommended procedures for testing / recertifying equipment

To Collection €

(37) ROOF; COMPLETIONS (Cont)

AS BUILT DRAWINGS; General: After commissioning/testing of the equipment and before Completion provide As- Built drawings for inclusion in the Safety File - Number of sets: 2; Drawing content; Contractor's name and contact number; Date of Certification/As-Built; Equipment Manufacturer's name, model and type numbers; General arrangement of the complete installation; Detailed description on how initial access to the roof is achieved; Restricted areas/ other areas not covered by the design; Accurate details on how each element (posts etc) are attached to the building; Full Design Notes with design loads (as applied to the building), notes on use, installation and certification of the systems;
TRAINING; Allow for one free training session for the client / facility manager / building owner as follows; Company to have at least one FETAC Level 6 Trainer on staff to oversee training; Training plan to be submitted to the client for approval prior to training session; Training to include initial class room session on the correct storage, inspection and use of PFPE (harnesses etc); All trainees to demonstrate competency in the use of PFPE before going out on the roof; All trainees to be shown how to use the fixed equipment on the roof and demonstrate; competency in use of same; Training to be assessed by the trainer using standard bank of questions and feedback forms; Training certificates to be issued within 24 hours of completion of training; as per Architects Specification Ss_80_30_25_35

Fall Prevention System

A	Generally; fixed to Pitched Roof	32	m		
B	Support Posts; Generally	9	nr		
C	Anti-Pendulum Anchors; Generally	1	item		

Personal Fall Protection Equipment (PFPE)

D	Set to comprise: 2 no. Full Body Harness; 2 no. Energy absorbing lanyards - 2m long; 2 no. 10m rope & grabs; 2no. cable shuttles; All to be supplied in a suitable PPE storage holdall	2	set		

Testing & certifying

System to be fully inspected and tested after installation and a 12 month test certificate be issued to Employer; as Architects requirements

E	Generally	1	item		

System to be fully inspected and re-certified at interval not exceeding 12 months or after the system has been used to arrest a fall; as Architects requirements

F	Generally	1	item		

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(37) ROOF; COMPLETIONS (Cont)

PAINTING AND DECORATING

Painting

Solvent-borne gloss finishes Interior & Exterior Metal Paint; Manufacturer: Dulux Trade or equivalent; Product Information: : Typical Use Suitable for use on interior and exterior wood and metal surfaces; Surface Preparation: To get the best results, ensure surfaces to be painted are sound, clean and dry (new surfaces particularly must be fully dry), and free from all defective or poorly adhering material, dirt, grease and wax. New or bare surfaces should be primed with an appropriate Dulux; Trade primer. Treat any knots in wood with an appropriate knotting solution. Thoroughly rub down previously painted surfaces, using #wet flatting# methods where possible, then wipe off with a damp, lint free cloth. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead. Any surface defects should be filled with the appropriate Polycell Trade Polyfilla

System Information: Stir thoroughly before use. Apply 1 coat of the appropriate coloured Dulux Trade Undercoat, followed by 2 coats of Dulux Trade High Gloss. Allow a minimum of 6 hours for the undercoat to dry before applying the gloss finish. Where a second coat of Dulux Trade High Gloss is required, allow a minimum of 16 hours between coats; Application Method: Brush or roller only. For Health & Safety reasons relating to all solvent-based paints, spray application is not recommended; As with other solvent-based paints, do not apply in temperatures below 5sC (as recommended by British Standard BS 6150); Sheen: High Gloss; Colour: To be agreed with Architect; Execution: Pr_35_31_22/703 Applying coating Internal & External Metalwork; as per Architects Specification Pr_35_31_22_80

Balustrades

A	Exceeding 300mm wide	31	m2		

				€	c
(37) ROOF; COMPLETIONS (Cont)					
COLLECTION					
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(37) ROOF; COMPLETIONS **Carried to Summary**					

					€	c
	(41) EXTERNAL WALL FINISHES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	FLOOR, WALL AND CEILING FINISHES					
	In-situ Finishes					
	Multicoat render systems; Description: Render finish to external leaf of external walls. System performance: Ss_25_45_70/210 Resistance to rain penetration; Ss_25_45_70/220 Compressive strength; Ss_25_45_70/230 Thermal conductivity; Ss_25_45_70/236 Performance of factory mixed rendering mortar; Ss_25_45_70/295 Compliance with performance requirements. Standard: To BS EN 13914-1. Substrate preparation: Pr_35_31_66_09 Bonding coats; Pr_35_31_64_12 Cementitious renders. First undercoat: Ss_25_45_70/630 Site mixed rendering mortar. Second undercoat: Ss_25_45_70/630 Site mixed rendering mortar. Final coat: Ss_25_45_70/630 Site mixed rendering mortar. Beads: Pr_35_90_07_72 Render beads. Sealant movement joints: Beads: Pr_35_90_07_72 Render beads. Fixings: Stainless steel screws. Sealant: Pr_30_31_76_77 Silicone construction joint sealants. Samples required: Ss_25_45_70/305 Product samples. System completion: Ss_25_45_70/820 Defective areas; Ss_25_45_70/895 Verification of performance; As per Architect's Specification Ss_25_45_70_55.					
	Walls					
C	Exceeding 300mm wide; to blockwork	900	m2			
D	Not exceeding 300mm wide; to reveals	357	m			
	Beads/ stops for External Use, Material: PVC-U. Form: Angle bead. Movement bead. Stop bead (standard wing). Stop bead (bell cast). To suit render depth: 19 mm. Colour: White; fixed in strict accordance with the Architect's Drawings and Specification Pr_35_90_07_72 & Pr_35_90_07/650					
	Sundries					
E	External Corner Beads at openings; Horizontal	119	m			
F	External Corner Beads at openings; Vertical	238	m			
G	External Corner Beads at corners	156	m			
H	Stop Beads at openings; Horizontal	119	m			
J	Stop Beads at openings; Vertical	238	m			
				To Collection €		

					€	c
	(41) EXTERNAL WALL FINISHES (Cont)					
A	Stop Bead fixed to top of render, Horizontal	167	m			
B	Stop Bead fixed to base of render at ground; Horizontal	73	m			
C	Non Hardening Sealant; taken around reveals of openings	357	m			
	PAINTING AND DECORATING					
	Painting					
	Water-based masonry paints; Description: Painting to external walls generally. Manufacturer: Dulux Trade, brand of AkzoNobel. Product reference: Weather shield Maximum Exposure Smooth Masonry Paint. Texture: Smooth. Additives: Fungicide. Execution: Applying coating. Form: Liquid. Texture: Smooth. Colour: To be agreed with ER; As per Architect's Specification Pr_35_31_22_96.					
	Walls; to rendered blockwork; Colour- White					
D	Exceeding 300mm wide	536	m2			
E	Not exceeding 300mm wide	246	m			
	Walls; to rendered blockwork; Colour- Blue					
F	Exceeding 300mm wide	365	m2			
G	Not exceeding 300mm wide	111	m			

To Collection €

(41) EXTERNAL WALL FINISHES (Cont)

COLLECTION

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(41) EXTERNAL WALL FINISHES
Carried to Summary

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	(42) INTERNAL WALL FINISHES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	FLOOR, WALL & CEILING FINISHES					
	Tile, Slab & Mosaic Finishes					
	Internal wall tiling systems; Description: Selected ceramic, matt, non bumpy, wall tiling in selected colour to be agreed. Substrate preparation: Pr_35_31_66_62 Plaster primers. Intermediate substrate. Adhesive: Pr_20_31_02_12 Cementitious adhesives. Tiles: Types: Pr_35_93_96_19 Ceramic tiles. Special tiles: Pr_35_93_96_13 Ceramic tile borders. Adhesives: Pr_20_31_02_12 Cementitious adhesives. Application: Thin bed, ribbed. Mechanical fixings: Not applicable. Grout: only ready mixed bagged grout to be used. System accessories: Pr_35_93_96_92 Tile spacers; Pr_35_90_22_66 Preformed tiling strip joints. Samples required: Yes. Execution: Ss_25_45_88/621 Suitability of backgrounds (minimum drying times). System completion: Ss_25_45_88/806 Cleaning and maintenance of wall tiling system; As per Architect's Specification Ss_25_45_88_40.					
	Walls					
C	Exceeding 300mm wide	122	m2			
	Extra over for					
D	Aluminum square edge tile trim or equal approved	99	m			

					€	c
	(42) INTERNAL WALL FINISHES (Cont)					
	Painting					
	Waterborne mid-sheen finishes Internal Plastered Walls. Manufacturer: Dulux Trade or equivalent. Product reference: Diamond Eggshell (mid sheen finish) or equivalent. Film Thickness will be dependent on the coverage achieved. Wet: 63 microns. Dry: 23 microns. Composition (nominal). Pigment: Light fast Pigments. Binder: Acrylic Copolymer Emulsion. Solvent: Water. Volume Solids: White - 37% (nominal). Other colors will vary Coverage: 16 m2/litre. Colour: to to be confirmed. Application:: STIR THOROUGHLY BEFORE USE. Seal new or bare surfaces with a thinned first coat of Dulux Trade Diamond Eggshell (up to 1 part clean water to 10 parts paint). Finish: 2 full coats of Dulux Trade Diamond Eggshell. Preparation: Make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry) and free from all defective or poorly adhering material such as dirt, grease and wax. New or bare surfaces should be primed with an appropriate Dulux Trade primer. Thoroughly rub down previously painted surfaces using 'wet flatting' methods where possible, then wipe off with a damp, lint free cloth. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead. Treat knots with a suitable knotting solution. Any surface defects should be filled with the appropriate Polycell Trade Polyfilla; all in strict accordance with the Architect's Drawings and Specification Pr_35_31_22_98					
	Walls					
A	Exceeding 300mm wide	5,097	m2			
B	Not exceeding 300mm wide	374	m			
	WOODWORK					
	Boarding and Second Fixings					
	Wall Finish - WPC 24mm Slat wall panel with Wood Effect Oak finish (2900x168x24mm panel sizes) (admin office); As per Architect's Drawing 23-16/TD-4028 - RLS37 - Admin Office Rev A					
	Walls					
C	Exceeding 300mm wide	39	m2			

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(42) INTERNAL WALL FINISHES (Cont)

COLLECTION

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(42) INTERNAL WALL FINISHES
Carried to Summary

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	(42) INTERNAL WALL FINISHES - EXISTING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	FLOOR, WALL & CEILING FINISHES					
	Painting					
	Waterborne mid-sheen finishes Internal Plastered Walls. Manufacturer: Dulux Trade or equivalent. Product reference: Diamond Eggshell (mid sheen finish) or equivalent. Film Thickness will be dependent on the coverage achieved. Wet: 63 microns. Dry: 23 microns. Composition (nominal). Pigment: Light fast Pigments. Binder: Acrylic Copolymer Emulsion. Solvent: Water. Volume Solids: White - 37% (nominal). Other colors will vary Coverage: 16 m2/litre. Colour: to to be confirmed. Application:: STIR THOROUGHLY BEFORE USE. Seal new or bare surfaces with a thinned first coat of Dulux Trade Diamond Eggshell (up to 1 part clean water to 10 parts paint). Finish: 2 full coats of Dulux Trade Diamond Eggshell. Preparation: Make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry) and free from all defective or poorly adhering material such as dirt, grease and wax. New or bare surfaces should be primed with an appropriate Dulux Trade primer. Thoroughly rub down previously painted surfaces using 'wet flatting' methods where possible, then wipe off with a damp, lint free cloth. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead. Treat knots with a suitable knotting solution. Any surface defects should be filled with the appropriate Polycell Trade Polyfilla; all in strict accordance with the Architect's Drawings and Specification Pr_35_31_22_98					
	Walls					
C	Exceeding 300mm wide	2,729	m2			
D	Not exceeding 300mm wide	8	m			

To Collection €

(42) INTERNAL WALL FINISHES - EXISTING (Cont)

COLLECTION

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(42) INTERNAL WALL FINISHES - EXISTING
Carried to Summary

					€	c
	(43) FLOOR FINISHES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	ROOFING, CLADDING AND WATERPROOFING					
	Mastic Asphalt, Waterproof and Gas proof Non-Metal Flexible Sheet Coverings					
	Tanking to upper floor above Elec Room R011; Concrete screed to be covered with a specialized polyethylene membrane; Waterproofing system should serve as a vapour pressure equalization layer to accommodate construction moisture occurring within the substrate and an uncoupling layer for problematic substrates; The membrane must be bonded to the substrate using a proprietary bonding adhesive that is appropriate for the substrate as certified by the supplier / manufacturer; Apply the adhesive using a 3 x 3mm or 4 x 4mm notched trowel; The anchoring fleece on the underside of of the membrane must be fully engaged in the adhesive to provide a mechanical bond to the substrate; Waterproofing membrane is to be turned up at walls by 150mm or as agreed with the architect; A declaration of performance (DOP) should be provided to the Assigned Certifier with regard to the materials / system being used; As part of preparation for tanking: At the following locations apply proprietary sealant reinforced with tape - Internal and external corners of walls/partitions and their junctions with bases, upstands, columns, etc. / Pipe penetrations, drainage channels and outlets / Junctions of different base/background materials / Cracks and joints in background/base / Allow tanking system to dry for at least 24 hours before tiling; all as per Architects Specification					
	Tanking					
C	Exceeding 300mm; laid horizontally	26	m2			
	NOTES					
D	1.The Tenderer is advised that the following measurements and descriptions are to be read in conjunction with the Architects and Structural Engineers Drawings and Specifications		note			
E	2. The tenderer is referred to the Architect's Drawings and Specification which accompany this document. All descriptions shall be read in conjunction with this information and included in the rates.		note			

(43) FLOOR FINISHES (Cont)

A	3. Power floated and screeded concrete floor slabs are to be finished to a sufficient level to obviate the necessity for the spreading of levelling compounds for all floor coverings measured within this element. Should it arise that it becomes necessary to spread levelling compounds as a preliminary to laying the floor finishes, the cost of this work will be deemed to be included in the prices against the various items of work of floor finishes		note			
B	4. The Contractor is to include in his tender for properly curing and drying out concrete ground floor slabs within the limits of the building programme to attain minimum moisture content as recommended by the manufacturers of the relevant sheet and brush applied floor coverings measured within this element; if these moisture levels are not achieved at the time of laying, then the contractor will be required to apply an approved patent trowel applied damp proof membrane over the slab and patent self levelling screed over same at his own expense		note			
C	5. The Contractor is solely responsible for ensuring that the concrete floor slabs are sufficiently dried out before any floor finishes are laid		note			
D	6. Works involved with achieving required moisture content in concrete floors prior to laying floor finish; all moisture content level readings to be 75% RH or less		note			
	WOODWORK					
	Boarding and Second Fixings					
	Medium density fibreboard (MDF) skirtings; General requirements: Ac_05_50_91/340 Timber sourcing; Manufacturer: Medite FR Clear or equal approved; Class: To BS EN 622-5, Class MDF. Class E1 formaldehyde content; Profile: As per architects drawings; Height: As per architects drawings; Thickness: As per architects drawings; Finish: Primed and painted with selected Dulux Trade Satinwood; Colour: To be agreed with architect; Execution: Pr_35_90_43/606 Installing wood mouldings and trims; as per Architects Specification Pr_35_90_43_58					
	Skirtings					
E	Generally; 120mm high x 18mm thick	624	m			
	Ironmongery, Accessories and Sundries					
	Sundries; Non-hardening sealant to skirting/wall junction; all in strict accordance with Architect's Details on Drawings					
	Seals					
F	Generally	624	m			

To Collection €

(43) FLOOR FINISHES (Cont)

FLOOR, WALL & CEILING FINISHES

Flexible Sheet Finishes

Linoleum sheets General; Description: Linoleum floor coverings, refer to Architects finishes plan; Manufacturer: Forbo Flooring Systems; Product reference: Marmoleum Marbled Fresco (2.5 mm); Standard: To EN ISO 24011; Use class: Class 34 / 43; Slip potential; Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): DIN 51130 = R9., PVT Dry: =50, EN 13898: =0.30; Recycled content: 43%; Acoustical impact sound reduction (to EN-ISO 717-2): =5 dB; Reaction to fire (to EN 13501-1): Cfl-s1, G, CS; Thermal conductivity (to EN 12524): 0.17 W/múK; Adhesive: Eurocol 414 Euroflex Lino Plus linoleum adhesive; Fabricated Underlay: Forbo Corkment Underlay. 2.5mm; Flexibility (to BS EN ISO 24344): 40 mm; Edging: As per 740; Skirtings: As per 770. Coving; Stair nosings: As per 750. Gradus ASVXT1R stair edging/nosing or equivalent aluminum stair edging/nosing; Thickness: 2.5mm; Colour and pattern: To be agreed with Architect; as per Architects Specification Pr_35_57_71_46

Floors

A	Exceeding 300mm wide; Forbo marmoleum - To select colour	476	m2		

Linoleum sheets General; Description: Linoleum floor coverings, refer to Architects finishes plan; Manufacturer: Forbo Flooring Systems; Product reference: Marmoleum Marbled Fresco (2.5 mm); Standard: To EN ISO 24011; Use class: Class 34 / 43; Slip potential; Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): DIN 51130 = R9., PVT Dry: =50, EN 13898: =0.30; Recycled content: 43%; Acoustical impact sound reduction (to EN-ISO 717-2): =5 dB; Reaction to fire (to EN 13501-1): Cfl-s1, G, CS; Thermal conductivity (to EN 12524): 0.17 W/múK; Adhesive: Eurocol 414 Euroflex Lino Plus linoleum adhesive; Fabricated Underlay: Forbo Corkment Underlay. 2.5mm; Flexibility (to BS EN ISO 24344): 40 mm; Edging: As per 740; Skirtings: As per 770. Coving; Stair nosings: As per 750. Gradus ASVXT1R stair edging/nosing or equivalent aluminum stair edging/nosing; Thickness: 2.5mm; Colour and pattern: To be agreed with Architect; as per Architects Specification Pr_35_57_71_46

Floors

B	Exceeding 300mm wide; Forbo marmoleum solid concrete 3742 - Green Glow	55	m2		

To Collection €

					€	c
	(43) FLOOR FINISHES (Cont)					
	Polyvinyl chloride (PVC) sheets WC Spaces/Wet Areas; Description: Linoleum Safety floor coverings, refer to Architects finishes plan; Manufacturer: Forbo Flooring Systems; Product reference: Sure-step Original; Standard: To BS EN ISO 10582 and BS EN 13845 & 14041; Use class: Class 34 Commercial very heavy, Class 43 light industrial; Slip potential; Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): DIN 51130, R10; BS EN 13893, DS =0.30.; PTV Wet slider 96: =36; Surface roughness (Rz) (minimum): =20; Recycled content: 20%; Dimension stability (to EN-ISO 23999): <0.1%; Residual indentation (to EN-ISO 24343-1): =0.05 mm; Electrical resistance (to EN 1081 R1): >1 x 10^9 O.; Reaction to fire (to BS EN 13501): Bfl-s1; Thermal conductivity (to BS EN 12524): 0.25 W/múK; Adhesive: Eurocol 640 Eurostar Special; Fabricated underlay: Forbo Corkment Underlay. 2.5mm; Use in wet areas (to EN 13553): Yes; Total weight (to EN ISO 23997): 2.75 kg/m#; Light fastness (to BS EN ISO 105 B02): =6; (to EN 13845 Annex C): Esf; Edging: As per 740; Skirtings: As per 770; Standard: To BS EN 14041 and BS EN ISO 10581 for homogeneous PVC sheet; Use class: To BS EN ISO 10874, class 34; Slip potential; Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): EN 13845 - ESf / DIN 51130 - R10; Surface roughness (Rz) (minimum): To BS 1134, 20 m; Recycled content: To BS EN ISO 14021, 25% (minimum); Width: 2000 mm; Thickness: 2.0 mm; Colour and pattern: To be Agreed with Architect; See Pr_35_90_31_33 Floor threshold strips Between Linoleum sheet flooring and carpet tiles. in Ss_30_42_72_10 Carpet tile systems; as per Architects Specification Pr_35_57_71_67					
	Floors					
A	Exceeding 300mm wide; Forbo Sure-step original safety vinyl R10 - To select colour	579	m2			
	Skirtings					
B	Polyvinyl chloride (PVC) cove skirtings; Description: Coving to WC's & Shower Rooms; Manufacturer: Forbo Flooring Systems UK Ltd or equivalent; Skirting type: To match floor covering; Upstand: 150mm required height; Finish: Securely bond to background using contact adhesive, with top edge straight and parallel with floor. Turn flooring material up wall, securely bond to cove former and background using adhesive specified for fixing to base, and ease top of material into edge trim. Accurately mitre at corners. All joints to be hot welded in accordance with the manufacturer's instructions; Colour: To be agreed with Architect; Top edge seal: Matching capping seal.; as per Architects Specification Pr_35_90_43_64	364	m			

(43) FLOOR FINISHES (Cont)

Fitted Carpeting

Pile carpet tiles; Description: Interface Employ Carpet Tiles or equivalent;Manufacturer: Interface Inc. or equal approved; Style: Tufted patterned structured loop pile; Material: 100% solution dyed Nylon; Classification; Standard: To BS EN 1307; Level of use class: To BS EN 1307, class 33; Recycled content: 50% (minimum) to BS EN ISO 14021; Size: 500 x 500 mm; Colour and pattern: To be agreed with Architect; as per Architects Specification Pr_35_57_11_62

Floors

A	Exceeding 300mm wide; Forbo - Tesera carpet tiles - To select colour	379	m2		

Entrance matting systems; Description: Recessed Entrance Matwell System; System manufacturer: Forbo Flooring UK Ltd or equivalent; System reference: Nuway Tuftiguard Design or equivalent; Standards: BS 7953:1999; Products: Double wiper strip 17mm thickness; Anodized Aluminum scraper bars; Execution: Installed as per manufacturer requirements; as per Architects Specification Ss_30_60_30_26

Floors

B	approx size: 1200 x 2035mm; rectangular shape	2	nr		
C	approx size: 1800 x 2480mm; rectangular shape	1	nr		
D	approx size: 2700 x 4285mm; rectangular shape	1	nr		
E	approx size: 1200 x 3250mm; rectangular shape	1	nr		

Floor threshold strips Between Linoleum sheet flooring and carpet tiles; Description: Gradus ETR299UF0 or equivalent multi-purpose aluminum threshold strip; Manufacturer: Gradus Limited or equivalent; Material: Aluminum; Finish: Natural; Width: 21mm; Thickness: 1.5mm; Predrilled: Centred; Matching fasteners: Required; as per Architects Specification Pr_35_90_31_33

Sundries; Dividing Strips

F	Junction of Carpet/ Sheet Flooring	9	m		

To Collection €

					€	c
	(43) FLOOR FINISHES (Cont)					
	PAINTING AND DECORATING					
	Painting					
	Waterborne finishes to internal joinery; Description: Dulux Easycare Satinwood paint to all Internal MDF and non-resinous softwood / hardwood; Manufacturer: Dulux Paints Ireland or equivalent; Product reference: Dulux Easycare Satinwood (satin finish); Coverage: 12m2/litre; Preparation: To get the best results with Dulux Easycare Satinwood, make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry); Remove all loose and defective paint; Colour: to be agreed; Execution: Pr_35_31_22/703 Applying coating Internal woodwork; as per Architects Specification Pr_35_31_22_95					
	Second Fixings					
A	Girth not exceeding 300mm; Skirtings	624	m			
	Concrete sealers; Description: 2 coats of ruberoid hardener / dust proofer; Composition: Acrylic resin-based; Primer: Sealer diluted with 3% water; Category: Deep penetrating; Colour: Clear; as per Architects Specification Pr_35_31_77_15					
	Floors					
B	Girth exceeding 300mm	75	m2			
				To Collection €		

(43) FLOOR FINISHES (Cont)

COLLECTION

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(43) FLOOR FINISHES
Carried to Summary

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	(44) STAIR FINISHES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1.This element has been measured from the relevant Architect's Drawings together with Engineers Drawings		note			
D	2. The tenderer is referred to the Architect's Drawings and Specification which accompany this document. All descriptions shall be read in conjunction with this information and included in the rates.		note			
E	3. Power floated and screeded concrete floor slabs are to be finished to a sufficient level to obviate the necessity for the spreading of levelling compounds for all floor coverings measured within this element. Should it arise that it becomes necessary to spread levelling compounds as a preliminary to laying the floor finishes, the cost of this work will be deemed to be included in the prices against the various items of work of floor finishes		note			
F	4. The Contractor is to include in his tender for properly curing and drying out concrete ground floor slabs within the limits of the building programme to attain minimum moisture content as recommended by the manufacturers of the relevant sheet and brush applied floor coverings measured within this element; if these moisture levels are not achieved at the time of laying, then the contractor will be required to apply an approved patent trowel applied damp proof membrane over the slab and patent self levelling screed over same at his own expense		note			
	WOODWORK					
	Boarding and Second Fixings					
	Medium density fibreboard (MDF) skirtings; General requirements: Ac_05_50_91/340 Timber sourcing; Manufacturer: Medite FR Clear or equal approved; Class: To BS EN 622-5, Class MDF. Class E1 formaldehyde content; Profile: As per architects drawings; Height: As per architects drawings; Thickness: As per architects drawings; Finish: Primed and painted with selected Dulux Trade Satinwood; Colour: To be agreed with architect; Execution: Pr_35_90_43/606 Installing wood mouldings and trims; as per Architects Specification Pr_35_90_43_58					
	Skirtings					
G	120mm high x 18mm thick; to landings	15	m			
H	120mm high x 18mm thick; to profile of stairs	23	m			
				To Collection €		

					€	c
	(44) STAIR FINISHES (Cont)					
	Ironmongery, Accessories and Sundries					
	Sundries; Non-hardening sealant to skirting/wall junction; all in strict accordance with Architect's Details on Drawings					
	Seals					
A	Generally	38	m			
	FLOOR, WALL & CEILING FINISHES					
	Finishings; Flexible Sheet Finishes					
	Linoleum sheets General; Description: Linoleum floor coverings, refer to Architects finishes plan; Manufacturer: Forbo Flooring Systems; Product reference: Marmoleum Marbled Fresco (2.5 mm); Standard: To EN ISO 24011; Use class: Class 34 / 43; Slip potential; Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): DIN 51130 = R9., PVT Dry: =50, EN 13898: =0.30; Recycled content: 43%; Acoustical impact sound reduction (to EN-ISO 717-2): =5 dB; Reaction to fire (to EN 13501-1): Cfl-s1, G, CS; Thermal conductivity (to EN 12524): 0.17 W/muK; Adhesive: Eurocol 414 Euroflex Lino Plus linoleum adhesive; Fabricated Underlay: Forbo Corkment Underlay. 2.5mm; Flexibility (to BS EN ISO 24344): 40 mm; Edging: As per 740; Skirtings: As per 770. Coving; Stair nosings: As per 750. Gradus ASVXT1R stair edging/nosing or equivalent aluminum stair edging/nosing; Thickness: 2.5mm; Colour and pattern: To be agreed with Architect; as per Architects Specification Pr_35_57_71_46					
	Landings					
B	Exceeding 300mm	12	m2			
	Treads					
C	Width 300mm	70	m			
	Risers					
D	Height 160mm	70	m			
	Stair trims - Description: Gradus ASVXT1R stair edging/nosing or equivalent aluminum stair edging/nosing; Manufacturer: Gradus Limited or equivalent; Material: Aluminum; Finish: Natural; Profile: Notched ramp back with 70mm tread & 40mm riser; Thickness of floor finish: 2mm; Accessories: Gradus Xtra-grip insert or equivalent, colour to be agreed with Architect; as per Architects Specification Pr_35_90_31_84 & Drawing 7001 and 7002					
	Sundries					
E	Nosing	70	m			

To Collection €

					€	c
	(44) STAIR FINISHES (Cont)					
	Extruded Aluminum steel stair edge trim; mitred with rounded corners at nosings; fixed in accordance with manufactures instructions					
	Sundries					
A	L-shape; 25 x 16mm; to open string of stairs; cut to profile of stairs	23	m			
B	L-shape; 25 x 16mm; to landings	15	m			
				To Collection €		

(44) STAIR FINISHES (Cont)

PAINTING AND DECORATING

Painting

Waterborne mid-sheen finishes Internal Walls; Description: Painting to internal walls generally; Manufacturer: Dulux Trade or equivalent; Product reference: Diamond Eggshell (mid sheen finish); Product Information:: Typical Use Suitable for interior use on plaster, masonry and wood. Also suitable for use in kitchens and bathrooms. Do not use externally. Pack Size 1L, 2.5L and 5L; Colour Range; See appropriate Dulux Trade colour literature or visit duluxtrade.co.uk; Film Properties; Chemical Resistance: Not recommended; Heat Resistance: Not recommended for use on heated surfaces, such as radiators; Water Resistance: Resistant to the levels of atmospheric humidity present in normal interior environments and will withstand repeated washing. Suitable for use in kitchens and bathrooms; Not suitable for use on immersed surfaces or where there is heavy and prolonged condensation; Film Thickness; Film thickness will be dependent on the coverage achieved; Wet: 63 microns; Dry: 23 microns; Composition (nominal); Pigment: Light fast Pigments; Binder: Acrylic Copolymer Emulsion; Solvent: Water; Volume Solids; White - 37% (nominal). Other colors will vary; Coverage:: 16 m2/litre; Colour: to to be confirmed; Application:: STIR THOROUGHLY BEFORE USE. Seal new or bare surfaces with a thinned first coat of Dulux Trade Diamond Eggshell (up to 1 part clean water to 10 parts paint). The normal finishing process is 2 full coats of Dulux Trade Diamond Eggshell, but on previously painted surfaces in good condition where similar colors are used, 1 coat may be sufficient. When applying water-based paints to surfaces previously decorated with a conventional solvent-based paint, very thorough surface preparation will be necessary. Brush, roller, conventional spray or airless spray. Do not use when the temperature is below 10sC

					€	c
	(44) STAIR FINISHES (Cont)					
	Thinning: Sealing new or bare surfaces: Add up to 1 part clean water to 10 parts paint. Normal use (not to be exceeded): Thinning is not usually required. Conventional spray application: Add up to 1 part clean water to 5 parts paint. Airless spray application: Thinning is not usually required; Spray Recommendations: Conventional Spray: Satisfactory through most equipment. Airless Spray: A typical set up for airless spray would be a minimum working pressure on paint of 133 bars (2000lb/sq in) with a spray tip size 0.38mm (15 thou) and a spray tip angle of 65s; Drying Times: Single coat at standard thickness: Touch Dry: Dependent on temperature and humidity; Recoat: 4-6 hours, although will vary according to temperature and humidity (e.g. will take significantly longer in cold, damp conditions); Cleaning Up: After use, remove as much product as possible from equipment before cleaning with water. When this paint container is empty please ask your stockist about recycling. If you have leftover paint, please dispose of it responsibly and consider donating it to Community RePaint. Find out more at duluxtrade.co.uk/pp; Preparation:: Make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry) and free from all defective or poorly adhering material such as dirt, grease and wax. New or bare surfaces should be primed with an appropriate Dulux Trade primer. Thoroughly rub down previously painted surfaces using #wet flatting# methods where possible, then wipe off with a damp, lint free cloth. Special precautions should be taken during surface preparation of pre-1960s paint surfaces over wood and metal as they may contain harmful lead. Treat knots with a suitable knotting solution. Any surface defects should be filled with the appropriate Polycell Trade Polyfilla; VOC Content:: Max 17g/L; Scrub Rating: Type C - BS 7719; Colour: To be agreed with Architect; Execution: Pr_35_31_22/703 Applying coating system Internal walls; all as per Architects Specification Pr_35_31_22_98					
	Ceilings					
A	Exceeding 300mm; Landings	12	m2			
B	Exceeding 300mm; Raking	24	m2			
C	Exceeding 300mm; String	17	m			
	Waterborne finishes to internal joinery - Description: Dulux Easycare Satinwood paint to all Internal MDF and non-resinous softwood/hardwood; Manufacturer: Dulux Paints Ireland, Commons Road, Cork, Ireland Tel. Number: +353 (0) 21 4220222; Product reference: Dulux Easycare Satinwood (satin finish); Coverage: 12m2/litre; Preparation: To get the best results with Dulux Easycare Satinwood, make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry). Remove all loose and defective paint; Colour: to be agreed; Execution: Pr_35_31_22/703 Applying coating Internal woodwork; as per Architects Specification Pr_35_31_22_95					
	Second fixings; skirtings					
D	Not exceeding 300mm; in staircase areas	38	m			
					To Collection €	

				€	c
(44) STAIR FINISHES (Cont)					
COLLECTION					
Page No. Building/125					
Page No. Building/126					
Page No. Building/127					
Page No. Building/128					
Page No. Building/129					
(44) STAIR FINISHES **Carried to Summary**					

					€	c
	(45) CEILING FINISHES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1.This element has been measured from the relevant Architect's Drawings together with Engineers Drawings		note			
D	2. The tenderer is referred to the Architect's Drawings and Specification which accompany this document. All descriptions shall be read in conjunction with this information and included in the rates.		note			
				To Collection €		

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	(45) CEILING FINISHES (Cont)					
	FLOOR, WALL & CEILING FINISHES					
	Suspended Ceilings					
	CT 1a; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Circulation:Low density fine textured moisture resistant ceiling tiles.; 1200mm X 600mm X 20mm thick in bright white; Sound absorption performance of Class A to comply with EN ISO 11654; Sound attenuation performance of 35 dB to comply with EN ISO 717-1; Relative Humidity performance of 100%; Fire Resistance performance of Class A to comply with EN 13501-1; Non corrosive exposed grid system with perimeter angle trim in bright white, fixed to 50mm X 50mm timber batten painted in bright white; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90					
	Ceilings; fixed below floor structure					
A	Depth of Suspension 500mm - 1000mm	179	m2			
B	Depth of Suspension 1000mm - 1500mm	23	m2			
	Ceilings; fixed below roof structure					
C	Depth of Suspension 500mm - 1000mm	28	m2			
D	Depth of Suspension 2500mm - 3000mm	49	m2			
	Sundries					
E	White perimeter trim securely fastened at 450 mm maximum centres and within 75mm from the ends	272	m			
F	Edge battens; Material: To BS EN 942, planed softwood, class J10; Finish: Primed and painted; Profile: Rectangular; Size: 50x50mm; as per Architects Specification Pr_35_90_43_21	272	m			

To Collection €

(45) CEILING FINISHES (Cont)

CT 1b; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Circulation / Office / Stores:; Fine textured mineral fibre ceiling tiles; 600mm X 600mm X 15mm thick in bright white; Sound absorption performance of Class A to comply with EN ISO 11654; Sound attenuation performance of 40 dB to comply with EN ISO 717-1; Relative Humidity performance of 90%; Fire Resistance performance of Class A to comply with EN 13501-1; Non corrosive exposed grid system with perimeter angle trim in bright white, fixed to 50mm X 50mm timber batten painted in bright white; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90

Ceilings; fixed below floor structure

A	Depth of Suspension 150mm - 500mm	9	m2		
B	Depth of Suspension 500mm - 1000mm	47	m2		

Ceilings; fixed below roof structure

C	Depth of Suspension 500mm - 1000mm	71	m2		
D	Depth of Suspension 1500mm - 2000mm	31	m2		

Sundries

E	White perimeter trim securely fastened at 450 mm maximum centres and within 75mm from the ends	152	m		
F	Edge battens; Material: To BS EN 942, planed softwood, class J10; Finish: Primed and painted; Profile: Rectangular; Size: 50x50mm; as per Architects Specification Pr_35_90_43_21	152	m		

To Collection €

(45) CEILING FINISHES (Cont)

CT 02; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Classrooms; Fine textured mineral fibre ceiling tiles; 600mm X 600mm X 20mm thick in bright white; Sound absorption performance of Class A to comply with EN ISO 11654; Sound attenuation performance of 35 dB to comply with EN ISO 717-1; Relative Humidity performance of 100%; Fire Resistance performance of Class A1 to comply with EN 13501-1; Non corrosive exposed grid system with perimeter angle trim in bright white, fixed to 50mm X 50mm timber batten painted in bright white; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90

Ceilings; fixed below floor structure

A	Depth of Suspension 500mm - 1000mm	235	m2		

Sundries

B	White perimeter trim securely fastened at 450 mm maximum centres and within 75mm from the ends	121	m		
C	Edge battens; Material: To BS EN 942, planed softwood, class J10; Finish: Primed and painted; Profile: Rectangular; Size: 50x50mm; as per Architects Specification Pr_35_90_43_21	121	m		

To Collection €

(45) CEILING FINISHES (Cont)

CT 03; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Classrooms / Office / Circulation:; Fine textured mineral fibre ceiling tiles; 600mm X 600mm X 15mm thick in bright white; Sound absorption performance of Class C to comply with EN ISO 11654; Sound attenuation performance of 35 dB to comply with EN ISO 717-1; Relative Humidity performance of 95%; Fire Resistance performance of Class A to comply with EN 13501-1; Non corrosive exposed grid system with perimeter angle trim in bright white, fixed to 50mm X 50mm timber batten painted in bright white; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90

Ceilings; fixed below roof structure

A	Depth of Suspension 500mm - 1000mm	113	m2		
B	Depth of Suspension 1500mm - 2000mm	126	m2		
C	Depth of Suspension 3500mm - 4000mm	208	m2		

Sundries

D	White perimeter trim securely fastened at 450 mm maximum centres and within 75mm from the ends	222	m		
E	Edge battens; Material: To BS EN 942, planed softwood, class J10; Finish: Primed and painted; Profile: Rectangular; Size: 50x50mm; as per Architects Specification Pr_35_90_43_21	222	m		

To Collection €

					€	c
	(45) CEILING FINISHES (Cont)					
	CT 04; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Servery:; Low density fine textured moisture resistant ceiling tiles; 600mm X 600mm X 20mm thick in bright white; Sound absorption performance of Class A to comply with EN ISO 11654; Sound attenuation performance of 50 dB to comply with EN ISO 717-1; Relative Humidity performance of 100%; Fire Resistance performance of Class A to comply with EN 13501-1; Non corrosive exposed grid system with perimeter angle trim in bright white, fixed to 50mm X 50mm timber batten painted in bright white.; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90					
	Ceilings; fixed below floor structure					
A	Depth of Suspension 500mm - 1000mm	37	m2			
	Sundries					
B	White perimeter trim securely fastened at 450 mm maximum centres and within 75mm from the ends	36	m			
C	Edge battens; Material: To BS EN 942, planed softwood, class J10; Finish: Primed and painted; Profile: Rectangular; Size: 50x50mm; as per Architects Specification Pr_35_90_43_21	36	m			

To Collection €

					€	c
	(45) CEILING FINISHES (Cont)					
A	CT 08; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Acc WC/Shower, Bulkheads:; 1No. layer 12.5 Gyproc Moisture Resistant board consisting of aerated non combustible core and repellent additives, encased and bonded to strong paper liners; Thermal conductivity 0.19W/mK; Moisture Resistance H1; Water Permeability 10; 5% Water resistance; Taped sealed and skimmed in accordance with manufacturers instructions; Non corrosive concealed metal grid system; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90					
	Ceilings; fixed below floor structure					
B	Depth of Suspension 150mm - 500mm	273	m2			
	Ceilings; fixed below roof structure					
C	Depth of Suspension 150mm - 500mm	56	m2			
	Access panels; Concealed frame flush ceiling access panel; Locations: Plasterboard ceiling; Recessed door/panel for plasterboard insert. M&E to confirm size, quantity and locations. Fire rating to match ceiling; as per Architects Drawing 23-16/TD-5101					
	Composite Item; Access Hatch					
D	Overall Size - 350 x 350mm	5	nr			
	Composite Item: Bulkhead type 2 - 150mm painted plasterboard; Metal stud bulkhead with painted plasterboard; all as per Architects Drawing 23-16/TD-5101					
	Upstands / down stands; Bulkhead Type 2 (150mm wide) to Stair					
E	Depth of Suspension 500mm - 1000mm	8	m			

To Collection €

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	(45) CEILING FINISHES (Cont)					
	Composite Item: Roof light/Access Hatch Shaft - Gyrproc MF of similar concealed monolithic metal frame suspended ceiling system;13.5mm duraline plasterboard and 3mm skim coat finish, taped and sealed, painted to selected ral. Skim coat 3mm gypsum plaster to bs en 13279-1; all as per Detail 27 and Architects Drawing 23-16/TD-8016					
	Sundries; Roof light Shafts					
A	Overall opening size 4300mm long x 1500mm wide x 3010mm deep	3	nr			
	Sundries; Access Hatches					
B	Overall opening size 1200mm long x 1200mm wide x 1350mm deep	1	nr			
	PAINTING AND DECORATING					
	Painting					
	Waterborne matt and flat finishes Ceilings; Description: Painting to plasterboard ceilings and walls generally; Manufacturer: Dulux Paints Ireland or equivalent; Product reference: Dulux Trade Diamond Matt; Coverage: 13-15 m2/ litre; Colour: to be agreed; Application: Apply 2 coats with a brush or roller, leave 2-4 hours between coats; Do not apply in very damp or humid conditions or in extreme temperatures; Preparation: Ensure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry); Execution: Pr_35_31_22/703 Applying coating system Internal walls; as per Architects Specification Pr_35_31_22_97					
	Ceilings					
C	Exceeding 300mm	117	m2			
	Waterborne finishes to internal joinery; Description: Dulux Easycare Satinwood paint to all Internal MDF and non-resinous softwood / hardwood; Manufacturer: Dulux Paints Ireland or equivalent; Product reference: Dulux Easycare Satinwood (satin finish); Coverage: 12m2/litre; Preparation: To get the best results with Dulux Easycare Satinwood, make sure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry); Remove all loose and defective paint; Colour: to be agreed; Execution: Pr_35_31_22/703 Applying coating Internal woodwork; as per Architects Specification Pr_35_31_22_95					
	Second Fixings					
D	Girth not exceeding 300mm; Edge battens	799	m			

To Collection €

					€	c
	(45) CEILING FINISHES (Cont)					
	CT10 - Exposed Concrete: Switch Room/Boiler Room; exposed concrete to be cleaned and sealed; joints and holes to be filled and painted with in selected colour (2 coats of Sealocrete Duraseal surface hardener and dust proofer to manufactures recommendations; as per Architects Specification & Drawings 23-16/TD-5101					
	Ceilings; fixed below floor structure					
A	Depth of Suspension not exceeding 150mm	30	m2			
B	Depth of Suspension 500mm - 1000mm	12	m2			
				To Collection €		

(45) CEILING FINISHES (Cont)

COLLECTION

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(45) CEILING FINISHES
Carried to Summary

					€	c
	(45) CEILING FINISHES - EXISTING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1.This element has been measured from the relevant Architect's Drawings together with Engineers Drawings		note			
D	2. The tenderer is referred to the Architect's Drawings and Specification which accompany this document. All descriptions shall be read in conjunction with this information and included in the rates.		note			
	FLOOR, WALL & CEILING FINISHES					
	Suspended Ceilings					
E	CT 02; Modular suspended ceiling system; Description: Concealed/Exposed grid ceilings; System performance: Ss_30_25_22/205 Design submittals; Ss_30_25_22/210 Demountable suspended ceiling design requirements; Ss_30_25_22/220 Durability; Ss_30_25_22/225 Health, hygiene and environment; Ss_30_25_22/230 Structural performance; Ss_30_25_22/260 Acoustic performance; Ss_30_25_22/290 Compliance with performance requirements; System manufacturer: ROCKWOOL Limited T/A Rockfon or equivalent; Ceiling support: Refer to Architects reflected ceiling plans: Contractor may submit proposal for approval; Non Corrosive Concealed grid ceilings - Rockfon Concealed Suspension System T24 X; DLC or equivalent approved; Non Corrosive Exposed grid ceilings - Rockfon System T24 A, E ECR or equivalent approved; Support fasteners: Rigid angle hangers to manufacturers specification; Ceiling units: Refer to Architects reflected ceiling plans; Classrooms; Fine textured mineral fibre ceiling tiles; 600mm X 600mm X 20mm thick in bright white; Sound absorption performance of Class A to comply with EN ISO 11654; Sound attenuation performance of 35 dB to comply with EN ISO 717-1; Relative Humidity performance of 100%; Fire Resistance performance of Class A1 to comply with EN 13501-1; Non corrosive exposed grid system with perimeter angle trim in bright white, fixed to 50mm X 50mm timber batten painted in bright white; Samples required: Ss_30_25_22/305 Product samples; System accessories: Pr_35_90_43_21 Edge battens; Pr_25_80_80_51 Mineral wool wire reinforced mattress cavity barriers Fire separation within ceiling voids; Execution: Ss_30_25_22/615 Installing demountable suspended ceilings generally; Ss_30_25_22/620 Setting out demountable suspended ceilings; Ss_30_25_22/625 Protection of demountable suspended ceilings; Ss_30_25_22/680 Installing edge battens to demountable suspended ceilings; System completion: Ss_30_25_22/820 Tools for demountable suspended ceilings; Ss_30_25_22/830 Operation and maintenance manual; Ss_30_25_22/895 Verification of performance; as per Architects Specification Ss_30_25_22_90					

					€	c
	(45) CEILING FINISHES - EXISTING (Cont)					
	Ceilings; fixed below floor structure					
A	Depth of Suspension 500mm - 1000mm	687	m2			
	Sundries					
B	White perimeter trim securely fastened at 450 mm maximum centres and within 75mm from the ends	305	m			
C	Edge battens; Material: To BS EN 942, planed softwood, class J10; Finish: Primed and painted; Profile: Rectangular; Size: 50x50mm; as per Architects Specification Pr_35_90_43_21	305	m			
	Board Finishes					
	Plasterboard Ceiling - One layer of 15mm plasterboard consisting of aerated non combustible core and water repellant additives encased in, and firmly bonded to, strong paper liners; Thermal conductivity 0.25w/mk thermal resistance 0.05m2k/w, fixed to underside of concealed metal frame grid and lining suspended ceiling system; include for being taped, sealed, skimmed & joints staggered in accordance with manufacturers recommendations; as per Architects Drawings					
	Ceilings; fixed below roof structure					
D	Depth of Suspension 500mm - 1000mm	91	m2			
	PAINTING AND DECORATING					
	Painting					
	Waterborne matt and flat finishes Ceilings; Description: Painting to plasterboard ceilings and walls generally; Manufacturer: Dulux Paints Ireland or equivalent; Product reference: Dulux Trade Diamond Matt; Coverage: 13-15 m2/ litre; Colour: to be agreed; Application: Apply 2 coats with a brush or roller, leave 2-4 hours between coats; Do not apply in very damp or humid conditions or in extreme temperatures; Preparation: Ensure surfaces to be painted are sound, clean, dry (new surfaces particularly must be fully dry); Execution: Pr_35_31_22/703 Applying coating system Internal walls; as per Architects Specification Pr_35_31_22_97					
	Ceilings					
E	Exceeding 300mm	91	m2			

(45) CEILING FINISHES - EXISTING (Cont)

COLLECTION

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(45) CEILING FINISHES - EXISTING
Carried to Summary

					€	c
	(47) ROOF FINISHES					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. The Tenderer is referred to the drawings and specifications which accompany this document. All descriptions shall be read in conjunction with this information.		note			
D	2. The Tenderer is to provide all fittings, support etc. which may be necessary to complete the works. The Contractor is required to liaise and coordinate with other trades to provide and fix all such fixings as may be necessary for his installation.		note			
E	3. The Tenderer shall examine all surfaces which are to come in contact with his installation and insure their suitability prior to installing roof coverings.		note			
				To Collection €		

(47) ROOF FINISHES (Cont)

PITCHED ROOFS

ROOFING, CLADDING & WATERPROOFING

Rigid Sheet Coverings and Decking

Metal composite panel roofing systems; Description: Trapezoidal profiled, double skin insulated roofing panel system. Factory preengineered roof deck panel roof system. 137mm core panel thickness. Overall thickness 168mm. Roof to achieve min U-value of 0.13W/m2K; Manufacturer: Kingspan Insulated Panels or equivalent; Product reference: QuadCore KS1000RW Roof Panel System (137 mm Core Thickness); Roof pitch (degrees); Roofing panels; Panel type: KS1000RW, 137 mm; Panel fasteners; Side laps sealing: Butyl rubber sealant, 6 x 5 mm; End laps sealing: Co-laminate butyl rubber sealant, 6 x 50 mm; Side lap stitching fasteners; End lap stitching fasteners; Glazing; Continuity thermal insulation: PIR insulation board to be installed in certain details to ensure thermal continuity. Fill any gaps with fire-rated canister insulation; Firestops:; Global warming potential (GWP): 39.872 kg CO2 eq/m2; Fire: Class 1 Surface spread of flame to BS 476 Part 6: 2009 and Part 7: 1997 (Class 0 as defined by the Building Regulations). by the Building Regulations).Reaction to Fire classification: B-s1,d0 to BS EN13501-1: 2007. LPS 1181: 2014: Part 1: Issue 1.2, series of fire growth tests for LPCB approval and is certified to LPS 1181 Grade EXT-B. SAA rated to BS 476 Part 3: 2004; Thermal

Performance: 25 years; Structural Performance: 25 years; Execution: Air Tightness: Air leakage rate of 3m3/hr/m2 at 50Pa. Additional Butyl seals to be provided in strict accordance with Manufacturer's specifications and details. Internal face of panel to be air sealed along the full length by an unbroken run of 6mm diameter butyl rubber sealant tape, Class A. Side joint to be hand seamed at ridge, eaves and end laps prior to power seaming in both directions immediately after panel is fastened to purlins; Service Penetrations: Where service penetrations are not fully detailed, the Contractor should, as a minimum, allow for all necessary flashings and sealants to provide a fully weathertight and air tight joint seal. All vertical penetrations should include for a Chinese hat detail that provides a minimum 100mm overlap and protection to the vertical upstand which shall be a minimum of 200mm above the roof level finish. Horizontal joints (ie: to rear of mono pitch roofs) should have as a minimum a 150mm tightly fixed overlap and seal to any penetrations; The Contractor shall ensure that all penetrations slope away from the opening in the building fabric; The Contractor shall schedule all service penetrations by number on the roof and provide written signed schedule of inspection and compliance sign off of same to the ER, a minimum of eight weeks before substantial completion

To Collection €

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(47) ROOF FINISHES (Cont) Acoustic Requirements: The acceptable level of intrusion noise must not exceed 35dB for the entire roofing element of each building. The location and detail of rooflights shall be taken into account when calculating this requirement. Obtain written confirmation from the manufacturer that their rooflights can meet this acoustic requirement. Deflection of metal roof cladding/covering; Roof covering: Maximum permitted deflection under distributed loads as a multiple of span and due to; Dead load: L/500; Dead and imposed loads: L/200; Dead and wind loads: L/90. Actual roof slope on completion after allowing for all deflections including structural deflection shall be a minimum of 6.5 ° Integrity of Cladding/ Covering; Requirement: Determine profiles, sizes and thicknesses of sheets, the sizes, number and spacing of fixings, configuration and location of spacer systems and incorporation of other accessories and fittings to ensure cladding/ covering system will resist factored dead, imposed and design live loads, and accommodate deflections and thermal movements without damage, in accordance with BS 5427 -1; Primary fasteners: Not to be subjected to any bending moment; Wind loads: Calculate to BS 6399-2, Standard Method and BS 5427-1 appropriate to location, exposure, height, building shape and size, taking account of existing and known future adjacent structures; Imposed roof load (no access): As determined from BS 6399 -3 and BS 5427 -1; Permanent imposed roof loads: Refer to Structural and Mechanical/Electrical Specifications; Temporary imposed roof loads: Refer to Structural and Mechanical/Electrical Specifications; Water Penetration; Requirement: Under site exposure conditions, moisture must not penetrate onto internal surfaces, or into cavities not designed to be wetted. Avoidance of Interstitial Condensation; Requirement: Determine interstitial condensation risk of cladding/ covering system using the method described in BS 5250 Appendix D. If necessary, provide a vapour control layer to ensure that damage and nuisance from interstitial condensation does not occur. Outdoor psychrometric conditions (notional): To BS 6229, table A.1 as follows; Winter Summer; Temperature -5 degrees 18 degrees; Relative humidity 90% 65%; Vapour pressure 0.36 kPa 1.34 kPa; Indoor psychrometric conditions (notional): As follows Temperature: 20°C; Relative humidity: 50%; Vapour pressure: 1.17 kPa; Calculated amount of winter interstitial condensate (maximum): 0.35; Winter interstitial condensate: Calculated amount (maximum): 0.35 kg/m2; Calculated annual net retention: Nil.; Provide evidence of compliance with required specification in writing on completion of the works.					

				€	c
(47) ROOF FINISHES (Cont) Avoidance of Surface Condensation: Requirement: Determine surface condensation risk of cladding/ covering system using the method described in BS EN ISO 13788. If necessary, revise thermal insulation to provide satisfactory temperature factor (min). Ensure that damage and nuisance from surface condensation does not occur.; Manufacturers Site Inspection: The manufacturer of the roofing system shall inspect the works regularly during the course of the works, starting within 1 week after roof work commences a minimum of 6 on site interim inspections and 1 before substantial completion. Fully detailed technical inspection reports (including reference photographs) and sign off sheets by the manufacturer, showing compliance with their specifications, recommendations and installation in accordance with their Technical Design Manuals shall be furnished to the ER within 3 days of each site visit , together with any remedial works identified by the manufacturer that may need to be carried out by the Contractor. Final inspection shall be carried out at the direction of the ER and before substantial completion of the main contract. The manufacturer shall issue documentation in writing that the installation has been correctly installed in accordance with the Technical Design Manuals and is waterproof.; System completion: Certification: Upon completion of the works and four weeks prior to substantial completion, the Contractor shall submit the following items in writing as evidence of compliance with specification: Fully detailed technical inspection reports and sign off sheets by the roofing manufacturer, showing compliance with their specifications, recommendations and installation in accordance with their Technical Design Manuals as per clause Manufacturers Site Inspections; Calculation sheets for number requirement and location of all fixing systems; Copy of all warranties, certificates and guarantees relating to the installed components for thermal, coating and structural aspects of the system. 40 Years for the panel and installation of the roofing system; Verification in writing from the roofing manufacturer that the contractor is licenced to install the system and has received the appropriate training to erect and install the roofing system in accordance with the manufacturer's detailed drawings and specifications; BCAR Ancillary Cert Cs (CIF - 01) to be completed and signed by the roofing subcontractor; Compliance with LPCB Certificate No. 260A/24 & 186A/24; Infrared thermography test results and report in accordance with DoES TGD; Airtightness test results and report; Please note that some of these items are also required prior to site start; Compliance with HSA Code of Practice for Safety in Roofwork; Roof Maintenance Manual: Provide the following to the ER: List of contractor. manufacturers, suppliers for all materials and accessories, including emergency contact numbers for leaks; Fully detailed maintenance schedules incorporating checklists and timetables of items to be checked monthly, quarterly, annually, etc; Simple Maintenance record forms to help keep maintenance records in good order; ER compliance requirements for maintaining warranties; Labelling: When the roofing cladding to this building is completed, a label identifying the insulated panels is to be fitted.This label illustrates the type of Insulated panels fitted, to aid Insurers, Fire Officers, Owners and Occupiers identify the envelope composition.It is a recommendation of the manufacturers Product Guarantee that the insulated panel identification label, which will have a specific project registration number, is installed in an agreed location. The project architect, roofing subcontractor or owner should locate these labels in an appropriate and accessible location on the building; as per Architects Specification Ss_30_40_55_50					

To Collection €

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	(47) ROOF FINISHES (Cont)					
	Roof coverings					
A	Horizontal; Area exceeding 300mm wide	601	m2			
	Aluminum sheet gutter lining systems; System performance: Ss_30_75_50/205 Design submittals; Ss_30_75_50/235 Integrity of metal sheet gutter lining systems; Ss_30_75_50/250 Fire performance to BS EN 13501; Ss_30_75_50/255 Durability; Ss_30_75_50/260 Aesthetic performance; Ss_30_75_50/210 Design of aluminum sheet gutter lining systems; Ss_30_75_50/290 Compliance with performance requirements; Aluminum: Pr_25_71_51_02 Aluminum long strips; Joints; Cross joints: Adapters as recommended by manufacturer; Joints with roof covering: Under lapped; Fasteners: Ss_30_75_50/510 Site-made aluminum clips; Outlets: Catch pits with spigot outlet to internal rainwater pipe; Execution: Ss_30_75_50/610 Layout; Ss_30_75_50/700 Welding seams in aluminum and stainless steel; Ss_30_75_50/705 Forming cross joints; Ss_30_75_50/730 Forming joints in direction of fall to gutter lining systems; Ss_30_75_50/765 Installing clips; Ss_30_75_50/615; Suitability of substrates; Ss_30_75_50/710 Forming drip and step joints generally; System completion: Ss_30_75_50/810 Cleaning and maintenance of metal gutter lining systems; Ss_30_75_50/890 Verification of performance; as per Architects Specification Ss_30_75_50_05					
	Gutters					
B	Girth 900mm - 1050mm; Preformed	34	m			
	Polyester powder coated aluminum Verge detailing; including verge support to Engineer's details; 2mm pressed aluminum soffit fixed to channels to Engineer's details; non hardening sealant between soffit and gutter; complete with and including all drip angles, closure flashings, additional insulation and any additional details shown all as Architects drawings 23-16/TD-8008					
	Verges					
C	Girth 750 - 900mm	35	m			
	Polyester powder coated aluminum Mono ridge detailing; including mono ridge support to Engineer's details; 2mm pressed aluminum soffit fixed to channels to Engineer's details; mono ridge flashing to selected ral with 150mm sealed butt strap; profiled filler set back 80-100mm sealed top and bottom with gun grade sealant; complete with and including all drip angles, closure flashings, additional insulation and any additional details shown all as Architects drawings 23-16/TD-8008					
	Ridges					
D	Girth 1350 - 1500mm	30	m			

To Collection €

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	(47) ROOF FINISHES (Cont)					
	Flat Roof abutment to wall / Parapet wall; Minimum 80mm cold bridge insulation carried up face of upstand of wall; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; include lead counter flashing, compatable VCL turned up wall behind PIR insulation; 75mm insulated angle fillets at upstands in accordance with manufactures recommendations; all as per Architects Drawing 23-16/TD-8008					
	Upstands; Flat Roof abutment to wall					
A	Girth:1050 - 1200mm; including roof membrane first layer 840mm girth and second layer 860mm girth as indicated; as per Detail 21 Architect's Drawing no. 23-16/ TD-8008; as per Architects Specification Ss_30_40_55_50	34	m			
B	Girth:450 - 600mm; including roof membrane first layer 840mm girth and second layer 860mm girth as indicated; as per Section EE Architect's Drawing no. 23-16/ TD-3005; as per Architects Specification Ss_30_40_55_50	2	m			
	Roof light; Minimum 80mm insulation carried up face of upstand of wall; Minimum one layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; including 3mm polyester powder coated aluminum insulated apron flashing with DPC backing & air tightness; all fixed to structural steel (measured elsewhere); all as per Architects Drawing 23-16/TD-8016					
	Kerbs					
C	Girth 300 - 450mm; 80mm thick insulation face of upstand of wall 400mm girth; roof membrane first layer 750mm girth as indicated; as per Detail 25 Architect's Drawing no. 23-16/TD-8016; as per Architects Specification Ss_30_40_55_50	35	m			

(47) ROOF FINISHES (Cont)

RWDP pipes penetrating the roof; selected proprietary weather collar to RWDP fitted to Manufacturer's Specifications over top of skirt and soaker; one layer of door and window weatherstrips and seals 900mm girth as indicated; second layer of insect guard mesh 430mm girth; preformed outlet as part of gutter system fully sealed and jointed to gutter; Custom made preformed removable PVDF-coated aluminum cover finish and colour to match RDP; Removable section of downpipes snugly fitting scupper outlet, to guide water to hopper below; fixing to bedded brackets at centers to manufacturers specification; Air tightness membrane to be fully closed and sealed around structural elements. All fixing and punctures to be closed with system-approved self-closing tape to manufacturers instruction; including all flashings, weatherings, coverings etc; as specified with the roofing system; all to Manufacturer's and Architect's instructions and Drawing

Collars around pipes, standards and the like

A	Generally	6	nr		

Solar Panel mounts fixed to roof finish; selected proprietary mount fitted to Manufacturer's Specifications; liquid applied waterproof coating consisting of reinforced base coat and protection top coat; include for solar mounting unit; baseplate; solar weld patch; fixed down to roof and structure (measured elsewhere); including all flashings, weatherings, coverings etc; as specified with the roofing system; all to Manufacturer's and Architect's instructions and Drawings

Mounts

B	Generally	336	nr		

Flexible Sheet Metal Coverings

3mm Polyester powder coated aluminum insulated apron flashing; as per Detail 25 and Architects Drawing 23-16/TD-8010

Flashings

C	Girth 450mm - 600mm; Horizontal	35	m		

Aluminum flashing to link existing and proposed roof covering; as per Detail 35 and Architects Drawing 23-16/TD-8015

Flashings

D	Girth 450mm - 600mm; Horizontal	20	m		

Counter flashing; as per Detail 35 and Architects Drawing 23-16/TD-8015

Flashings

E	Girth 150mm - 300mm; Horizontal	16	m		
F	Girth 300mm - 450mm; Horizontal	16	m		

To Collection €

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	(47) ROOF FINISHES (Cont)					
	2mm Galvanized air seal support flashing fixed to structure and underside of panel as per manufactured panel; as per Detail 35 and Architects Drawing 23-16/ TD-8015					
	Flashings					
A	Girth 150mm - 300mm; Horizontal	16	m			
	2mm Galvanized air seal support flashing to upstand fixed to structure and underside of panel as per manufacturer instructions. Double line of 8mm dia gun grade mastic air seal to structure and panel; as per Detail 37 and Architects Drawing 23-16/TD-8016					
	Flashings					
B	Girth 750mm - 900mm; Horizontal	35	m			
	Flashing; Proprietary velux bottom flashing on bracket system, foam gasket at junction with flat roof covering; as per Detail 37 and Architects Drawing 23-16/ TD-8016					
	Flashings					
C	Girth 450mm - 600mm; Horizontal	35	m			
	CANOPY					
	ROOFING, CLADDING & WATERPROOFING					
	Rigid Sheet Coverings and Decking					
	IKO Prevent torch on bitumen roofing membrane on IKO system T-0 3mm torh on underlay on 18mm marine ply deck primed with IKOPRO bitumen primer fixed to tilting fillets on structural frame as per engineers specification and details; as per Detail 09 Architects Drawing 23-16/TD-8005					
	Roof coverings					
D	Horizontal; Area exceeding 300mm wide	12	m2			
	8-12mm Fibre cement rainscreen panels to select colour fixed to cladding rails as per manufactures instructions - Equitone Pictura range or similar or equal approved; as per Detail 09 Architects Drawing 23-16/TD-8005					
	Decking					
E	Horizontal; Area exceeding 300mm wide	16	m2			

					€	c
	(47) ROOF FINISHES (Cont)					
	Gutter - Continuous gutter with internal downpipe connected to external wall to discharge rainwater; as per Detail 09 Architects Drawing 23-16/TD-8005					
	Gutters					
A	Girth 150mm- 300mm; Preformed	3	m			
	Flat Roof abutment to wall / Parapet wall; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; include lead counter flashing, compatable VCL turned up wall behind PIR insulation; 75mm insulated angle fillets at upstands in accordance with manufactures recommendations; all as per Architects Drawing 23-16/TD-8005					
	Upstands; Flat Roof abutment to wall					
B	Girth: 150 - 300mm; including for dressing 50mm thick insulation face of upstand of parapet wall 260mm girth; roof membrane first layer 430mm girth and second layer 270mm girth as indicated; as per Detail 09 Architect's Drawing no. 23-16/ TD-8005	3	m			
	Flexible Sheet Metal Coverings					
	Lead counter flashing with patination oil treatment; as per Detail 09 and Architects Drawing 23-16/TD-8005					
	Flashings					
C	Girth 150mm - 300mm; Horizontal	3	m			
	2mm profiled aluminum coated pressed metal fascia to select RAL; as per Detail 09 and Architects Drawing 23-16/TD-8005					
	Flashings					
D	Girth 900mm - 1050mm; Horizontal	13	m			
	WOODWORK					
	Structural & First Fixings					
	Softwood; sawn; Battens; unplaned; vac-vac pressure treated with approved colour preservative; as per Detail 09 and Architects Drawing 23-16/TD-8005					
	Carcassing; Canopy					
E	50 X 35mm battens	12	m			

To Collection €

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	(47) ROOF FINISHES (Cont)					
A	75 X 35mm battens	6	m			
B	75 X 45mm battens	13	m			
C	100 X 45mm battens	6	m			
	Boarding & Second Fixings					
	STRUCTURAL PLYWOOD - 18mm thick marine plyboard; as per Detail 09 and Architects Drawing 23-16/TD-8005					
	Roofs; Laid to falls					
D	Exceeding 300mm	16	m2			
				To Collection €		

(47) ROOF FINISHES (Cont)

FLAT ROOF AREAS

ROOFING, CLADDING & WATERPROOFING

Mastic Asphalt, Waterproof and Gas proof & Non-Metal Flexible Sheet Coverings

Torch on bitumen roofing membrane systems (warm roof); Description: Paralon Total Warm Roof System or equivalent; Min. U-Value: 0.14 W/m#K; System performance: Ss_30_40_30/270 Durability; Ss_30_40_30/240 Thermal design; Ss_30_40_30/210 Roof covering design; Preparation; Horizontal work : Apply bitumen and tensioactive additive based primer compound, to cleaned dry cement based surfaces. Apply at a rate of 0.2 to 0.3 litres per M2. Allow to dry; Air and vapour control layer; Type: Reinforced Modified Bitumen; Manufacturer: Imper Italia or equivalent; Product reference: Parabase 3kg; Thickness: 2.5mm; Vapour resistance: 20,000; Attachment: Securely bond to substrate; Side and end laps: Side Laps 80mm, End Laps 150mm; Joints in second layer (where applicable): Stagger by half a membrane.Penetrations: Fully seal using bonding or taping methods recommended by manufacturer; Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like: Enclosed with vapour control layer: Dressed up sufficiently, providing 50 mm (minimum) seal when overlapped by the roof covering; or Turned back 150 mm (minimum) over the insulation and sealed down; Insulation; Type: Pr_25_71_63_66 Polyisocyanurate (PIR) foam boards Flat Roof Insulation; Fixing; Setting out; Long edges: Fully support and run at right angles; End edges: Adequately support; Joints: Butt together; End joints: Stagger; Bedding: Bonded in Moy Materials PU Insulation adhesive, installed in accordance with manufacturer's installation guidelines; Mechanical fixing: N/A; Protection to exposed edges of insulation: Install Galvanized steel flashing strip prior to application of waterproofing layers at changes in level; Completion: Boards must be in good condition, well-fitting and stable.

Waterproof covering; Waterproofing; Top Layer: Pr_25_57_08_75 Reinforced bitumen roofing sheets Top Layer; Base Layer Moy Paralon ARD/S Cap Sheet; Base Layer: Pr_25_57_08_75 Reinforced bitumen roofing sheets Top Layer & Base Layer Moy Paralon TOP/S Base Layer System accessories; Harmer AV400M Moy Materials Ltd. Cast Aluminum Anti Vortex Outlets, sized in accordance with project specific rainwater design calculations to BS EN 12056, cast in LM6 Aluminum Silicone Alloy to BS 1490:1988. Complete with clamping ring & leaf grille, sized and supplied by waterproofing system manufacturer and incorporated in total roof system warranty. Supply with continuously welded 600mm vertical spigot pipe. Flange must be recessed into the insulation board or sumped by a minimum of 30mm; Moy Flex Joint EP20 / EP40 Expansion joint strip to any expansion joints; Moy Lite Anchor lightning tape clips; Moy PP3 and Roof Nek Cable penetration devices; Moy Walkway Roll to walkways and high traffic zones and ladder step down points; Execution: Ss_30_40_30/732 Laying reinforced bitumen membranes (generally); System completion: Issue Moy Materials Ltd warranty upon satisfactory final inspection by Moy Materials Ltd Ss_30_40_30/890 Verification of performance; Ss_30_40_30/810 Inspection of completed work; Ss_30_40_30/830 Electronic roof integrity test; as per Architects Specification Ss_30_40_30_72

Roofing; laid to falls

A	Area exceeding 300mm	263	m2			

To Collection €

					€	c
	(47) ROOF FINISHES (Cont)					
A	Extra over for approved non-combustable stone ballast below PV panels to specialist design, 30mm depth & resin bonded; as per Architects Drawing 23-16/ TD-8011 and Detail 29	94	m2			
B	Extra over for metal perimeter angle to ballast; as per Architects Drawing 23-16/TD-8011 and Detail 29	45	m			
	Flat Roof abutment to wall / Parapet wall; Minimum 80mm cold bridge insulation carried up face of upstand of wall; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; include lead counter flashing, compatable VCL turned up wall behind PIR insulation; 75mm insulated angle fillets at upstands in accordance with manufactures recommendations; all as per Architects Drawing 23-16/TD-8009					
	Upstands; Flat Roof abutment to parapet					
C	Girth: 1200 - 1350mm; including for dressing vapour control membrane 360mm girth, 80mm thick insulation face of upstand of parapet wall 1080mm girth; roof membrane first layer 1150mm girth and second layer 1270mm girth as indicated; as per Detail 25 Architect's Drawing no. 23-16/TD-8009; as per Architects Specification Ss_30_40_30_72	67	m			
	Flat Roof abutment to wall / Parapet wall; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; include lead counter flashing, compatable VCL turned up wall behind PIR insulation; 75mm insulated angle fillets at upstands in accordance with manufactures recommendations; all as per Architects Drawing 23-16/TD-8011					
	Upstands; Flat Roof abutment to wall					
D	Girth: 300 - 450mm; including for dressing vapour control membrane 360mm girth, roof membrane first layer 300mm girth and second layer 310mm girth as indicated; as per Detail 26 Architect's Drawing no. 23-16/TD-8011; as per Architects Specification Ss_30_40_30_72	34	m			

To Collection €

(47) ROOF FINISHES (Cont)

Access hatch; Minimum 150mm insulation carried up face of upstand of wall and 30mm insulation top of upstand; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; including 3mm polyester powder coated aluminum insulated apron flashing with DPC backing & air tightness; all fixed to structural steel (measured elsewhere); all as per Architects Drawing 23-16/ TD-8010

Kerbs

A	Girth 450 - 600mm; including for dressing vapour control membrane 240mm girth, 150mm thick insulation face of upstand of wall 540mm girth and 30mm thick top of upstand 330mm girth; roof membrane first layer 560mm girth and second layer 440mm girth as indicated; as per Detail 25 Architect's Drawing no. 23-16/ TD-8010; as per Architects Specification Ss_30_40_30_72	5	m		

Solar Panel mounts fixed to roof finish; selected proprietary mount fitted to Manufacturer's Specifications; liquid applied waterproof coating consisting of reinforced base coat and protection top coat; include for solar mounting unit; baseplate; solar weld patch; fixed down to roof and structure (measured elsewhere); including all flashings, weatherings, coverings etc; as specified with the roofing system; all to Manufacturer's and Architect's instructions and Drawings

Mounts

B	Generally	108	nr		

RWDP pipes penetrating the roof; selected proprietary weather collar to RWDP fitted to Manufacturer's Specifications over top of skirt and soaker; one layer of door and window weatherstrips and seals 900mm girth as indicated; second layer of insect guard mesh 430mm girth; preformed outlet as part of gutter system fully sealed and jointed to gutter; Custom made preformed removable PVDF-coated aluminum cover finish and colour to match RDP; Removable section of downpipes snugly fitting scupper outlet, to guide water to hopper below; fixing to bedded brackets at centers to manufacturers specification; Air tightness membrane to be fully closed and sealed around structural elements. All fixing and punctures to be closed with system-approved self-closing tape to manufacturers instruction; including all flashings, weatherings, coverings etc; as specified with the roofing system; all to Manufacturer's and Architect's instructions and Drawing

Collars around pipes, standards and the like

C	Generally	6	nr		

To Collection €

					€	c
	(47) ROOF FINISHES (Cont)					
	Flat roof outlets; 150mm dia harmer roof AV aluminum flat roof outlets to all flat roof area with raised grate and tamper proof fixings; as per Architects Drawing 23-16/TD-1007					
	Like Items; Outlets					
A	Generally	3	nr			
	Flexible Sheet Metal Coverings					
	3mm Polyester powder coated aluminum insulated apron flashing; as per Detail 25 and Architects Drawing 23-16/TD-8010					
	Flashings					
B	Girth 450mm - 600mm; Horizontal	5	m			
	WOODWORK					
	Ironmongery, Accessories and Sundries					
	Polyisocyanurate (PIR) foam boards Flat Roof Insulation; Description: Flat roof insulation to all bitumen flat roofs installed as per system requirements; Manufacturer: Kingspan Insulation or Equivalent; Product reference; Fire performance: Reaction to fire: Roof Assembly Value B Roof T4; Facing: Lower Board # Glass Tissue / Upper Board # Bitumen Facer; Edges: Square; as per Architects Specification Pr_25_71_63_66					
	Insulation; Thermal					
C	Exceeding 300mm	263	m2			
				To Collection €		

(47) ROOF FINISHES (Cont)

TERRACE

ROOFING, CLADDING & WATERPROOFING

Mastic Asphalt, Waterproof and Gas proof Non-Metal Flexible Sheet Coverings

Torch on bitumen roofing membrane systems (warm roof); Description: Paralon Total Warm Roof System or equivalent; Min. U-Value: 0.14 W/m#K; System performance: Ss_30_40_30/270 Durability; Ss_30_40_30/240 Thermal design; Ss_30_40_30/210 Roof covering design; Preparation; Horizontal work : Apply bitumen and tensioactive additive based primer compound, to cleaned dry cement based surfaces. Apply at a rate of 0.2 to 0.3 litres per M2. Allow to dry; Air and vapour control layer; Type: Reinforced Modified Bitumen; Manufacturer: Imper Italia or equivalent; Product reference: Parabase 3kg; Thickness: 2.5mm; Vapour resistance: 20,000; Attachment: Securely bond to substrate; Side and end laps: Side Laps 80mm, End Laps 150mm; Joints in second layer (where applicable): Stagger by half a membrane.Penetrations: Fully seal using bonding or taping methods recommended by manufacturer; Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like: Enclosed with vapour control layer: Dressed up sufficiently, providing 50 mm (minimum) seal when overlapped by the roof covering; or Turned back 150 mm (minimum) over the insulation and sealed down; Insulation; Type: Pr_25_71_63_66 Polyisocyanurate (PIR) foam boards Flat Roof Insulation; Fixing; Setting out; Long edges: Fully support and run at right angles; End edges: Adequately support; Joints: Butt together; End joints: Stagger; Bedding: Bonded in Moy Materials PU Insulation adhesive, installed in accordance with manufacturer's installation guidelines; Mechanical fixing: N/A; Protection to exposed edges of insulation: Install Galvanized steel flashing strip prior to application of waterproofing layers at changes in level; Completion: Boards must be in good condition, well-fitting and stable.

Waterproof covering; Waterproofing; Top Layer: Pr_25_57_08_75 Reinforced bitumen roofing sheets Top Layer; Base Layer Moy Paralon ARD/S Cap Sheet; Base Layer: Pr_25_57_08_75 Reinforced bitumen roofing sheets Top Layer & Base Layer Moy Paralon TOP/S Base Layer System accessories; Harmer AV400M Moy Materials Ltd. Cast Aluminum Anti Vortex Outlets, sized in accordance with project specific rainwater design calculations to BS EN 12056, cast in LM6 Aluminum Silicone Alloy to BS 1490:1988. Complete with clamping ring & leaf grille, sized and supplied by waterproofing system manufacturer and incorporated in total roof system warranty. Supply with continuously welded 600mm vertical spigot pipe. Flange must be recessed into the insulation board or sumped by a minimum of 30mm; Moy Flex Joint EP20 / EP40 Expansion joint strip to any expansion joints; Moy Lite Anchor lightning tape clips; Moy PP3 and Roof Nek Cable penetration devices; Moy Walkway Roll to walkways and high traffic zones and ladder step down points; Execution: Ss_30_40_30/732 Laying reinforced bitumen membranes (generally); System completion: Issue Moy Materials Ltd warranty upon satisfactory final inspection by Moy Materials Ltd Ss_30_40_30/890 Verification of performance; Ss_30_40_30/810 Inspection of completed work; Ss_30_40_30/830 Electronic roof integrity test; as per Architects Specification Ss_30_40_30_72

Roofing; laid to falls

A	Area exceeding 300mm	31	m2			

To Collection €

					€	c
	(47) ROOF FINISHES (Cont)					
A	Extra over for pea gravel; as per Detail 07 Architects Drawing 23-16/TD-8004	4	m2			
B	Extra over for revealing angle; as per Detail 07 Architects Drawing 23-16/ TD-8004	15	m			
	Flat Roof abutment to wall / Parapet wall; Minimum 30mm cold bridge insulation carried up face of upstand of wall; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; include lead counter flashing, compatable VCL turned up wall behind PIR insulation; 75mm insulated angle fillets at upstands in accordance with manufactures recommendations; all as per Architects Drawing 23-16/TD-8004					
	Upstands; Flat Roof abutment to parapet					
C	Girth: 300 - 450mm; including for dressing vapour control membrane 390mm girth, 30mm thick insulation face of upstand of parapet wall 380mm girth; roof membrane first layer 260mm girth and second layer 260mm girth as indicated; as per Detail 07 Architect's Drawing no. 23-16/TD-8004; as per Architects Specification Ss_30_40_30_72	15	m			
	Flat Roof abutment to wall / Parapet wall; Minimum 90mm cold bridge insulation carried up face of upstand of wall; Minimum two layer bitumen warm deck roof covering taken up wall; Polyester reinforced on insulation on suitable vapour control membrane; include for Base sheet: Top S 3mm polyester reinforced A.P.P. modified bitumen base sheet membrane fully torch bonded to suitable insulation with 100mm side and 150mm end laps; Roofing manufacturer approved 3kg vapour control layer loose laid with minimum 80mm side and 150mm end laps; sealed and detailed to envelope insulation board fixed in accordance with manufacturers recommendations and the specification; include lead counter flashing, compatable VCL turned up wall behind PIR insulation; 75mm insulated angle fillets at upstands in accordance with manufactures recommendations; all as per Architects Drawing 23-16/TD-8004					
	Upstands; Flat Roof abutment to wall					
D	Girth: 150 - 300mm; including for dressing vapour control membrane 260mm girth, 90mm thick insulation face of upstand of parapet wall 260mm girth; roof membrane first layer 170mm girth and second layer 180mm girth as indicated; as per Detail 10 Architect's Drawing no. 23-16/TD-8004; as per Architects Specification Ss_30_40_30_72	15	m			

To Collection €

					€	c
	(47) ROOF FINISHES (Cont)					
	Flexible Sheet Metal Coverings					
	3mm Polyester powder coated aluminum flashing; as per Detail 07 and Architects Drawing 23-16/TD-8004					
	Flashings					
A	Girth not exceeding 150mm; Horizontal	15	m			
	WOODWORK					
	Ironmongery, Accessories and Sundries					
	Polyisocyanurate (PIR) foam boards Flat Roof Insulation; Description: Flat roof insulation to all bitumen flat roofs installed as per system requirements; Manufacturer: Kingspan Insulation or Equivalent; Product reference; Fire performance: Reaction to fire: Roof Assembly Value B Roof T4; Facing: Lower Board # Glass Tissue / Upper Board # Bitumen Facer; Edges: Square; as per Architects Specification Pr_25_71_63_66					
	Insulation; Thermal					
B	Exceeding 300mm	31	m2			
	SURFACE PAVING, FENCING AND LANDSCAPING					
	Pre-formed Paving and Edging Units					
	Granite Paving Flags 600 x 450 x 32mm on bauder slope correcting pedestal on thermaroof (measured elsewhere); Paviors on IKO Ultra prevent 600 x 450 x 32mm concrete paving slab manufactured to BS 1388:2003 with extremely low slip potential (>75 USRV), square edge, colour and surface finish to be selected by architect on IKO ETERNO adjustable paving slab supports with self levelling head on IKO Ultra prevent as above; as per Architects Drawing 23-16/TD-1007					
	Paving					
C	Exceeding 300mm wide	31	m2			

					€	c
	(47) ROOF FINISHES (Cont)					
	SOFFITS					
	ROOFING, CLADDING & WATERPROOFING					
	Rigid Sheet Coverings and Decking					
	CT 11; 8-12mm fibre cement panels to select colour - Equitone or Similar or equal approved; as per Architects Drawing 23-16/TD-5101 to 5102					
	Decking					
A	Exceeding 300mm; Horizontal	15	m2			
	Metal flashing drip piece mechanically fixed to underside of supporting angle and flashed down over cladding; As per Architect's Detail Drawing 23-16/TD-8005					
	Flashing					
B	Girth not exceeding 150mm, one times bent; all to Architect's Drawings	16	m			
				To Collection €		

(47) ROOF FINISHES (Cont)

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(47) ROOF FINISHES
Carried to Summary

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING					
	(10) DEMOLITION & ALTERATIONS					
	ALTERATIONS					
	GENERAL					
A	1. THE ONUS IS ON THE CONTRACTOR TO VISIT THE SITE OF THE WORKS AND TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF THE WORKS AND ALL OTHER MATTERS THAT MIGHT INFLUENCE HIS PRICE OR TIME FOR COMPLETION OF THE WORKS (ARRANGEMENTS TO VISIT THE SITE SHOULD BE MADE WITH THE EMPLOYERS REPRESENTATIVE). THE CONTRACTOR MUST INCLUDE WITHIN HIS PRICE FOR ALL WORKS IN CONNECTION WITH THE DEMOLITION WORKS AND WORKS TO THE EXISTING BUILDINGS, WHICH COULD BE REASONABLY FORESEEN OR IMPLIED BY THE TENDER DOCUMENTS. NO CLAIMS ON THE GROUNDS OF WANT OF KNOWLEDGE IN RESPECT OF THE ABOVE WILL BE ENTERTAINED WHATSOEVER.		Note			
	Alterations					
	Plumbing and Engineering Installations					
	Mechanical removals and disconnections necessary to facilitate the installation of all modification to existing mechanical systems within the existing plantroom; The Contractor shall carry out all isolations, disconnections, removals, and disposals in a safe and controlled manner, in full compliance with current Health, Safety & Environmental legislation, and local authority requirements; Coordinate all service shutdowns with the School and obtain written approval prior to any disruption of existing services; Remove redundant mechanical plant, pipework, ductwork, controls, and accessories as detailed and shown on the drawings; Make safe and cap off all live services to the satisfaction of the Engineer; Dispose of all redundant materials off-site to an approved licensed waste facility; Allow for all necessary temporary disconnections, isolations, access, protection, and reinstatement works as part of the removals scope; all in accordance with the Mechanical specification					
B	Remove all existing 65mm MDPE pre-insulated flow and return pipework, including valves, fittings, insulation, and all associated supports serving 2012 extension; Cut back and cap existing circuits as required to facilitate connection of new pipework, ensuring all terminations are left safe, clean, and properly sealed; Allow for all labour, access, isolation, and making good to complete the works in full compliance with the specification; complete; all in accordance with Mechanical specification and Drawing 2999-SMK-ZZ-XX-DR-M-5001	1	Item			
C	Remove all existing 50mm LPHW and return pipework, including valves, fittings, insulation, and all associated supports serving 2012 extension; Cut back and cap existing circuits as required to facilitate connection of new pipework, ensuring all terminations are left safe, clean, and properly sealed; Allow for all labour, access, isolation, and making good to complete the works in full compliance with the specification; complete; all in accordance with Mechanical specification and Drawing 2999-SMK-ZZ-XX-DR-M-5001	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	Isolate, disconnect and remove 2 No. existing gas-fired sectional boilers complete with associated burners, including all flue connections, valves, fittings, supports, and ancillary components; Make safe all associated gas, water, and electrical connections; dispose of all redundant materials off-site to a licensed waste facility in accordance with current environmental legislation and regulations; Allow for all access, lifting, and making good to all surrounding finishes; complete	1	Item			
B	Remove and dispose off-site of all existing gas boiler flues in full, from boiler connection to termination point, including removal of all associated brackets, supports, flashings, and weathering details; make good all affected building fabric and finishes following removal to match existing, ensuring all external penetrations are properly sealed and weatherproofed; allow for all access, lifting, and reinstatement works; complete	1	Item			
C	Remove all existing primary LPHW flow and return pipework, including headers, valves, fittings, insulation, and all associated supports within the Plantroom; Cut back and cap existing circuits as required to facilitate connection of new pipework and headers, ensuring all terminations are left safe, clean, and properly sealed; Allow for all labour, access, isolation, and making good to complete the works in full compliance with the specification; complete	1	Item			
D	Isolate, disconnect, and remove existing gas service pipework within the Plantroom, up to and including the existing slam-shut valve, including all associated fittings, supports, insulation, and valves; Ensure all gas lines are safely purged, capped, and sealed in accordance with relevant gas safety regulations; Dispose of redundant materials off-site to a licensed waste facility; make good all affected areas upon completion of works; complete	1	Item			
E	Remove and dispose off-site all redundant electrical power isolators, containment, cabling, and wiring associated with decommissioned mechanical plant and equipment within the Plantroom; Ensure all electrical circuits are safely isolated, terminated, and made safe in accordance with ET101:2020 - National Rules for Electrical Installations; Dispose of all redundant materials to a licensed waste facility; make good all disturbed surfaces and finishes to match existing; complete	1	Item			
F	Remove all existing heating controls, field devices, control wiring, and containment associated with redundant mechanical systems within the Plantroom; Ensure all control circuits are safely isolated, terminated, and made safe in accordance with current regulations and project requirements; Dispose of all redundant materials off-site to a licensed waste facility; make good all disturbed areas and finishes to match existing; complete	1	Item			
G	Isolate, disconnect, dismantle, and remove 1 No. existing gas-fired storage water heater, including all associated pipework, valves, fittings, insulation, and flue connections; Ensure all gas, water, and electrical supplies are safely isolated and capped in accordance with current safety regulations; Dispose of all redundant equipment and materials off-site to a licensed waste facility; make good all affected surfaces and penetrations to match existing; complete	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	Isolate, disconnect, dismantle, and remove 2 No. existing DHW buffer tanks, complete with all associated pipework, valves, fittings, supports, and insulation within the Plantroom; Ensure all services are safely isolated and capped in accordance with current safety standards; Dispose of all redundant equipment and materials off-site to a licensed waste facility; make good all disturbed areas, supports, and finishes to match existing; complete	1	Item			
B	Isolate, disconnect, dismantle, and remove 2 No. existing expansion vessels, complete with all associated brackets, valves, fittings, and supports within the Plantroom; Ensure all connections are safely isolated, drained, and capped in accordance with current safety and environmental regulations; Dispose of all redundant vessels and associated materials off-site to a licensed waste facility; make good all disturbed areas, supports, and finishes to match existing; complete	1	Item			
C	Remove all existing primary plumbing pipework within the Plantroom, including Mains Water Supply (MWS), Cold Water Supply (CWS), Hot Water Supply (HWS), and Hot Water Return (HWR) services, together with all associated valves, fittings, insulation, and supports; Cut back and cap existing pipework as required to facilitate the installation of new systems, ensuring all terminations are left safe, clean, and properly sealed; Dispose of all redundant materials off-site to a licensed waste facility; make good all affected areas and supports to match existing; complete	1	Item			
D	Allow for the safe handling, removal, transportation, and disposal of all redundant mechanical plant, equipment, pipework, and materials off-site to an approved licensed waste disposal facility, in full compliance with current environmental and waste management legislation; Include for the segregation and recycling of materials where practicable and the provision of all necessary waste transfer and disposal certificates as part of the project handover documentation; complete	1	Item			
E	Allow for making good all disturbed finishes, penetrations, supports, and building fabric resulting from mechanical removal and installation works. Include for the repair, sealing, and reinstatement of all affected walls, floors, ceilings, and service supports to match existing finishes and fire-resistance ratings where applicable; All reinstatement works shall be carried out to a high standard of workmanship and in accordance with the architectural and fire-stopping requirements of the project specification; complete	1	Item			
	Notes					
F	The tendering Contractors are referred to ARM 4 Supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		note			
G	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		note			
				To Collection €		

(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)

A Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings, will be carried out by the Works Specialist under the terms of the main contract. The Mechanical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist. | | note | | |

ALTERNATIVE RULES FOR THE MEASUREMENT OF MECHANICAL INSTALLATIONS

(51) HEATING CENTRE - EXISITING PLANT ROOM

System

Heating centre installation, testing and commissioning; complete; The Contractor shall include for the supply, installation, testing and commissioning of a complete new LPHW Heating Plantroom as indicated on the design drawings and described in the specification; The heating system shall be flushed and provided with appropriate chemical treatment; The contractor shall provide, prior to handover, a commissioning certificate to confirm that correct treatment has been carried out; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 5; Part 2; Part 3; Part 4, Section 1 and Drawings 2999-SMK-ZZ-LL-DR-M-5151

Primary Equipment

Boiler; supply and installation complete; Type: Wall-mounted boiler cascade arrangement; Fuel: Natural gas; LPHW Flow & Return Operating Temps: 70/65°C; Duty: Nominal heat output at 80/60°C: 155.5kW; Rated heat input: 1.8KW; Modulation Ratio: 7.5:1; Gas Consumption: 6.8m3/h (G20); Gas Supply Pressure: 20mbar; Size: 690mm (W) x 1050mm (H) x 675mm (D); Flue connection: 100mm diameter; Air Inlet connection: 150mm diameter; Condensate drain: 35 mm; Heat Exchanger Material: Stainless Steel; Full Load Efficiency (100%): 98.2%; Maximum working pressure: 6.0 bar; Water content: 21.3 litres; Sound Power level at 1m, full load: 67 dB(A); NOx Level (EN 15502) GCV: 22.6mg/kWh; Power supply: 1ph/230V/50hz; Electrical consumption (full load / boiler): 464 W; Shunt Pump Control: 0 - 10V; Accessories: Weather compensated cascade controller and north facing sensor, Main Flow & Return Header & Gas Header pipework, Pump group connections and modulating pump (per boiler), Low Loss Header, Boiler Piping Set, Manifold configuration supports, Pre-formed Rigid Insulation for Header Pipework, Immersion Sensor Pocket, EA1 connection module and VFC required for connection to the BMS for Enable/Fault; Warranty: 2 years parts and labour; include for all accessories and wall mounting brackets; all in strict accordance with the Mechanical Specification Part 4, Section 1.3

B Boiler; Ref: BLR-02 - BLR-04; Location: Existing Plant Room | 3 | nr | | |

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Buffer Vessel; supply and installation complete; Direct Heating Vertical Buffer Vessel; Storage Capacity: 2000lt; Material: Mild Steel Construction with exterior paint; Insulation: Hard Polyurethane Foam High Thermal Insulation to ErP class B or C; Max Storage Temperature: 99°C; Max Working Pressure: 3.0 bar; Heating Coils: Not Required; Electric Immersion: 6kW; Typical Dimensions: 1320mm dia x 2565mm h; Warranty: 5 years; Accessories: Temperature Gauge, Pressure Gauge, Temp/Pressure, safety Valve & tundish, Immersion Pockets 200mm deep (min), connecting kit; include for all accessories; all in strict accordance with the Mechanical Specification Part 4, Section 1.2					
A	Buffer Vessel; Ref: BUF-02, Location: Existing Plant room	1	nr			
	Accessories associated with Primary Equipment					
	Isolation valves; for isolation of LPHW pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	22mm Isolation Valves	2	nr			
C	32mm Isolation Valves	14	nr			
D	50mm Isolation Valves	9	nr			
E	65mm Isolation Valves	12	nr			
F	100mm Isolation Valves	21	nr			
G	125mm Isolation Valves	2	nr			
	Lock shield valves; for isolation of LPHW pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	22mm LSV Valves	2	nr			
	Auto air vent valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
J	32mm AAV Valves	2	nr			
K	65mm AAV Valves	2	nr			
	Non-return Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
L	22mm NRV Valves	3	nr			
M	32mm NRV Valves	2	nr			
N	50mm NRV Valves	1	nr			
P	65mm NRV Valves	1	nr			

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	100mm NRV Valves	4	nr			
B	125mm NRV Valves	1	nr			
C	150mm NRV Valves	6	nr			
	Strainer valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	32mm STR Valves	2	nr			
E	50mm STR Valves	1	nr			
F	65mm STR Valves	2	nr			
G	100mm STR Valves	2	nr			
	Test point valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	80mm test point valves	2	nr			
J	90mm test point valves	2	nr			
	Drain Cock Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
K	Drain Cock Valves to 100mm header pipes	2	nr			
L	Drain Cock Valves to 150mm header pipes	2	nr			
	Safety Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
M	100mm Safety Valve	1	nr			
N	Safety Valve to Buffer Vessel	1	nr			
	Double regulating valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
P	150mm DRV Valves	1	nr			
	Commissioning sets; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
Q	32mm Commissioning set	2	nr			
R	50mm Commissioning set	1	nr			
S	65mm Commissioning set	2	nr			
T	100mm Commissioning set	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Pressure Differential By-Pass Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	32mm Pressure Differential By-Pass valves	2	nr			
B	50mm Pressure Differential By-Pass valves	1	nr			
C	65mm Pressure Differential By-Pass valves	2	nr			
D	100mm Pressure Differential By-Pass valves	1	nr			
	Blank End Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	50mm Blank end valves	2	nr			
F	100mm Blank end valves	2	nr			
G	150mm Blank end valves	4	nr			
	2-port motorised Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	32mm 2-port motorised Valves	2	nr			
J	50mm 2-port motorised Valves	1	nr			
K	65mm 2-port motorised Valves	2	nr			
L	100mm 2-port motorised Valves	2	nr			
	Temperature Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
M	32mm Temperature Sensor	4	nr			
N	50mm Temperature Sensor	2	nr			
P	65mm Temperature Sensor	4	nr			
Q	100mm Temperature Sensor	6	nr			
R	125mm Temperature Sensor	2	nr			
S	150mm Temperature Sensor	2	nr			
T	Temperature Sensor to Buffer Vessel	1	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	High Pressure Switch; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	High Pressure Switch to Pressurisation Unit	1	nr			
	Low Pressure Switch; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section2					
B	Low Pressure Switch to Pressurisation Unit	1	nr			
	High Limit Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	100mm High Limit Sensor	1	nr			
D	150mm High Limit Sensor	1	nr			
	Pressure Gauge; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	32mm Pressure Gauge	4	nr			
F	50mm Pressure Gauge	2	nr			
G	65mm Pressure Gauge	4	nr			
H	100mm Pressure Gauge	4	nr			
J	125mm Pressure Gauge	2	nr			
K	Pressure Gauge to Buffer Vessel	1	nr			
	Temperature Gauge; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
L	32mm Temperature Gauge	4	nr			
M	50mm Temperature Gauge	2	nr			
N	65mm Temperature Gauge	4	nr			
P	100mm Temperature Gauge	6	nr			
Q	125mm Temperature Gauge	2	nr			
R	150mm Temperature Gauge	2	nr			
S	Temperature Gauge to Buffer Vessel	1	nr			
				To Collection €		

	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Immersion Frost Thermostat; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.4.2					
A	Immersion Frost Thermostat	1	nr			
	Outside Air Temperature Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.4.3					
B	Outside Air Temperature Sensor	1	nr			
	Outside Frost Thermostat; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.4.4					
C	Outside Frost Thermostat	1	nr			
	Flexible connections; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	32mm Flexible connections	4	nr			
E	50mm Flexible connections	2	nr			
F	65mm Flexible connections	4	m			
G	80mm Flexible connections	2	nr			
H	100mm Flexible connections	5	nr			
	Electrical Radiator; oil filled radiator; white stove enamel finish; Dimensions: 1084mm lenght x 659mm height; minimum output: 1.5kw; Weight; 20kg; Controls; Remote Frost Thermostat c/w wall mounting brackets; include for all accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 1.10					
J	Oil filled electric radiator	1	nr			
	Pumps; supply and installation; complete; Type: single head/Twin head in-line pump c/w integral variable speed drives & BMS connectivity; Pump Housing Material: Cast iron; Impeller Material: Composite; Maximum Operating Pressure: 10 bar; Pressure rating: PN10; Electrical Requirements: 1phase / 230V / 50 Hz; Enclosure Class: X4D; Insulation Class: F; Energy Efficiency Index (EEI): 0.18; On-board VSD: Required; Volt Free Contacts: Required for BMS enable/fault; Differential Pressure Transducer Kit for sealed circuits: Required; c/w flexible connections, test points; include for all fixings, anti vibration mounts and brackets; all in strict accordance with the Mechanical Specification Part 4, Section 1.5					
K	Pump Ref: PMP-06; Single head inline pump; Flow rate: 6.7Kg/s; Head: 55kPa; Motor: 0.5kW; Complete	1	nr			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	Pump Ref: PMP-07; Twin head inline pump; Flow rate: 8.2Kg/s; Head: 55kPa; Motor: 0.5kW; Complete	1	nr			
B	Pump Ref: PMP-08; Single head inline pump; Flow rate: to match existing + 1kg/s; Head: to matchexisting + 90kPa; Complete	1	nr			
C	Pump Ref: PMP-09; Single head inline pump; Flow rate: to match existing; Head: to match existing; Complete	1	nr			
D	Pump Ref: PMP-10; Single head inline pump; Flow rate: to match existing; Head: to match existing; Complete	1	nr			
E	Pump Ref: PMP-11; Single head inline pump; Flow rate: to match existing; Head: to match existing; Complete	1	nr			
F	Pump Ref: PMP-12; Single head inline pump; Flow rate: to match existing; Head: to match existing; Complete	1	nr			
	Pressurisation Unit; supply and installation; complete; Type: Floor Standing LPHW Pressurisation Unit & Expansion Vessels; Pumps: 2no.; Heating Load (kW): 500; Static Head (m): 6.0; Approx System Water capacity (litres): 7200; F/R Temperaturer: 70/65°C; Press Unit Dimensions (mm): 470 (W) x 332 (D) x 832 (H); Breaktank Capacity: 17.5lts; Breaktank Connection: 'AB' air gap to water supply; Max Cold Fill Pressure: 4.0 Bar; Connectivity: Volt Free Contacts required for High/Low level fault output to BMS via Volt Free Contacts; Digital Display: Required; Independent High / Low Pressure Alarm: Hard-wired; Auto Fill Capacity: Required; Power Supply: 1ph, 240V, 50 Hz; Power Consumption: 0.41kW/1.9A; Standards/ Conformity: ISO 9001, BSEN 60204 Part 1, WRAS approved, IMQ & VDE, Standards, PED, EMC, Directives, CE, UKCA; Expansion Vessel: To be confirmed by Mechanical Contractor based on parameters, Max. Working Pressure: 10bar; c/w isolation valve; lock shield valve, stainer on pump; pressure gauge; air relief valve, pressure relief valve, control panel, pump test button; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.6					
G	Pressurisation Unit; Ref: PRU-01; Location: Plant room	1	nr			
	Chemical dosing pot; supply and installation; complete; Description: Chemical Dosing Pot; Application: LPHW Heating System; Capacity; 11 litres; Construction: Stainless steel; Mounting: Wall mounted c/w wall mounting brackets; Tundish, 25mm fill valved connection, 25mm drain valved connection, 25mm flow valved connection, 25mm return valved connection, Air vent; Connection Sizes: 25 mm; Typical Height: 865mm; Typical Diameter: 320mm; Weight; 16.3kg; include for all accessories; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.7					
H	Chemical dosing pot	1	nr			

To Collection €

(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)

Air seperator; supply and installation; complete; Application: LPHW Heating System; Construction: Mild steel, flanged; Mounting: Inline; Finish: Powder coated; Max. flow velocity: 1.5 m/s; Pressure drop at Max. Flow: 4.2 kPa; Auto Air Vent: Integral; Typical Height: 700mm; Typical Length: 650 mm; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.8

A	Air seperator; Connection size: DN 125	1	nr		

Magnetic dirt seperator; supply and installation; complete; Application: LPHW Heating System; Construction: Mild steel, flanged; Mounting: Inline; Finish: Powder coated; Max. flow velocity: 1.5 m/s; Pressure drop at Max. Flow: 4.2 kPa; Typical Height: 690mm; Typical Length: 635mm; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.9

B	Dirt seperator; Connection size: DN 125	1	nr		

Expansion Vessel; supply and installation; complete; Capacity: 1000 litres; include for all accessories, fixings and mounting brackets; complete; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4

C	Expansion Vessel	1	nr		

Exhaust Flue; supply and installation; complete; Type: Horizontal Balanced Flue Kit; Inner/Outer Diameter: 100/160mm (Contractor to confirm with Boiler specialist prior to order); Construction Inner: 304 grade s/steel (EN 1.4301); Construction Outer: Powder Coated Steel; Insulation Thickness: 50mm; Fire Rating: 2 hours (BS 476: Part 20); Minimum Clearance to Combustible Material: 50mm; Terminal Type: Suitable for Horizontal discharge; Support Brackets-Int. Use: Powder-coated, 304 grade stainless steel; External wall terminal kit: Required; Accessories: Back draught shutter, End piece to be fitted with a condensate drain; include for all accessories, fittings and fire stopping; complete; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.4

D	Boiler flue; 100/160mm diameter exhaust flue	2	nr		
E	Boiler flue; 360mm diameter exhaust flue	1	nr		

Heat meter; supply and installation; complete; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 1, Section 14.6.15

F	Heat Meter	8	nr		

Hydraulic low loss header; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

G	Hydraulic low loss header	1	nr		

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Distribution					
	Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5001					
A	140mm ID/ 202mm OD diameter pipework	1	Item			
	Medium Grade Black Mild steel pipework and fittings; include for all fixings and supports; include for all elbows, expansion bellows; unions and tees necessary to complete the work, all pipework up to 50mm to be screw joints, pipework above 50mm to be welded, plant room pipework to be flanged; all connections to valves shall be screwed; Painting: two coat of zinc chromate primer prior to fitting of insulation; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1					
B	15mm diameter pipework	1	Item			
C	22mm diameter pipework	1	Item			
D	25mm diameter pipework	1	Item			
E	32mm diameter pipework	1	Item			
F	35mm diameter pipework	1	Item			
G	40mm diameter pipework	1	Item			
H	50mm diameter pipework	1	Item			
J	65mm diameter pipework	1	Item			
K	80mm diameter pipework	1	Item			
L	90mm diameter pipework	1	Item			
M	125mm diameter pipework	1	Item			
N	100mm diameter header pipework	1	Item			
P	150mm diameter header pipework	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Insulation					
	Foiled faced fibreglass insulation; to all new pipework services; class A1, CFC and HCFC free with ozone depletion factor of zero; Thermal conductivity not exceeding 0.042W/m2K at 100°C; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 5.5					
	Insulation, 20mm thick					
A	to 15mm diameter pipework	1	Item			
	Insulation, 25mm thick					
B	to 22mm diameter pipework	1	Item			
C	to 25mm diameter pipework	1	Item			
	Insulation, 40mm thick					
D	to 32mm diameter pipework	1	Item			
E	to 35mm diameter pipework	1	Item			
F	to 40mm diameter pipework	1	Item			
G	to 50mm diameter pipework	1	Item			
H	to 65mm diameter pipework	1	Item			
J	to 80mm diameter pipework	1	Item			
K	to 90mm diameter pipework	1	Item			
L	to 125mm diameter pipework	1	Item			
M	to 100mm diameter header pipework	1	Item			
N	to 150mm diameter header pipework	1	Item			
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
P	General Valves & Plant	1	Item			
	Aluminium Cladding; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
Q	to 15mm diameter pipework	1	Item			
R	to 22mm diameter pipework	1	Item			
S	to 25mm diameter pipework	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	to 32mm diameter pipework	1	Item			
B	to 35mm diameter pipework	1	Item			
C	to 40mm diameter pipework	1	Item			
D	to 50mm diameter pipework	1	Item			
E	to 65mm diameter pipework	1	Item			
F	to 80mm diameter pipework	1	Item			
G	to 90mm diameter pipework	1	Item			
H	to 125mm diameter pipework	1	Item			
J	to 100mm diameter header pipework	1	Item			
K	to 150mm diameter header pipework	1	Item			
L	to General Valves & Plant	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
M	Testing and commissioning	1	Item			
N	Testing, chemical dosing, sterilization and certification of all systems	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
P	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
Q	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
R	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
S	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
T	Identification plates, labels and the like	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Maintenance; all in accordance with Engineers Specification					
A	The Contractor shall provide for full servicing of all boiler plant before handover and again before the end of the defects period	1	Item			
B	The Contractor shall provide for full servicing of the Air Source Heat Pumps before handover and again before the end of the defects period	1	Item			
C	The Contractor shall provide for full servicing of the pressurisation units before handover and again before the end of the defects period	1	Item			
	(51) HEATING CENTRE - 2012 EXTENSION HEATING MAINS REPLACEMENT					
	System					
	Heating mains replacement for 2012 extension installation, testing and commissioning; The works comprise the removal of existing 65mm flow and return pre-insulated MDPE heating pipework and the installation of new 2 no. 63 ID / 126 OD pre-insulated steel heating mains to supply the 2012 building extension; all in strict accordance with the Mechanical Engineers Specifications and Drawing 2999-SMK-ZZ-XX-DR-M-5001					
	Distribution					
	Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5001					
D	63mm ID/ 126mm OD diameter pipework	1	Item			
	Insulation					
	Aluminium Cladding; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
E	to 126mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
F	Testing and commissioning	1	Item			
G	Testing, chemical dosing, sterilization and certification of all systems	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Operating and maintenance manuals; all in accordance with Engineers Specification					
A	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
B	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
C	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
D	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
E	Identification plates, labels and the like	1	Item			
	Maintenance; all in accordance with Engineers Specification					
F	The Contractor shall provide for full servicing of all boiler plant before handover and again before the end of the defects period	1	Item			
G	The Contractor shall provide for full servicing of the Air Source Heat Pumps before handover and again before the end of the defects period	1	Item			
H	The Contractor shall provide for full servicing of the pressurisation units before handover and again before the end of the defects period	1	Item			
				To Collection €		

(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)

(53) WATER SERVICES - HOT AND COLD WATER

System

Cold Water Distribution installation, testing and commissioning; complete; The new cold water supplies serving the school extension shall be taken from a new portable water storage tanks located in the water tank room of the extension; A cold water booster set shall provide boosted cold water to the hot water cylinder, wash hand basins, sinks and showers; the contractor shall install pipework to all appliances and outlets as indicated on the drawings. General pipework shall be copper with plain ends, installed with foil -back insulation. The Contractor shall coordinate water service pipework with ductwork, electrical and heating services; The Contractor shall commission and test all systems under this contract prior to handover;; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 7; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-LL-DR-M-5351

Hot Water Distribution installation, testing and commissioning; complete; A new domestic hot water recirculation system shall be installed with a new domestic hot water return pump fitted on an inlet to the DHW Pre-heat Cylinder as shown on the drawings to ensure the hot water is returned to the Central Heating plant at no less than 50°C; Domestic hot water must be circulated throughout the school building at a minimum temperature of 55°C in order to protect against legionella; the contractor shall install pipework to all appliances and outlets as indicated on the drawings; General pipework shall be copper with plain ends, installed with foil -back insulation; The Contractor shall coordinate water service pipework with ductwork, electrical and heating services; The Contractor shall commission and test all systems under this contract prior to handover; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 7; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-LL-DR-M-5351

Equipment

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Heat pump; supply and installation; complete; Description: Low Noise Full Inverter External Monobloc Air Source Heat Pump; Heating Capacity: 38.2kW; CoP: 3.08W/W; SCoP: 4.47W/W; Compressor Type: Scroll; Minimum Number of Compressors: 1; Global Warming Potential: 3 GWP; Refrigerant Type: R290; Outdoor Air Temp: 7.0°C; Outdoor Relative Humidity: 87%; Integral Hydronic Kit c/w on board primary pumps: Required; Fluid Type: Water; In/Out Fluid Temp: 45.0 / 50.0°C; Max Sound Pressure @ 10m (dB(A)): 35; Fluid Flowrate (l/h): 6769; Pump Available Pressure Drop (kPa): 62; Super Low Noise: Required; Nominal Voltage Supply (Ph/V/Hz): 3/400/50; Maximum Input Power (kW): 12.6; Discharge Direction: Horizontal; Nominal Dimensions L x W x H: 2012 x 702 x 1465mm; Heat Exchanger: Cu/Al pipes and fins with hydrophilic coating Blue Fins; Control & Protection Devices: Required; Control Panel: microprocessor based c/w display showing all operational icons and connections for MODBUS protocols; Serial Interface Card RS485: Required to allow the controller to communicate using Modbus Protocol; Head Pressure Control: This device, using a pressure probe installed on the source heat exchanger, controls the fan speed with respect to the ambient conditions; Accessories: Rubber Anti-vibration mounts, Condensate Drip Tray, Anti Freeze Kit, Pressure Gauges, Control system, Outdoor Air Temperature Sensor for Weather Compensation, Hydraulic Kit comprising centrifugal circulating pump c/w safety valve & fill/drain point; Defrost Method: Reverse Cycle; Defrost Control: Sensor for outdoor temperature; Warranty: 5 year parts and labour; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 4, Section 1.1					
A	Heat pump; Ref: ASHP 05; Location: External to Existing Plantroom	1	nr			
	Gas fired water heater; supply and installation; complete; Description: Direct gas-fired un-vented condensing storage water heater (tank-in-tank); Fuel: Natural Gas; DHW Storage Capacity: 190 litres; Peak Flow at 60oC: 371 litres/10; Constant Flow at 60°C: 1520 litres/hour; Heat Input: 94.4 kW; Efficiency at 100% (EN89): 97.5 %; Water Heating Efficiency Class : A; Water Heating Energy Efficiency (EU 814/2013) : 87.2%; Max Working Pressure (DHW): 8.6 bar; NOx weighted (GCV) (EN15502): 29.3 mg/kWh; Sound Power Level : 61dB; Dimensions (WxDxH): 690 x 787 x 2170mm; Electrical Requirements: 230V / 50Hz / 1ph; Heat Exchanger: Stainless Steel; Burner: Modulating air/gas premix natural gas burner; BMS Interface: Remote Enable Terminals & Fault Output; Accessories: Weather compensated controller c/s north facing temp stat, Air Inlet & Exhaust Outlet concentric flue kit, Unvented Kit comprising; non-return valve, 6 bar expansion valve, expansion vessels suitable for hot water and a 7 bar T&P relief valve for hot water outlet, Connection module and VFC required for connection to the BEMS for Enable/Fault, Water Heater integral PCB board ability to enable and control re-circulation pump: Warranty: 5 Years parts and labour; Standards / Conformity: CE Marked, WRAS, KIWA approved; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 2.3					
B	Gas Fires Water Heater; Ref: WH2; Location: Existing Plantroom	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	DHW Pre-heat Cylinder; supply and installation; complete; Description: Quick Recovery Vertical Tank In Tank Indirect Pre Heat DHW Cylinder; DHW Storage Capacity Reqd (L): 800; Capacity Total (L): 675; Peak Flow 60°C: 961 litres / 10; Peak Flow 60°C 1st Hour: 2124 litres / 60; Continuous Flow 60°C: 1395 litres/hr; Cylinder Material: Stainless Steel; Insulation: Thick Polypropylene Jacket with high Thermal insulation to Class B or C; Max DHW Storage Temperature (°C): 80; Max DHW Operating Pressure (bar): 8.6; Primary Heating Coil: ASHP @ 55/45 F&R 39kW to heat 775L CWS from 10° - 50°C in 30mins; Pasteurisation: Anti legionalla pump from gas fired water heater to cylinder for 4 hours 1 day per week; Standing Losses (W) / (kWh/day): 120 / 2.88; Typical Dimensions: 780 x 1955mm; Accessories: Temperature Gauge, Pressure Gauge, Temp/Pressure, Safety Valve & tundish, Unvented Kit, Immersion pockets as required, 80L Expansion Vessel; Warranty: 5 Years on S/S Cylinder; Standards/ Conformity: WRAS, KIWA, CE Marked; include for all accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 2.2					
A	DHW Pre-Heat Cylinder; Ref: CYL-02; Location: Existing Plantroom	1	nr			
	Accessories associated with Primary Equipment					
	Isolation valves; for isolation of water services pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	28mm Isolation Valves	3	nr			
C	54mm Isolation Valves	13	nr			
D	67mm Isolation Valves	6	nr			
E	To Cylinder Isolation Valves	1	nr			
	Lock Shield Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
F	54mm Lock Shield Valve	1	nr			
	Drain Cock Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
G	54mm Drain Cock Valve	1	nr			
	Double Regulating Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	28mm Double Regulating Valve	1	nr			
	Auto Air Vent Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
J	54mm Auto Air Vent Valve	2	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Non-return Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	28mm Non-return Valve	1	nr			
B	35mm Non-return Valve	3	nr			
	Strainer Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	28mm Strainer Valve	1	nr			
	Commissioning Set; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	28mm Commissioning Set	1	nr			
	Safety Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	Safety Valve to cylinder	1	nr			
F	54mm Safety Valve	1	nr			
	Pressure Guage; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
G	54mm dia Pressure Guage	4	nr			
H	67mm dia Pressure Guage	2	nr			
J	Pressure Guage to Cylinder	1	nr			
	Temperature Guage; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
K	28mm Temperature Guage	2	nr			
L	35mm Temperature Guage	2	nr			
M	54mm Temperature Guage	3	nr			
N	Temperature Guage to cylinder	1	nr			
	Temperature Sensors; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
P	28mm Temperature Sensors	2	nr			
Q	35mm Temperature Sensors	2	nr			
R	54mm Temperature Sensors	5	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	Temperature Sensors to cylinder	3	nr			
	3-port motorised Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	28mm 3-port motorised Valves	1	nr			
C	54mm 3-port motorised Valves	1	nr			
	Pressure Reducing Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	54mm Pressure Reducing Valve	2	nr			
E	67mm Pressure Reducing Valve	1	nr			
	Double Check Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
F	54mm Double Check Valve	1	nr			
	3kW Immersion Heater; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3					
G	3kW Immersion Heater to hot water cylinder	1	nr			
	Expansion Vessels; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	Expansion Vessels	2	nr			
	Volumetric Water Meter; Media: Mains Water; Visible Display: 5 roller counter; Pulse Output: Switch type - reed, Contacts - VFC, Pulse value - 1 per litre, Load current - 500mA, Max switch voltage - 180Vdc, Contact rating - 10W, Flying lead - 2m; Connection Type: As per Part 3: Standard Clauses; Inline Strainer: Required; Installation Positions: Horizontal & Vertical; Valve Body: Epoxy resin coated brass to DIN 50 930 part 6; Max Pressure: 16 Bar; Media Temperature: 0°C - 30°C; Operating Temperature: -20°C - 50°C; Conformance: WRAS Approved, MID Approved, IS EN 14154, Declaration of Performance / CE Certification; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.3.1					
J	Volumetric Water Meter	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Pumps; supply and installation; complete; Type: single head, canned rotor type c/w integral variable speed drive; Minimum Energy Class: A; Design Duty: 1 kg/s @ 30kPa; Pump Housing Material: Stainless Steel EN 1.4308; Impeller Material: Composite; Maximum Operating Pressure: 10 bar; Maximum Operating Temperature: 110°C; Electrical Requirements: 1phase / 230V / 50 Hz; Enclosure Class: X4D; Insulation Class: F; Energy Efficiency Index (EEI): 0.18; On-board VSD: Required; Volt Free Contacts: Required for BMS enable/fault; c/w flexible connections, test points, anti vibration mounts and fixing brackets; all in strict accordance with the Mechanical Specification Part 4, Section 2.7					
A	Pump; Ref: Anti-legionella HWR	1	nr			
	Pumps; supply and installation; complete; Type: single head, canned rotor type c/w integral variable speed drive; Minimum Energy Class: A; Pump Housing Material: Stainless Steel EN 1.4308; Impeller Material: Composite; Maximum Operating Pressure: 10 bar; Maximum Operating Temperature: 110°C; Electrical Requirements: 1phase / 230V / 50 Hz; Enclosure Class: X4D; Insulation Class: F; Energy Efficiency Index (EEI): 0.18; On-board VSD: Required; Volt Free Contacts: Required for BMS enable/fault; c/w flexible connections, test points, anti vibration mounts and fixing brackets; all in strict accordance with the Mechanical Specification Part 4, Section 2.6					
B	Pump Ref: PMP-13; Flow rate: 0.5Kg/s; Head: 75kPa; Motor: 0.15kW; Complete	1	nr			
	Packaged cold water booster pump c/w integrated VSD; supply and installation; complete; Type: Twin Pump Duty/Assist; Design Duty: 1.5l/s @ 1.5bar; Integral Frequency Converter and PID Controller with adjustable PI parameters: Required; Integral Expansion Vessel, Pressure Transducer & Pressure Gauge: Required; Integral Non-return Valve: Required; Variable Speed Drive: Required; Pump Housing Material: 304 Stainless Steel; Impeller Material: 304 Stainless Steel; Manifolds: 304 Stainless Steel; Rubber Material: EPDM; Shaft Seal Material; HQQE; Max. Operating Pressure: 10 bar; Electrical Requirements: 400 V / 3ph / 50 Hz; IE Efficiency Class: IE5; Enclosure class (IEC 34-5): IP54; Insulation class (IEC 85): F; Volt Free Contacts: Required for BEMS enable/fault; Manufacturers Warranty: 2 years (minimum); Dry Run Protection: Required - Float Switch; Standards / Conformity: DIN Standard 1988/T5, CE Marked WRAS / KIWA; c/w flexible connections, test points, anti vibration mounts and fixing brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 2.5					
C	Packaged Cold Water Booster Pump Set; Ref: BS-02	1	nr			
				To Collection €		

(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)

Balanced Flue Kit; supply and installation; complete; Inner/Outer Diameter: 80/125mm (Contractor to confirm with Water heater specialist prior to order); Construction Inner: 304 grade s/steel (EN 1.4301); Construction Outer: Powder Coated Steel; Insulation Thickness: 45mm; Fire Rating: 2 hours (BS 476: Part 20); Minimum Clearance to Combustible Material: 50mm; Terminal Type: Suitable for horizontal discharge; Support Brackets - Int. Use: Powder-coated, 304 grade stainless steel; External wall terminal kit: Required; include for all fixings and brackets; all in strict accordance with the Mechanical Specification Part 4, Section 1.4

A	Balanced Flue Kit; 80/125mm diameter	1	nr		

Distribution

Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5305

B	28mm diameter pipework	1	Item		

Copper Pipes and Fitting; supply and installation complete; Application: rainwater pipelines; Material: Copper; Finish: uncoated; include for all fixing brackets, hangers and supports; include for all elbows, expansion bellows, unions and tees necessary to complete works; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1

C	15mm diameter pipework	1	Item		
D	22mm diameter pipework	1	Item		
E	28mm diameter pipework	1	Item		
F	35mm diameter pipework	1	Item		
G	42mm diameter pipework	1	Item		
H	54mm diameter pipework	1	Item		
J	67mm diameter pipework				

Insulation

Foil-faced Mineral Wool Insulation; Class: A1, CFC, HCFC free, ozone depletion factor zero; Max thermal conductivity: 0.035W/m/K; Density: 80-120kg/m3; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 3

Insulation, 20mm thick

K	to 15mm diameter pipework	1	Item		

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Insulation, 25mm thick					
A	to 22mm diameter pipework	1	Item			
B	to 28mm diameter pipework	1	Item			
	Insulation, 40mm thick					
C	to 35mm diameter pipework	1	Item			
D	to 42mm diameter pipework	1	Item			
E	to 54mm diameter pipework	1	Item			
F	to 67mm diameter pipework	1	Item			
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
G	General Valves & Plant	1	Item			
	Aluminium Cladding; to valves and plant; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
H	to 15mm diameter pipework	1	Item			
J	to 22mm diameter pipework	1	Item			
K	to 28mm diameter pipework	1	Item			
L	to 35mm diameter pipework	1	Item			
M	to 42mm diameter pipework	1	Item			
N	to 54mm diameter pipework	1	Item			
P	to 67mm diameter pipework	1	Item			
Q	to General Valves & Plant	1	Item			
	General					
	Testing and commissioning; all in accordance with the Mechanical Engineers Specification Documents					
R	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Mechanical Engineers Specification Documents					
S	Operating and maintenance manuals;complete	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Working drawings; all in accordance with the Mechanical Engineers Specification Documents					
A	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Mechanical Engineers Specification Documents					
B	Co- ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Mechanical Engineers Specification Documents					
C	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Mechanical Engineers Specification Documents					
D	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	(53) WATER DISTRIBUTION - MAINS WATER					
	System					
	Mains Water Distribution installation, testing and commissioning; Provide and install a new mains water supply system extended from the existing 2010 extension building to the new school extension, in accordance with design drawings and plumbing schematics; The system shall comprise a complete non-metallic pipework and fittings solution, suitable for potable water, installed in ceiling voids and service routes as indicated; All valves, fittings, and distribution components shall be non-metallic in compliance with Technical Guidance Document 031.1 to prevent metallic exceedances (Lead and Copper); Include engraved traffolite labels for all drinking water outlets and pipework identification at regular intervals and prior to sanitaryware connections, as per the standard specification; Provide test points in Plantrooms for water quality verification; Arrange for NSAI-accredited testing in accordance with S.I. No. 122 of 2014 (EU Drinking Water Regulations) before handover and again nine months post-handover during the Defects Liability Period; Any non-compliance shall be rectified at the Contractors expense; As-installed documentation to include total system volume, materials records, EU compliance certificates, and details within the Health & Safety File; Include commissioning, testing, demonstration, and maintenance handover; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 7; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-L0-DR-M-5301, 2999-SMK-ZZ-L1-DR-M-5302, 2999-SMK-ZZ-RF-DR-M-5303, 2999-SMK-ZZ-LL-DR-M-5350, 2999-SMK-ZZ-LL-DR-M-5105					
	Accessories associated with Primary Equipment					
	Stop Cock Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	54mm Stop Cock Valve	1	nr			
	Test Point Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	54mm Test Point Valve	1	nr			
	Drain Cock Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	54mm Drain Cock Valve	1	nr			
	Double Check Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	54mm Double Check Valve	1	nr			

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Pressure Reducing Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	54mm PRV	1	nr			
	Pressure Guage; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	54mm dia Pressure Guage	2	nr			
	Pipe adaptor; for connection of 42mm diameter MWS pipework to exisitng incomming MDPE mains water supply at entry to plantroom; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	Pipe adaptor	1	nr			
	Volumetric Water Meter; Media: Mains Water; Visible Display: 5 roller counter; Pulse Output: Switch type - reed, Contacts - VFC, Pulse value - 1 per litre, Load current - 500mA, Max switch voltage - 180Vdc, Contact rating - 10W, Flying lead - 2m; Connection Type: As per Part 3: Standard Clauses; Inline Strainer: Required; Installation Positions: Horizontal & Vertical; Valve Body: Epoxy resin coated brass to DIN 50 930 part 6; Max Pressure: 16 Bar; Media Temperature: 0°C - 30°C; Operating Temperature: -20°C - 50°C; Conformance: WRAS Approved, MID Approved, IS EN 14154, Declaration of Performance / CE Certification; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.3.1					
D	Volumetric Water Meter	2	nr			
	<u>Distribution system</u>					
	Non-matallic pipework and fittings; in accordance with the Irish Standard IS EN 806:2005: Specification for installations inside buildings conveying water for human consumption; include for all fixing brackets, hangers and supports; include for all elbows, unions and tees necessary to complete works; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1 & Drawings M-5301, M-5302, M-5311					
E	15mm diameter pipework	1	Item			
F	22mm diameter pipework	1	Item			
G	42mm diameter pipework	1	Item			
H	54mm diameter pipework	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Insulation					
	Foil-faced Mineral Wool Insulation; Vlass: A1, CFC, HCFC free, ozone depletion factor zero; Max thermal conductivity: 0.035W/m/K; Density: 80-120kg/m3; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 3					
	Insulation; 20mm thick					
A	15mm diameter pipework	1	Item			
	Insulation; 25mm thick					
B	22mm diameter pipework	1	Item			
	Insulation, 40mm thick					
C	to 42mm diameter pipework	1	Item			
D	to 54mm diameter pipework	1	Item			
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
E	General Plant & Valves	1	Item			
	Aluminium Cladding; to valves and plant; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
F	to 15mm diameter pipework	1	Item			
G	to 22mm diameter pipework	1	Item			
H	to 42mm diameter pipework	1	Item			
J	to 54mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with the Mechanical Engineers Specification Documents					
K	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Mechanical Engineers Specification Documents					
L	Operating and maintenance manuals;complete	1	Item			
				To Collection €		

	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Working drawings; all in accordance with the Mechanical Engineers Specification Documents					
A	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Mechanical Engineers Specification Documents					
B	Co- ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Mechanical Engineers Specification Documents					
C	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Mechanical Engineers Specification Documents					
D	Identification plates, labels and the like; complete	1	Item			
	(54) GAS SERVICES					
	System					
	Natural Gas distribution; installation testing and commissioning; The gas supply to serve the new school shall be taken from the existing gas supply network within the 2010 plantroomm and routed within the corridor ceiling voids to the new extension plant room; works shall include for all necessary modifications to the existing internal gas installation and for providing a complete new gas supply system to serve the proposed extension Plantroom; The existing G100 gas meter located within the existing Plantroom to remain in use, serving both the existing and new installations; The installation shall be carried out in full compliance with the current edition of the Irish Gas Regulations, IS 813, IS EN 10255:2004; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 8; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-L0-DR-M-5401, 2999-SMK-ZZ-LL-DR-M-5450, 2999-SMK-ZZ-LL-DR-M-5451					
	Accessories associated with Primary Equipment					
	Isolation Valves; isolation of gas services pipework; include for all accessories; all in strict accordance with the Mechanical Specification Part 1, Section 8					
E	25mm Isolation Valves	3	nr			
F	32mm Isolation Valves	1	nr			
G	40mm Isolation Valves	2	nr			
H	50mm Isolation Valves	1	nr			

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	90mm Isolation Valves	3	nr			
	1/4 Turn Isolation Valves; isolation of gas services pipework; include for all accessories; all in strict accordance with the Mechanical Specification Part 1, Section 8					
B	90mm 1/4 Turn Isolation Valves	1	nr			
	Capped Ends; include for all accessories; all in strict accordance with the Mechanical Specification Part 1, Section 7					
C	40mm Capped Ends	1	nr			
	Gas meter; supply and installation; complete; Description:Low Pressure Drop Turbine Gas Meter with pulsed output to BMS; Media: Natural Gas; Visible Display: 8 digit roller counter; Pulse Output: Required for BMS connectivity; Connection Type: Screwed unions/welded; Meter Model: Contractor to confirm based on proposed equipment peak gas loads; Installation Positions: Horizontal; Casing: Aluminium Resin Coated Steel; Max Pressure: 0.5 Bar; Operating Temperature: -25°C - 55°C; Back Flow Prevention: Required; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification Part 4, Section 6.3.2					
D	Gas meter	1	nr			
	Distribution System					
	Galvanised Medium Grade Mild steel pipework and fittings; include for all fixings and supports, elbows,expansion bellows; unions and tees necessary to complete works; Painted with two coats of yellow ochre paint; pipework run in ceiling voids; all in strict accordance with the Mechanical Specification Part 1, Section 7.3					
E	20mm diameter pipework	1	Item			
F	32mm diameter pipework	1	Item			
G	40mm diameter pipework	1	Item			
H	65mm diameter pipework	1	Item			
J	90mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
K	Testing and commissioning	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Operating and maintenance manuals; all in accordance with Engineers Specification					
A	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
B	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
C	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
D	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
E	Identification plates, labels and the like	1	Item			
	(54) GAS DETECTION SYSTEM					
	<u>System</u>					
	Gas detection system installation testing and commissioning; The Contractor shall supply, install, test and commission the new natural gas installation in accordance with this specification and detailed on the design; Conformity in accordance with IIS 813, IS EN 60079; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 8.9; Part 2; Part 3; Part 4, Section 4 and Drawings 2999-SMK-ZZ-LL-DR-M-5451					
	<u>Primary Equipment</u>					
	Gas detection control panel; supply and installation; complete; Description: Gas Leak Detection & Isolation System; Panel Dimensions: 183mm(H) x 212mm(W) x 97mm(D); IP Rating: IP65; Electrical Supply: 1ph, 230V, 50Hz; Gas Solenoid Valve Size: Line Size as indicated on Gas Drawings M-5400 Series; Auxillary Position Status Facility: Required on solenoid valve for BMS; Gas Detector Type: Natural Gas; Gas Detector Calibration: Pre alarm: 5% of low explosion level, High alarm: 10% of low explosion level; Quantity of Gas Detectors per System: 2no.; Integral Emergency Stop Button & Reset: Required; Auxiliary Emergency Stop Button: 1 no. for each plantroom; Audible Alarm: Required; LED Indication: Power - GREEN, Gas On - RED; Auto Reset After Power Supply Failure: Required; BMS Connectivity: Volt free contacts; Fire Test Isolation Mode: Required; Fire Alarm Interface: Required; Fire Alarm Test Module: Required; all in accordance with the Mechanical Specification Part 4, Section 3.1					
F	Gas detection control panel; Ref: CP-01; Location: Existing plantroom	1	nr			

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Gas pressure proving control panel; Description: Gas pressure proving system; Nominal Dimensions: 183(H) x 212(W) x 97(D)mm; IP Rating: IP65; Electrical Supply: 1ph, 230V, 50Hz; LCD Display: Required; Gas Solenoid Valve Size: Line Size as indicated on Gas Drawings M-5400 Series; Gas Solenoid Valve Actuator Rating: 230V; Auxiliary Pressure Sender Unit: Required; Integral Electrical Isolation: Optional; Integral Emergency Stop Button & Reset: Required; Auxiliary Emergency Stop Button: Required; Keyswitch Operation: Required; Audible Alarm: Required; LED Indication: Power, Gas On & Pre-alarm; include for all accessories and fittings; complete; all in accordance with the Mechanical Specification Part 4, Section 3.2					
A	Gas pressure proving control panel; Ref: CP-02; Location: Reception/Admin office	1	nr			
	Accessories associated with Primary Equipment					
	Gas Solenoid Valves; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification Part 3					
B	40mm dia Gas Solenoid Valve	1	nr			
C	90mm dia Gas Solenoid Valve	1	nr			
	Emergency Stop Button; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification					
D	Emergency Stop Button	2	nr			
	Sensor; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification					
E	Gas Sensor	4	nr			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
F	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
G	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
H	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
J	Co-ordination drawings	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	As built drawings; all in accordance with Engineers Specification					
A	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
B	Identification plates, labels and the like	1	Item			
	(58) HVAC MOTOR CONTROL CENTRE & BUILDING MANAGEMENT SYSTEM					
	System					
	BMS System Installation; testing and commissioning; complete; A Building Energy Management Systems shall be supplied, installed, tested and commissioned as part of this contract in the school extension Heating Plantroom; all in accordance with the Mechanical Engineers Specification Part 1, Section 14; Part 2; Part 3; Part 4, Section 6 and Drawing 2999-SMK-ZZ-LL-DR-M-5850					
	Primary Equipment					
	MCC Panel; supply and installation; complete; The MCC panel: wall mounted top entry and top exit type with hinged front doors, Form 2b classification; Door interlocked isolator: 1; Control circuit MCB: 1; Control panel live lamp: 1; Fire relay complete with status lamp: 1; I/O Modules: As Required; GSM Module: 1; Hand / Off / Auto Selector Switches: As Required; Selection Switch for Holiday Settings: 1; Selection Switch for Winter/Summer Settings: 1; 415/240V Transformer complete with MCB: 1; 240/24V Transformer complete with MCB: 1; Touch-screen interface panel mounted at 1500 AFFL: 1; Spare capacity: 30%; The MCC shall contain hand/off/auto switches with run and trip indicators and interfaces for all items as detailed on the drawings; each button shall be clearly labelled showing the area served; include for all fittings and accessories; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 1, Section 14; Part 4, Section 6.1					
C	BMS Panel; Location: Heating Plant Room	1	nr			
	Remote Panels; supply and installation; complete; Maximum Front Dimensions: 500mm x500mm; As noted on BEMS Mechanical Wiring Drawings (M-5800 Series); Heating Programme Active Lamps: Required; Fault Status Lamps: Required; Energy Monitoring Status Lamps: Required; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.2					
D	Remote Panel; Location: Admin Office	1	nr			
	Touch Screen; supply and installation; complete; Panel mounted; include for all fixings; all in accordance with the Mechanical Engineers Specification					
E	Touch Screen	2	nr			

To Collection €

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
	Central Monitoring Facility; 1nr PC c/w 21" colour LCD monitor, keyboard, DVD RW, inkjet printer and sofware, archive storage capacity for at least 5 years; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
A	Central Monitoring Facility	1	nr			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
B	Testing and commissioning	1	Item			
C	Testing,chemical dosing, sterilization and certification of all systems	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
D	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
E	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
F	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
G	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
H	Identification plates, labels and the like	1	Item			
	Maintenance and Warranty; all in accordance with Engineers Specification					
J	The specialist sub-contractor shall make allowance for 2no. demonstrations and training the School in the use of the new controls installation. A period of not less than 3 days should be allowed for this purpose; all in accordance with the Engineers Specification.	1	Item			
K	The controls specialist shall allow for two site visits for seasonal commissioning, to be carried out within the 12-month period following handover; These visits shall include full inspection, testing, adjustment and optimisation of all BEMS-controlled plant and associated control strategies to ensure correct operation under varying seasonal conditions, all in accordance with the Engineers Specification.	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
A	The controls specialist shall allow for a full service and checking of the BEMS system at the end of the defects liability period and updating the Energy Monitoring traffic light system based on the schools usage over the first 12 months of usage; all in accordance with Engineers Specification	1	Item			
				To Collection €		

				€	c
(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
COLLECTION					
Page No. Building/163					
Page No. Building/164					
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(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING (Cont)					
COLLECTION					
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Page No. Building/196					
Page No. Building/197					
(5-) MECHANICAL INSTALLLATIONS - EXISTING BUILDING **Carried to Summary**					

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION					
	Notes					
A	The tendering Contractors are referred to ARM 4 Supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		note			
B	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		note			
C	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings, will be carried out by the Works Specialist under the terms of the main contract. The Mechanical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		note			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	ALTERNATIVE RULES FOR THE MEASUREMENT OF MECHANICAL INSTALLATIONS					
	(51) HEATING CENTRE					
	System					
	Heating centre installation, testing and commissioning; complete; The Contractor shall include for the supply, installation, testing and commissioning of a complete new LPHW Heating Plantroom as indicated on the design drawings and described in the specification; The heating system shall be flushed and provided with appropriate chemical treatment; The contractor shall provide, prior to handover, a commissioning certificate to confirm that correct treatment has been carried out; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 5; Part 2; Part 3; Part 4, Section 1 and Drawings 2999-SMK-ZZ-LL-DR-M-5150					
	Primary Equipment					
	Boiler; supply and installation complete; Type: Wall Hung Modulating boiler; Fuel: Natural gas; LPHW Flow & Return Operating Temps: 75/65°C; Duty: Nominal heat output at 80/60°C: 56.9kW; Rated heat input: 57.9KW; Modulation Ratio: 1:10; Gas Consumption: 6.3m3/h (G20); Gas Supply Pressure: 20mbar; Size: 530mm (W) x 1050mm (H) x 595mm (D); Flue connection: 100mm diameter; Air Inlet connection: 150mm diameter; Condensate drain: 35 mm; Heat Exchangers: Dual Heat Exchangers; Heat Exchanger Material: Stainless Steel; Full Load Efficiency (100%): 98.2%; Maximum working pressure: 6.0 bar; Flowrate (AT 20K) (m3/h): 6.7; Available Head (AT 20K) (kPa): 8; Water content: 9.3 litres; Sound Power level at 1m, full load: 61.5 dB(A); NOx Level (EN 15502) GCV: 21.7mg/kWh; Power supply: 1ph/230V/50hz; Electrical consumption (full load / boiler): 126 W; Shunt Pump Control: 0 - 10V; Accessories: Weather compensated cascade controller and north facing sensor, Main Flow & Return Header & Gas Header pipework, Pump group connections and modulating pump (per boiler), Low Loss Header, Boiler Piping Set, Manifold configuration supports, Pre-formed Rigid Insulation for Header Pipework, Immersion Sensor Pocket, EA1 connection module and VFC required for connection to the BMS for Enable/Fault; Warranty: 2 years parts and labour; include for all accessories and wall mounting brackets; all in strict accordance with the Mechanical Specification Part 4, Section 1.3					
A	Boiler; Ref: BLR-01; Location: Plant Room	1	nr			
	Buffer Vessel; supply and installation complete; Direct Heating Vertical Buffer Vessel; Storage Capacity: 1000lt; Material: Mild Steel Construction with exterior paint; Insulation: Hard Polyurethane Foam High Thermal Insulation to ErP class B or C; Max Storage Temperature: 99°C; Max Working Pressure: 3.0 bar; Heating Coils: Not Required; Electric Immersion: 6kW; Typical Dimensions: 1010mm dia x 2075mm h; Warranty: 5 years; Accessories: Temperature Gauge, Pressure Gauge, Temp/Pressure, safety Valve & tundish, Immersion Pockets 200mm deep (min), connecting kit; include for all accessories; all in strict accordance with the Mechanical Specification Part 4, Section 1.2					
B	Buffer Vessel; Ref: BUF-001, Location: Plant room	1	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Accessories associated with Primary Equipment					
	Isolation valves; for isolation of LPHW pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	25mm Isolation Valves	7	nr			
B	40mm Isolation Valves	13	nr			
C	50mm Isolation Valves	15	nr			
	Lock shield valves; for isolation of LPHW pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	22mm LSV Valves	2	nr			
	Auto air vent valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	25mm AAV Valves	2	nr			
F	40mm AAV Valves	2	nr			
	Non-return Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
G	25mm NRV Valves	2	nr			
H	40mm NRV Valves	3	nr			
J	50mm NRV Valves	5	nr			
	Strainer valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
K	25mm STR Valves	1	nr			
L	40mm STR Valves	2	nr			
M	50mm STR Valves	1	nr			
	Test point valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
N	40mm test point valves	2	nr			
P	80mm test point valves	2	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Drain Cock Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	Drain Cock Valves to 100mm header pipes	4	nr			
B	Drain Cock Valves to Buffer Vessel	1	nr			
	Safety Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	100mm Safety Valve	1	nr			
D	Safety Valve to Buffer Vessel	1	nr			
	Double regulating valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	65mm DRV Valves	1	nr			
	Commissioning sets; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
F	25mm Commissioning set	1	nr			
G	40mm Commissioning set	1	nr			
H	50mm Commissioning set	1	nr			
	Pressure Differential By-Pass Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
J	25mm Pressure Differential By-Pass valves	1	nr			
K	40mm Pressure Differential By-Pass valves	1	nr			
L	50mm Pressure Differential By-Pass valves	1	nr			
	Blank End Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
M	100mm Blank end valves	6	nr			
	2-port motorised Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
N	25mm 2-port motorised Valves	1	nr			
P	40mm 2-port motorised Valves	1	nr			
Q	50mm 2-port motorised Valves	2	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Temperature Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	25mm Temperature Sensor	2	nr			
B	40mm Temperature Sensor	4	nr			
C	50mm Temperature Sensor	4	nr			
D	100mm Temperature Sensor	4	nr			
E	Temperature Sensor to Buffer Vessel	1	nr			
	High Pressure Switch; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
F	High Pressure Switch to Pressurisation Unit	1	nr			
	Low Pressure Switch; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section2					
G	Low Pressure Switch to Pressurisation Unit	1	nr			
	High Limit Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	100mm High Limit Sensor	2	nr			
	Pressure Gauge; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
J	25mm Pressure Gauge	2	nr			
K	40mm Pressure Gauge	5	nr			
L	50mm Pressure Gauge	2	nr			
M	80mm Pressure Gauge	2	nr			
N	Pressure Gauge to Buffer Vessel	1	nr			
	Temperature Gauge; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
P	25mm Temperature Gauge	2	nr			
Q	40mm Temperature Gauge	3	nr			
R	50mm Temperature Gauge	4	nr			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	100mm Temperature Gauge	4	nr			
B	Temperature Gauge to Buffer Vessel	1	nr			
	Immersion Frost Thermostat; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.4.2					
C	Immersion Frost Thermostat	1	nr			
	Outside Air Temperature Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.4.3					
D	Outside Air Temperature Sensor	1	nr			
	Outside Frost Thermostat; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.4.4					
E	Outside Frost Thermostat	1	nr			
	Flexible connections; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
F	25mm Flexible connections	2	nr			
G	40mm Flexible connections	4	nr			
H	50mm Flexible connections	2	nr			
	Pumps; supply and installation; complete; Type: single head/Twin head in-line pump c/w integral variable speed drives & BMS connectivity; Pump Housing Material: Cast iron; Impeller Material: Composite; Maximum Operating Pressure: 10 bar; Pressure rating: PN10; Electrical Requirements: 1phase / 230V / 50 Hz; Enclosure Class: X4D; Insulation Class: F; Energy Efficiency Index (EEI): 0.18; On-board VSD: Required; Volt Free Contacts: Required for BMS enable/fault; Differential Pressure Transducer Kit for sealed circuits: Required; c/w flexible connections, test points; include for all fixings, anti vibration mounts and brackets; all in strict accordance with the Mechanical Specification Part 4, Section 1.5					
J	Pump Ref: PMP-01; Single head inline pump; Flow rate: 1.65Kg/s; Head: 55kPa; Electrical supply: 220/1/50; Motor: 0.5kW; Complete	1	nr			
K	Pump Ref: PMP-02; Twin head inline pump; Flow rate: 1.3Kg/s; Head: 40kPa; Electrical supply: 220/1/50; Motor: 0.5kW; Complete	1	nr			
L	Pump Ref: PMP-03; Single head inline pump; Flow rate: 0.4Kg/s; Head: 85kPa; Electrical supply: 220/1/50; Motor: 0.5kW; Complete	1	nr			
M	Pump Ref: PMP-04; Single head inline pump; Flow rate: 1.4Kg/s; Head: 110kPa; Electrical supply: 220/1/50; Motor: 0.8kW; Complete	1	nr			

To Collection €

(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)

Pressurisation Unit; supply and installation; complete; Type: Floor Standing LPHW Pressurisation Unit & Expansion Vessels; Pumps: 2no.; Heating Load (kW): 60; Static Head (m): 10.0; Approx System Water capacity (litres): 837; F/R Temperaturer: 55/45°C; Press Unit Dimensions (mm): 470 (W) x 332 (D) x 832 (H); Breaktank Capacity: 17.5lts; Breaktank Connection: 'AB' air gap to water supply; Max Cold Fill Pressure: 4.0 Bar; Connectivity: Volt Free Contacts required for High/Low level fault output to BMS; Digital Display: Required; Independent High / Low Pressure Alarm: Hard-wired; Auto Fill Capacity: Required; Power Supply: 1ph, 240V, 50 Hz; Power Consumption: 0.41kW/1.9A; Expansion Vessel: To be confirmed by Mechanical Contractor based on parameters, Max. Working Pressure: 10bar; c/w isolation valve; lock shield valve, stainer on pump; pressure gauge; air relief valve, pressure relief valve, control panel, pump test button; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.6

A	Pressurisation Unit; Ref: PRU-01; Location: Plant room	1	nr		

Chemical dosing pot; supply and installation; complete; Description: Chemical Dosing Pot; Application: LPHW Heating System; Capacity; 11 litres; Construction: Stainless steel; Mounting: Wall mounted c/w wall mounting brackets; Tundish, 25mm fill valved connection, 25mm drain valved connection, 25mm flow valved connection, 25mm return valved connection, Air vent; Connection Sizes: 25 mm; Typical Height: 865mm; Typical Diameter: 320mm; Weight; 16.3kg; include for all accessories; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.7

B	Chemical dosing pot	1	nr		

Air seperator; supply and installation; complete; Application: LPHW Heating System; Construction: Mild steel, flanged; Mounting: Inline; Finish: Powder coated; Max. flow velocity: 1.5 m/s; Pressure drop at Max. Flow: 4.2 kPa; Auto Air Vent: Integral; Typical Height: 700mm; Typical Length: 650 mm; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.8

C	Air seperator; Connection size: DN 50	1	nr		

Magnetic dirt seperator; supply and installation; complete; Application: LPHW Heating System; Construction: Mild steel, flanged; Mounting: Inline; Finish: Powder coated; Max. flow velocity: 1.5 m/s; Pressure drop at Max. Flow: 4.2 kPa; Typical Height: 690mm; Typical Length: 635mm; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.9

D	Dirt seperator; Connection size: DN 50	1	nr		

Expansion Vessel; supply and installation; complete; Capacity: 1000 litres; include for all accessories, fixings and mounting brackets; complete; include for all fixings and mounting brackets; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4

E	Expansion Vessel	1	nr		

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Exhaust Flue; supply and installation; complete; Type: Horizontal Balanced Flue Kit; Inner/Outer Diameter: 100/150mm (Contractor to confirm with Boiler specialist prior to order); Construction Inner: 304 grade s/steel (EN 1.4301); Construction Outer: Powder Coated Steel; Insulation Thickness: 50mm; Fire Rating: 2 hours (BS 476: Part 20); Minimum Clearance to Combustible Material: 50mm; Terminal Type: Suitable for Horizontal discharge; Support Brackets-Int. Use: Powder-coated, 304 grade stainless steel; External wall terminal kit: Required; Accessories: Back draught shutter, End piece to be fitted with a condensate drain; include for all accessories, fittings and fire stopping; complete; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 1.4					
A	Boiler flue; 100/150mm diameter exhaust flue	1	nr			
B	Boiler flue; 200mm diameter exhaust flue	1	nr			
	Heat meter; supply and installation; complete; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 1, Section 14.6.15					
C	Heat Meter	5	nr			
	Hydraulic low loss header; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	Hydraulic low loss header	1	nr			
	Distribution					
	Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5150					
E	63mm ID/ 126mm OD diameter pipework	1	Item			
	Medium Grade Black Mild steel pipework and fittings; include for all fixings and supports; include for all elbows, expansion bellows; unions and tees necessary to complete the work, all pipework up to 50mm to be screw joints, pipework above 50mm to be welded, plant room pipework to be flanged; all connections to valves shall be screwed; Painting: two coat of zinc chromate primer prior to fitting of insulation; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1					
F	15mm diameter pipework	1	Item			
G	22mm diameter pipework	1	Item			
H	25mm diameter pipework	1	Item			
J	32mm diameter pipework	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	35mm diameter pipework	1	Item			
B	40mm diameter pipework	1	Item			
C	50mm diameter pipework	1	Item			
D	65mm diameter pipework	1	Item			
E	80mm diameter pipework	1	Item			
F	100mm diameter header pipework	1	Item			
	Insulation					
	Foiled faced fibreglass insulation; to all new pipework services; class A1, CFC and HCFC free with ozone depletion factor of zero; Thermal conductivity not exceeding 0.042W/m2K at 100°C; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 5.5					
	Insulation, 20mm thick					
G	to 15mm diameter pipework	1	Item			
	Insulation, 25mm thick					
H	to 22mm diameter pipework	1	Item			
J	to 25mm diameter pipework	1	Item			
	Insulation, 40mm thick					
K	to 32mm diameter pipework	1	Item			
L	to 35mm diameter pipework	1	Item			
M	to 40mm diameter pipework	1	Item			
N	to 50mm diameter pipework	1	Item			
P	to 65mm diameter pipework	1	Item			
Q	to 80mm diameter pipework	1	Item			
R	to 100mm diameter pipework	1	Item			
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
S	General Valves & Plant	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Aluminium Cladding; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
A	to 15mm diameter pipework	1	Item			
B	to 22mm diameter pipework	1	Item			
C	to 25mm diameter pipework	1	Item			
D	to 32mm diameter pipework	1	Item			
E	to 35mm diameter pipework	1	Item			
F	to 40mm diameter pipework	1	Item			
G	to 50mm diameter pipework	1	Item			
H	to 65mm diameter pipework	1	Item			
J	to 80mm diameter pipework	1	Item			
K	to 100mm diameter pipework	1	Item			
L	to General Valves & Plant	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
M	Testing and commissioning	1	Item			
N	Testing, chemical dosing, sterilization and certification of all systems	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
P	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
Q	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
R	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
S	As built drawings	1	Item			
				To Collection €		

	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Identification plates, labels and the like; all in accordance with Engineers Specification					
A	Identification plates, labels and the like	1	Item			
	Maintenance; all in accordance with Engineers Specification					
B	The Contractor shall provide for full servicing of all boiler plant before handover and again before the end of the defects period	1	Item			
C	The Contractor shall provide for full servicing of the Air Source Heat Pumps before handover and again before the end of the defects period	1	Item			
D	The Contractor shall provide for full servicing of the pressurisation units before handover and again before the end of the defects period	1	Item			
	(52) DRAINAGE AND REFUSE DISPOSAL					
	System					
	Soils and Waste Drainage Installation, testing and commissioning; complete; The complete installation of all above ground foul water drainage and refuse disposals; all in strict accordance with the Mechanical Engineers Particular Specification Part 1, Section 5; Part 2; Part 3 and Drawings 2999-SMK-ZZ-L0-DR-M-5201, 2999-SMK-ZZ-L1-DR-M-5202					
	Terminal equipment and fittings					
	Floor Gully; supply and installation; complete; Type: Stainless steel; c/w removable core; include for all fittings and seals; all in accordance with the Mechanical Engineers Specification					
E	Floor Gully	6	nr			
	Sanitary ware; INSTALLATION AND FINAL CONNECTIONS ONLY (Sanitary ware measured elsewhere, refer to Bill of Quantities element (74) Sanitary Fittings for full details; fixing in accordance with the manufacturer's recommendations; all in accordance with the Architects and Mechanical Engineers Specification Part 1, Section 5.2					
F	WC; c/w connections and fittings	24	nr			
G	WHB; c/w taps, waste traps, fittings and brackets	25	nr			
H	Single bowl, single drainer sink; c/w taps, anti-syphon waste traps, fittings and brackets	6	nr			
J	Drinking fountain; c/w taps, anti-syphon waste traps, fittings and brackets	1	nr			
K	Dentist chair sink; c/w taps, anti-syphon waste traps, fittings and brackets	2	nr			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Shower; c/w taps, waste traps, fittings and brackets	31	nr			
B	Appliance; c/w waste traps and flexible fittings	5	nr			
	Accessories associated with terminal equipment and fittings					
	Chemial resistant polypropylene pipework and fittings; supply and installation; complete; Jointing type: Solvent weld joints generally; ring seal joints at expansion joints; include for all joints; fittings; brackets and pipework supports; all in accordance with the Mechanical General Specification					
C	32mm diameter waste drop from WHB to 50mm diameter float pipe	2	nr			
D	32mm diameter waste drop from Dentist chair sink to 50mm diameter float pipe	2	nr			
E	32mm cleaning eye	2	nr			
F	40mm diameter waste drop from Sinks to common pipe located in ceiling void	4	nr			
G	40mm diameter waste drop from Sinks to ceiling void below; to SVP	1	nr			
H	40mm cleaning eye	2	nr			
J	50mm cleaning eye	3	nr			
K	110mm diameter waste drop from SVP to ground floor builders floor socket	2	nr			
L	110mm diameter waste drop from SVP to first floor builders floor socket	2	nr			
M	110mm cleaning eye	2	nr			
N	110mm Vent cowl	2	nr			
	PVC-U plastic pipework and fittings; supply and installation; complete; Jointing type: Solvent weld joints generally; ring seal joints at expansion joints; include for all joints; fittings; brackets and pipework supports; all in accordance with Mechanical Engineers Specification Part 1, Section 5					
P	20mm diameter waste drop c/w HEPVO self sealing dry trap from MHRV to 50mm diameter float pipe	15	nr			
Q	20mm cleaning eye	15	nr			
R	32mm diameter waste drop from WHB to 40mm diameter float pipe	8	nr			
S	32mm diameter waste drop from WHB to 50mm diameter float pipe	12	nr			
T	32mm diameter waste drop from WHB to builders floor socket	5	nr			
U	32mm cleaning eye	5	nr			
V	40mm diameter waste drop from Sinks to ceiling void below; to SVP	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	40mm diameter waste drop from Kitchen appliance to 50mm diameter float pipe	1	nr			
B	40mm diameter waste drop from Drinking fountain to builders floor socket	1	nr			
C	40mm cleaning eye	7	nr			
D	50mm diameter waste drop from Water tank to discharge externally	1	nr			
E	50mm diameter waste drop from Shower to ground floor builders floor socket	31	nr			
F	50mm diameter waste drop from Shower to common pipe located in ceiling void	1	nr			
G	50mm cleaning eye	16	nr			
H	110mm diameter waste drop from WC to builders floor socket	8	nr			
J	110mm diameter waste drop from WC to 110mm common float pipe located in ceiling void	13	nr			
K	110mm diameter waste drop from Floor gully to ground floor 110mm builders floor socket	6	nr			
L	110mm diameter waste drop from SVP to ground floor builders floor socket	5	nr			
M	110mm diameter waste drop from SVP to first floor builders floor socket	5	nr			
N	110mm cleaning eye	2	nr			
P	110mm Vent cowl	5	nr			
	Distribution System					
	Chemial resistant polypropylene pipework and fittings; supply and installation; complete; Jointing type: Solvent weld joints generally; ring seal joints at expansion joints; include for all joints; fittings; brackets and pipework supports; all in accordance with the Mechanical General Specification					
Q	40mm nominal diameter; supports at average 500mm centres vertical, 500mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
R	50mm nominal diameter; supports at average 900mm centres vertical, 900mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
S	110mm nominal diameter; surface fixed; supports at average 900mm centres vertical, 900mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	PVC-U plastic pipework and fittings; supply and installation; complete; Jointing type: Solvent weld joints generally; ring seal joints at expansion joints; include for all joints; fittings; brackets and pipework supports; all in accordance with Mechanical Engineers Specification Part 1, Section 5					
A	20mm nominal diameter; supports at average 500mm centres vertical, 500mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
B	25mm nominal diameter; supports at average 500mm centres vertical, 500mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
C	32mm nominal diameter; supports at average 500mm centres vertical, 500mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
D	40mm nominal diameter; supports at average 500mm centres vertical, 500mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
E	50mm nominal diameter; supports at average 900mm centres vertical, 900mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
F	110mm nominal diameter; surface fixed; supports at average 900mm centres vertical, 900mm centres horizontal; ears fixed with screws to background requiring plugging	1	Item			
	Insulation					
	Acoustic foil-faced mineral wool insualtion; to all pipework services and fittings; 65mm thick; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 5					
G	to 20mm diameter pipework	1	Item			
H	to 25mm diameter pipework	1	Item			
J	to 32mm diameter pipework	1	Item			
K	to 40mm diameter pipework	1	Item			
L	to 50mm diameter pipework	1	Item			
M	to 110mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
N	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
P	Operating and maintenance manuals	1	Item			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Working drawings; all in accordance with Engineers Specification					
A	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
B	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
C	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
D	Identification plates, labels and the like	1	Item			
				To Collection €		

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(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont) **(53) WATER SERVICES - HOT AND COLD WATER** System Cold Water Distribution installation, testing and commissioning; complete; The new cold water supplies serving the school extension shall be taken from a new portable water storage tanks located in the water tank room of the extension; A cold water booster set shall provide boosted cold water to the hot water cylinder, wash hand basins, sinks and showers; the contractor shall install pipework to all appliances and outlets as indicated on the drawings. General pipework shall be copper with plain ends, installed with foil -back insulation. The Contractor shall coordinate water service pipework with ductwork, electrical and heating services; The Contractor shall commission and test all systems under this contract prior to handover;; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 7; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-L0-DR-M-5301, 2999-SMK-ZZ-L1-DR-M-5302, 2999-SMK-ZZ-RF-DR-M-5303, 2999-SMK-ZZ-LL-DR-M-5350 Hot Water Distribution installation, testing and commissioning; complete; A new domestic hot water recirculation system shall be installed with a new domestic hot water return pump fitted on an inlet to the DHW Pre-heat Cylinder as shown on the drawings to ensure the hot water is returned to the Central Heating plant at no less than 50°C; Domestic hot water must be circulated throughout the school building at a minimum temperature of 55°C in order to protect against legionella; the contractor shall install pipework to all appliances and outlets as indicated on the drawings; General pipework shall be copper with plain ends, installed with foil -back insulation; The Contractor shall coordinate water service pipework with ductwork, electrical and heating services; The Contractor shall commission and test all systems under this contract prior to handover; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 7; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-L0-DR-M-5301, 2999-SMK-ZZ-L1-DR-M-5302, 2999-SMK-ZZ-RF-DR-M-5303, 2999-SMK-ZZ-LL-DR-M-5350 Equipment					

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Heat pump; supply and installation; complete; Description: Low Noise Full Inverter External Monobloc Air Source Heat Pump; Heating Capacity: 38.9kW; CoP: 3.08W/W; SCoP: 4.47W/W; Compressor Type: Scroll; Minimum Number of Compressors: 1; Global Warming Potential: 3 GWP; Refrigerant Type: R2909; Outdoor Air Temp: 7.0°C; Outdoor Relative Humidity: 87%; Integral Hydronic Kit c/w on board primary pumps: Required; Fluid Type: Water; In/Out Fluid Temp: 45.0 / 50.0°C; Max Sound Pressure @ 10m (dB(A)): 35; Fluid Flowrate (l/h): 6769; Pump Available Pressure Drop (kPa): 62; Super Low Noise: Required; Nominal Voltage Supply (Ph/V/Hz): 3/400/50; Maximum Input Power (kW): 12.6; Discharge Direction: Horizontal; Nominal Dimensions L x W x H: 2012 x 702 x 1465mm; Heat Exchanger: Cu/Al pipes and fins with hydrophilic coating Blue Fins; Control & Protection Devices: Required; Control Panel: microprocessor based c/w display showing all operational icons and connections for MODBUS protocols; Serial Interface Card RS485: Required to allow the controller to communicate using Modbus Protocol; Head Pressure Control: This device, using a pressure probe installed on the source heat exchanger, controls the fan speed with respect to the ambient conditions; Accessories: Rubber Anti-vibration mounts, Condensate Drip Tray, Anti Freeze Kit, Pressure Gauges, Control system, Outdoor Air Temperature Sensor for Weather Compensation, Hydraulic Kit comprising centrifugal circulating pump c/w safety valve & fill/drain point; Defrost Method: Reverse Cycle; Defrost Control: Sensor for outdoor temperature; Warranty: 5 year parts and labour; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 4, Section 1.1					
A	Heat pump; Ref: ASHP 02; Location: External to Heating Plantroom	1	nr			
	Gas fired water heater; supply and installation; complete; Description: Direct gas-fired un-vented condensing storage water heater (tank-in-tank); Fuel: Natural Gas; DHW Storage Capacity: 190 litres; Peak Flow at 60oC: 371 litres/10; Constant Flow at 60°C: 1520 litres/hour; Heat Input: 94.4 kW; Efficiency at 100% (EN89): 97.5 %; Water Heating Efficiency Class : A; Water Heating Energy Efficiency (EU 814/2013) : 87.2%; Max Working Pressure (DHW): 8.6 bar; NOx weighted (GCV) (EN15502): 29.3 mg/kWh; Sound Power Level : 61dB; Dimensions (WxDxH): 690 x 787 x 2170mm; Electrical Requirements: 230V / 50Hz / 1ph; Heat Exchanger: Stainless Steel; Burner: Modulating air/gas premix natural gas burner; BMS Interface: Remote Enable Terminals & Fault Output; Accessories: Weather compensated controller c/s north facing temp stat, Air Inlet & Exhaust Outlet concentric flue kit, Unvented Kit comprising; non-return valve, 6 bar expansion valve, expansion vessels suitable for hot water and a 7 bar T&P relief valve for hot water outlet, Connection module and VFC required for connection to the BEMS for Enable/Fault, Water Heater integral PCB board ability to enable and control re-circulation pump: Warranty: 5 Years parts and labour; Standards / Conformity: CE Marked, WRAS, KIWA approved; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 2.3					
B	Gas Fires Water Heater; Ref: WH1; Location: Plantroom	1	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	DHW Pre-heat Cylinder; supply and installation; complete; Description: Quick Recovery Vertical Tank In Tank Indirect Pre Heat DHW Cylinder; DHW Storage Capacity Reqd (L): 517; Capacity Total (L): 800; Peak Flow 60°C: 504 litres / 10; Peak Flow 60°C 1st Hour: 1368 litres / 60; Continuous Flow 60°C: 1037 litres/hr; Cylinder Material: Stainless Steel; Insulation: Thick Polypropylene Jacket with high Thermal insulation to Class B or C; Max DHW Storage Temperature (°C): 80; Max DHW Operating Pressure (bar): 8.6; Primary Heating Coil: ASHP @ 55/45 F&R 30kW to heat 517L CWS from 10° - 50°C in 30mins; Pasteurisation: Anti legionalla pump from gas fired water heater to cylinder for 4 hours 1 day per week; Standing Losses (W) / (kWh/day): 120 / 2.88; Typical Dimensions: 780 x 2000mm; Accessories: Temperature Gauge, Pressure Gauge, Temp/Pressure, Safety Valve & tundish, Unvented Kit, Immersion pockets as required, 80L Expansion Vessel; Warranty: 5 Years on S/S Cylinder; Standards/ Conformity: WRAS, KIWA, CE Marked; include for all accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 2.2					
A	DHW Pre-Heat Cylinder; Ref: CYL-01; Location: Plantroom	1	nr			
	GRP pre-insulated sectional water storage tank; supply and installation; complete; Contents: Potable Cold Water; Specification: Format 30; Capacity: 5625 Litres; Dimensions (LxWxH): 2.65m x 1.65m x 1.50m; Internal Divider: Required; Drip Tray: Required; Inlet Connection: 2 no. DN 15; Outlet Connection: 2 no. DN 50; Overflow Connection: 2 no. DN 50; Vents: 2 no.; Access Hatch: 2 no. 600 x 600mm; Internal Ladders: Not Required; External LadderNot Required; Tank Base Description: Pre-insulated c/w internal flanges; Tank Wall Description: Pre-insulated c/w external flanges; Tank Cover Description: Heavy duty and pre-insulated c/w internal flanges to Format 30; Underwater Bolts, Tie Bars, Joiners, etc: Stainless steel, grade 316 S16; External bolts: Mild steel to BS 3692 and galvanised to BS 729; Mesh Screen Details: All vents, warning pipes, overflows, shall have mesh screens of maximum 0.65mm x 0.65mm holes; Standards/ Conformity: Commissioned and Maintained to BS 6700, BS 3692, BS 729, BS4211 1994, Declaration of Performance / CE certification, I.S. EN 13280: 2001; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2.1					
B	Cold Water Storage Tank; Ref: WT-01; Location: Tank room	1	nr			
	Accessories associated with Primary Equipment					
	Isolation valves; for isolation of water services pipework up to 50mm diameter; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	15mm Isolation Valves	36	nr			
D	22mm Isolation Valves	19	nr			
E	28mm Isolation Valves	7	nr			
F	35mm Isolation Valves	3	nr			
G	42mm Isolation Valves	15	nr			
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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	54mm Isolation Valves	8	nr			
B	To Cylinder Isolation Valves	1	nr			
	Lock Shield Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	42mm Lock Shield Valve	1	nr			
	Drain Cock Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	42mm Drain Cock Valve	1	nr			
	Double Regulating Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	15mm Double Regulating Valve	18	nr			
F	28mm Double Regulating Valve	2	nr			
	Auto Air Vent Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
G	42mm Auto Air Vent Valve	2	nr			
	Non-return Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	28mm Non-return Valve	3	nr			
J	35mm Non-return Valve	1	nr			
	Strainer Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
K	28mm Strainer Valve	1	nr			
	Commissioning Set; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
L	28mm Commissioning Set	1	nr			
	Safety Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
M	Safety Valve to cylinder	1	nr			
N	42mm Safety Valve	1	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Pressure Guage; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	42mm dia Pressure Guage	4	nr			
B	54mm dia Pressure Guage	2	nr			
C	Pressure Guage to Cylinder	1	nr			
	Temperature Guage; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	28mm Temperature Guage	3	nr			
E	35mm Temperature Guage	1	nr			
F	42mm Temperature Guage	3	nr			
G	Temperature Guage to cylinder	1	nr			
	Temperature Sensors; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	28mm Temperature Sensors	3	nr			
J	35mm Temperature Sensors	1	nr			
K	42mm Temperature Sensors	5	nr			
L	Temperature Sensors to cylinder	3	nr			
	3-port motorised Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
M	28mm 3-port motorised Valves	1	nr			
N	42mm 3-port motorised Valves	1	nr			
	Pressure Reducing Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
P	42mm Pressure Reducing Valve	2	nr			
Q	54mm Pressure Reducing Valve	1	nr			
	Double Check Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
R	42mm Double Check Valve	1	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	3kW Immersion Heater; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3					
A	3kW Immersion Heater to hot water cylinder	1	nr			
	Expansion Vessels; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	Expansion Vessels	2	nr			
	Volumetric Water Meter; Media: Mains Water; Visible Display: 5 roller counter; Pulse Output: Switch type - reed, Contacts - VFC, Pulse value - 1 per litre, Load current - 500mA, Max switch voltage - 180Vdc, Contact rating - 10W, Flying lead - 2m; Connection Type: As per Part 3: Standard Clauses; Inline Strainer: Required; Installation Positions: Horizontal & Vertical; Valve Body: Epoxy resin coated brass to DIN 50 930 part 6; Max Pressure: 16 Bar; Media Temperature: 0°C - 30°C; Operating Temperature: -20°C - 50°C; Conformance: WRAS Approved, MID Approved, IS EN 14154, Declaration of Performance / CE Certification; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.3.1					
C	Volumetric Water Meter	1	nr			
	Pumps; supply and installation; complete; Type: single head, canned rotor type c/w integral variable speed drive; Minimum Energy Class: A; Design Duty: 1 kg/s @ 30kPa; Pump Housing Material: Stainless Steel EN 1.4308; Impeller Material: Composite; Maximum Operating Pressure: 10 bar; Maximum Operating Temperature: 110°C; Electrical Requirements: 1phase / 230V / 50 Hz; Enclosure Class: X4D; Insulation Class: F; Energy Efficiency Index (EEI): 0.18; On-board VSD: Required; Volt Free Contacts: Required for BMS enable/fault; c/w flexible connections, test points, anti vibration mounts and fixing brackets; all in strict accordance with the Mechanical Specification Part 4, Section 2.7					
D	Pump; Ref: Anti-legionella HWR	1	nr			
	Pumps; supply and installation; complete; Type: single head, canned rotor type c/w integral variable speed drive; Minimum Energy Class: A; Pump Housing Material: Stainless Steel EN 1.4308; Impeller Material: Composite; Maximum Operating Pressure: 10 bar; Maximum Operating Temperature: 110°C; Electrical Requirements: 1phase / 230V / 50 Hz; Enclosure Class: X4D; Insulation Class: F; Energy Efficiency Index (EEI): 0.18; On-board VSD: Required; Volt Free Contacts: Required for BMS enable/fault; c/w flexible connections, test points, anti vibration mounts and fixing brackets; all in strict accordance with the Mechanical Specification Part 4, Section 2.6					
E	Pump Ref: PMP-05; Flow rate: 0.25Kg/s; Head: 95kPa; Motor: 0.15kW; Complete	1	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Packaged cold water booster pump c/w integrated VSD; supply and installation; complete; Type: Twin Pump Duty/Assist; Design Duty: 4.0l/s @ 2.5bar; Integral Frequency Converter and PID Controller with adjustable PI parameters: Required; Integral Expansion Vessel, Pressure Transducer & Pressure Gauge: Required; Integral Non-return Valve: Required; Variable Speed Drive: Required; Pump Housing Material: 304 Stainless Steel; Impeller Material: 304 Stainless Steel; Manifolds: 304 Stainless Steel; Rubber Material: EPDM; Shaft Seal Material; HQQE; Max. Operating Pressure: 10 bar; Electrical Requirements: 400 V / 3ph / 50 Hz; IE Efficiency Class: IE5; Enclosure class (IEC 34-5): IP54; Insulation class (IEC 85): F; Volt Free Contacts: Required for BEMS enable/fault; Manufacturers Warranty: 2 years (minimum); Dry Run Protection: Required - Float Switch; Standards / Conformity: DIN Standard 1988/T5, CE Marked WRAS / KIWA; c/w flexible connections, test points, anti vibration mounts and fixing brackets; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 2.5					
A	Packaged Cold Water Booster Pump Set; Ref: BS-01	1	nr			
	Balanced Flue Kit; supply and installation; complete; Inner/Outer Diameter: 100/150mm (Contractor to confirm with Water heater specialist prior to order); Construction Inner: 304 grade s/steel (EN 1.4301); Construction Outer: Powder Coated Steel; Insulation Thickness: 45mm; Fire Rating: 2 hours (BS 476: Part 20); Minimum Clearance to Combustible Material: 50mm; Terminal Type: Suitable for horizontal discharge; Support Brackets - Int. Use: Powder-coated, 304 grade stainless steel; External wall terminal kit: Required; include for all fixings and brackets; all in strict accordance with the Mechanical Specification Part 4, Section 1.4					
B	Balanced Flue Kit; 100/150mm diameter	1	nr			
	<u>Terminal equipment and fittings</u>					
	Sanitary ware; FINAL CONNECTIONS ONLY (Sanitary ware measured elsewhere, refer to Bill of Quantities element (74) Sanitary Fittings for full details); fixing in accordance with the manufacturer's recommendations; all in accordance with the Architects and Mechanical Engineers Specification and Drawings 2999-SMK-ZZ-L0-DR-M-5301, 2999-SMK-ZZ-L1-DR-M-5302, 2999-SMK-ZZ-RF-DR-M-5303					
C	WHB; 15mm; connecting in accordance with the manufacturer's instructions	25	nr			
D	WC, double bowl; 15mm; connecting in accordance with the manufacturer's instructions	24	nr			
E	Sink, single bowl; 15mm; connecting in accordance with the manufacturer's instructions	6	nr			
F	Shower; 15mm; connecting in accordance with the manufacturer's instructions	31	nr			
G	Appliance; 15mm; connecting in accordance with the manufacturer's instructions	1	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Thermostatic Blending Valves; supply and installation; complete; TMV3 standard fail-safe, lockable thermostatic mixing valve c/w integral strainers and non-return valves; Temperature setting range: 38 - 46°C; all in accordance with the Mechanical Engineers Specification Part 4, Section 2.9					
A	15mm Thermostatic Mixing Valves	31	nr			
	Shower Thermostatic Blending Valves; supply and installation; complete; TMV3 standard fail-safe, lockable thermostatic mixing valve c/w integral strainers and non-return valves; Outlet temperature: 42/43 degree C; all in accordance with the Mechanical Engineers Specification					
B	15mm Shower Thermostatic Mixing Valves	31	nr			
	Ballofix Isolation Valves; PTFE seals and stem seals, treaded; for isolation of water services pipework at final connections to fittings; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	15mm Ballofix Isolation Valves	221	nr			
	Distribution					
	Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5305					
D	28mm diameter pipework	1	Item			
	Copper Pipes and Fitting; supply and installation complete; Application: rainwater pipelines; Material: Copper; Finish: uncoated; include for all fixing brackets, hangers and supports; include for all elbows, expansion bellows, unions and tees necessary to complete works; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1					
E	15mm diameter pipework	1	Item			
F	22mm diameter pipework	1	Item			
G	28mm diameter pipework	1	Item			
H	35mm diameter pipework	1	Item			
J	42mm diameter pipework	1	Item			
K	54mm diameter pipework	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Insulation					
	Foil-faced Mineral Wool Insulation; Class: A1, CFC, HCFC free, ozone depletion factor zero; Max thermal conductivity: 0.035W/m/K; Density: 80-120kg/m3; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 3					
	Insulation, 20mm thick					
A	to 15mm diameter pipework	1	Item			
	Insulation, 25mm thick					
B	to 22mm diameter pipework	1	Item			
C	to 28mm diameter pipework	1	Item			
	Insulation, 40mm thick					
D	to 35mm diameter pipework	1	Item			
E	to 42mm diameter pipework	1	Item			
F	to 54mm diameter pipework	1	Item			
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
G	General Valves & Plant	1	Item			
	Aluminium Cladding; to valves and plant; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
H	to 15mm diameter pipework	1	Item			
J	to 22mm diameter pipework	1	Item			
K	to 28mm diameter pipework	1	Item			
L	to 35mm diameter pipework	1	Item			
M	to 42mm diameter pipework	1	Item			
N	to 54mm diameter pipework	1	Item			
P	to General Valves & Plant	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	General					
	Testing and commissioning; all in accordance with the Mechanical Engineers Specification Documents					
A	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Mechanical Engineers Specification Documents					
B	Operating and maintenance manuals;complete	1	Item			
	Working drawings; all in accordance with the Mechanical Engineers Specification Documents					
C	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Mechanical Engineers Specification Documents					
D	Co- ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Mechanical Engineers Specification Documents					
E	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Mechanical Engineers Specification Documents					
F	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)

(53) WATER DISTRIBUTION - MAINS WATER

System

Mains Water Distribution installation, testing and commissioning; Provide and install a new mains water supply system extended from the existing 2010 extension building to the new school extension, in accordance with design drawings and plumbing schematics; The system shall comprise a complete non-metallic pipework and fittings solution, suitable for potable water, installed in ceiling voids and service routes as indicated; All valves, fittings, and distribution components shall be non-metallic in compliance with Technical Guidance Document 031.1 to prevent metallic exceedances (Lead and Copper); Include engraved traffolite labels for all drinking water outlets and pipework identification at regular intervals and prior to sanitaryware connections, as per the standard specification; Provide test points in Plantrooms for water quality verification; Arrange for NSAI-accredited testing in accordance with S.I. No. 122 of 2014 (EU Drinking Water Regulations) before handover and again nine months post-handover during the Defects Liability Period; Any non-compliance shall be rectified at the Contractors expense; As-installed documentation to include total system volume, materials records, EU compliance certificates, and details within the Health & Safety File; Include commissioning, testing, demonstration, and maintenance handover; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 7; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-L0-DR-M-5301, 2999-SMK-ZZ-L1-DR-M-5302, 2999-SMK-ZZ-RF-DR-M-5303, 2999-SMK-ZZ-LL-DR-M-5350, 2999-SMK-ZZ-LL-DR-M-5105

Accessories associated with Primary Equipment

Isolation Valves; include for all seals and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

A	15mm Isolation Valves	6	nr		
B	22mm Isolation Valves	9	nr		
C	28mm Isolation Valves	1	nr		

2 Port Control Valves; include for all seals and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

D	22mm 2 Port Control Valve	1	nr		

Non-return Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

E	22mm Non-return Valve	3	nr		

Lock Shield Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

F	22mm Lock Shield Valve	2	nr		

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Auto Air Vent Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	22mm Auto Air Vent Valve	1	nr			
	Volumetric Water Meter; Media: Mains Water; Visible Display: 5 roller counter; Pulse Output: Switch type - reed, Contacts - VFC, Pulse value - 1 per litre, Load current - 500mA, Max switch voltage - 180Vdc, Contact rating - 10W, Flying lead - 2m; Connection Type: As per Part 3: Standard Clauses; Inline Strainer: Required; Installation Positions: Horizontal & Vertical; Valve Body: Epoxy resin coated brass to DIN 50 930 part 6; Max Pressure: 16 Bar; Media Temperature: 0°C - 30°C; Operating Temperature: -20°C - 50°C; Conformance: WRAS Approved, MID Approved, IS EN 14154, Declaration of Performance / CE Certification; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.3.1					
B	Volumetric Water Meter	2	nr			
	Water boiler; supply and installation; complete; Description: Over-sink, wall-mounted, steam-free electric water boiler; Storage Capacity: 7.5 litres; Heat Up Time From 10°C: 17 minutes; Delivery Rate: 45 Cups; Power Rating: 1ph/230V/50Hz (13A) - 2.4kW; Water Supply: Potable Water; Water Supply Pressure: 0.7 bar - 5.0 bar; Nominal Dimensions: 578 (H) x 318 (W) x 198 (D)mm; Construction: Twin Chamber, Stainless Steel c/w cool touch tap; Case: Stainless steell; Tap: Pull down classic; Drip Tray: Required; Mains Water Expansion Kit: Required; Warranty: 2 years; include for all accessories; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 2.10					
C	Water boiler	1	nr			
	Terminal equipment and fittings					
	Frost free bib tap; Body: Gun Metal with Chrome Finish; Seat Seals: EPDM; Extension Kit: Copper; Extension Kit: Required; Automatic Draining: Required; Back Flow Prevention: Required; Fixing Set: Required; Lockable / Cap: Required; include for all seals and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 2.8					
D	Frost free bib tap	2	nr			
	Sanitary ware; FINAL CONNECTIONS ONLY (Sanitary ware measured elsewhere, refer to Bill of Quantities element (74) Sanitary Fittings for full details); fixing in accordance with the manufacturer's recommendations; all in accordance with the Architects and Mechanical Engineers Specification					
E	Sink, single bowl; 15mm connections; all in accordance with the manufacturer's instructions	6	nr			
F	Drinking Fountain; 15mm connections; all in accordance with the manufacturer's instructions	1	nr			
G	Water Boiler; 15mm connections; all in accordance with the manufacturer's instructions	1	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Dentist Chair; 15mm connections; all in accordance with the manufacturer's instructions	2	nr			
B	Appliance; 15mm connections; all in accordance with the manufacturer's instructions	4	nr			
	Accessories associated with terminal equipment and fittings					
	Ballofix Isolation Valves; PTFE seals and stem seals, treaded; for isolation of water services pipework at final connections to fittings; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	15mm Ballofix Valves	14	nr			
	Distribution system					
	Non-matallic pipework and fittings; in accordance with the Irish Standard IS EN 806:2005: Specification for installations inside buildings conveying water for human consumption; include for all fixing brackets, hangers and supports; include for all elbows, unions and tees necessary to complete works; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1 & Drawings M-5301, M-5302, M-5311					
D	15mm diameter pipework	1	Item			
E	22mm diameter pipework	1	Item			
F	28mm diameter pipework	1	Item			
G	54mm diameter pipework	1	Item			
	Insulation					
	Foil-faced Mineral Wool Insulation; Vlass: A1, CFC, HCFC free, ozone depletion factor zero; Max thermal conductivity: 0.035W/m/K; Density: 80-120kg/m3; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 3					
	Insulation; 20mm thick					
H	15mm diameter pipework	1	Item			
	Insulation; 25mm thick					
J	22mm diameter pipework	1	Item			
K	28mm diameter pipework	1	Item			
	Insulation, 40mm thick					
L	to 54mm diameter pipework	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
A	General Plant & Valves	1	Item			
	Aluminium Cladding; to valves and plant; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
B	to 15mm diameter pipework	1	Item			
C	to 22mm diameter pipework	1	Item			
D	to 28mm diameter pipework	1	Item			
E	to 54mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with the Mechanical Engineers Specification Documents					
F	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Mechanical Engineers Specification Documents					
G	Operating and maintenance manuals;complete	1	Item			
	Working drawings; all in accordance with the Mechanical Engineers Specification Documents					
H	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Mechanical Engineers Specification Documents					
J	Co- ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Mechanical Engineers Specification Documents					
K	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Mechanical Engineers Specification Documents					
L	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	(54) GAS SERVICES					
	System					
	Natural Gas distribution; installation testing and commissioning; The gas supply to serve the new school shall be taken from the existing gas supply network within the 2010 plantroomm and routed within the corridor ceiling voids to the new extension plant room; The installation shall be carried out in full compliance with the current edition of the Irish Gas Regulations, IS 813, IS EN 10255:2004; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 8; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-L0-DR-M-5401, 2999-SMK-ZZ-LL-DR-M-5450, 2999-SMK-ZZ-LL-DR-M-5451					
	Accessories associated with Primary Equipment					
	Isolation Valves; isolation of gas services pipework; include for all accessories; all in strict accordance with the Mechanical Specification Part 1, Section 8					
A	32mm Isolation Valves	2	nr			
B	40mm Isolation Valves	4	nr			
	Capped Ends; include for all accessories; all in strict accordance with the Mechanical Specification Part 1, Section 7					
C	40mm Capped Ends	1	nr			
	Gas meter; supply and installation; complete; Description:Low Pressure Drop Turbine Gas Meter with pulsed output to BMS; Media: Natural Gas; Visible Display: 8 digit roller counter; Pulse Output: Required for BMS connectivity; Connection Type: Screwed unions/welded; Meter Model: Contractor to confirm based on proposed equipment peak gas loads; Installation Positions: Horizontal; Casing: Aluminium Resin Coated Steel; Max Pressure: 0.5 Bar; Operating Temperature: -25°C - 55°C; Back Flow Prevention: Required; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification Part 4, Section 6.3.2					
D	Gas meter	1	nr			

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Terminal equipment and fittings					
	Square 4 way supply diffuser; supply and installation; complete; Volume Flow-rate: As indicated on Diffuser Schedule; Max. Pressure Drop: 20 Pa; Max Noise Levels: NR 35; Material & Finish: Polyester Powder Coated Extruded Aluminium, Colour: White RAL 9010; Integral Opposed Blade Damper: Required; Plenum Box: Side Entry with neck spigot to suit ductwork size; Noise Attenuation: not required; c/w supports, volume control dampers, plenum boxes, perforated baffle plates, connecting collar and flexible connections; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 4, Section 5.7					
A	Square 4 way supply diffuser; Size 200mm x 200mm	6	nr			
	Distribution System					
	Galvanised Medium Grade Mild steel pipework and fittings; include for all fixings and supports, elbows,expansion bellows; unions and tees necessary to complete works; Painted with two coats of yellow ochre paint; pipework run in ceiling voids; all in strict accordance with the Mechanical Specification Part 1, Section 7.3					
B	32mm diameter pipework	1	Item			
C	40mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
D	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
E	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
F	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
G	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
H	As built drawings	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Identification plates, labels and the like; all in accordance with Engineers Specification					
A	Identification plates, labels and the like	1	Item			
	(54) GAS DETECTION SYSTEM					
	System					
	Gas detection system installation testing and commissioning; The Contractor shall supply, install, test and commission the new natural gas installation in accordance with this specification and detailed on the design; Conformity in accordance with IIS 813, IS EN 60079; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 8.9; Part 2; Part 3; Part 4, Section 4 and Drawings 2999-SMK-ZZ-LL-DR-M-5450					
	Primary Equipment					
	Gas detection control panel; supply and installation; complete; Description: Gas Leak Detection & Isolation System; Panel Dimensions: 183mm(H) x 212mm(W) x 97mm(D); IP Rating: IP65; Electrical Supply: 1ph, 230V, 50Hz; Gas Solenoid Valve Size: Line Size as indicated on Gas Drawings M-5400 Series; Auxillary Position Status Facility: Required on solenoid valve for BMS; Gas Detector Type: Natural Gas; Gas Detector Calibration: Pre alarm: 5% of low explosion level, High alarm: 10% of low explosion level; Quantity of Gas Detectors per System: 2no.; Integral Emergency Stop Button & Reset: Required; Auxiliary Emergency Stop Button: 1 no. for each plantroom; Audible Alarm: Required; LED Indication: Power - GREEN, Gas On - RED; Auto Reset After Power Supply Failure: Required; BMS Connectivity: Volt free contacts; Fire Test Isolation Mode: Required; Fire Alarm Interface: Required; Fire Alarm Test Module: Required; all in accordance with the Mechanical Specification Part 4, Section 3.1					
B	Gas detection control panel; Ref: CP-01; Location: Plantroom	1	nr			
	Accessories associated with Primary Equipment					
	Gas Solenoid Valves; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification Part 3					
C	40mm dia Gas Solenoid Valve	1	nr			
	Emergency Stop Button; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification					
D	Emergency Stop Button	1	nr			
	Sensor; include for all accessories and fittings; complete; all in strict accordance with the Mechanical Specification					
E	Gas Sensor	2	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
A	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
C	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
D	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
E	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
F	Identification plates, labels and the like	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	(56) SPACE HEATING					
	System					
	Heating installation, testing and commissioning; The installation of underfloor heating (UFH) system pipework shall include the supply and installation of the heating manifold, pump & valve arrangement, wiring centre and pipework and all associated components necessary for the efficient and safe operation of the underfloor heating system. Underfloor heating pipework and manifolds shall be installed as detailed on drawings and in Part 4: Equipment Schedule. The specialist supplier shall provide final installation drawings for approval before commencement. All zones shall be complete with intelligent controller to provide time and temperature control. The zones shall also have the ability to be enabled on a time schedule through the BMS. Manifold location shall be agreed with the engineer and architects prior to construction; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 8; Part 2; Part 3; Part 4, Section 5 and Drawings 2999-SMK-ZZ-L0-DR-M-5601, 2999-SMK-ZZ-L0-DR-M-5603, 2999-SMK-ZZ-L1-DR-M-5602, 2999-SMK-ZZ-L1-DR-M-5604, 2999-SMK-ZZ-L0-DR-M-5603, 2999-SMK-ZZ-L1-DR-M-5604					
	Terminal equipment and fittings					
	Electrical Radiator; oil filled radiator; white stove enamel finish; Dimensions: 1084mm lenght x 659mm height; minimum output: 1.5kw; Weight; 20kg; Controls; Remote Frost Thermostat c/w wall mounting brackets; include for all accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 1.10					
A	Oil filled electric radiator	2	nr			
	Accessories associated with terminal equipment and fittings					
	Pre-assembled Underfloor Heating Manifold, Pump & Wiring Centre; supply and installation; complete; Material: Nickel plated, brass; Size: As required to meet zone requirements as shown on manifold schedule on drawings include for all accessories and fittings; Flow Header Fittings Electrothermic heads and actuators; Return Header Fittings: Integral double regulating lockshields; Wiring Centre Capacity: As required; Wiring Centre Supply Voltage: 230VAC, 50 Hz, 8A; BMS Connectivity: Volt free contacts (enable/fault); Max. Ambient Temperature: 0°C - 40°C; Additional Fittings Per Header: isolation valve, draincock, air vent, temperature gauge, temperature sensor for each zone; include for all fittings and accessories; all in strict accordance with the Mechanical Engineers Specification Part 4, Section 4.3					
B	Manifold Ref: M1; IVR 08 Port	1	nr			
C	Manifold Ref: M2; IVR 13 Port	1	nr			
D	Manifold Ref: M3; IVR 10 Port	1	nr			
E	Manifold Ref: M4; IVR 12 Port	1	nr			
F	Manifold Ref: M5; IVR 11 Port	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Manifold Ref: M6; IVR 07 Port	1	nr			
B	Manifold Ref: M7; IVR 08 Port	1	nr			
C	Manifold Ref: M8; IVR 12 Port	1	nr			
D	Manifold Ref: M9; IVR 09 Port	1	nr			
E	Manifold Ref: M10; IVR 11 Port	1	nr			
F	Manifold Ref: M11; IVR 10 Port	1	nr			
G	Manifold Ref: M12; IVR 10 Port	1	nr			
H	Manifold Ref: M13; IVR 11 Port	1	nr			
	Isolation valves; supply and installation; complete; include for all accessories and fittings; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 2					
J	15mm Isolation Valves	8	nr			
K	20mm Isolation Valves	18	nr			
	2-Port Motorised Valve and Actuator; supply and installation; complete; Assisted Lift Servo Operated Valve or equivalent; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 4.2					
L	15mm 2-Port Control Valves	4	nr			
M	20mm 2-Port Control Valves	9	nr			
	3-Port Motorised Valve and Actuator; supply and installation; complete; Assisted Lift Servo Operated Valve or equivalent; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 4.2					
N	15mm 2-Port Control Valves	4	nr			
P	20mm 2-Port Control Valves	9	nr			
	Double Regulating Valve; supply and installation; complete; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 4, Section 4.6					
Q	15mm Double Regulating Valve	4	nr			
R	20mm Double Regulating Valve	9	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Non return valves; supply and installation; complete; include for all accessories and fittings; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	15mm Non-return Valves	8	nr			
B	20mm Non-return Valves	18	nr			
	Commissioning Set; supply and installation; complete; include for all accessories and fittings; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	15mm Commissioning Set	4	nr			
D	20mm Commissioning Set	9	nr			
	Pressure Relief Safety Valves; supply and installation; complete; include for all accessories and fittings; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	15mm Pressure Relief Safety Valves	4	nr			
F	20mm Pressure Relief Safety Valves	9	nr			
	Expansion Bellows; supply and installation; complete; include for all accessories and fittings; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 2					
G	Expansion Bellows	2	nr			
	Digital Space Thermostats; supply and installation; complete; LCD Display: 3.5" Touchscreen; Functions: clear temperature display; clear set point display; lockable for adjustment only between 18°C -22°C; Power Supply: 4Vac/dc; Dimensions: 87mm x112mmx14mm; c/w modus connections; wired to BMS; Wall mounted; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 4.1					
H	Digital Space Thermostats; Ref: TS	38	nr			
	<u>Distribution</u>					
	Medium Grade Black Mild steel pipework and fittings; include for all fixings and supports; include for all elbows, expansion bellows; unions and tees necessary to complete the work, all pipework up to 50mm to be screw joints, pipework above 50mm to be welded, plant room pipework to be flanged; all connections to valves shall be screwed; Painting: two coat of zinc chromate primer prior to fitting of insulation; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1					
J	15mm diameter pipework	1	Item			
K	20mm diameter pipework	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	25mm diameter pipework	1	Item			
B	32mm diameter pipework	1	Item			
C	40mm diameter pipework	1	Item			
	PERT/AL/PERT to DIN 4726 and DIN 16833/84 ; include for all fixings and supports; Installed using pipe clip rails and tracker clips to ensure even spacing throughout the new extension with the floor screed to be installed by the main contractor; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 9.3					
D	16mm diameter pipework	1	Item			
	Insulation					
	Foiled faced fibreglass insulation; to all new pipework services; class A1, CFC and HCFC free with ozone depletion factor of zero; Thermal conductivity not exceeding 0.042W/m2K at 100°C; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4.2					
	Insulation, 20mm thick					
E	to 15mm diameter pipework	1	Item			
	Insulation, 25mm thick					
F	to 20mm diameter pipework	1	Item			
G	to 25mm diameter pipework	1	Item			
	Insulation, 40mm thick					
H	to 32mm diameter pipework	1	Item			
J	to 40mm diameter pipework	1	Item			
	Proprietary Insulation Jackets; Velcro fixed jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
K	General Valves & Plant	1	Item			
	Aluminium Cladding; to valves and plant; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
L	to 15mm diameter pipework	1	Item			
M	to 20mm diameter pipework	1	Item			
N	to 25mm diameter pipework	1	Item			
P	to 32mm diameter pipework	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	to 40mm diameter pipework	1	Item			
B	to General Valves & Plant	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
C	Testing and commissioning	1	Item			
D	Testing,chemical dosing, sterilization and certification of all systems	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
E	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
F	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
G	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
H	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
J	Identification plates, labels and the like	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	(57) COMPRESSED AIR					
	System					
	Compressed Air installation testing and commissioning; complete; compressed air installation for dental equipment, executed by a specialist medical gas pipework installer (e.g. HPI or BOC) in full compliance with HTM 02-01 Medical Gas Pipeline Systems; Works Include: Supply and installation of compressed air compressor (230V, 50/60Hz, 1.3-1.7 kW) complete with 20L tank, pressure range 6-7.8 bar, noise level max. 68 dBA (51 dBA with cabinet).; Degreased copper pipework, fittings, and valves, installed as per HTM 02-01 standards; Drain points and compressed air outlets with ballofix valves, installed flush with floor screed; Identification and protection in accordance with HTM 02-01; All final connections and commissioning to be carried out by the approved medical gas installer; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 12; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-LO-DR-M-5401, 2999-SMK-ZZ-L1-DR-M-5402, 2999-SMK-ZZ-RF-DR-M-5403					
	Primary Equipment					
	Dental Air Compressor; supply and installation; complete; Type: Super silent compressor with the following features: 2 Surgeries, Oil-free, dry, hygienic, taste and odourless compressed air, closed crankcase, Extremely low-noise, Plug 'n' play installation, Membrane-drying unit, Two cylinders; Pressure Tank Volume: 20 l; Suction Power Approx.: 260/315 l/min; Delivery at 5 bar: 124/140 l/min; Dimensions: 65(H) x 48(W) x 41(D); Weight: 38 Kg; Noise Level: 68 dB(A); Noise Level with Cabinet: 51/52 dB(A); Medical Device Class (MDR): IIa; Cut-In pressure: 6 bar; Cut-out Pressure: 7.8 bar; Rate Voltage: 230 V; Mains Frequenzy: 50/60 Hz; Nominal current at 8 bar: 7.6/6.9 A; Type of Protection: IP 24; Mains fuses: 16 A; all in strict accordance with the Mechanical Engineers Specification Part 4 , Section 5.14					
A	Dental Air Compressor; Ref: CA-01; Location: Roof	1	nr			
	Accessories associated with Primary Equipment					
	Isolation valves; for isolation of Medical Gas Pipeline Systems; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3					
B	15mm Isolation Valves	2	nr			
	Pressure relief valves; for use with Medical Gas Pipeline Systems; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3					
C	15mm Pressure Relief Valves	2	nr			

(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)

Non-return valves; for use with Medical Gas Pipeline Systems; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3

A	15mm Non-return Valves	2	nr		

Pressure Switch; for use with Medical Gas Pipeline Systems; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3

B	15mm Pressure Switch	2	nr		

Pressure gauge; for use with Medical Gas Pipeline Systems; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3

C	15mm Pressure Gauge	2	nr		

Drain valuve; for use with Medical Gas Pipeline Systems; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3

D	15mm Drain Valve	2	nr		

Terminal equipment and fittings

FINAL CONNECTIONS ONLY (Dentist chair masured elsewhere, refer to Bill of Quantities element (76) Fitted Furniture for full details); fixing in accordance with the manufacturer's recommendations; all in accordance with the Architects and Mechanical Engineers Specification

E	Dental Chair; 15mm connections; all in accordance with the manufacturer's instructions	2	nr		

Medial grade compressed air outlets to HTM 02-01; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 1, Section 12.5

F	Medial grade compressed air outlets	2	nr		

Accessories associated with terminal equipment and fittings

Ballofix Isolation Valves; PTFE seals and stem seals, treaded; for isolation of water services pipework at final connections to fittings; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3

G	15mm Ballofix Valves	4	nr		

To Collection €

(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)

Compressed air manifold; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 1, Section 12

A	Compressed air manifold	1	nr		

Distribution System

Phosphorous de-oxidised non arsenical pipework and fittings; supply and installation; complete; Standards in accordance with HTM 02-01 Medical Gas Pipeline Systems; include for all joints; fittings; brackets and pipework supports; all in accordance with Mechanical Engineers Specification Part 1, Section 12

B	15mm diameter pipework	1	Item		

General

Testing and commissioning; all in accordance with Engineers Specification

C	Testing and commissioning	1	Item		

Operating and maintenance manuals; all in accordance with Engineers Specification

D	Operating and maintenance manuals	1	Item		

Working drawings; all in accordance with Engineers Specification

E	Working drawings	1	Item		

Co-ordination drawings; all in accordance with Engineers Specification

F	Co-ordination drawings	1	Item		

As built drawings; all in accordance with Engineers Specification

G	As built drawings	1	Item		

Identification plates, labels and the like; all in accordance with Engineers Specification

H	Identification plates, labels and the like	1	Item		

To Collection €

(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)

(57) VACUUM DELIVERY SYSTEMS

System

Vacuum delivery system installation testing and commissioning; The vacuum/ suction system serving the dental surgeries, shall include all pipework, fittings, manifold connections, and vacuum plant; All works to comply with HTM 02-01 Medical Gas Pipeline Systems; Pipework to be grey MUPVC with push-fit joints and fittings, installed independently from each outlet to the plantroom manifold; Ensure all materials are resistant to carried substances and capable of withstanding a negative pressure of 25 kPa; Provide fire collars/sleeves where non-metallic pipework passes through fire compartment; Final connections to be carried out by a specialist medical gas installer; Include all supports, fixings, testing, commissioning, and certification; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 13; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-LO-DR-M-5401, 2999-SMK-ZZ-L1-DR-M-5402, 2999-SMK-ZZ-RF-DR-M-5403

Primary Equipment

Dental Vacuum Pump; supply and installation; complete; Type: Semi-wet suction system with inverter control with the following features: 2-3 chairs, Intelligent aspiration, Self-regulating of suction flow, Automatic self-diagnosis system, Fitted with ISO 18 Hydrocyclone Amalgam Retention; Amalgam Retention: ISO 11143 Compliant, Max Flow - 18 l/min, Min Flow - 0.5 l/min, Inverter control Max Flow: 1,430 l/min; Max vacuum for continous duty: 210 mBar; Sound: 69 dB (A); Power: 7 A, 1.45 kW; Dimensiosn: 645 (H) x 400 (W) x 330 (D); Net Weight: 39.6 Kg; TUV Certified: 98.1% amalgam retention; Warrenty: 5 years; all in strict accordance with the Mechanical Engineers Specification Part 4 , Section 5.15

A	Dental Vacuum Pump; Ref: VA-01; Location: Roof	1	nr		

Accessories associated with Primary Equipment

Terminal equipment and fittings

FINAL CONNECTIONS ONLY (Dentist chair masured elsewhere, refer to Bill of Quantities element (76) Fitted Furniture for full details); fixing in accordance with the manufacturer's recommendations; all in accordance with the Architects and Mechanical Engineers Specification

B	Dental Chair; 40mm connections; all in accordance with the manufacturer's instructions	2	nr		

Vacumm manifold; all in strict accordance with the Mechanical Specification Part 1, Section 13

C	Vacuum manifold	1	nr		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Distribution System					
	MUPVC plastic pipework and fittings; supply and installation; complete; Colour: Grey; Jointing type: Push fits joints and fittings generally; include for all joints; fittings; brackets and pipework supports; all in accordance with Mechanical Engineers Specification Part 1, Section 13					
A	40mm diameter pipework	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
B	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
C	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
D	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
E	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
F	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
G	Identification plates, labels and the like	1	Item			
				To Collection €		

(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)

(57) VENTILATION SERVICES

System

Ventilation installation, testing and commissioning; complete; The contractor shall supply and install all ventilation ductwork, terminals and plant within the building; all in accordance with the CIBSE commissioning codes and Mechanical Engineers Specification Part 1, Section 10; Part 2; Part 3; Part 4, Section 6 and Drawings 2999-SMK-ZZ-L0-DR-M-5701, 2999-SMK-ZZ-L1-DR-M-5702

Primary Equipment

Heat recovery ventilator units; supply and installation; complete; Description: Demand Controlled Horizontal Mechanical Ventilation with Heat Recovery Unit c/w demand controller; Type: Aluminium Counter Flow Heat Exchanger; Dimensions (WxDxH): 2141x1323x350mm; Airflow / ESP: 30 l/s @150 Pa (@ 75%); Max Specific Fan Powers: 1.07 W/(l/s) (@ 75%); Filters: F7/G4 filters (supply & Extract); Casing: Double Skinned Aluzinc Panels, internally lined with 90kg/m3 thermal & acoustic insulation c/w bottom access panels for maintenance; Heat Exchanger Efficiency (winter): 93% (EN 308); By Pass Damper: Yes - modulating summer by-pass; Fans: Class 1 EC/DC Fan/motor Variable Speed Control, low energy, high efficiency, ErP rated motorised fans providing low specific fan powers and stepless speed control; Impellars: Backward curved; Integral Frost Heater: 2.4kW; Weight: 275kg's; Voltage: 220-240V/1/50Hz; Fuse Rating: 12A; Max Noise Levels: 32 dB(A) at 3m; Warranty: 5 years; Matched Attenuators: Required on supply & extract; Matched attenuators to suite supply & extract spigots; Attenuators to be sized by acoustic specialist to achieve max sound pressure level within classrooms of 35 dB(A) @ 1.5m; Accessories: Wall controller, PIR motion detector, Duct mounted C02 Sensor for Demand Control of fan speeds, Suspension brackets, VFC for BEMS connectivity, Remote ON/OFF Adapter (PAC-SE55RA-E or similar) to allow MHRV unit to disable under fire alarm conditions; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.1

A	Heat recovery ventilator units; Ref: HRU-01; Location: Hotdesk	1	nr		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Heat recovery ventilator units; supply and installation; complete; Description: Demand Controlled Horizontal Mechanical Ventilation with Heat Recovery Unit c/w demand controller; Type: Aluminium Counter Flow Heat Exchanger; Dimensions (WxDxH): 2400x1312x460mm; Airflow / ESP: 150 l/s @150 Pa (@ 75%); Max Specific Fan Powers: 1.03 W/(l/s) (@ 75%); Filters: F7/G4 filters (supply & Extract); Casing: Double Skinned Aluzinc Panels, internally lined with 90kg/m3 thermal & acoustic insulation c/w bottom access panels for maintenance; Heat Exchanger Efficiency (winter): 93% (EN 308); By Pass Damper: Yes - modulating summer by-pass; Fans: Class 1 EC/DC Fan/motor Variable Speed Control, low energy, high efficiency, ErP rated motorised fans providing low specific fan powers and stepless speed control; Impellars: Backward curved; Integral Frost Heater: 2.8kW; Weight: 275kg's; Voltage: 220-240V/1/50Hz; Fuse Rating: 14A; Max Noise Levels: 30 dB(A) at 3m; Warranty: 5 years; Matched Attenuators: Required on supply & extract; Matched attenuators to suite supply & extract spigots; Attenuators to be sized by acoustic specialist to achieve max sound pressure level within classrooms of 35 dB(A) @ 1.5m; Accessories: Wall controller, PIR motion detector, Duct mounted C02 Sensor for Demand Control of fan speeds, Suspension brackets, VFC for BEMS connectivity, Remote ON/OFF Adapter (PAC-SE55RA-E or similar) to allow MHRV unit to disable under fire alarm conditions; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.1					
A	Heat recovery ventilator units; Ref: HRU-02; Location: Various classrooms	4	nr			
	Heat recovery ventilator units; supply and installation; complete; Description: Demand Controlled Horizontal Mechanical Ventilation with Heat Recovery Unit c/w demand controller; Type: Aluminium Counter Flow Heat Exchanger; Dimensions (WxDxH): 2400x1312x460mm; Airflow / ESP: 330 l/s @150 Pa (@ 75%); Max Specific Fan Powers: 1.13 W/(l/s) (@ 75%); Filters: F7/G4 filters (supply & Extract); Casing: Double Skinned Aluzinc Panels, internally lined with 90kg/m3 thermal & acoustic insulation c/w bottom access panels for maintenance; Heat Exchanger Efficiency (winter): 93% (EN 308); By Pass Damper: Yes - modulating summer by-pass; Fans: Class 1 EC/DC Fan/motor Variable Speed Control, low energy, high efficiency, ErP rated motorised fans providing low specific fan powers and stepless speed control; Impellars: Backward curved; Integral Frost Heater: 5.6kW; Weight: 296kg's; Voltage: 220-240V/1/50Hz; Fuse Rating: 29A; Max Noise Levels: 38 dB(A) at 3m; Warranty: 5 years; Matched Attenuators: Required on supply & extract; Matched attenuators to suite supply & extract spigots; Attenuators to be sized by acoustic specialist to achieve max sound pressure level within classrooms of 35 dB(A) @ 1.5m; Accessories: Wall controller, PIR motion detector, Duct mounted C02 Sensor for Demand Control of fan speeds, Suspension brackets, VFC for BEMS connectivity, Remote ON/OFF Adapter (PAC-SE55RA-E or similar) to allow MHRV unit to disable under fire alarm conditions; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.1					
B	Heat recovery ventilator units; Ref: HRU-03; Location: Various classrooms	9	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Air Conditioning Heat Pump Unit; supply and installation; complete; Description: Ceiling Concealed Ducted standard Inverter Heat Pumps; Refrigerant: R32; Heating (UK): 2.5 kW; Total Cooling (UK): 2.0 kW; Sensible Cooling (UK): 1.8 kW; Air Flow (Lo-Med-Hi): 100-125-142 (l/s); Sound Pressure Levels dB(A): 21-25-27 (Lo-Med-Hi); Max. Weight (Indoor Unit): 26 kg; Max. Weight (Outdoor Unit): 40 kg; Power Requirements: 1ph / 230 V / 50 Hz; Running Current (A): 0.25 / 0.25 (Htg/ Clg); Fuse Rating (A): 6; Controller: Wall Controller [AC]; Energy Label: Cooling: A++, Heating: A+; Control Type: Inverter Driven; Additional Requirements: Volt Free Contacts for connection to BEMS, Wall Controller; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.13.1					
A	Air Conditioning Heat Pump Unit; Ref: AC-01; Location: Admin office ceiling void	1	nr			
	Extract Fan; supply and installation; complete; Fan Type: Low noise In line duct fans; Size: As required to meet design duty; Impeller Type: Backward curved impellar (low noise); Casing: Aluzinc suitable for internal and external mounting; Sound Output: < 20 dB(A) @ 3m (Quiet Fans); Specific Fan Power (max): 0.5 W/(l/s); Speed Control: Variable; Motor: EC; Voltage: 230V/1ph/50Hz; Insulation Class: B; Enclosure Motor IP Rating: IP 44; ErP Compliant: Required; Warranty: 5 years; Accessories: Integral adjustable over-run timer variable between 2-30 minutes; Speed controller (commissioning only); Ceiling mounted PIR (as noted on drawings); c/w sound attenuator, backdraught dampers, flexible connections and av mounts;; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.3					
B	Inline Fan Ref: F1; Air Volume: 50, Static Fan Pressure: 100	2	nr			
C	Inline Fan Ref: F2; Air Volume: 95, Static Fan Pressure: 100	1	nr			
D	Inline Fan Ref: F3; Air Volume: 70, Static Fan Pressure: 100	1	nr			
E	Inline Fan Ref: F4; Air Volume: 335, Static Fan Pressure: 200	1	nr			
F	Inline Fan Ref: F5; Air Volume: 210, Static Fan Pressure: 200	1	nr			
	<u>Accessories Associated with Primary Equipment</u>					
	AC room controller; supply and installation; complete; Description: A/C Wall Controllers; Power Supply: Fed from indoor unit; Relay contact rating: 230 Vac 10A; Time Programme Configuration: 24 hour / 7 day; Backlit LCD Display: Required; Lockable Temperature Range: Required; Winter Summer Time Change: Automatic; Housing: White ABS; Mounting: Wall / Flush mounted; Warranty: 5 years; Operating Functions: On/Off, Mode (Heating/Cooling), Temperature Setpoint Adjust, Fan Speed, Room Temperature, Night Setback, Button Lock, Clock, Filter Sign Room Temperature; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.13.2					
G	AC Room Controller; Ref: AC	1	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	MHRV Wall Controller; Power Supply: Fed from MHRV unit; Relay contact rating: 230 Vac 10A; Fan Speed Selection: Speeds 1-4; Ventilation Mode: Energy Recovery/ Bypass/Auto; Weekly Timer: Required; Filter Cleaning Sign: Required; HRV Core Cleaning Sign: Required; Error Indication: Required; Error History: Required; OA/RA/SA Temp Display: Required; Backlit LCD Display: Required; Housing: White ABS; Dimensions (L)x(W)x(D): 120 x 120 x 19mm; Mounting: Wall / Flush mounted; Volt Free Contacts: For BEMS Fault Connectivity; Warranty: 5 years; include for all accessories; all in accordance with the Mechanical Specification Part 4, Section 5.2					
A	MHRV Wall Controller; Ref: C	14	nr			
	CO2 Monitoring Control Panel; Nominal Size: 125mm x 86mm x 36mm; Display Area (Min): 8.5cm2; Traffic Light Indication: Green: <1000ppm, Amber: 1000 -1500ppm, Red: >1500ppm; Power Supply: 230 VAC / 50Hz; Power Consumption: 3W; C02 Range: 0 - 5,000ppm; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.12					
B	CO2 Monitoring Control Panel; Ref: Co2	11	nr			
	Ceiling mounted presence detector; Modes of operation: Presence and absence detection; Supply Voltage: 230VAC +/-10% 50Hz; Power Consumption: On 625mW, Off 807mW; Max. Load Rating: 2.5A / 600W Inductive; Mounting: Ceiling; Mounting Component: Standard UK single gang mounting box; Time-out period range: Adjustable 5 to 25 minutes; Light level: Light to dark; Ingress Protection: IP43; Temperature Operation: -10°C to 35°C; Connectivity: Volt-free contacts; Conformity/standards: EMC-2004/108108/EC LVD-2006/95/EC; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.4					
C	Presence Detector; Ref: PIR	22	nr			
	Co2 duct sensor; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 1, Section 10					
D	Co2 duct sensor	15	nr			
	Thermoswitch; Mode of operation: Automatic switching of fan on rise/fall of air temperature; Setting Range: 6°C to 30°C; Temperature Range Locking Facility: Required; Max. Load Current: 16 A (resistive); Contact Rating: 1.5 A (inductive); Mounting: Surface mounted; Max. dimensions: 80mm(H) x 104mm(W) x 36mm(D); Ingress Protection: IP20; include for all fittings and accessories; all in accordance with the Mechanical Specification Part 4, Section 5.6					
E	Room Temperature Stats; Ref: T	1	nr			
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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Terminal equipment and fittings					
	Fire dampers; supply and installation; complete; Type: Curtain Blade Fusible Link; Construction: Galvanised steel body with 25mm thick closing blade made with refactory material; Fire Integrity: 4 Hours; Thermal Activation: 72°C; Reset Mechanism: Required; Connections: Circular; dampers shall be installed to the manufacturers recommendations and shall either be installed within, or keyed to the wall; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 4, Section 7.5					
A	Fire Damper; to 100mm ducts	1	nr			
B	Fire Damper; to 200mm ducts	2	nr			
	Volume control dampers; single blade dampers; installed to the manufacturers recommendations; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 1, Section 10.11					
C	Volume Control Damper; to 100mm ducts	21	nr			
D	Volume Control Damper; to 150mm ducts	2	nr			
E	Volume Control Damper; to 200mm ducts	1	nr			
F	Volume Control Damper; to 250mm ducts	67	nr			
	In-line duct attenuators; Noise level: not exceeding 35dB(a) in Teaching spaces and 45 dB(A) in Circulation spaces; installed room side of fan; c/w flexible connections and antivibration mounts; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 1, Section 10.7					
G	In-line duct attenuators; Duct size: 250mm	2	nr			
H	In-line duct attenuators; Duct size: 315mm	26	nr			
	Square 4 way supply diffuser; supply and installation; complete; Volume Flow-rate: As indicated on Diffuser Schedule; Max. Pressure Drop: 20 Pa; Max Noise Levels: NR 35; Material & Finish: Polyester Powder Coated Extruded Aluminium, Colour: White RAL 9010; Integral Opposed Blade Damper: Required; Plenum Box: Side Entry with neck spigot to suit ductwork size; Noise Attenuation: not required; c/w supports, volume control dampers, plenum boxes, perforated baffle plates, connecting collar and flexible connections; include for all accessories and fittings; all in accordance with the Mechanical Engineers Specification Part 4, Section 5.7					
J	Square 4 way supply diffuser Ref: S1; Size 600mm x 600mm; Air Volume: 60l/s	6	nr			
K	Square 4 way supply diffuser Ref: S2; Size 600mm x 600mm; Air Volume: 90-100l/s	4	nr			
L	Square 4 way supply diffuser Ref: S3; Size 600mm x 600mm; Air Volume: 100-120l/s	14	nr			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Square 4 way supply diffuser Ref: S4; Size 600mm x 600mm; Air Volume: 140-165l/s	12	nr			
	Circular air extract valve; supply and installation; complete; Volume Flow-rate: As indicated on Grille Schedule; Max. Pressure Drop: 20 Pa; Material: Steel construction finished in durable white stove enamel; Colour: White RAL 9010; Adjustable Core: Required; Installation Acessories: Sealing Gasket, Mounting Rings; c/w supports, volume control dampers, plenum boxes, perforated baffle plates, connecting collar and flexible connections; all in accordance with the Mechanical Specification Part 4, Section 5.9					
B	Circular air extract valve Ref: E1; Size 150mm; Air Volume: 23l/s	22	nr			
C	Circular air extract valve Ref: E2; Size 200mm; Air Volume: 50-60l/s	2	nr			
D	Circular air extract valve Ref: E3; Size 250mm; Air Volume: 70l/s	1	nr			
	Four-way louvre-faced diffuser; supply and installation; complete; Volume Flow-rate: As indicated on Grille Schedule; Max. Pressure Drop: 20 Pa; Max Noise Levels: NR 35; Material & Finish: Powder Coated Extruded Aluminium; Colour: White RAL 9010; Integral Opposed Blade Damper: Required; Plenum Box: Side Entry with neck spigot to suit ductwork size; Noise Attenuation: Not Required; c/w supports, volume control dampers, plenum boxes, perforated baffle plates, connecting collar and flexible connections; all in accordance with the Mechanical Specification Part 4, Section 5.8					
E	Four-way louvre-faced diffuser Ref: E4; Size 225mm x 225mm; Air Volume: 45l/s	4	nr			
F	Four-way louvre-faced diffuser Ref: E5; Size 600mm x 600mm; Air Volume: 60l/s	2	nr			
G	Four-way louvre-faced diffuser Ref: E6; Size 600mm x 600mm; Air Volume: 90-100l/s	10	nr			
H	Four-way louvre-faced diffuser Ref: E7; Size 600mm x 600mm; Air Volume: 100-120l/s	8	nr			
J	Four-way louvre-faced diffuser Ref: E8; Size 600mm x 600mm; Air Volume: 140-165l/s	12	nr			
	External Louvres; supply and installation; complete; Type: Pitch louvre; Blade Pitch: 38mm; Flange Width: 22.5mm; Minimum Free Area: 50%; Material & Finish: Powder Coated Aluminium to Architect's RAL specification; Plenum Box: Yes, Splitter plate on extract; Insect Screen: Required; Max. Pressure Drop: 20 Pa; Max. Sound Output: N/A; Noise Attenuation: Not Required; c/w spigot plates, plenum box, flanged connection; include for all weatherproofing and fittings; all in accordance with the Mechanical Specification Part 4, Section 5.11					
K	External Louvre Ref: L1; size 300mm x 750mm	4	nr			
L	External Louvre Ref: L2; size 200mm x 200mm	2	nr			

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Passive air vent; supply and installation; complete; 100mm diameter duct c/w external weather louvre, internal louvre and insect mesh; include for all weatherproofing and fittings; all in accordance with the Mechanical Specification					
A	Passive air vent; tank room	1	nr			
B	Passive air vent; comms room	1	nr			
	Roof Cowl; Description: Curb Mounted Roof Cowl; Nominal Size: As dictated by supply & extract air volumes; Volume Flow-rate: Refer to Fan schedule for each cowl exhaust volume; Free Area: 50% minimum; Material & Finish: Powder Coated moulded plastic to Architects RAL specification; Bird Guard: Required; Insect Screen: Not Required; Max. Pressure Drop: 20 Pa; Max. Sound Output: N/A; Noise Attenuation: Not Required; include for all accessories and weatherproofing; all in accordance with the Mechanical Specification Part 4, Section 5.10					
C	Roof Cowl; size 600mm x 600mm	1	nr			
	Architectural Window Package; window vent terminations; final connection of ductwork ONLY; c/w spigot plates, plenum box, flanged connection; include for all weatherproofing and fittings; all in accordance with the Architects drawings Nr. 601 - 602 and Mechanical Specifications and drawings M-5701 - M-5702					
D	Architectrual window vent termination; Duct size 150mm; Plenum 200mmm x 200mm	2	nr			
E	Architectrual window vent termination; Duct size 200mm; Plenum 200mmm x 250mm	1	nr			
F	Architectrual window vent termination; Duct size 300mm; Plenum 800mmm x 300mm	2	nr			
G	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 350mmm x 200mm	2	nr			
H	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 400mmm x 200mm	4	nr			
J	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 700mmm x 300mm	8	nr			
K	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 750mmm x 300mm	5	nr			
L	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 800mmm x 300mm	1	nr			
M	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 850mmm x 300mm	2	nr			
N	Architectrual window vent termination; Duct size 300mm x 200mm; Plenum 1000mmm x 300mm	2	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Distribution					
	Galvanised Sheet Steel Ductwork; supply and installation; complete; Type: rectangular/circular ductwork; Standards: HVAC DW/144; include for all flexible connections; quick fix connections; joints; ductwork supports; access hatches, test holes, accessories and fixings; all in accordance with the Mechanical Engineers Specification Part 1, Section 10					
A	Ductwork; size 100mm diameter	1	Item			
B	Ductwork; size 150mm diameter	1	Item			
C	Ductwork; size 200mm diameter	1	Item			
D	Ductwork; size 250mm diameter	1	Item			
E	Ductwork; size 300mm diameter	1	Item			
F	Ductwork; size 315mm diameter	1	Item			
G	Ductwork; size 300mm x 200mm	1	Item			
	Insulation					
	Foil faced fibreglass duct insulation; For circular/ rectangular supply and return air ductwork; 50mm thick; PVC backing; applied strictly in accordance with the manufacturers instructions; butt joints, taped and sealed; 150mm long 18mm gauge steel selves at location of duct supports; include for all insulation hangers and accessories; all in accordance with the Mechanical Specification Part 1, Section 9.4					
H	Ductwork; size 100mm diameter	1	Item			
J	Ductwork; size 150mm diameter	1	Item			
K	Ductwork; size 200mm diameter	1	Item			
L	Ductwork; size 250mm diameter	1	Item			
M	Ductwork; size 300mm diameter	1	Item			
N	Ductwork; size 315mm diameter	1	Item			
P	Ductwork; size 300mm x 200mm	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
Q	Testing and commissioning	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Operating and maintenance manuals; all in accordance with Engineers Specification					
A	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
B	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
C	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
D	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
E	Identification plates, labels and the like	1	Item			
	(58) FIRE PROTECTION INSTALLATION					
	System					
	Fire Fighting installation, testing and commissioning; complete; Provide, deliver, install, and commission all portable fire extinguishers, fire blankets, and associated signage as detailed on drawings and in Part 4: Equipment Schedules.; All equipment to comply with BS EN 3-3:1996, BS EN 3-7:2007, and IS 291:2015; Include mounting brackets, wall signage, and fire assembly point signage, with installation heights per IS 291; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 12, Part 2; Part 3; Part 4, Section 7 Aand Drawing 2999-SMK-ZZ-L0-DR-M-5201, 2999-SMK-ZZ-L1-DR-M-5202					
	Terminal equipment and Fittings					
	Fire Extinguishers supply and installation; all in accordance with the Mechanical Specification Part 4, Section 7.1					
F	2kg CO2 Gas Extinguishers c/w wall mounting brackets and signage	16	nr			
G	9kg CO2 Gas Extinguishers c/w wall mounting brackets and signage	1	nr			
H	6kg Dry Powder Automatic Extinguishers c/w mounting brackets and signage	3	nr			
J	6 litre Aqueous Film Forming Foam c/w wall mounting brackets and signage	14	nr			
K	Fire Blanket c/w wall mounting brackets and signage	1	nr			

To Collection €

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
A	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
C	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
D	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
E	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
F	Identification plates, labels and the like	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	(58) HVAC MOTOR CONTROL CENTRE & BUILDING MANAGEMENT SYSTEM					
	System					
	BMS System Installation; testing and commissioning; complete; A Building Energy Management Systems shall be supplied, installed, tested and commissioned as part of this contract in the school extension Heating Plantroom; all in accordance with the Mechanical Engineers Specification Part 1, Section 14; Part 2; Part 3; Part 4, Section 6 and Drawing 2999-SMK-ZZ-L0-DR-M-5801, 2999-SMK-ZZ-L1-DR-M-5802, 2999-SMK-ZZ-LL-DR-M-5850					
	Primary Equipment					
	MCC Panel; supply and installation; complete; The MCC panel: wall mounted top entry and top exit type with hinged front doors, Form 2b classification; Door interlocked isolator: 1; Control circuit MCB: 1; Control panel live lamp: 1; Fire relay complete with status lamp: 1; I/O Modules: As Required; GSM Module: 1; Hand / Off / Auto Selector Switches: As Required; Selection Switch for Holiday Settings: 1; Selection Switch for Winter/Summer Settings: 1; 415/240V Transformer complete with MCB: 1; 240/24V Transformer complete with MCB: 1; Touch-screen interface panel mounted at 1500 AFFL: 1; Spare capacity: 30%; The MCC shall contain hand/off/auto switches with run and trip indicators and interfaces for all items as detailed on the drawings; each button shall be clearly labelled showing the area served; include for all fittings and accessories; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 1, Section 14; Part 4, Section 6.1					
A	BMS Panel; Location: Heating Plant Room	1	nr			
	Remote Panels; supply and installation; complete; Maximum Front Dimensions: 500mm x500mm; As noted on BEMS Mechanical Wiring Drawings (M-5800 Series); Heating Programme Active Lamps: Required; Fault Status Lamps: Required; Energy Monitoring Status Lamps: Required; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 4, Section 6.2					
B	Remote Panel; Location: Admin Office	1	nr			
	Touch Screen; supply and installation; complete; Panel mounted; include for all fixings; all in accordance with the Mechanical Engineers Specification					
C	Touch Screen	2	nr			
	Central Monitoring Facility; 1nr PC c/w 21" colour LCD monitor, keyboard, DVD RW, inkjet printer and sofware, archive storage capacity for at least 5 years; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
D	Central Monitoring Facility	1	nr			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
A	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
C	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
D	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
E	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
F	Identification plates, labels and the like	1	Item			
	Maintenance and Warranty; all in accordance with Engineers Specification					
G	The specialist sub-contractor shall make allowance for 2no. demonstrations and training the School in the use of the new controls installation. A period of not less than 3 days should be allowed for this purpose; all in accordance with the Engineers Specification.	1	Item			
H	The controls specialist shall allow for two site visits for seasonal commissioning, to be carried out within the 12-month period following handover; These visits shall include full inspection, testing, adjustment and optimisation of all BEMS-controlled plant and associated control strategies to ensure correct operation under varying seasonal conditions, all in accordance with the Engineers Specification.	1	Item			
J	The controls specialist shall allow for a full service and checking of the BEMS system at the end of the defects liability period and updating the Energy Monitoring traffic light system based on the schools usage over the first 12 months of usage; all in accordance with Engineers Specification	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	MECHANICAL INSTALLATIONS					
	Sundries & Builders Work					
	General Attendances					
A	Provide all general attendances in accordance with Arm 4 .	1	Item			
B	Provide use of the Main Contractors tempory roads and hardstandings.	1	Item			
C	Provide use of the Main Contractors scaffolding.	1	Item			
D	Provide use of the Main Contractors standing power operated hoisting plant.	1	Item			
E	Provide accommodation for the subcontractors staff for eating, site lavatories, site washing facilities and cloakroom facilities.	1	Item			
F	Each sub-contractor shall be permitted the free use, in common with other trades engaged on the site, of any available water supply, temporary plumbing and electrical services.	1	Item			
G	Provide temporary distribution systems for lighting, power, water and fuel for the execution of the Mechanical services works, including testing and commissioning , and pay all ongoing operation charges.	1	Item			
H	Provide safe and dry storage accommodation for the sub-contractors materials, plant and tools.	1	Item			
J	Provide space for the provision by the sub-contractors of their own site offices.	1	Item			
K	Provide temporary telephone services to the Mechanical Contractors temporary office and pay all charges associated with installation and operation.	1	Item			
L	Include for unloading, hoisting/cranage and placing into position all items of heavy plant and site offices supplied by the sub-contractors.	1	Item			
M	Allow for maintaining all ducts, chases, trenches, trunking, etc., clean and free of all water, debris and rodents at all times.	1	Item			
N	Allow for making good and fire sealing of all builders work opes with proprietary sealant to Architects details, where services penetrate fire zones.	1	Item			
P	Fire proofing (material) around ducts and pipework shall be the responsibility of the Main Contractor	1	Item			
Q	Timber grounds shall be provided within stud partitions to facilitate fixing of wall mounted accessories	1	Item			
				To Collection €		

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	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Special Attendances					
A	Provide all special attendances in accordance with Arm 4 Clause 3.1	1	Item			
B	Provide temporary access roads and hardstanding in connection with heavy items of plant and the like, forming part of the site establishment works	1	Item			
C	Provide scaffolding internal and external to the building to facilitate installation of high-level electrical services during the contract	1	Item			
D	Provide use of the Main Contractors standing power operated hoisting plant.	1	Item			
E	Provide adequate barriers/tape/signage of exclusion zoning in relation to use of access equipment and ACOPs for working at height	1	Item			
F	Provide construction signage (internal and external) in relation to M&E services e.g live systems etc.	1	Item			
G	Provide temporary lighting and power in accordance with IS10101 Wiring Regulations.	1	Item			
H	Provide protection to all M&E services installations installed during the works including protection against debris and water ingress	1	Item			
J	Provide fire stopping to all mechanica services on the vertical and horizontal planes throughout the entire buildings	1	Item			
K	Ensure close coordination during the building phase to ensure electrical, ventilation and mechanical services are installed and integrated within the building fabric as designed.	1	Item			
L	Provide grounds and fixings for suspension of Mechanical services; Electrical loading = 10kg/m Mechanical loading = 40kg/m	1	Item			
M	Provide boxing out of containment and pipework as necessary, boxing to be accessible with screwed access.	1	Item			
N	Main contractor shall employ a full time M&E Co-ordinator for the duration of the contract works and their duties shall include but not limited to details set out within the specification A2.4 Part 1 of 4 particular specification document	1	Item			
P	Contractor shall be aware that drawings are indicative only including the minimum ope sizes; It will be the contractors responsibility in conjunction with their in-house M&E services coordinator to produce construction stage builders works drawings for DT comment	1	Item			
Q	Provide safe access and task lighting for mechanical sub-contractor to all sections of school roofspace	1	Item			
R	Seal all incoming services to prevent ingress of vermin	1	Item			
S	Fire Stopping to all services penetrations throughout	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Attendance to electrical sub-contractor	1	Item			
B	Provide accommodation for the subcontractors staff for eating, site lavatories, site washing facilities and cloakroom facilities.	1	Item			
C	Each sub-contractor shall be permitted the free use, in common with other trades engaged on the site, of any available water supply, temporary plumbing and electrical services.	1	Item			
D	Provide safe and dry storage accommodation for the sub-contractors materials, plant and tools.	1	Item			
E	Provide space for the provision by the sub-contractors of their own site offices.	1	Item			
F	Provide temporary telephone services to the Mechanical Contractors temporary office and pay all charges associated with installation and operation.	1	Item			
G	Provide tempory power supplies (3 phase 400V and maximum loading 15kVA) for welding, handtools, and for commissioning, including infrastructure and all charges fot the contractors use of the facility.	1	Item			
H	Provide scaffolding additional to the main contractors standing scaffolding, or access towers if required.	1	Item			
J	Protection/Maintenance, provide covers for placing on live equipment/fittings in areas under construction at the start of each work day and removing the covers at the end of each work day	1	Item			
K	Provide facilities for safe removal and disposal of all materials off site	1	Item			
L	Provide a week by week program detailing the Mechanical and Electrical service activities	1	Item			
M	Provide for heating / drying out the building as and when necessary to comply with their program. This may be done (at the clients specific consent) with the installed conventional heating system (if available). Be responsible, however, for providing the fuel to do this. Be responsible for maintaining background heat until the building is handed over to the client, after the heating system has been commissioned	1	Item			
N	Provide and maintain the specific temperatures and humidity levels	1	Item			
P	Facilitate Installation of all sanitary ware as indicated on Architects drawings	1	Item			
Q	Provide safe access for mechanical sub-contractor to install CW storage tank and pipework at high level throughout.	1	Item			
R	The contractor shall allow for all coordination and attendances to the mechanical contractor to facilitate the installation of all underfloor heating installation, prior to pouring of concrete; Temporary protection shall be provided to the pipework during construction	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Provide Builders Attendances to all utility services as follows; Gas Networks Ireland, Eir, Virgin Media, Local Authority, ESB Networks.	1	Item			
B	Fire stopping requirements of all services penetrations through fire compartment structures to be the responsibility of the building contractor. In addition, all pipework, ductwork, containment and service penetrations shall be fire-stopped where passing through every wall, floor and ceiling regardless if its a fire compartment or not by main contractor. Refer to M&E services drawings indicating main routes of M&E infrastructure. All instances of firestopping shall be labelled and certified using CE certified products including fire-pillows for use inside electrical trunkings.	1	Item			
	Unload, hoist distribute, and place in position the following items of plant and equipment:					
C	Air Source Heat Pumps	1	Item			
D	Boilers	1	Item			
E	Buffer tanks	1	Item			
F	Pumps	1	Item			
G	Gas boiler	1	Item			
H	Cylinders	1	Item			
J	CWS Tanks	1	Item			
K	MVHR units	1	Item			
L	AC units	1	Item			
M	Extract Fans	1	Item			
	Sundries & Builders Work					
	General					
N	Marking positions of holes, mortices and chases	1	Item			
P	Testing & Commissioning	1	Item			
Q	Preparing drawings of "as completed" installations	1	Item			
R	Identification plates, labels and the like; Provide and fit colour identification markers to ceiling hatches to mark the location of isolating devices within ceiling voids	1	Item			
S	Keys, tools and spares	1	Item			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	Gypsum board partition systems; 1. Description: Stud wall partitions - refer to Architectural drawings for wall types & locations; 2. System performance: Ss_25_10_30/207 Framed partition system design requirements; Ss_25_10_30/230 Fire performance to BS EN 13501; Ss_25_10_30/240 Acoustic performance; Ss_25_10_30/290 Compliance with performance requirements; 3. Framing: Pr_20_85_32_14 Carbon steel dry lining frames; 4. Fire separation; 4.1. Fire-stopping: Seal gaps at junctions of partitions with perimeter abutments, cavity barriers, service penetrations, etc. in accordance with the instruction of the manufacturer of the system; 5. Linings: 5.1. Face layer: Pr_25_71_52_33 Fire-resistant gypsum plasterboards General; Pr_25_71_52_84 Standard gypsum plasterboards; 6. Fasteners: Pr_20_29_76_65 Plasterboard screws; 7. Joint treatment: Pr_35_90_87_60 Paper jointing tapes8. Finish: Pr_35_31_64_35 Gypsum plasters; 9. System accessories: Pr_25_80_80_79 Sleeved mineral wool small cavity barriers Type A; 10. Execution: Ss_25_10_30/610 Installing framed partitions generally; Ss_25_10_30/620 Installing partitions onto new concrete and screeds; Ss_25_10_30/630 Installing framing for partitions; Ss_25_10_30/650 Installing deflection heads; Ss_25_10_30/690 Sealing gaps and air paths around partitions; Ss_25_10_30/660 Installing plasterboard to metal framing; Ss_25_10_30/695 Installing insulation and cavity barriers in framed partitions; 11. System completion: Ss_25_10_30/895 Verification of performance; in strict accordance with the Architects Specification Ss_25_10_30_35					
	Pipe Casings					
A	250mm x 250mm wide; 2nr sides only; casings fixed vertically; complete; include all necessary insulation (measured elsewhere), battens, screws, bolts, masonry fixings, decoration etc.; in various locations throughout building; complete	57	m			
B	600mm x 250mm wide; 3nr sides only; casings fixed vertically; complete; include all necessary insulation (measured elsewhere), battens, screws, bolts, masonry fixings, decoration etc.; in various locations throughout building; complete	35	m			
	Chasing to precast concrete walls; include for firestopping, making good all structures and finishes; all in accordance with the Architects / Engineers / Service Engineers drawings, schedule and specification					
	Chasing					
C	Chasing for 1nr 15mm diameter pipe	40	m			
D	Chasing for 3nr 15mm diameter pipe	122	m			
	In-situ concrete; plain; to IS EN 206; Grade C30; formwork to sides of platform, powerfloating finish; all in strict accordance with the Engineers Drawings and Specification					
	Bases					
E	Heating Buffer Vessel; size 1600mm x 1600mm x 200mm thick	1	nr			
F	DHW Pre-heat Cylinder; size 1000mm x 1000mm x 200mm thick	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	Gas fired water heater; size 1000mm x 800mm x 200mm thick	1	nr			
B	Pressurisation Unit; size 1200mm x 800mm x 200mm thick	1	nr			
C	Water Storage Tank; size 2650mm x 1650mm x 1500mm thick	1	nr			
	Equipment supports; provide mounting grounds for the installation of the following fittings; making good structure and finishes; in strict accordance with the Architects/ Services Engineers drawings, schedule and specifications					
	Equipment supports					
D	BMS panel; 25mm thick plywood grounds; size 1600 x 500 x 400mm c/w steel support system; complete	1	nr			
E	Boiler flue; size 300mm diameter; 3m above parapet level; complete	1	nr			
F	Sanitaryware; WHB; complete	25	nr			
G	Sanitaryware; WC; complete	24	nr			
H	Ventilation grilles; size 150mm diameter; complete	22	nr			
J	Ventilation grilles; size 200mm diameter; complete	8	nr			
K	Ventilation grilles; size 250mm diameter; complete	1	nr			
L	Ventilation grilles; size 225 x 225mm; complete	4	nr			
M	Ventilation grilles; size 600 x 600mm; complete	68	nr			
N	MVHR Unit; size 1144 x 1231 x 404mm; complete	14	nr			
P	AC Unit; complete	1	nr			
Q	Portable fire extinguisher; 25mm thick plywood grounds; size 750 x 500mm; complete	35	nr			
	Forming or cutting holes/mortices/chases and the like; including sleeves/plates, intumescent collars; making good structure and finishes; include for a fully completed installation where nothing must remain to be done to the installation by others; in strict accordance with the Architects/ Services Engineers drawings, schedule and specifications					
R	Cutting or forming holes is deemed to include all finishes and decorations both sides of the structure		note			
S	Cutting or forming opes is deemed to include the making good and sealing of the ope		note			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	For ducts/pipes through precast concret external walls; include for building in sleeves; making good all finishes on completion					
A	100mm diameter opes	3	nr			
B	250mm x 250mm opes	1	nr			
C	350mm x 750mm opes	4	nr			
	For ducts/pipes through precast concrete internal walls various thicknesses; include for building in sleeves; making good all finishes on completion					
D	150mm x 150mm opes	12	nr			
E	200mm x 200mm opes	1	nr			
F	250mm x 150mm opes	2	nr			
G	300mm x 150mm opes	15	nr			
H	300mm x 300mm opes	3	nr			
J	350mm x 150mm opes	8	nr			
K	350mm x 350mm opes	1	nr			
L	450mm x 200mm opes	8	nr			
M	550mm x 150mm opes	5	nr			
N	800mm x 150mm opes	2	nr			
P	1100mm x 600mm opes	5	nr			
	For ducts/pipes through suspended concrete floor slab; include for building in sleeves; making good all finishes on completion					
Q	100mm diameter opes	3	nr			
R	110mm diameter opes	6	nr			
S	150mm x 150mm opes	12	nr			
T	350mm x 150mm opes	17	nr			
	For ducts/pipes through roof finishes; include for building in sleeves; c/w upstand detail and weatherproofing; making good all finishes on completion					
U	150mm diameter opes	6	nr			
V	200mm diameter opes	2	nr			
W	100mm x 100mm opes	1	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	150mm x 150mm opes	6	nr			
B	150mm x 150mm opes	1	nr			
C	250mm x 150mm opes	1	nr			
D	600mm x 600mm opes	1	nr			
	For ducts/pipes through ceiling finishes; include for building in sleeves; making good all finishes on completion					
E	150mm diameter opes	22	nr			
F	200mm diameter opes	2	nr			
G	250mm diameter opes	1	nr			
H	600mm x 600mm opes	74	nr			
	Fire stopping system to multiple and single service penetrations; including intumescent boards, fire stop laminate; intumescent foams and mastic; intumescent pillows; intumescent putty; mineral wool rigid batts; intumescent collars and sealants to achieve 1 hour fire resistance; all in accordance with the Architects specification					
	Special works were services pass through structures; precast concrete external walls, making good all finishes on completion					
J	100mm diameter opes	3	nr			
K	250mm x 250mm opes	1	nr			
L	350mm x 750mm opes	4	nr			
	Special works were services pass through structures; precast concrete internal walls, making good all finishes on completion					
M	150mm x 150mm opes	12	nr			
N	200mm x 200mm opes	1	nr			
P	250mm x 150mm opes	2	nr			
Q	300mm x 150mm opes	15	nr			
R	300mm x 300mm opes	3	nr			
S	350mm x 150mm opes	8	nr			
T	350mm x 350mm opes	1	nr			
U	450mm x 200mm opes	8	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
A	550mm x 150mm opes	5	nr			
B	800mm x 150mm opes	2	nr			
C	1100mm x 600mm opes	5	nr			
	Special works were services pass through structures; suspended concrete floor slab, making good all finishes on completion					
D	100mm diameter opes	3	nr			
E	110mm diameter opes	6	nr			
F	150mm x 150mm opes	12	nr			
G	350mm x 150mm opes	17	nr			
	Special works were services pass through structures; roof finishes, making good all finishes on completion					
H	150mm diameter opes	6	nr			
J	200mm diameter opes	2	nr			
K	100mm x 100mm opes	1	nr			
L	150mm x 150mm opes	6	nr			
M	150mm x 150mm opes	1	nr			
N	250mm x 150mm opes	1	nr			
P	600mm x 600mm opes	1	nr			
	Special works were services pass through structures; ceiling finishes, making good all finishes on completion					
Q	150mm diameter opes	22	nr			
R	200mm diameter opes	2	nr			
S	250mm diameter opes	1	nr			
T	600mm x 600mm opes	74	nr			
				To Collection €		

					€	c
	(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
	PAINTING AND DECORATING					
	Painting					
	Solvent-borne paint systems; 1. System performance: Ss_40_90_60/210 Design of coating system; 2. System manufacturer: Dulux Trade or equal approved; 3. Initial coats: Pr_35_31_66_81 Solvent-borne metal primers; 4. Finishing coats: Pr_35_31_22_80 Solvent-borne gloss finishes Interior & Exterior Metal Paint; 5. Execution: Ss_40_90_60/620 Preparation for coating systems generally; Ss_40_90_60/603; Handling and storage of coating materials; Ss_40_90_60/607 Wet paint signs; Ss_40_90_60/610; Control samples of coating systems; 6. System completion: Ss_40_90_60/800 Information to be provided on completion; Ss_40_90_60/895 Verification of performance; all as per Architects Specification Ss_40_90_60_80					
	Pipes, ducts and the like					
A	girth not exceeding 300mm	1,000	m			

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(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
COLLECTION					
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(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
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(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION (Cont)					
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(5-) MECHANICAL INSTALLLATIONS - NEW EXTENSION **Carried to Summary**					

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	(52) RAINWATER & DISPOSALS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	DRAINAGE					
	Disposal above Ground - Rainwater Installation					
	Aluminum rainwater pipe and fittings; Description: Aluminum rainwater down-pipes. Standard: To BS 8530. Third-party product certification: BBA Agreement certificate. Form: Pressed. Section: Square. Size (nominal): DN 150. Minimum thickness or gauge: 1.8 mm. Finish and colour: Finish: Polyester powder coat finish. Colour: To selected RAL. Integral accessories: Access fittings. Rainwater heads. Rainwater shoes; As per Architects Specification Pr 65 52 63 04.					
	100mm square downpipes; supported at average 1800mm centres; brackets fixed with screws to background requiring plugging					
C	Surface fixed; vertical	85	m			
	Extra over pipes on which they occur for					
D	Bends to suit 100mm square downpipes	12	nr			
E	Shoes to suit 100mm square downpipes	12	nr			
F	Rainwater Head to suit 100mm square downpipes	12	nr			
G	100mm Vertical Spigot Rainwater Outlet to flat roofs	12	nr			
H	Hopper Rainwater Outlet; PPC Aluminum Hopper Head to suite rainwater two way out let and pipework; 100mm diameter sprocket to profiled hopper head; Standard hopper heads are fixed with round head twin thread screws and washers; as per Architects Specification	12	nr			

					€	c
	(52) RAINWATER & DISPOSALS (Cont)					
	Aluminum eaves gutters; Description: Aluminum gutter; Form: Pressed; Third-party product certification: BBA Agreement certificate; Profile: Varies, refer to Architects details; Size (nominal width): Varies, refer to Architects detail drawings; Thickness or gauge: 2 mm. Finish: Polyester powder coat finish; Colour: To selected RAL; Integral accessories: Preformed gutter angles. Stop ends; As per Architect's Specification Pr_65_50_35_06.					
	Gutter					
A	Generally	3	m			
				To Collection €		

(52) RAINWATER & DISPOSALS (Cont)

COLLECTION

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(52) RAINWATER & DISPOSALS
Carried to Summary

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	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING					
	(10) DEMOLITION & ALTERATIONS					
	ALTERATIONS					
	GENERAL					
A	1. THE ONUS IS ON THE CONTRACTOR TO VISIT THE SITE OF THE WORKS AND TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF THE WORKS AND ALL OTHER MATTERS THAT MIGHT INFLUENCE HIS PRICE OR TIME FOR COMPLETION OF THE WORKS (ARRANGEMENTS TO VISIT THE SITE SHOULD BE MADE WITH THE EMPLOYERS REPRESENTATIVE). THE CONTRACTOR MUST INCLUDE WITHIN HIS PRICE FOR ALL WORKS IN CONNECTION WITH THE DEMOLITION WORKS AND WORKS TO THE EXISTING BUILDINGS, WHICH COULD BE REASONABLY FORESEEN OR IMPLIED BY THE TENDER DOCUMENTS. NO CLAIMS ON THE GROUNDS OF WANT OF KNOWLEDGE IN RESPECT OF THE ABOVE WILL BE ENTERTAINED WHATSOEVER.		Note			
	Alterations					
	Plumbing and Engineering Installations					
B	Safely isolate, disconnect, and remove the existing main LV distribution board; located adjacent the ESB substation, including all redundant cables, supports, and terminations; Ensure continuity of power supply to critical circuits during changeover (temporary supply where required); Remove all redundant materials from site and dispose of in accordance with environmental regulations; all in accordance with the Engineers Specification	1	Item			
	Notes					
C	The tendering Contractors are referred to ARM 4 Supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		note			
D	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		note			
E	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings, will be carried out by the Works Specialist under the terms of the main contract. The Electrical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		note			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	ALTERNATIVE RULES FOR THE MEASUREMENT OF ELECTRICAL SERVICES					
	(61) ELECTRICITY SUPPLY & MAIN DISTRIBUTION - LV INSTALLATIONS EXISTING BUILDING					
	System					
	LV installation, testing and commissioning; complete; The Contractor shall allow for the supply and installation of all switchgear, distribution boards and sub mains cables in accordance with the drawings and attached specification; The Contractor shall be responsible for safe off-loading, receiving, storage, positioning and fixing of the boards and shall be liable for any damage to boards during installation; The Contractor shall submit working drawings to the Engineer for approval prior to manufacture of switchgear; the contractor shall allow for liaising with the ESB; all in accordance with the Electrical Engineers Specification Part 1, Section 13, 14; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-XX-SC-E-6200					
A	LV installation	1	Item			
	Mains and Sub-mains cables					
	Supply and Installation of sub-mains cable from Main Distribution Board MSB; Location: Electrical switch room 18; to sub-distribution boards/ Control panels located throughout school building; Sub-mains distribution within the building shall be via XLPE/LSF/SWA/LSF armored cables laid in galvanised steel cable tray/trunking; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6201					
B	Submains Ref: 10; MSB to DB-ASTRO TURF; 4core 150sq.mm XLPE/SWA/LSF + 95sq.mm CPC	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
C	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
D	Testing; LV switchboards shall undergo a thorough pre-test checklist and testing process to ensure compliance with required safety and quality standards. Test certificates must be completed and signed by the switchboard technician, test engineer, and company director. All test records shall be submitted in both hard copy for the O&M manual and in electronic format.	1	Item			

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	Commissioning of Plant; The electrical specialist shall include in their tender the on-site commissioning of the main switchboard by the manufacturer prior to project handover, along with staff training; Factory visits for the engineer and client to witness testing before dispatch must also be arranged, with all associated costs covered by the electrical specialist and their switchboard supplier.	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
C	12-Month Warranty and Maintenance; The Electrical Reserved Specialist and Switchgear Sub-Specialist shall provide a 12-month full warranty and planned maintenance for the new LV switchgear, starting from the date of practical Completion (PC) of the project; Maintenance, including testing of MCCBs and components, shall follow manufacturer requirements; All work shall be done on weekends, outside normal working hours; All costs, including parts, labour, travel, and expenses, must be included in the tender.	1	Item			
D	Thermal Imaging Inspections; The Electrical Specialist shall ensure their Switchgear Sub-Specialist conducts thermal imaging of the main LV and kitchen switchgear six months after PC and before the end of the defects period (prior to retention release); Inspections must be done in-situ under live conditions, with a full report issued to the client and consulting engineer; All associated costs must be included in the tender.	1	Item			
E	Ultra Sonic Detection; Six months after PC and again prior to the end of defects period and before retentions shall be released, the electrical reserved specialist shall arrange for his switchgear sub-specialist to carry out Ultra sonic detection testing of the main LV switchboard and kitchen switchgear and all its various components, connections etc. in-situ under 'live' conditions; A full report shall be issued thereafter to the client and consulting engineer; All costs associated with this shall be included at tender stage.	1	Item			
F	Power Logging Tests; Six months after PC and again prior to the end of defects period and before retentions shall be released, the electrical reserved specialist shall arrange for his switchgear sub-specialist to install a power logger within the main LV switchboard and kitchen switchgear and record and monitor all supplies for a minimum of 7days under 'Live' conditions. The unit shall monitor and log voltage, current, power, power factor and energy over the given time which shall assist the client analysing energy consumption and verification of metering arrangements; A full report shall be issued thereafter to the client and consulting engineer; All costs associated with this shall be included at tender stage.	1	Item			
	Working drawings; all in accordance with Engineers Specification					
G	Working drawings	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Co-ordination drawings; all in accordance with Engineers Specification					
A	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
B	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
C	Identification plates, labels and the like	1	Item			
	(61) ELECTRICAL SUPPLY AND MAIN DISTRIBUTION - CONTAINMENT					
	System					
	Cable ladder/ tray/ trunking installation, testing and commissioning; complete; The Contractor shall supply and install a complete cable support system using cable tray, trunking, conduit and support steelwork as shown on the drawings and as detailed in the specification. The Contractor shall include for all incidental cable containment which may not be shown on the drawings but which may be required to effect cable routes to individual items of equipment, luminaires etc; include for all joints, fixing brackets and supports; all in accordance with the Electrical Engineers Specification Part 1, Section 14; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-LL-DR-E-6101, 2999-SMK-ZZ-LR-DR-E-6200					
D	Cable Tray; Submains cabling; heavy-duty galvanised steel; size 300mm wide x 80mm high; complete	1	Item			
E	Cable Tray; PV cabling; galvanised external grade steel; size 200mm wide x 75mm high; c/w bigfoot support system; complete	1	Item			
F	Cable Tray; PV cabling; galvanised external grade steel; size 300mm wide x 50mm high; c/w bigfoot support system; complete	1	Item			
G	Cable Trunking; PV cabling; 3-compartment; galvanised heavy duty external grade steel; size 300mm wide x 100mm high; complete	1	Item			
H	Cable Trunking; LV; Mech Controls, ELV; 2-compartment; galvanised steel; size 150mm wide x 75mm high; complete	1	Item			
J	Cable Trunking; Floor trunking; 2-compartment; galvanised steel; size 150mm wide x 75mm high; complete	1	Item			
K	Cable Trunking; Boiler house; 2-compartment; galvanised steel; size 150mm wide x 75mm high; complete	1	Item			
L	Cable Trunking; Mains, LV; Mech Controls, ELV cabling; 3-compartment; galvanised steel; size 300mm wide x 100mm high; complete	1	Item			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	Cable Wire Basket; Fire Alarm; heavey-duty galvanised steel; size 100mm wide x 50mm high; complete	1	Item			
B	Cable Wire Basket; Fire Alarm; heavey-duty galvanised steel; size 100mm wide x 100mm high; complete	1	Item			
C	Cable Wire Basket; PV Submains; galvanised heavy duty external grade steel; size 300mm wide x 50mm high; complete	1	Item			
D	Cable Wire Basket; Submains; galvanised steel; size 500mm wide x 50mm high; complete	1	Item			
E	Cable Wire Basket; CAT6 cabling; galvanised steel; size 100mm wide x 65mm high; complete	1	Item			
F	Cable Wire Basket; CAT6 cabling; galvanised steel; size 300mm wide x 65mm high; complete	1	Item			
G	Cable Wire Basket; CAT6A; galvanised steel; size 600mm wide x 65mm high; complete	1	Item			
H	Dado Trunking; PVC- U, high impact self-extinguishing, white; 3-compartment; 150mm wide x 60mm deep; c/w angles, bends, tees, lids & end caps; complete	1	Item			
J	Dado Trunking; Ref: TA; PVC- U, high impact self-extinguishing, white; 3-compartment; 150mm wide x 60mm deep; c/w angles, bends, tees, lids & end caps; complete	1	Item			
K	Dado Trunking; Ref: TB; PVC- U, high impact self-extinguishing, white; 3-compartment; 150mm wide x 60mm deep; c/w angles, bends, tees, lids & end caps; complete	1	Item			
L	Conduit; class 4 galvanisd steel; size 20mm diameter; complete	1	Item			
M	Conduit; class 4 galvanisd steel; size 25mm diameter; complete	1	Item			
N	Conduit; PVC sheeted flexible metallic conduit, IP65; connections to plant; complete	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
P	General Earthing and Bonding; complete	1	Item			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
A	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
B	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
C	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
D	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
E	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
F	Identification plates, labels and the like; complete	1	Item			
	(62) POWER - GENERAL POWER SERVICES					
	System					
	General Services and small power installation, testing and commissioning; complete; The contractor shall provide and install throughout, a general-purpose socket outlet and fixed power installation as indicated on the drawings; all in strict accordance with the Electrical Specification Part 1, Section 14-15, Part 2, Part 3, Part 4, Section 2, 3 and Drawings 2999-SMK-ZZ-00-DR-E-6201					
G	General Services Installation	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Accessories associated with terminal equipment					
	Socket Outlets; supply and installation (including wiring); complete; Finish: metalclad finish; c/w heavy guage steel back boxes and safety covers; surface mounting; include for all accessories and fixings; all in strict accordance with the Electrical Specification Part 4, Section 3					
A	13 Amp Switched; Double Socket	1	nr			
	Isolator Switch; supply and installation (including wiring); complete; Rotary type, IP65, locakable c/w back boxes; include for all accessories and fixings; all in accordance with the Electrical Specification Part 4, Section 3					
B	16 Amp SPN Isolator	32	nr			
C	20 Amp TPN Isolator	8	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
D	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
E	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
F	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
G	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
H	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
J	As built drawings; complete	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
A	Identification plates, labels and the like; complete	1	Item			
	(64) COMMUNICATION - DATA & IT					
	System					
	Information and Communication Technology interconnecting link installation, testing and commissioning; complete; The works comprise the supply, installation, testing, and commissioning of new comms interconnection cabling between the existing MDF panel and the new extension IDF panel; A Category 6A (Class EA) structured cabling system for data, voice, CCTV, access control, and building network infrastructure; The installation shall be fully compliant with TIA/EIA-568-B.2-10, ISO/IEC 11801, and EN 50173 standards, forming a fully warranted end-to-end solution from a single manufacturer; Provision of structured cabling warranty (minimum 20 years) direct from manufacturer following independent audit; Contractor shall liaise with the telecoms provider and provide all attendances; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 2; Part 3; Part 4, Section 5 and Drawings 2999-SMK-ZZ-XX-DR-E-6400, 2999-SMK-LX-DR-ME-6001					
B	Data / IT Interconnecting Link Installations	1	Item			
	Accessories associated with terminal equipment					
	Data Outlet; supply and installation (including wiring); complete; Outlets: RJ45 CAT 6A connectors; Body: Heavy gauge steel; Finish: Metalclad, grey epoxy coated steel; Mounting: recessed mounting; 450mm to centre of outlet above finished floor level, minimum distance from internal corners 350mm; all accessories shall be engraved to indicate the circuit reference number; c/w galvanised steel back boxes; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20					
C	Data Outlets - 2 points (NP)	1	nr			
	Mains Sub-mains Cables					
	Multicore Cable; installation, testing and commissioning; complete; Minimum of 50 pair CW1308 Multicore cable; distributed within galvanised trunking /conduit; terminations at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.14 & Drawing 2999-SMK-ZZ-XX-DR-E-6400					
D	Cabling from Krone Patch Frame to Existing MDF Comms cabinet	1	Item			

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Fibre Cable; installation, testing and commissioning; complete; OS2 single mode fibre cable; 12 core lazerspeed 9 -125 um; distributed within galvanised trunking /conduit; OS2 multimode fibre external grade cable; 12 core lazerspeed 9 -125 um; distributed within underground ducts; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.12; Part 4, Section 5 & Drawing 2999-SMK-ZZ-XX-DR-E-6400					
A	Cabling from Existing MDF Comms cabinets to IDF Comms cabinet	1	Item			
	Fibre Cable; installation, testing and commissioning; complete; OM4 multimode fibre cable; 12 core lazerspeed 50 -125 um; distributed within galvanised trunking /conduit; OM4 multimode fibre external grade cable; 12 core lazerspeed 50 -125 um; distributed within underground ducts; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.12 & Drawing 2838-SMK-ZZ-XX-DR-E-6400					
B	Cabling from Existing MDF Comms cabinets to IDF Comms cabinet	1	Item			
	<u>Final Circuits (including all points terminations as per M&E Drawings)</u>					
	CAT 6a UTP Cable; installation, testing and commissioning; complete; distributed within galvanised trunking /conduit; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 4, Section 5					
	Final Circuits - IDF Comms Cabinet					
C	Structured Cable to Data points	2	nr			
	<u>General Earthing and Bonding</u>					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification					
D	General Earthing and Bonding; complete	1	Item			
	<u>General</u>					
	Testing and commissioning; all in accordance with Engineers Specification					
E	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
F	Operating and maintenance manuals	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Working drawings; all in accordance with Engineers Specification					
A	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
B	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
C	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
D	Identification plates, labels and the like	1	Item			
	Maintenance and Warrenty; all in accordance with Engineers Specification					
E	Upon practical completion, the specialist contractor must provide a minimum 20-year 'system or application warranty' for the CAT 6A system; ensuring full compliance with ISO 11801 standards; 'Product-or-material-only ' warranties are not acceptable; Use of uncertified systems will require full replacement at the contractor; An independent audit by the manufacturer is required before project sign-off to validate system performance and issue the warranty; The contractor is responsible for coordinating this audit.	1	Item			
	(64) COMMUNICATIONS - PUBLIC ADDRESS INTERCONNECTING LINKS					
	System					
	Public Address interconnecting link installation, testing and commissioning; complete; The works comprise the supply and installation of 2 No. 50-pair multicore 1.0 mm2 twisted-pair communication cables to interconnect the existing college public address (PA) and voice communication system with the new multi-tertiary extension; The cables shall be installed within the designated communications containment system (comms tray) and form part of the Safety Extra-Low Voltage (SELV) network infrastructure; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 2; Part 3; Part 4; all in strict accordance with the Electrical Engineers Specification Part 1, Section 21; Part 2; Part 3; Part 4 and Drawing 2999-SMK-Z1-00-DR-E-6500, 2999-SMK-Z2-01-DR-E-6501					
F	Public Address System Interconnecting Link Installation	1	Item			

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
B	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
C	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
D	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
E	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
F	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
G	Identification plates, labels and the like	1	Item			
	(65) SECURITY & PROTECTION - INTRUDER ALARM INTERCONNECTING LINKS					
	System					
	Intruder Alarm interconnecting link installation, testing and commissioning; complete; All wiring shall be installed in accordance with and comply with the current NSAI I.S. 10101: 2020 electrical regulations, NSAI I.S. 10101: 2020; all in strict accordance with the Electrical Engineers Specifications Part 1, Section 29; Part 4, Section 8; and Drawing 2999-SMK--Z1-00-DR-E-6501, 2999-SMK-LX-DR-ME-6001					
H	Intruder Alarm Interconnecting Link Installation	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
B	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
C	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
D	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
E	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
F	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
G	Identification plates, labels and the like; complete	1	Item			
H	Maintenance & Warranty					
J	The intruder alarm specialist shall allow for liaising with the monitoring company for the provision and initial cost for setting up external monitoring including the first 12 months coverage. This shall be included by the alarms specialist costs at tender stage. The contractor shall be responsible for providing all telephone cabling as necessary within the building between Eircoms incoming position and intruder alarm panel; all in accordance with the Electrical Engineers Specification Documents	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	The specialist installer shall include in their tender for the cost of comprehensive maintenance of the systems for a period of 12 months from the date of commissioning. This cost shall include for 24-hour engineering maintenance cover. Preventative maintenance and corrective maintenance will be provided and will consist of 2 site visits to be carried out on a 6 monthly basis. Copies of all maintenance carried out shall be forward to the engineer for his records; all in accordance with the Electrical Engineers Specification Documents	1	Item			
	(65) SECURITY & PROTECTION - FIRE ALARM					
	System					
	Fire Alarm interconnecting installation; testing and commissioning; complete; The works comprise the supply, installation, testing, and commissioning of new fire alarm interconnection cabling between the existing FireClass FC600 fire alarm control panel and the new extension fire alarm panel; The interconnection shall enable complete two-way communication, ensuring full alarm, fault, and disablement signal transmission between both panels; all in strict accordance with the Engineers Specification and Drawing 2999-SMK-ZZ-XX-SC-E-6700, 2999-SMK-LX-DR-ME-6001					
B	Fire Alarm Interconnecting	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
C	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
D	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
E	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
F	Working drawings; complete	1	Item			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
A	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
B	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
C	Identification plates, labels and the like; complete	1	Item			
	Maintenance & Warranty; all in accordance with the Electrical Engineers Specification Documents					
D	The contractor shall include for monitoring the installation and pay all costs for the first 12 months of operation, which shall include 24 hour (4 hour call out period maximum) response to system faults and free parts and labour warranty for the duration of this maintenance contract. Additionally, regular servicing and maintaining of the installation shall be carried out atquarterly intervals during the maintenance period. During this period the contractor in conjunction with the specialist installer shall submit to the Engineer a full report in duplicate including details of tests carried out and any faults found with the system and corrective action taken; all in accordance with Engineers Specification Part 1, Section 25.2	1	Item			
	(68) BMS WIRING INSTALLATIONS - EXISITNG BUILDING					
	<u>System</u>					
	BMS Wiring Installation; testing and commissioning; complete; Electrical Contractor must provide and issue as installed drawings for all electrical cabling associated with mechanical services. All wiring for mechanical services must be carried out under this contract to include wiring for heating, ventilation etc. The wiring to all mechanical devices must be taken from dedicated MCC (motor control centre) panels supplied as a 'Free Issue' item by the Mechanical Contractor as part of the BMS installation, and must be installed and connected up by the electrical contractor. Generally, the MCC panels must be installed in boiler houses, plant rooms, etc. all in accordance with the Mechanical Specification, Electrical Specification Part 1, Part 2, Part 3, Part 4 and Drawing 2838-SMK-ZZ-LL-DR-M-5850					
E	Mechanical & BMS Wiring Installation	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Equipment					
	Mechanical Control Panel; Mechanical and BMS wiring installation, testing and commissioning; complete; The Contractor shall allow for all wiring associated with the installation of the MCC and BMS outstations; The Contractor shall allow for all switchgear as indicated on the electrical services connection schedules and reflected on the electrical services layouts; all in accordance with the Mechanical Engineers Specification and Drawing M-5850					
A	Mechanical Control Centre; Ref: BMS Panel, Location: Heating Plant Room	1	Item			
	Fittings					
	BMS final connections and wiring installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ELV / control wiring cables fed from the BMS panel (Location: LG floor heating plant room) to mechanically operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing M-5850					
B	Fire Alarm interface	1	nr			
C	Link to New School Extension BEMS Panel; External grade CAT 6A cable	1	nr			
D	Link to Local Comms Cabinet; CAT 6A cable bacnet connection	1	nr			
E	Pump module controller linked to BMS ASHP-03	1	nr			
F	Pump module controller linked to BMS ASHP-04	1	nr			
G	Pump module controller linked to BMS ASHP-05	1	nr			
H	Main distribution board, Surge protection alarm link	1	nr			
J	Boiler BLR-02, Enable/fault	1	nr			
K	Boiler BLR-03, Enable/fault	1	nr			
L	Boiler BLR-04, Enable/fault	1	nr			
M	Gas fired water heater WH-02, Enable/fault	1	nr			
N	Pressurisation unit PU-02, High/ low level fault	1	nr			
P	LPHW Pump PMP-06, Enable/fault	1	nr			
Q	LPHW Pump PMP-07, Enable/fault	1	nr			
R	LPHW Pump PMP-08, Enable/fault	1	nr			
S	LPHW Pump PMP-09, Enable/fault	1	nr			
T	LPHW Pump PMP-10, Enable/fault	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	LPHW Pump PMP-11, Enable/fault	1	nr			
B	LPHW Pump PMP-12, Enable/fault	1	nr			
C	DHW Return Pump PMP-13, Enable/fault	1	nr			
D	Heat meter pulsed signal	9	nr			
E	Gas detection CP1, valve position/status	1	nr			
F	Cold water booster pump BS-02, Enable/fault	1	nr			
G	LPHW Buffer vessel electric immersion, Enable/fault	1	nr			
H	ASHP-03, Enable/fault	1	nr			
J	ASHP-04, Enable/fault	1	nr			
K	Boiler master controller, Enable/fault	1	nr			
L	Outdoor air temp sensor	1	nr			
M	Outdoor frost thermostat	1	nr			
N	ASHP-03 primary flow immersion temperature sensor	1	nr			
P	ASHP-03 primary return immersion temperature sensor	1	nr			
Q	ASHP-04 primary flow immersion temperature sensor	1	nr			
R	ASHP-04 primary return immersion temperature sensor	1	nr			
S	Boiler header flow temperature sensor	1	nr			
T	Boiler header return temperature sensor	1	nr			
U	Boiler header high limit stat	1	nr			
V	Pressurisation unit low level alarm	1	nr			
W	Gas detection (boiler house) input - automatic reset	1	nr			
X	Boiler master controller interface connection	1	nr			
Y	LPHW heating circuit flow temp sensor, PMP-06	1	nr			
Z	LPHW heating circuit return temp sensor, PMP-06	1	nr			
AA	LPHW heating circuit flow temp sensor, PMP-07	1	nr			
BB	LPHW heating circuit return temp sensor, PMP-07	1	nr			
CC	LPHW heating circuit flow temp sensor, PMP-08	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	LPHW heating circuit return temp sensor, PMP-08	1	nr			
B	LPHW heating circuit flow temp sensor, PMP-09	1	nr			
C	LPHW heating circuit return temp sensor, PMP-09	1	nr			
D	LPHW heating circuit flow temp sensor, PMP-10	1	nr			
E	LPHW heating circuit return temp sensor, PMP-10	1	nr			
F	LPHW heating circuit flow temp sensor, PMP-11	1	nr			
G	LPHW heating circuit return temp sensor, PMP-11	1	nr			
H	LPHW heating circuit flow temp sensor, PMP-12	1	nr			
J	LPHW heating circuit return temp sensor, PMP-12	1	nr			
K	Buffer vessel inlet flow temperature sensor	1	nr			
L	Buffer vessel inlet return temperature sensor	1	nr			
M	Buffer vessel contents temperature sensor	4	nr			
N	Buffer vessel outlet flow temperature sensor	1	nr			
P	Buffer vessel outlet return temperature sensor	1	nr			
Q	LPHW header temperature sensor - flow	1	nr			
R	LPHW header temperature sensor - return	1	nr			
S	Domestic monobloc heat pump supply	1	nr			
T	Domestic monobloc heat pump supply - primary flow temperature sensor	1	nr			
U	Domestic monobloc heat pump supply - primary return temperature sensor	1	nr			
V	3-port diverting valve - monoblock heat pump	1	nr			
W	Cold feed temp sensor to DHW pre-heat cylinder	1	nr			
X	Hot water pre-heat, temperature sensor low level	1	nr			
Y	Hot water pre-heat, temperature sensor mid level	1	nr			
Z	Hot water pre-heat, temperature sensor high level	1	nr			
AA	Hot water pre-heat flow, temperature sensor	1	nr			
BB	Gas fired water heater flow, temperature sensor	1	nr			
CC	3-port diverting valve - anti-legionella	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	Anti-legionella return pump	1	nr			
B	Anti-legionella cycle - temperature sensor	1	nr			
C	DHWS flow temperature sensor	1	nr			
D	DHWS return temperature sensor	1	nr			
E	DHWS high limit sensor	1	nr			
F	Mains water incoming meter, pulsed signal	1	nr			
G	Heating plantroom gas meter, pulsed signal	1	nr			
H	Intruder alarm input	1	nr			
J	Flue riser Co2 sensor alarm	1	nr			
K	Run on timer	7	nr			
L	Electrical switchboard meters - modbus	1	nr			
M	ASHP - Interface Modbus/BacNet	1	nr			
N	Temperature stats, power & control cable	40	nr			
P	Non-essential LV switch gear outputs (multiple boards)	6	nr			
	Final Circuits (including all points terminations)					
	Final Circuits; installation, testing and commissioning; Complete; Final circuits shall be fed from local sub-distribution board; Installation: Sub-circuit wiring shall be drawn in concealed galvanised steel conduit and/or galvanised steel trunking; all in accordance with the Electrical Engineers Specification and Drawing M-5850					
	Final Circuits - BMS Panel; Location: Heating Plant Room					
Q	Power Services - Boiler BLR-02	1	nr			
R	Power Services - Boiler BLR-03	1	nr			
S	Power Services - Boiler BLR-04	1	nr			
T	Power Services - Gas fired water heater WH-02	1	nr			
U	Power Services - Pressurisation Unit PU-02	1	nr			
V	Power Services - LPHW pump PMP-06	1	nr			
W	Power Services - LPHW pump PMP-07	1	nr			
X	Power Services - LPHW pump PMP-08	1	nr			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
A	Power Services - LPHW pump PMP-09	1	nr			
B	Power Services - LPHW pump PMP-10	1	nr			
C	Power Services - LPHW pump PMP-11	1	nr			
D	Power Services - LPHW pump PMP-12	1	nr			
E	Power Services - DHW return pump PMP-13	1	nr			
F	Power Services - Heat meter	9	nr			
G	Power Services - Gas leak detection panel CP1	1	nr			
H	Power Services - Cold water booster pump BS-02	1	nr			
J	Power Services - Buffer vessel electic immersion	1	nr			
K	Power Services - ASHP-03	1	nr			
L	Power Services - ASHP-04	1	nr			
M	Power Services - Boiler master controller	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
N	General Earthing and Bonding; complete		Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
P	Testing and commissioning; complete		Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
Q	Operating and maintenance manuals; complete		Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
R	Working drawings; complete		Item			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
A	Co-ordination drawings;complete		Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
B	As built drawings; complete		Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
C	Identification plates, labels and the like; complete		Item			
	(68) MECHANICAL WIRING INSTALLATIONS					
	Mechanical Wiring Installation; testing and commissioning; complete; Electrical Contractor must provide and issue as installed drawings for all electrical cabling associated with mechanical services. All wiring for mechanical services must be carried out under this contract to include wiring for heating, ventilation etc. The wiring to all mechanical devices must be taken from dedicated MCC (motor control centre) panel/ local switch boards; all in accordance with the Mechanical and Electerical Specification and Drawings					
D	Mechanical Wiring Installation	1	Item			
	Fittings					
	Ancillary frost protection heater mechanical wiring provisions and final connections (ONLY); installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ ELV control wiring cables to mechaincally operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing					
E	Ancillary frost protection heater	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers					
F	Generally	1	Item			

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	(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
A	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
B	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
C	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
D	Co- ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
E	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
F	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

				€	c
(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING (Cont)					
COLLECTION					
Page No. Building/271					
Page No. Building/272					
Page No. Building/273					
Page No. Building/274					
Page No. Building/275					
Page No. Building/276					
Page No. Building/277					
Page No. Building/278					
Page No. Building/279					
Page No. Building/280					
Page No. Building/281					
Page No. Building/282					
Page No. Building/283					
Page No. Building/284					
Page No. Building/285					
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Page No. Building/289					
Page No. Building/290					
Page No. Building/291					
(6-) ELECTRICAL INSTALLATIONS - EXISTING BUILDING **Carried to Summary**					

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION					
	Notes					
A	The tendering Contractors are referred to ARM 4 Supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		note			
B	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		note			
C	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings, will be carried out by the Works Specialist under the terms of the main contract. The Electrical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		note			
	ALTERNATIVE RULES FOR THE MEASUREMENT OF ELECTRICAL SERVICES					
	(61) ELECTRICITY SUPPLY & MAIN DISTRIBUTION - LV INSTALLATIONS					
	System					
	LV installation, testing and commissioning; complete; The Contractor shall allow for the supply and installation of all switchgear, distribution boards and sub mains cables in accordance with the drawings and attached specification; The Contractor shall be responsible for safe off-loading, receiving, storage, positioning and fixing of the boards and shall be liable for any damage to boards during installation; The Contractor shall submit working drawings to the Engineer for approval prior to manufacture of switchgear; the contractor shall allow for liaising with the ESB; all in accordance with the Electrical Engineers Specification Part 1, Section 13, 14; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-XX-SC-E-6201					
D	LV installation	1	Item			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Equipment					
	Main Switch Board; supply and installation (including wiring) complete; Switchboard Classification: Form 4B, Type 2, Multi-Cubicle; Enclosure: Metal clad unit fabricated from 2.5mm thick sheet electro galvanised Iron phosphated steel plate, 2mm thick sheet steel enclosure doors, minimum protective rating of IP 54; Mounting: Floor mounted; distribution board to provide 30% spare capacity for future expansion; complete with and include for all PVC cables, bush bar system, TP&N's, MCCB's, MCB's, RCBO's; HOA switches, Integral isolating switches, CTU's, open/closed contractors; remote key switches, phase indicator lamps, time clocks, metering, surge protection, power factor correction equipment and automatic changeover; space for integral switch board DB-GPL1.MT, DB-GPL1 E, DB-SITE (measured elsewhere); earth terminal; Labels: Traffolyte, black on white, screw on type, to all chambers inside and outside the panel; Testing and commissioning: in accordance with current standards; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13 Part 2; Part 3; Part 4, Section 2 and Drawings E-6201					
A	Main Switch board Ref: MSB; complete; Location: Ground floor electrical switch room 18	1	nr			
	Sub-distribution Board; supply and installation (including wiring) complete; Switchboard Classification: Form 3B, Type 2; Enclosure: Metal clad unit fabricated from 1.5mm thick sheet electro galvanised Iron phosphated steel plate, 1.0mm thick sheet steel enclosure doors, minimum protective rating of IP 40; Mounting: Floor mounted; distribution board to provide 30% spare capacity for future expansion; complete with and include for all PVC cables, bush bar system, TP&N's, MCCB's, MCB's, RCBO's; HOA switches, Integral isolating switches, CTU's, open/closed contractors; remote key switches, phase indicator lamps, time clocks, metering, surge protection, space for future power factor correction equipment and automatic changeover; earth terminal; Labels: Traffolyte, black on white, screw on type, to all chambers inside and outside the panel; Testing and commissioning: in accordance with current standards; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13; Part 2; Part 3; Part 4, Section 2 and Drawings E-6201					
B	Sub-distribution board Ref: DB-GPL1.MT; complete; Location: Ground floor electrical switch room 18, integral to MDB	1	nr			
C	Sub-distribution board Ref: DB-SITE; complete; Location: Ground floor electrical switch room 18, integral to MDB	1	nr			
D	Sub-distribution board Ref: DB-DCC; complete; Location: Ground floor comms	1	nr			
E	Sub-distribution board Ref: DB-CR; complete; Location: Ground floor computer room	1	nr			
F	Sub-distribution board Ref: DB-MECH PLANT; complete; Location: Ground floor plant room	1	nr			
G	Sub-distribution board Ref: DB-GPL2.MT; complete; Location: First floor service riser	1	nr			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Sub-distribution board Ref: DB-GPL.MP; complete; Location: First floor servery	1	nr			
	Fittings					
	Multi-function digital meter; supply and installation; complete; Parameters to be measured include kW, kilowatt hours, kVARh, kVA, voltage, and current displayed on a three-line backlit LCD display; with link back to BMS; installation as per manufacturers recommendations; all in accordance with the Electrical Engineers Specifications Part 1, Section 13.10					
B	Multi-function digital meter	15	nr			
	Power factor correction equipment; supply and installation; complete; The power factor correction (PFC) equipment shall be an integral component of the main switch panel; It shall operate automatically in stages, as specified in the contract drawings; PFC compartment shall be c/w a suitably sized fan to maintain adequate air circulation; all in accordance with the Electrical Engineers Specifications Part 1, Section 13.8					
C	Power factor correction equipment	1	nr			
	Firemans switch; supply and installation (including wiring); complete; linked to 630A MCCB in main switchboad MDC; to be clearly labeled "Multi-Tertiary Firemans Switch"; all in accordance with specification and drawing E-6201					
D	Firemans Switch; Ref: No.2	1	nr			
	Insulated Matting/Carpet; 1000mm wide x full length of switch board, standards to comply with the International Standard; complete; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.3.5					
E	Insulated matting; Main switch board	1	nr			
F	Insulated matting; Sub-distribution board	5	nr			
	Main switchboard drawing; 'A1' framed drawing of the switchboard to be installed within the switch room; the drawing shall be framed with a perspex cover; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.3.7					
G	Main switchboard drawing	1	nr			
	Circuit charts; printed circuit charts shall be provided c/w a perspex cover and fitted to the inside of each distribution board access door; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.18					
H	Circuit charts	5	nr			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	First Aid Chart; "Electrical review" first aid charts, Size 508mm x 381mm; Detailing instructions for dealing with electric shock; wall hung at each switchboard and subboard; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.20					
A	First Aid Chart	6	nr			
	Mains and Sub-mains cables					
	Supply and Installation of sub-mains cable from Existing Main Distribution Board MSB-MDC; Location: Switchroom adjacent yo ESB substation; to sub-distribution boards/ Control panels located throughout school building; Sub-mains distribution within the building shall be via XLPE/LSF/SWA/LSF armored cables laid in galvanised steel cable tray/trunking; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6201					
B	Submains Ref: 12; MSB, DB-GPL1.MT to MSB-M1; 2 x 4core 240sq.mm XLPE/SWA/LSF + 150sq.mm CPC	1	Item			
	Supply and Installation of sub-mains cable from Main Distribution Board MSB-M1; Location: Electrical switch room 18; to sub-distribution boards/ Control panels located throughout school building; Sub-mains distribution within the building shall be via XLPE/LSF/SWA/LSF armored cables laid in galvanised steel cable tray/trunking; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6201					
C	Submains Ref: 3; MSB to BEMS Panel; 4core 16sq.mm XLPE/SWA/LSF + 16sq.mm CPC	1	Item			
D	Submains Ref: 3; MSB to DB-GPL-MP; 4core 16sq.mm XLPE/SWA/LSF + 16sq.mm CPC	1	Item			
E	Submains Ref: 4; MSB to PV Relay 01; 4core 25sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
F	Submains Ref: 4; MSB to PV Relay 02; 4core 25sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
G	Submains Ref: 4; MSB to PV Relay 03; 4core 25sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
H	Submains Ref: 4; MSB to DB-CR; 4core 25sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
J	Submains Ref: 5; MSB to Lift; 4core 35sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
K	Submains Ref: 5; MSB to ASHP; 4core 35sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
L	Submains Ref: 6; MSB to DB-GPL2.MT; 4core 50sq.mm XLPE/SWA/LSF + 25sq.mm CPC	1	Item			
M	Submains Ref: 8; MSB to DB-MECH PLANT; 4core 95sq.mm XLPE/SWA/LSF + 50sq.mm CPC	1	Item			
N	Submains Ref: 11; MSB to EV-Mini pillar; 4core 185sq.mm XLPE/SWA/LSF + 120sq.mm CPC	1	Item			

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Submains Ref: 13; MSB to FAP; 2core & earth 2.5sq.mm Firetuf PH120 Enhanced Grade	1	Item			
B	Submains Ref: 13; MSB to Disable Refuse Panel; 2core & earth 2.5sq.mm Firetuf PH120 Enhanced Grade	1	Item			
C	Submains Ref: 14; MSB to IAP; 2core & earth 2.5sq.mm Firetuf PH120 Enhanced Grade	1	Item			
D	Submains Ref: 17; MSB to DB-DCC; 3core 10sq.mm XLPE/SWA/LSF	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
E	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
F	Testing; LV switchboards shall undergo a thorough pre-test checklist and testing process to ensure compliance with required safety and quality standards. Test certificates must be completed and signed by the switchboard technician, test engineer, and company director. All test records shall be submitted in both hard copy for the O&M manual and in electronic format.	1	Item			
G	Commissioning of Plant; The electrical specialist shall include in their tender the on-site commissioning of the main switchboard by the manufacturer prior to project handover, along with staff training; Factory visits for the engineer and client to witness testing before dispatch must also be arranged, with all associated costs covered by the electrical specialist and their switchboard supplier.	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
H	Operating and maintenance manuals	1	Item			
J	12-Month Warranty and Maintenance; The Electrical Reserved Specialist and Switchgear Sub-Specialist shall provide a 12-month full warranty and planned maintenance for the new LV switchgear, starting from the date of practical Completion (PC) of the project; Maintenance, including testing of MCCBs and components, shall follow manufacturer requirements; All work shall be done on weekends, outside normal working hours; All costs, including parts, labour, travel, and expenses, must be included in the tender.	1	Item			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Thermal Imaging Inspections; The Electrical Specialist shall ensure their Switchgear Sub-Specialist conducts thermal imaging of the main LV and kitchen switchgear six months after PC and before the end of the defects period (prior to retention release); Inspections must be done in-situ under live conditions, with a full report issued to the client and consulting engineer; All associated costs must be included in the tender.	1	Item			
B	Ultra Sonic Detection; Six months after PC and again prior to the end of defects period and before retentions shall be released, the electrical reserved specialist shall arrange for his switchgear sub-specialist to carry out Ultra sonic detection testing of the main LV switchboard and kitchen switchgear and all its various components, connections etc. in-situ under 'live' conditions; A full report shall be issued thereafter to the client and consulting engineer; All costs associated with this shall be included at tender stage.	1	Item			
C	Power Logging Tests; Six months after PC and again prior to the end of defects period and before retentions shall be released, the electrical reserved specialist shall arrange for his switchgear sub-specialist to install a power logger within the main LV switchboard and kitchen switchgear and record and monitor all supplies for a minimum of 7days under 'Live' conditions. The unit shall monitor and log voltage, current, power, power factor and energy over the given time which shall assist the client analysing energy consumption and verification of metering arrangements; A full report shall be issued thereafter to the client and consulting engineer; All costs associated with this shall be included at tender stage.	1	Item			
	Working drawings; all in accordance with Engineers Specification					
D	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
E	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
F	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
G	Identification plates, labels and the like	1	Item			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	(61) ELECTRICAL SUPPLY AND MAIN DISTRIBUTION - CONTAINMENT					
	System					
	Cable ladder/ tray/ trunking installation, testing and commissioning; complete; The Contractor shall supply and install a complete cable support system using cable tray, trunking, conduit and support steelwork as shown on the drawings and as detailed in the specification. The Contractor shall include for all incidental cable containment which may not be shown on the drawings but which may be required to effect cable routes to individual items of equipment, luminaires etc; include for all joints, fixing brackets and supports; all in accordance with the Electrical Engineers Specification Part 1, Section 14; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-LL-DR-E-6101, 2999-SMK-ZZ-LR-DR-E-6200					
A	Cable Tray; Submains cabling; heavy-duty galvanised steel; size 300mm wide x 80mm high; complete	1	Item			
B	Cable Tray; PV cabling; galvanised external grade steel; size 200mm wide x 75mm high; c/w bigfoot support system; complete	1	Item			
C	Cable Tray; PV cabling; galvanised external grade steel; size 300mm wide x 50mm high; c/w bigfoot support system; complete	1	Item			
D	Cable Trunking; PV cabling; 3-compartment; galvanised heavy duty external grade steel; size 300mm wide x 100mm high; complete	1	Item			
E	Cable Trunking; LV; Mech Controls, ELV; 2-compartment; galvanised steel; size 150mm wide x 75mm high; complete	1	Item			
F	Cable Trunking; Floor trunking; 2-compartment; galvanised steel; size 150mm wide x 75mm high; complete	1	Item			
G	Cable Trunking; Boiler house; 2-compartment; galvanised steel; size 150mm wide x 75mm high; complete	1	Item			
H	Cable Trunking; Mains, LV; Mech Controls, ELV cabling; 3-compartment; galvanised steel; size 300mm wide x 100mm high; complete	1	Item			
J	Cable Wire Basket; Fire Alarm; heavey-duty galvanised steel; size 100mm wide x 50mm high; complete	1	Item			
K	Cable Wire Basket; Fire Alarm; heavey-duty galvanised steel; size 100mm wide x 100mm high; complete	1	Item			
L	Cable Wire Basket; PV Submains; galvanised heavy duty external grade steel; size 300mm wide x 50mm high; complete	1	Item			
M	Cable Wire Basket; Submains; galvanised steel; size 500mm wide x 50mm high; complete	1	Item			
N	Cable Wire Basket; CAT6 cabling; galvanised steel; size 100mm wide x 65mm high; complete	1	Item			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Cable Wire Basket; CAT6 cabling; galvanised steel; size 300mm wide x 65mm high; complete	1	Item			
B	Cable Wire Basket; CAT6A; galvanised steel; size 600mm wide x 65mm high; complete	1	Item			
C	Dado Trunking; PVC- U, high impact self-extinguishing, white; 3-compartment; 150mm wide x 60mm deep; c/w angles, bends, tees, lids & end caps; complete	1	Item			
D	Conduit; class 4 galvanisd steel; size 20mm diameter; complete	1	Item			
E	Conduit; class 4 galvanisd steel; size 25mm diameter; complete	1	Item			
F	Conduit; PVC sheeted flexible metallic conduit, IP65; connections to plant; complete	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
G	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
H	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
J	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
K	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
L	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
M	As built drawings; complete	1	Item			
				To Collection €		

	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
A	Identification plates, labels and the like; complete	1	Item			
	(62) POWER - GENERAL POWER SERVICES					
	System					
	General Services and small power installation, testing and commissioning; complete; The contractor shall provide and install throughout, a general-purpose socket outlet and fixed power installation as indicated on the drawings; all in strict accordance with the Electrical Specification Part 1, Section 14-15, Part 2, Part 3, Part 4, Section 2, 3 and Drawings 2999-SMK-ZZ-00-DR-E-6201, 2999-SMK-ZZ-01-DR-E-62022, 2999-SMK-ZZ-XX-SC-E-6201					
B	General Services Installation	1	Item			
	Accessories associated with terminal equipment					
	Socket Outlets; supply and installation (including wiring); complete; Finish: metalclad finish; c/w heavy guage steel back boxes and safety covers; surface mounting; include for all accessories and fixings; all in strict accordance with the Electrical Specification Part 4, Section 3					
C	13 Amp Switched; Double Socket	4	nr			
	Socket Outlets; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w heavy guage steel back boxes and safety covers; surface mounting; include for all accessories and fixings; all in strict accordance with the Electrical Specification Part 4, Section 3					
D	13 Amp Switched; Single Socket (cleaners)	36	nr			
E	13 Amp Switched; Twin Socket	69	nr			
F	13 Amp Unswitched; Twin Socket	5	nr			
	Socket Outlets; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w back boxes and safety covers; surface fixed to PVC-U dado trunking; include for all accessories and fixings; all in accordance with the Electrical Engineers Specification Part 4, Section 3					
G	13 Amp Switched; Single Socket (Cleaners)	1	nr			
H	13 Amp Switched; Twin Socket	84	nr			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Inductrial Socket Outlets; supply and installation (including wiring); complete; Industrial commando plug and socket, IP44, 2P&E; colour blue; angled; include for all accessories and fixings; all in accordance with the Electrical Engineers Specification Part 4, Section 3					
A	20 Amp Inductrial Socket Outlets	2	nr			
	Fused Connection Outlet; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; 13A Fused Outlet With Neon; 1 Gang 86 x 86mm; c/w galvanised steel back boxes; include for all accessories and fixings; all in accordance with the Electrical Specification Part 4, Section 3					
B	Fuse Connection Outlet; Unswitched	21	nr			
C	Fuse Connection Outlet; Switched	44	nr			
	Fused Connection Outlet; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w back boxes and safety covers; surface fixed to PVC-U dado trunking; include for all accessories and fixings; all in accordance with the Electrical Engineers Specification Part 4, Section 3					
D	Fuse Connection Outlet; Switched	6	nr			
	Double-pole Switch; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w galvanised steel back boxes; include for all accessories and fixings; all in accordance with the Electrical Specification Part 1, Part 4, Section 3					
E	20A Double-pole switch	30	nr			
	3-Pole Fan Isolating Switch; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w galvanised steel back boxes; c/w galvanised steel back boxes; include for all accessories and fixings; all in accordance with the Electrical Specification Part 4, Section 3					
F	3-Pole Fan Isolating Switch	5	nr			
	Isolator Switch; supply and installation (including wiring); complete; Rotary type, IP65, locakable c/w back boxes; include for all accessories and fixings; all in accordance with the Electrical Specification Part 4, Section 3					
G	16 Amp SPN Isolator	32	nr			
H	25 Amp SPN Isolator	1	nr			
J	32 Amp SPN Isolator	1	nr			
K	20 Amp TPN Isolator	8	nr			
L	32 Amp TPN Isolator	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Key Switch; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w back boxes and safety covers; surface fixed to PVC-U dado trunking; include for all accessories and fixings; all in accordance with the Electrical Engineers Specification Part 4, Section 3					
A	Switch key	1	nr			
	45Amp Cooker Switch; supply and installation (including wiring); complete; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range c/w galvanised steel back boxes; include for all accessories and fixings; include for all accessories and fixings; all in strict accordance with the Electrical Specification Part 4, Section 2.2					
B	45Amp Cooker Switch c/w Low Level Outlet	1	nr			
C	Floor box, supply and installation (including wiring) complete; Screed floor box size 230mm x 300mm x 110mm, two compartment c/w 2nr double sockets, 2nr single data points; include for all accessories and fixings; all in strict accordance with the Electrical Specification Part 1, Section 14 -15					
D	Floor box	7	nr			
	Final Circuits (including all points terminations)					
	Final Circuits; installation, testing and commissioning; Complete; Final circuits shall be fed from local sub-distribution boards; Socket outlets and small power services outlets shall be circuited as shown on the drawings; Circuits shall be wired with insulated LSF/LSZH cables; standards to Engineers Specification; laid in galvanised trunking /conduit. Cable sizes are as follows: 10amp radial circuits: 2.5mm2/2.5mm2 CPC, 16amp radial circuits: 4.0mm2/4.0mm2 CPC, 20amp radial circuits: 4.0mm2/4.0mm2 CPC; 32amp radial circuits (non cooker): 6.0mm2/6.0mm2 CPC; 32amp radial circuits (cooker): 10.0mm2/10.0mm2 CPC; all in strict accordance with the Electrical Engineers Specification Part 1, Section 14, 15 and Drawing 2999-SMK-ZZ-XX-SC-E-6201					
	Final Circuits - DB.GPL1					
E	Power Essential Services	54	nr			
F	Power Non-essential Services	54	nr			
	Final Circuits - DB-SITE					
G	Power Non-essential Services	8	nr			
	Final Circuits - DB-DCC					
H	Power Essential Services	12	nr			

To Collection €

	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Final Circuits - DB-CR					
A	Power Non-essential Services	12	nr			
	Final Circuits - DB.GPL2.MT					
B	Power Essential Services	72	nr			
C	Power Non-essential Services	72	nr			
	Final Circuits - DB.GPL2.MP					
D	Power Essential Services	24	nr			
E	Power Non-essential Services	24	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
F	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
G	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
H	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
J	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
K	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
L	As built drawings; complete	1	Item			

To Collection €

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents

A	Identification plates, labels and the like; complete	1	Item		

(62) POWER DISTRIBUTION SERVICES - PV SYSTEM

System

Photovoltaic System installation, testing and commissioning; complete; The electrical contractor shall be responsible for the design, supply, installation, commissioning and demonstration of a solar power generating system; The PV system shall be a building integrated and grid-connected system and operate in parallel with the grid network; The PV array is to be installed on the south facing roof with minimal acceptable peak power rating using 99 number 430W panels. The delivered annual generation should be no less than 42,570kWh/yr; The Solar Photovoltaic (PV) system shall include the following main components, PV Modules, Module Mounting System, provision for safe access, Cabling DC and AC, Connectors, String Combiners, Inverters (power optimisers), Switch-disconnectors (isolators) DC and AC, Electrical Protection and Monitoring System. The electrical contractor shall engage a Photovoltaic (PV) Systems specialist but shall co-ordinate all elements of the installation in order to provide a complete system; all in strict accordance with the Electrical Engineers Specification Part 1, Section 16 Part 2, Part 3 and Drawings 2999-SMK-ZZ-LR-DR-E-6200

B	Photovoltaic System installation	1	Item		

Equipment

Solar PV Panels and mounting system; supply and installation (including wiring); complete; Panels: Teir 1 solar PV panels, 430Wp with a conversion efficiency of 19.8%; Positive power tolerance: up to +5W; Junction boxes: IP68 rated with 3 diodes; Construction: single glass with an anodised aluminium alloy frame; Fire rating: UL Type 1 or Type 2; 25-year performance warranty, 10-year product warranty; south facing orientation; Mounting system: non-penetrable roof mounting systems; K2 S-Dome system or equivalent; c/w cabling, connectors, junction boxes and string combiners; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 16.19.2 - 3 and Drawings 2999-SMK-ZZ-LR-DR-E-6200

C	Solar PV Panels; Location: Flat roof	99	nr		

Fittings

G10 PV Control and Protection Panel; supply and installation (including wiring); complete; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 16

D	G-10 PV Control Panel	3	nr		

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Photovoltaic Inverter, supply and installation (including wiring); complete; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 16.19.4					
A	Photovoltaic Inverter	3	nr			
	LED Digital Monitor c/w mounting brackets, supply and installation (including wiring); complete; Size: 32" display screen; Mounting: wall mounted; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 16.19.6					
B	LED Digital Monitor	1	nr			
	Accessories associated with terminal equipment					
	PV System Accessories; supply and installation (including wiring); complete; warranty of 10-years to be included in this contract; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 16					
C	Photovoltaic DC Isolator; shunt trip	3	nr			
D	Photovoltaic Mains AC Isolator; with shunt trip	3	nr			
E	Generation Meter	3	nr			
F	PV Fault Indicator Light	3	nr			
G	Fireman switch	1	nr			
H	Control & communications gateway master	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
J	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
K	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
L	Operating and maintenance manuals; complete	1	Item			

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
A	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
B	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
C	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
D	Identification plates, labels and the like; complete	1	Item			
	Maintence and Warranty; all in accordance with the Electrical Engineers Specification Documents					
E	Inverter; The inverter manufacturer shall provide comprehensive warranty cover as specified; Maintenance schedules for PV inverters must be in accordance with the manufacturers recommendations.	1	Item			
	(63) LIGHTING					
	System					
	General Lighting installation, testing and commissioning; complete; The Contractor shall include for the supply, installation, wiring, testing and commissioning of the general lighting installation as described in the Electrical Specification and as indicated on the tender drawings and equipment schedules; The installation shall consist of a mixture of surface and suspended lighting installations within the classrooms, surface and recessed luminaires within corridors and surface installations in back of houses; The lighting system shall be fed from local sub-distribution boards as indicated on the system drawings; All lighting circuits shall be protected by MCB's of a minimum size of 10A; all in strict accordance with the Electrical Specification Part 1, Section 17 - 19; Part 2; Part 3; Part 4, Section 4 and Drawings 2999-SMK-ZZ-00-DR-E-6301, 2999-SMK-ZZ-00-DR-E-6301, 2999-SMK-ZZ-XX-SC-E-6201					
F	General Lighting	1	Item			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	External Lighting installation, testing and commissioning; complete; The Contractor shall include for the supply, installation, wiring, testing and commissioning of the external lighting installation as described in the Electrical Specification and as indicated on the tender drawings and equipment schedule; The school external amenity lighting comprises lighting of the car park, school footpaths/walkways and building facade lighting; Exterior luminaires shall be installed at locations as indicated on the contract drawings; all in strict accordance with the Electrical Specification Part 1, Section 17 - 19; Part 2; Part 3; Part 4, Section 4 and Drawings 2999-SMK-ZZ-00-DR-E-6301, 2999-SMK-ZZ-00-DR-E-6301, 2999-SMK-ZZ-XX-SC-E-6201					
A	External Lighting	1	Item			
	Emergency lighting installation, testing and commissioning; complete;The emergency lighting installation shall comply with IS3217: 2013/A1:2017 and EN1838: 1999; The contractor shall provide and install a complete emergency lighting system as indicated on the contract drawings and as specified hereafter; The completed emergency lighting system shall comply in its entirety, and be certified upon completion, with the following National Standard, IS 3217:2013 "Code of Practice for Emergency Lighting" published by the N.S.A.I. normative documents and subsequent amendments (if any) where, when and if applicable; The contractor shall include for the provision of an A3 sized chart at each central test location; all in strict accordance with the Electrical Specification Part 1, Section 17 - 19; Part 2; Part 3; Part 4, Section 4 and Drawings 2999-SMK-ZZ-00-DR-E-6301, 2999-SMK-ZZ-00-DR-E-6301, 2999-SMK-ZZ-XX-SC-E-6201					
B	Emergency Lighting	1	Item			
	<u>Fittings</u>					
	Luminaries; supply and installation (including wiring); complete; Luminaries shall be complete with lamps and mounting kits/ fixing brackets; Final connections: plug-in ceiling rose unit with 1.5mm2 LSF heat resistant flex cable mounted on a besa box; Earthing: 1.5mm2 green/yellow CPC boned to luminaire metalwork to lighting circuit; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 17 - 19; Part 4, Section 4					
C	Luminaire Ref: B1; LED modular fitting; Dimensions: 597mm x 597mm x 57mm; Lamps: 30W LED; Total connected Load: 30.0W, Control Gear; Electronic DALI digital dimming control gear 1%; Body; White enamelled sheet steel; Diffuser: Microprism louvre in UV stabil polystyrene; IP Rating: IP44 Minimum; Rated Median Useful Life: L100B50 100,000hr; Mounting: recessed	132	nr			
D	Luminaire Ref: C1; LED downlight modular fitting; Dimensions: 173mm diameter: Lamp: 16W LED; Total connected Load: 16.0W; IP rating: IP44 miniumum; Control Gear: Electronic DALI control gear; Impact Resistance: IK03; Body: Graphile embedded heatsink; Diffuser: UV-stabilised polycarbonate microprismatic optic; Rated Median Useful Life: 50000h L90 at 25°C; Gear Cover: Yes, to cover and protect all components; Mounting: recessed	115	nr			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Luminaire Ref: D; Circular LED luminaire; Dimensions: 400mm diameter; Lamps: 18.0W; Total Connected Load: 18.0W; IP Rating: IP44; Impact Resistance: IK08; Body: White enamelled aluminium; Diffuser: Opal polycarbonate diffuser; Control Gearfixed output control gear; Gear Cover: Yes, to cover and protect all components; Mounting: Surface	16	nr			
B	Luminaire Ref: F; LED modular fitting; Dimensons: 735mm x 180mm x 95mm; Lamps: 28W LED; Total Connected Load 28W; Control Gear: Electronic DALI digital dimming control gear to 1%; IP Rating IP66 minimum; Impact Resistance IK10; Body White painted steel; Diffuser: Clear prismatic polycarbonate diffuser; Rated Median Useful Life: 50000h L80 at 25°C; Gear Cover: Yes, to cover and protect all components; Mounting: Surface	9	nr			
C	Luminaire Ref: F*; LED modular fitting; Emergency Version: c/w 3hr emergency battery pack; Dimensons: 735mm x 180mm x 95mm; Lamps: 28W LED; Total Connected Load 28W; Control Gear: Electronic DALI digital dimming control gear to 1%; IP Rating IP66 minimum; Impact Resistance IK10; Body White painted steel; Diffuser: Clear prismatic polycarbonate diffuser; Rated Median Useful Life: 50000h L80 at 25°C; Gear Cover: Yes, to cover and protect all components; Mounting: Surface	6	nr			
D	Luminaire Ref: H; LED modular fitting; Dimensions: 610mm x 610mm x 60mm; Lamps: 2.5W LED; Total connected Load: 35.0W, Control Gear; Electronic DALI digital dimming control gear; Body; White enamelled sheet steel; Diffuser: Microprism louvre in UV stabil polystyrene; IP Rating: IP20 Minimum; Impact Resistance: IK05; Rated Median Useful Life: 100,000hrs @ L100; Gear Cover: Yes, to cover and protect all components; Mounting: Surface	2	nr			
E	Luminaire Ref: I; LED modular fitting; Size: 597mm x 597mm x 57mm; Lamp: 30W LED; Total connected Load: 30.0W; IP rating: IP44 miniumum; Control Gear: Electronic DALI digital dimming control gear to 1%; Impact Resistance: IK03; Body: White enamelled sheet steel; Diffuser: Microprism louvre in UV stabil polystyrene; Rated Median Useful Life: L100B50 100,000hr; Gear Cover: Yes, to cover and protect all components; Mounting: recessed	43	nr			
F	Luminaire Ref: L; LED luminaire; Dimensions: 330mm x 225mm x 50mm; Lamps: LED; Total Connected Load: 45W; Control Gear: HF; IP Rating: IP65; Impact Resistance: IK08; Body: Die-cast aluminium; Diffuser: Clear Polycarbonate; Mounting: Surface	8	nr			
G	Luminaire Ref: X; Twin wall LED luminaire; Dimensions: 205mm x 75mm x 244mm; Lamps: 26W LED; Total Connected Load: 26W; Initial MacAdam: 3; IP Rating: IP66; Impact Resistance: IK10; LED Failure rate: 1000000/10; Body: Die-cast aluminium; Diffuser: Glass of PMMA; Mounting: Surface	4	nr			
H	Luminaire Ref: Y; Vandal resistant LED liminaire; Dimensions: 242mm x 218mm x 337mm; Lamps: 25W LED; Total Connected Load: 25W; IK Rating: IK10; IP Rating: IP65; Body: Die cast aluminium with an anthracite finish; Diffuser: Prismatic polycarbonate diffuser, aluminium reflector; Rated Median Useful Life: 60000hrs @25 degrees C; Mounting: Surface wall	9	nr			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Luminaire Ref: EM1; 3-hour non-maintained, self-contained LED emergency luminaire; Dimensions: 85mm diameter x 28mm; Lamps: 1x2.7W L.E.Ds; Total power: 5W; Emergency lumens level: 93 lm; Luminaire LOR: 90%; Luminaire ULOR: 1%; Luminaire DLOR: 89%; Luminaire Efficacy: 17 lm/W; Lamp Efficacy: 19 lm/W; Optics: Open area; Control Gear: DALI; Testing: 3-hour manual test; Inverter: Solid state, constant current highpower LED driver; Battery Charger: 276mA current fast charger; Charging Monitor: Green charge L.E.D; Recharge Period: 20-hours for full 3-hr recharge; IP Rating: IP40; Battery; Rechargeable high-temp Ni-Mh batteries; Complies with EN 60598.2.22: Yes; Body: Die-cast aluminium, powdercoated white; Base/body Colour: White; Diffuser/cover: As per body; Warranty: 5-years (Battery 3 year); Mounting: Recessed	52	nr			
B	Luminaire Ref: EM2; 3-hour non-maintained, self-contained LED emergency luminaire; Dimensions: 85mm diameter x 46mm; Lamps: 1x2.7W L.E.Ds; Total power: 5W; Emergency lumens level: 93 lm; Luminaire LOR: 84%; Luminaire ULOR: 0%; Luminaire DLOR: 84%; Luminaire Efficacy: 16 lm/W; Lamp Efficacy: 19 lm/W; Optics: Escape route; Control Gear: DALI; Testing: 3-hour manual test; Inverter: Solid state, constant current highpower LED driver; Battery Charger: 276mA current fast charger; Charging Monitor: Green charge L.E.D; Recharge Period: 20-hours for full 3-hr recharge; IP Rating: IP40; Battery; Rechargeable high-temp Ni-Mh batteries; Complies with EN 60598.2.22: Yes; Body: Die-cast aluminium, powdercoated white; Base/body Colour: White; Diffuser/cover: As per body; Warranty: 5-years (Battery 3 year); Mounting: Recessed	27	nr			
C	Luminaire Ref: EM3; 3-hour non-maintained, self-contained LED emergency luminaire; Dimensions: 85mm diameter x 46mm; Lamps: 1x2.7W L.E.Ds; Total power: 5W; Emergency lumens level: 93 lm; Luminaire LOR: 84%; Luminaire ULOR: 0%; Luminaire DLOR: 84%; Luminaire Efficacy: 16 lm/W; Lamp Efficacy: 19 lm/W; Optics: Point of emphasis; Control Gear: DALI; Testing: 3-hour manual test; Inverter: Solid state, constant current highpower LED driver; Battery Charger: 276mA current fast charger; Charging Monitor: Green charge L.E.D; Recharge Period: 20-hours for full 3-hr recharge; IP Rating: IP40; Battery; Rechargeable high-temp Ni-Mh batteries; Complies with EN 60598.2.22: Yes; Body: Die-cast aluminium, powdercoated white; Base/body Colour: White; Diffuser/cover: As per body; Warranty: 5-years (Battery 3 year); Mounting: Recessed	7	nr			
D	Luminaire Ref: EM4; 3-hour non-maintained, self-contained LED emergency luminaire; Dimensions: 85mm diameter x 46mm; Lamps: 1x2.7W L.E.Ds; Total power: 5W; Emergency lumens level: 93 lm; Luminaire LOR: 84%; Luminaire ULOR: 0%; Luminaire DLOR: 84%; Luminaire Efficacy: 16 lm/W; Lamp Efficacy: 19 lm/W; Optics: Point of emphasis; Control Gear: DALI; Testing: 3-hour manual test; Inverter: Solid state, constant current highpower LED driver; Battery Charger: 276mA current fast charger; Charging Monitor: Green charge L.E.D; Recharge Period: 20-hours for full 3-hr recharge; IP Rating: IP40; Battery; Rechargeable high-temp Ni-Mh batteries; Complies with EN 60598.2.22: Yes; Body: Die-cast aluminium, powdercoated white; Base/body Colour: White; Diffuser/cover: As per body; Warranty: 5-years (Battery 3 year); Mounting: Recessed	9	nr			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Luminaire Ref: EA; Ultra slim, LED exit sign with 3 hour, non-maintained, manual test emergenc yluminaire; Lamps: LED; Total Luminous Flux: 60 lm; Total Connected Load: 2.2w; ULOR: 0%; IP Rating: IP30; Dimensions: 268 x 42 x 192 mm; Body: Aluminium, silver finish; Diffuser: Perspex; Mounting: ceiling/ wall mounting	27	nr			
B	Luminaire Ref: EX1; Safety LED luminaire; Dimensions: 336mm x 54mm x 59mm; Lamps: LED; Total Connected Load: 2.5W; IP Rating: IP65; Impact Resistance: IK03; Body: White Polycarbonate; Diffuser: Clear Polycarbonate; Mounting: Surface, external wall	11	nr			
	Lighting Control detectors; supply and installation (including wiring); complete; Microwave presence detector; Voltage: 230 VAC +/10%; 50/60Hz; Stand by Power: < 1W (Without Dali Load); Max Power: 2.4 W (with 15 ballasts); Connector Screw Terminal: MRT3P7.62-3VE or GMVSTBW2.5/3-ST- 7.62; Wire Range: 0.5 to 2.5 mm2 Mains Distribution System: TN-S, 16A max, with Neutral grounded; Power Consumption: Stand-by 1.2 W Max. 1.2 W; Parallel Interface: Up to 22 units in parallel Free Topology, Wiring Polarity sensitive; BMS Interface: Hardware DALI compatible Reduced DALI command set Up to 64 units in parallel (depending on control device used as master) Free Topology and polarity; Switch off Delay 1,5, 10,15,20,25,30,35* minutes * OmniProg only; Light Levels: 250 to 1000 Lux (30% reflection); Detector Range: The OccuSwitch DALI detection pattern is 4 by 5 meters for small movements(desk work) and 6 by 8 meters for larger movements like walking; Delay time occupancy control: With the rotary it is possible to select a delay time of either 70s, 5 till 30 min (in steps of 5 minutes); Operating Temperature: 5 to 50 °C;Operating Relative humidity: 20% to 90%; no condensation; Programming: Remote control handset; Mounting: recessed; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 18; Part 4, Section 4					
C	Detector Ref: S1; Programmable microwave detection c/w 360 degree absence detection, 7m diameter coverage at 2.8m	19	nr			
D	Detector Ref: S2; Infrared PIR detection c/w 360 degree movement detection, 6m diameter coverage at 2.6m	21	nr			
E	Detector Ref: S3; Infrared PIR detection c/w 360 degree movement detection, 6m diameter coverage at 2.6m	2	nr			
F	Detector Ref: S4; Programmable microwave detection; Max 20 x 20m range for use in corridors and stairwells	10	nr			
	Lighting Control; supply and installation (including wiring); complete; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 16 - 18; Part 4, Section 4					
G	Photocell (Ref: PC)	1	nr			
H	Digital time switch	1	nr			
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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Accessories associated with terminal equipment					
	Light Switches; supply and installation (including wiring) complete; Light switch: 10/20amp, Body: Heavy gauge steel; Finish: Metal clad, Grey epoxy coated steel; c/w heavy guage steel back boxes; recessed mounting 1100mm to centre of outlet above finished floor level, minimum distance from internal corners 350mm; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 16 - 18; Part 4, Section 3					
A	Light Switch; 1 gang, 1way	3	nr			
B	Light Switch; 1 gang, 2way	2	nr			
C	Light Switch; 2 gang, 1way	1	nr			
	Light Switches; supply and installation (including wiring) complete; Light switch: 10/20amp, Body: Urea moulded plastic; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M range; c/w heavy guage steel back boxes; recessed mounting 1100mm to centre of outlet above finished floor level, minimum distance from internal corners 350mm; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 16 - 18; Part 4, Section 3					
D	Light Switch; 1 gang, 1way	16	nr			
E	Light Switch; 1 gang, 1way (Retractable)	11	nr			
F	Light Switch; 1 gang, 2way	15	nr			
G	Light Switch; 1 gang, time lag switch	5	nr			
H	Light Switch; 2 gang, 2way (Retractable)	8	nr			
J	Light Switch; HOA	2	nr			
	Final Circuits (including all points terminations)					
	Final Circuits; installation, testing and commissioning; Complete; Final circuits shall be fed from the main and sub-distribution boards; Circuits shall be wired with insulated LSF cables; standards to Engineers Specification; enclosed within class 4 screwed galvanised trunking /conduit. Cable sizes are as follows: 10amp lighting circuits: 2.5mm2/2.5mm2 CPC; all in strict accordance with the Electrical Engineers Specification Part 1, Section 17 - 19					
	Final Circuits - DB-GPL1.MT					
K	Non-essential lighting/Emergency Lighting Circuits; 10Amp MCB/RCBO	27	nr			
L	Essential lighting/Emergency Lighting Circuits; 10Amp MCB/RCBO	27	nr			
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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Final Circuits - DB-GPL1 2.MT					
A	Non-essential lighting/Emergency Lighting Circuits; 10Amp MCB/RCBO	36	nr			
B	Essential lighting/Emergency Lighting Circuits; 10Amp MCB/RCBO	36	nr			
	Final Circuits - DB-GPL1 2.MP					
C	Non-essential lighting/Emergency Lighting Circuits; 10Amp MCB/RCBO	12	nr			
D	Essential lighting/Emergency Lighting Circuits; 10Amp MCB/RCBO	12	nr			
	Final Circuits; installation, testing and commissioning; Complete; Final circuits shall be fed from the main/ sub-distribution boards; Circuits shall be wired with insulated XPLE/SWA cables; standards to Engineers Specification; enclosed within class 4 screwed galvanised trunking /conduit. Cable sizes are as follows: 3c x 10.0mm2 with a separate 10.0mm earth; all in strict accordance with the Electrical Engineers Specification Part 1, Section 10.3.1					
	Final Circuits - DB-SITE					
E	Site Lighting; Single Phase; 10Amp MCB	8	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification					
F	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
G	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
H	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
J	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
K	Co-ordination drawings	1	Item			

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	As built drawings; all in accordance with Engineers Specification					
A	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
B	Identification plates, labels and the like	1	Item			
	(64) COMMUNICATION - DATA & IT					
	System					
	Information and Communication Technology System installation, testing and commissioning; complete; A Category 6A (Class EA) structured cabling system for data, voice, CCTV, access control, and building network infrastructure; The installation shall be fully compliant with TIA/EIA-568-B.2-10, ISO/IEC 11801, and EN 50173 standards, forming a fully warranted end-to-end solution from a single manufacturer; Provision of structured cabling warranty (minimum 20 years) direct from manufacturer following independent audit; Contractor shall liaise with the telecoms provider and provide all attendances; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 2; Part 3; Part 4, Section 5 and Drawings 2999-SMK-Z1-00-DR-E-6201, 2999-SMK-Z2-00-DR-E-6202, 2999-SMK-ZZ-XX-DR-E-6400					
C	Data / IT Installations	1	Item			
	Equipment					
	Communications Cabinet; supply and installation (including wiring) complete; Performance Specification: Size: 42U, 800mm wide x 800mm deep; Front Door: Glazed with security locking system; Rear Door: Steel ventilated, wire mesh with security locking system; Side Panels: Lockable side panels: Top Cover: Ventilated; Cable Tray: Yes; Cable Management: 1U for every 48 RJ45 ports installed and vertically along each side top-to-bottom; 19" Panel Mounts Front and Rear: Yes; Cross Member Supports: Yes; Internal Shelves: 2 No. heavy-duty & 2 No. cantilever (front mounting) shelves; 1 x 4 way low-noise fan: Yes; Retractable Cabinet Feet: Yes, castors for transport only; Power Unit: 2 x 9-way 13-AMP power distribution unit - powered from dedicated 20A circuit; Safety Earthing Kit: Yes; c/w fibre optic patch panels; CAT 6a patch panels, voice patch panel; structured and backbone cabling, outlets, RJ45 patch frames, device leads, patch leads and 25% spare capacity; include for all and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 4, Section 5 and Drawings 2999-SMK-ZZ-XX-SC-E-6400					
D	Communications Cabinet; Ref: IDF; Location: Comms room 17	2	nr			

	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Test Jack Frame; supply and installation; complete test jack frame c/w 20-pair Krone strip; include for all accessories and fixings; all in accordance with the Electrical Engineers Specification Part 1, Section 20.14					
A	Test Jack Frame c/w 20-pair Krone stip	1	nr			
	Accessories associated with terminal equipment					
	Data Outlet; supply and installation (including wiring); complete; Outlets: RJ45 CAT 6A connectors; Body: Heavy gauge steel; Finish: Metalclad, grey epoxy coated steel; Mounting: recessed mounting; 450mm to centre of outlet above finished floor level, minimum distance from internal corners 350mm; all accessories shall be engraved to indicate the circuit reference number; c/w galvanised steel back boxes; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20					
B	Data Outlets - 1 point	2	nr			
C	Data Outlets - 2 points (NP)	4	nr			
	Data Outlet; supply and installation (including wiring); complete; Outlets: RJ45 CAT 6A connectors; Body: Urea moulded plastic; Finish: Graphite coloured, high-grade thermostet anti-bacterial material; 450mm to centre of outlet above finished floor level, minimum distance from internal corners 350mm; all accessories shall be engraved to indicate the circuit reference number; c/w galvanised steel back boxes; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20					
D	Data Outlets - 1 point	3	nr			
E	Data Outlets - 1 point (CCTV)	1	nr			
F	Data Outlets - 1 point (ENBNP)	1	nr			
G	Data Outlets - 1 point (PNP)	5	nr			
H	Data Outlets - 1 point (TV)	2	nr			
J	Data Outlets - 1 point (WAPNP)	13	nr			
	Data Outlet; supply and installation (including wiring); complete; Outlets: RJ45 CAT 6A connectors; Body: Urea moulded plastic; Finish: Graphite coloured, high-grade thermostet anti-bacterial material, Part M compliant, to achieve LRV >30; Mounting: surface mounting to dado trunking, include for all accessories shall be engraved to indicate the circuit reference number; include for all accessories and fixings; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20					
K	Data Outlets - 1 point	27	nr			
L	Data Outlets - 1 point (DPNP)	7	nr			
M	Data Outlets - 1 point (PNP)	1	nr			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Data Outlets - 1 point (SNP)	6	nr			
B	Data Outlets - 1 point (TEL)	1	nr			
C	Data Outlets - 1 point (TPNP)	4	nr			
D	Data Outlets - 1 point (WAPNP)	9	nr			
E	Data Outlets - 2 points	5	nr			
F	Data Outlets - 2 points (SNP)	4	nr			
	Mains Sub-mains Cables					
	Multicore Cable; installation, testing and commissioning; complete; Minimum of 50 pair CW1308 Multicore cable; distributed within galvanised trunking /conduit; terminations at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.14 & Drawing 2999-SMK-ZZ-XX-DR-E-6400					
G	Cabling from Krone Patch Frame to Existing MDF Comms cabinet	1	Item			
H	Cabling from Krone Patch Frame to IDF Comms cabinet	1	Item			
	Multicore Cable; installation, testing and commissioning; complete; Minimum of 30 pair CW1308 Multicore cable; distributed within galvanised trunking /conduit; terminations at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.14 & Drawing 2999-SMK-ZZ-XX-DR-E-6400					
J	Cabling from Existing MDF Comms cabinets to IDF Comms cabinet	1	Item			
K	Cabling from IDF Comms cabinets to IDF Comms cabinet	1	Item			
	Fibre Cable; installation, testing and commissioning; complete; OS2 single mode fibre cable; 12 core lazerspeed 9 -125 um; distributed within galvanised trunking /conduit; OS2 multimode fibre external grade cable; 12 core lazerspeed 9 -125 um; distributed within underground ducts; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.12; Part 4, Section 5 & Drawing 2999-SMK-ZZ-XX-DR-E-6400					
L	Cabling from Existing MDF Comms cabinets to IDF Comms cabinet	1	Item			
M	Cabling from IDF Comms cabinets to IDF Comms cabinet	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Fibre Cable; installation, testing and commissioning; complete; OM4 multimode fibre cable; 12 core lazerspeed 50 -125 um; distributed within galvanised trunking /conduit; OM4 multimode fibre external grade cable; 12 core lazerspeed 50 -125 um; distributed within underground ducts; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20.12 & Drawing 2838-SMK-ZZ-XX-DR-E-6400					
A	Cabling from Existing MDF Comms cabinets to IDF Comms cabinet	1	Item			
B	Cabling from IDF Comms cabinets to IDF Comms cabinet	1	Item			
	CAT 6a UTP Cable; installation, testing and commissioning; complete; distributed within galvanised trunking /conduit; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 4, Section 5 & Drawing					
C	Cabling from Comms cabinets (Ref: IDF) to BMS panel heating plant room	1	Item			
	<u>Final Circuits (including all points terminations as per M&E Drawings)</u>					
	CAT 6a UTP Cable; installation, testing and commissioning; complete; distributed within galvanised trunking /conduit; terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 4, Section 5					
	Final Circuits - IDF Comms Cabinet					
D	Structured Cable to Data points	106	nr			
E	Structured Cable to CCTV points	15	nr			
	<u>General Earthing and Bonding</u>					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification					
F	General Earthing and Bonding; complete	1	Item			
	<u>General</u>					
	Testing and commissioning; all in accordance with Engineers Specification					
G	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
H	Operating and maintenance manuals	1	Item			
				To Collection €		

	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Working drawings; all in accordance with Engineers Specification					
A	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
B	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
C	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
D	Identification plates, labels and the like	1	Item			
	Maintenance and Warrenty; all in accordance with Engineers Specification					
E	Upon practical completion, the specialist contractor must provide a minimum 20-year 'system or application warranty' for the CAT 6A system; ensuring full compliance with ISO 11801 standards; 'Product-or-material-only ' warranties are not acceptable; Use of uncertified systems will require full replacement at the contractor; An independent audit by the manufacturer is required before project sign-off to validate system performance and issue the warranty; The contractor is responsible for coordinating this audit.	1	Item			
	(64) COMMUNICATION - DATA PROJECTORS					
	<u>System</u>					
	Data Projector installation, testing and commissioning; complete; The infrastructure for Short Throw Ceiling mounted and Short Throw Wall mounted Data Projectors shall be installed; To facilitate the provision of data projectors by others in the future the following services shall be provided in the locations indicated on the drawings; A network point, Additional power socket outlets, Projector Audio Faceplates (PAF) to facilitate final input connections from a computer and output connections to a data projector; All wiring associated with these shall be accommodated in wall mounted dado trunking as indicated on the drawings; all in accordance with the Electrical Specification Section 1; Section 2; Section 3 and Drawings 2999-SMK-ZZ-00-DR-E-6201, 2838-SMK-ZZ-01-DR-E-6202					
F	Data Projector Installations	1	Item			
	<u>Accessories associated with terminal equipment</u>					
	Projector face plate; include for all accessories and fixings; all in accordance with the Electrical Specification					
G	PAF 1 face plate	8	nr			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	PAF 2 face plate	8	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Specification					
B	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
C	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
D	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
E	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
F	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
G	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
H	Identification plates, labels and the like	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	(64) COMMUNICATIONS - PUBLIC ADDRESS					
	System					
	Public Address System installation, testing and commissioning; complete; Supply, installation, testing, and commissioning of a complete one-way Public Address (PA) system integrated with the existing system within the school to provide a single unified platform; The system shall allow independent addressing of each classroom and zone from desk-mounted paging stations, with multi-zone amplifiers linked for group, global, or individual paging; The system shall include 100V wall-mounted loudspeakers with integral volume controls (3W/6W) for internal areas, and 15W IP67-rated horn-type loudspeakers for external zones, located as per PA drawings; Special Educational Needs Unit (SENU) classrooms shall include local volume control accessible to teacherS; Equipment shall be from TOA, InterM, Bosch, or equyivalent manufacturers, installed by an Infocomm Gold Level certified installer; The system shall include a master switch/amplifier (TOA VM2000 or equal) with zone selector module, recording output, and digital message broadcast functionality; All speakers shall be wired individually to the head-end equipment; All components shall be housed in a 24U wall-mounted PA rack (600x600mm) complete with power distribution, ventilation, and accessories. Interconnecting cabling shall be in 2-core 2.5mm2 flexible cable within the main ELV trunking routes; System to be fully commissioned and tested by certified technology specialists (CTS) and provided with 12 months warranty and complete O&M documentation; all in strict accordance with the Electrical Engineers Specification Part 1, Section 20; Part 2; Part 3; Part 4; all in strict accordance with the Electrical Engineers Specification Part 1, Section 21; Part 2; Part 3; Part 4 and Drawing 2999-SMK-Z1-00-DR-E-6500, 2999-SMK-Z2-01-DR-E-6501					
A	Public Address System Installation	1	Item			
	Equipment					
	PA rack; supply and installation; complete; Performance specification: 600x600 open cabinet frame, glazed front door with secure locking system, steel ventilated rear door with secure locking system, steel ventilated side panels with secure locking system, 600x600 fully ventilated top cover, 19" mounting rails fitted front and rear of cabinet, cross member supports, cabinet feet x 4, 4-way, 600x600 low noise fan tray, 9-way Power distribution strip, earthing kit, baying kit (vertical and horizontal), lacing bars (as required), blanks (as required), velcro straps (as required), brush panels (as required), trim strips (as required), include for all accessories; all in strict accordance with the Electrical Specification Part 1, Section 21.5					
B	PA rack; Location: Admin office	1	nr			
	Master Paging Controller / Amplifier; supply and installation; complete; multi-zone capability; zone selector-switching module; audio output for recording; digital message broadcast board; integrated with digital timer; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 21					
C	Master Paging Controller / Amplifier	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Fittings					
	Public Address Fittings; supply and installation(including wiring); complete; including all necessary accessories; all in strict accordance with the Electrical Specification Part 1, Section 21					
A	Speaker; external horn speaker c/w wall mounting brakets	2	nr			
B	Speakers; 1-way speaker; internal c/w wall mounting brakets	30	nr			
C	Remote Microphone	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
D	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
E	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
F	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
G	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
H	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
J	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
K	Identification plates, labels and the like	1	Item			
				To Collection €		

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

(64) COMMUNICATIONS - DISABLE WC ASSISTANCE ALARM

System

Disabled Toilet Alarm Installation, testing and commissioning; complete; The contractor shall allow for the installation of a disabled person call alarm system in all disabled persons WCs as indicated on the drawings. The system shall comprise, over door indicators, central remote indicator unit/panel located in the admin office, reset buttons local power supply unit(s) and low level pull cords; All units shall be surface mounted with the exception of the panel in the admin office that shall be a single panel that can easily identify as to which bathroom the alarm has been raised; all in strict accordance with the Electrical Engineers Specification Part 1, Section 23; Part 2; Part 3 and Drawings 2999-SMK-ZZ-00-DR-E-6701, 2999-SMK-ZZ-01-DR-E-6702, 2999-SMK-ZZ-XX-SC-E-6700

A	Disable Toilet Alarm System Installation	1	Item		

Equipment

Disabled WC Assistance Alarm Remote Indicator Panel; supply and installation (including wiring); The main control panel shall contain voltage free relay contacts to enabletransmission of a signal to the fire alarm panel; This function shall be enabled, and the link made to the fire alarm panel verified; including all necessary accessories; all in accordance with the Electrical Engineers Specification Part 1, Section 23

B	WC Assistance Alarm Remote Indicator Control Panel c/w PSU unit (Ref: RI; Location: Admin Office)	2	nr		

Accessories associated with terminal equipment

Disabled WC Assistance Alarm Accessories; supply and installation (including wiring); including all necessary accessories; all in accordance with the Electrical Engineers Specification Part 1, Section 23

C	Reset Unit	5	nr		
D	Over Door Indicator Unit	3	nr		
E	Pull Cord	5	nr		
F	Power supply unit	3	nr		

General Earthing and Bonding

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification

G	General Earthing and Bonding; complete	1	Item		

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
A	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
C	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
D	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
E	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
F	Identification plates, labels and the like	1	Item			
	(65) SECURITY & PROTECTION - INTRUDER ALARM					
	System					
	Intruder Alarm System installation, testing and commissioning; complete; Provide a complete PSA-licensed Grade 3 intruder alarm system installation in accordance with EN50131-1:2004 and PD6662:2004; Works include supply, installation, wiring, equipment, testing, commissioning, external monitoring setup, and 12-month maintenance; all in strict accordance with the Electrical Engineers Specifications Part 1, Section 29; Part 4, Section 8; and Drawing 2999-SMK-Z1-00-DR-E-6501, 2999-SMK-Z2-01-DR-E-6502, 2999-SMK-ZZ-XX-SC-E-6501					
G	Intruder Alarm System	1	Item			
	Equipment					
	Intruder Alarm equipment; supply and installation (including wiring); c/w standby rechargeable battery backup; including all necessary accessories; all in strict accordance with the Electrical Engineers Specification Part 4, Section 6					
H	Intruder Alarm Control Panel; Ref: IAP; Location: Comms	1	nr			
J	Intruder Alarm Control Panel; Ref: IAP; Location: First floor store	1	nr			

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Fittings					
	Intruder Alarm Fittings; supply and installation (including wiring); include for all and accessories; all in strict accordance with the Electrical Specification Part 4, Section 6					
A	Detector; PIR Dual Tech Anti Mask Detector	30	nr			
B	Detector; Long Range PIR Detector	6	nr			
C	Panic Button	1	nr			
D	Keypad	1	nr			
E	ACE fobs	10	nr			
F	Internal Sounder	1	nr			
G	External Sounder/Strobe	1	nr			
H	IP Server	1	nr			
J	Digi dialler	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
K	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
L	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
M	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
N	Working drawings; complete	1	Item			

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
A	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
B	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
C	Identification plates, labels and the like; complete	1	Item			
D	Maintenance & Warranty					
E	The intruder alarm specialist shall allow for liaising with the monitoring company for the provision and initial cost for setting up external monitoring including the first 12 months coverage. This shall be included by the alarms specialist costs at tender stage. The contractor shall be responsible for providing all telephone cabling as necessary within the building between Eircoms incoming position and intruder alarm panel; all in accordance with the Electrical Engineers Specification Documents	1	Item			
F	The specialist installer shall include in their tender for the cost of comprehensive maintenance of the systems for a period of 12 months from the date of commissioning. This cost shall include for 24-hour engineering maintenance cover. Preventative maintenance and corrective maintenance will be provided and will consist of 2 site visits to be carried out on a 6 monthly basis. Copies of all maintenance carried out shall be forward to the engineer for his records; all in accordance with the Electrical Engineers Specification Documents	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	(65) SECURITY & PROTECTION - DOOR ACCESS CONTROL & INTERCOM INSTALLATION					
	System					
	Door Access Control & Intercom System installation, testing and commissioning; complete; Supply, installation, testing and commissioning of a complete TCP/IP-based Integrated Door Access and Door Intercom System, fully compliant with PSA 67:2022, incorporating all requirements of EN1125, EN179, and EN13637; The system shall be based on Paxton Net2 access control software and controllers, integrated with Comelit TCP/IP video/audio door entry system components; The system shall control access to main entrances, internal wing doors, and external exit doors as detailed on the drawings; Each door access point shall comprise vandal-resistant IP-rated proximity readers, electronic locking devices, and associated control units, fully networked via the site LAN using TCP/IP or PoE/ PoE+ connection; The access system shall interface with the fire alarm, intruder alarm, and lighting control (Dynalite) systems as required; The main school entrance shall incorporate a vandal-resistant stainless-steel Comelit "Vandelcom" video intercom panel with integrated keypad and proximity reader, allowing communication with the Comelit Icona 4.3" touchscreen indoor monitor located in the administration office; The intercom system shall also provide remote "Away From Home" App functionality enabling authorized users to answer calls, monitor visitors, and grant access via smartphone; Staff entry shall be via Paxton Net2 keyfobs or PIN, integrated into the intercom panel; All access control functions shall be administered via a server PC installed under this contract, complete with Paxton Net2 software, SQL database, and desktop USB reader for token administration; The system shall support a minimum of 50,000 users, 250 access levels, and up to 5 simultaneous client connections, with no additional software licence costs for client PCs; System software shall provide real-time monitoring, event reporting, email alerts, custom reports, site graphics integration, and IP camera/NVR linkage; Each single-door controller shall include distributed intelligence with non-volatile memory for 2,000 buffered events, operate independently during network loss, and reconnect automatically when communications are restored; Controllers shall feature: Dual reader/keypad ports, Two relay outputs; Door contact, exit and tamper inputs, RS485 and 100 Mbps Ethernet connectivity, Built-in fault LEDs and flash memory for remote firmware updates; Power shall be provided via PoE/PoE+ or local 12 V DC PSU with 7 Ah backup battery housed in tamper-proof enclosures; Emergency escape and delayed egress doors shall include compliant EN1125 panic bars, EN179 mechanical handles, or EN13637 electronic delay mechanisms as applicable; All containment, cabling, interfaces, commissioning, programming, and certification shall be included in accordance with NSAI I.S. 10101:2020 and the Engineers specification; The complete system shall be installed and commissioned by a PSA-licensed, manufacturer-approved specialist, and provided with a minimum 5-year equipment warranty and full O&M documentation; all in strict accordance with the Electrical Engineers Specification Part 1, Section 27, Part 2; Part 3; Part 4 and Drawing 2999-SMK--Z1-00-DR-E-6501, 2999-SMK-Z2-01-DR-E-6502, 2999-SMK-ZZ-XX-SC-E-6501					
A	Access Control & Intercom System	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Equipment					
	Access door control unit; supply and installation (including wiring); single door control unit c/w 2A PSU and battery back-up; including all necessary accessories; all in strict accordance with the Electrical Specifications Part 1, Section 27					
A	Door control unit; Ref: DECP	4	nr			
	Fittings					
	Access Control & Intercom Fittings; supply and installation (including wiring); including all necessary accessories; all in strict accordance with the Electrical Specifications; including all necessary accessories; all in strict accordance with the Electrical Specifications Part 1, Section 27					
B	Door Entry Push to Talk Video Intercom Unit; Ref: DE	1	nr			
C	Door Entry Internal Handset; Ref: HS	1	nr			
D	Disabled Push Pad; Ref: PP	2	nr			
E	Buzzer for Door Entry	1	nr			
F	Keyswitch	5	nr			
G	Mortice lock; 352; 12-24v DC c/w 25mm strike; Ref: EML	8	nr			
H	EDS 1386 EPED display terminal c/w interface	4	nr			
J	EDS interface for locking device	4	nr			
K	Fob/ Proxinity Reader; Ref: CR	8	nr			
L	Breakglass; Ref: BG	4	nr			
M	Egress Button; Ref: EB	4	nr			
N	Desktop token/fob reader	1	nr			
P	Token/Fobs	50	nr			
Q	Access control PC and Server c/w software	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification					
R	General Earthing and Bonding; complete	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
A	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
C	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
D	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
E	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
F	Identification plates, labels and the like	1	Item			
	(65) SECURITY & PROTECTION - DOOR BELL					
	System					
	Door Access Control & Intercom System installation, testing and commissioning; complete; Provide and install a complete door bell system at the buildings main entrance for use outside reception hours. System to include a bell push at the front entrance, two internal chimes located along the ground floor corridor (exact positions to be confirmed on site), and all associated power supplies and transformers installed in the main switch room. The electrical specialist shall supply all equipment, cabling, and terminations, and wire the chimes using dedicated bell-circuit cabling from the transformer; all in strict accordance with the Electrical Engineers Specification Part 1, Section 27, Part 2; Part 3; Part 4 and Drawing 2999-SMK--Z1-00-DR-E-6501, 2999-SMK--Z2-01-DR-E-6502, 2999-SMK-ZZ-00-DR-E-6201					
G	Door bell	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Equipment					
	Door bell transformer; supply and installation (including wiring); suitable for DIN rail mounting; including all necessary accessories; all in strict accordance with the Electrical Specifications Part 1, Section 30					
A	Bell transformer	2	nr			
	Fittings					
	Door bell Fittings; supply and installation (including wiring); including all necessary accessories; all in strict accordance with the Electrical Specifications; including all necessary accessories; all in strict accordance with the Electrical Specifications Part 1, Section 30					
B	Door bell push button	1	nr			
C	Door bell chime	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification					
D	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
E	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
F	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
G	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
H	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
J	As built drawings	1	Item			
				To Collection €		

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

Identification plates, labels and the like; all in accordance with Engineers Specification

A	Identification plates, labels and the like	1	Item		

(65) SECURITY & PROTECTION - CCTV

System

Closed Circuit Television System installation, testing and commissioning; complete; Supply, installation, testing and commissioning of a complete IP Analytical CCTV System installed by a PSA-licensed security specialist, in full compliance with EN50132 Parts 1-7 and PSA33:2014; System to comprise high-definition network-based megapixel IP cameras, Network Video Recorder (NVR), PoE network switches, monitors, and remote monitoring software providing full site coverage and 35-day recording capacity; The system shall form part of a single managed IP security platform, fully integrating with the site Public Address (PA) system, and capable of future expansion for ANPR and facial recognition functionality; All cameras to be connected via CAT6a structured cabling (external grade for outdoor locations), contained in wire basket, trunking, or galvanised conduit throughout. Wireless connectivity between the school and external car park cameras shall be achieved via Ubiquiti point-to-point nano station link; The installation shall include internal and external fixed and PTZ IP cameras located as shown on drawings, wall or pole mounted, with full local and remote viewing and playback capability from the security room and principal's office; System shall include PoE switches, CCTV patch panels, NVR servers, UPS power backup, and flat-panel monitors. Recording rate: 25 fps for fixed cameras, 20 fps for PTZ cameras, retained for minimum 35 days; System shall include 1-year monitoring and maintenance, with remote access via PC, iPad, and smartphone App.All final camera positions and mounting heights to be agreed on site with the Engineer prior to installation; all in strict accordance with the Electrical Engineers Specifications Part 1, Section 29; Part 4, Section 8; and Drawing 2999-SMK--Z1-00-DR-E-6501, 2999-SMK--Z2-01-DR-E-6502

B	CCTV System	1	Item		

Equipment

CCTV Control Unit; supply and installation (including wiring); c/w Network Video Management Software (NVMS), Video Management Server (VSM), Network Video Recording Hardware (NVR), External storage/ expansion, Network ready IP controller and PC; including all necessary accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 28

C	CCTV Central Control Equipment; Location: Comms Room	1	nr		

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

CCTV Monitoring Workstation; supply and installation (including wiring); CCTV client workstation for live view, playback, and administration of IP analytical CCTV system, c/w keyboard/mouse, DVD-ROM, monitor, PTZ joystsick, Intel Xeon/i5 = 2.0 GHz, 8 GB RAM, 500 GB SSD, 1 GbE LAN, DirectX 10+ GPU, Windows 10 Pro 64-bit, fully loaded with NVMS client software; complete with all accessories and commissioning; all in strict accordance with the Electrical Engineers Specification Part 1, Section 28

A	CCTV Monitoring Workstation; Location: Comms Room	1	nr			

NVR cabinet; supply and installation; complete; Size: 800mm wide x 1000mm deep wall cabinets; Glazed front door with security locking system; Steel ventilated, wire mesh rear door with security locking system; Lockable side panels; Ventilated top cover; Vertical cable management; Vertical cable tray; 19" panel mounts fitted front and rear; Cross member supports; 1 x 4-way low-noise fan tray; 2 x 12-way 13-AMP power distribution unit; including all necessary accessories; including all necessary accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 28.9

B	NVR cabinet; Location: Comms Room	1	nr			

Uninterruptible Power System; supply and installation; complete; 800VA / 480-watts capacity; 220/230/240VAC voltage; 81-145VAC / 162-290VAC voltage range; 60/50Hz (auto sensing) frequency range; +/- 10% AC voltage regulation (battery mode); Transfer time: 2-6ms, 10ms max.; Waveform (battery mode): simulated sine wave; With short-circuit and overload protection; 12V / 9AH x 1 battery; 23-minutes autonomy (based on 1 No. PC load at 99W); Recharge time: 4-hours recovery to 90% capacity; With green, yellow and red flashing indicators for AC mode, battery mode and fault respectively; With overload, discharge and overcharge protection; Alarms for battery-mode, low-battery, overload, battery replacement and fault; Dimensions 330(d) x 100(w) x 140(h)mm; < 40dB noise level; Management: USB port supports windows 2008, Linux and MAC; including all necessary accessories; including all necessary accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 28.10

C	Uninterruptible Power System; Location: Comms Room	1	nr			

Fittings

CCTV Fittings; supply and installation supply and installation (including wiring); including all necessary accessories; including all necessary accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 28

D	19" CCTV Wall Mounted Monitor	1	nr			
E	External Vandal resistant CCTV	6	nr			
F	Internal CCTV Dome Camera	6	nr			
G	Provisions ONLY for installation of future CCTV cameras	2	nr			
H	Point to point wireless kit	1	nr			

To Collection €

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

Accessories Associated with Terminal Equipment

External CCTV Camera; supply and installation; complete; Each sign shall carry a symbol of a CCTV camera and contain the following wording 'This system is controlled and operated by Drogheda Insitute of Further Education Multi-Tertiary Building'; include for all and accessories; all in strict accordance with the Electrical Engineers Specification Section 28.14

A	External CCTV camera signage	5	nr		
B	Internal CCTV camera signage	5	nr		

General Earthing and Bonding

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification

C	General Earthing and Bonding; complete	1	Item		

General

Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents

D	Testing and commissioning; complete	1	Item		

Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents

E	Operating and maintenance manuals; complete	1	Item		

Working drawings; all in accordance with the Electrical Engineers Specification Documents

F	Working drawings; complete	1	Item		

Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents

G	Co-ordination drawings;complete	1	Item		

As built drawings; all in accordance with the Electrical Engineers Specification Documents

H	As built drawings; complete	1	Item		

Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents

J	Identification plates, labels and the like; complete	1	Item		

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Maintenance & Warranty					
A	The contractor shall include for monitoring the installation and pay all costs for the first 12 months of operation, which shall include 24 hour (4 hour call out period maximum) response to system faults and free parts and labour warranty for the duration of this maintenance contract; all in accordance with the Electrical Engineers Specification Documents	1	Item			
B	Regular servicing and maintaining of the installation shall be carried out during the maintenance period. During this period the contractor in conjunction with the specialist installer shall submit to the engineer copies of all maintenance records and issue full report including details of tests carried out and any faults found with the system and corrective action taken; all in accordance with the Electrical Engineers Specification Documents	1	Item			
C	The main contractor shall provide a single written document outlining the warranty of the manufacturer(s) product and the contractors installation, on a single document; The document shall warrant complete installation of all services and equipment to be free from defects in materials and workmanship for a period of no less than two (2) years, starting with the date of final system acceptance which shall be the date of the engineers practical completion certificate and not necessarily the date of installation; all in accordance with the Electrical Engineers Specification Documents	1	Item			
D	The main contractor and their security specialist shall provide any software maintenance patches and version updates or upgrades at no-additional cost to client for a period of at least three (3) years; all in accordance with the Electrical Engineers Specification Documents	1	Item			
E	The main contractor security specialist provides a cost budget for up to three (3) years for the maintenance and upgrades to the system. The budget must clearly define all contractor and manufacturer costs expected; all in accordance with the Electrical Engineers Specification Documents	1	Item			
F	Spare Parts: Deliver to the client in its original packaging, two spare fixed internal dome camera, two spare fixed bullet cameras; Spares shall be housed in an environment and condition recommended by the manufacturer and shall be clearly labeled with "SPARE: DO NOT REMOVE" manufacturer part number, and date of delivery to the client. These shall be located in the security room and handed over in the presence of the consulting engineer; All packaging for spares must be kept in good condition and used as appropriate for any Returns to Manufacturer (RMA); all in accordance with the Electrical Engineers Specification Documents	1	Item			

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

(65) SECURITY & PROTECTION - FIRE ALARM

System

Fire Alarm installation; testing and commissioning; complete; The Contractor shall supply, install, test and commission an analogue, fully addressable, automatic Fire Detection & Alarm System; with a minimum of L2/L3 in full compliance with I.S. 3218:2024, EN54 Parts 2 & 4, BS 5839 Parts 1, 2 & 4, and BS 5445 / BS 8434; The system and all equipment shall be open protocol;"Managed" with closed protocol system shall not be acceptable, The sensors, sounders and manual call points shall be in the same loop circuit. The system shall be capable of controlling 100 devices per loop, c/w 6 No. loop cards fitted and tested; All devices, sounders and break glass units shall be wired in 2 core & earth 1.5mm2 (unless stated otherwise) fire rated cable to PH120 classification; Ancillary outbuildings such as art room, PE hall etc. are to be served from the fire alarm system with cabling traveling from the extension across the external areas. To serve these buildings, contractor to allow for non-fire resistant armoured cable to BS5467/BS6724, in the underground duct between buildings. As this cable is not fire resistant it must be run directly into a fire resistant enclosure and joint at the entry to the building; The fire alarm system shall interface with the following: MCC, Gas Detection panels, Public address, Lifts, Disable WC alarm, Hold-Open Devices, Automatic assisted doors, Accessed controlled doors, Security Control Panels, Automatic opening vents, Fire Curtains, Ventilation Damper Controls, roller shutters; The Fire Alarm System shall be linked to the monitoring station via the digi-dialer on the intruder alarm panel allow 2C 1.5mm2 enhanced grade PH120 cable between the fire alarm panel and intruder alarm panel; Wiring connections of telephone line at EIRCOM DP point, setting-up and activating the link to the monitoring station shall be provided; The fire alarm system shall be linked back to the existing fire alarm panel (located in the existing building) allow 3C+e 1.5 FP400 external grade fire resistant cable, full functionality user interface to be provided at the main fire alarm panel;

The contractor shall include for monitoring the installation and pay all costs for the first 12 months of operation, which shall include 24 hour (4 hour call out period maximum) response to system faults and free parts and labour warranty for the duration of this maintenance contract; all in strict accordance with the Electrical Engineers Specification Part 1, Section 25; Part 2; Part 3; Part 4, Section 8 and Drawing 2999-SMK-ZZ-00-DR-E-6701, 2999-SMK-ZZ-01-DR-E-6702

A	Fire Alarm System	1	Item			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Equipment					
	Fire Alarm Panel; supply and installation (including wiring); complete; Dual Flash based Processors with Real Time Clock, Trace diagnostics, Pulse communications & programmable languages; Display Backlit 240 x 64 Graphical LCD; Devices per loop Minimum 120 No. ; Loop Current 500mA; Programmable Switch Inputs 8 Volt Free Digital Inputs ; Battery Capacity 24V 18Ah Internal, 24V 48Ah external; surface fixed to fair faced block-work; include for all and accessories; all in strict accordance with the Electrical Engineers Specification Part 4, Section 8					
A	Fire Alarm Panel; 4 loop panel; complete (Location: Social Space; Ref: RFACP)	1	nr			
B	Fire Alarm Panel; 4 loop panel; complete (Location: Entrance Lobby; Ref: MFACP)	1	nr			
	Fittings					
	Fire Alarm Fittings; supply and installation (including wiring); including all necessary accessories;all in strict accordance with the Electrical Engineers Specification Part 4, Section 8					
C	Addressable Smoke Detector (Optical)	50	nr			
D	Addressable Smoke Detector within Ceiling void c/w remote indicator	11	nr			
E	Addressable Smoke Detector & Sounder	15	nr			
F	Addressable Smoke Detector, Sounder & Stobe	13	nr			
G	Addressable Heat Detector (Optical)	2	nr			
H	Addressable Heat Detector & Sounder	6	nr			
J	Addressable Heat Detector & Sounder & Strobe	4	nr			
	Accessories associated with Terminal Equipment					
	Fire Alarm accessories; supply and installation (including wiring); including all necessary accessories; all in strict accordance with the Electrical Engineers Specification Part 4, Section 8					
K	Fire Alarm Strobe	3	nr			
L	Electronic Door Holder	14	nr			
M	Interface Unit (Ref; I/F)	19	nr			
N	Manual call point	18	nr			
P	Fireman Switch	1	nr			
Q	Fire Alarm Zone/loop Chart; Size: A3	1	nr			
				To Collection €		

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

Automatic Opening Vent; cable provisions and final connections ONLY; complete; Electrical contractor to include for power & control wiring only including fire alarm interface; all in strict accordance with the Electrical Engineers Specification

A	AOV control panel	1	nr		
B	Automatic opening vent; Roof light (Ref: AOV)	1	nr		
C	AOV Manual Override\Yellow Break glass (Ref: BG)	1	nr		

General Earthing and Bonding

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification

D	General Earthing and Bonding; complete	1	Item		

General

Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents

E	Testing and commissioning; complete	1	Item		

Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents

F	Operating and maintenance manuals; complete	1	Item		

Working drawings; all in accordance with the Electrical Engineers Specification Documents

G	Working drawings; complete	1	Item		

Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents

H	Co-ordination drawings;complete	1	Item		

As built drawings; all in accordance with the Electrical Engineers Specification Documents

J	As built drawings; complete	1	Item		

Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents

K	Identification plates, labels and the like; complete	1	Item		

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Maintenance & Warranty; all in accordance with the Electrical Engineers Specification Documents					
A	The contractor shall include for monitoring the installation and pay all costs for the first 12 months of operation, which shall include 24 hour (4 hour call out period maximum) response to system faults and free parts and labour warranty for the duration of this maintenance contract. Additionally, regular servicing and maintaining of the installation shall be carried out atquarterly intervals during the maintenance period. During this period the contractor in conjunction with the specialist installer shall submit to the Engineer a full report in duplicate including details of tests carried out and any faults found with the system and corrective action taken; all in accordance with Engineers Specification Part 1, Section 25.2	1	Item			
	(65) SECURITY & PROTECTION - DISABLE REFUSE					
	System					
	Disable Refuse installation, testing and commissioning; complete; The contractor shall supply and install an emergency voice communication (EVC) system designed especially for use with the wheelchair refuge areas. The system shall enable Fire Officers/Building Management to keep in contact throughout an emergency with these areas; The system shall meet BS9999:2008, BS5839 part 9 (2011) and BS8300:2009. All equipment shall be surface mounted; Wiring of the system shall be 2C & earth 1.5mm2 Firetuf 'FT120' enhanced grade PH120 fire cable; After the final commissioning the system shall be demonstrated to the school; The hand over documents must include the following: Certificate of demonstration to Contractor, Certificate of demonstration to Employer's Representative, Certificate of demonstration to Client, Operation manuals, Commission Certificate; all in strict accordance with the Electrical Engineers Specification Part 1, Section 26; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-00-DR-E-6702, 2999-SMK--Z1-00-DR-E-6501, 2999-SMK-ZZ-00-DR-E-6701, 2999-SMK-ZZ-01-DR-E-6702					
B	Disable Refuse System	1	Item			

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

Equipment

Master Control Panel; supply and installation (including wiring); complete; Features: backlit LCD screen, handset inside a hinged door, Fully-monitored Battery backed for 24 hours in quiescent mode then 3 hours in full power; Fully networkable; The system shall be fully monitored and faults reported back to the master control panel; RAL9005 30% Glass black colour; The system shall be able to communicate with disabled refuge remotes, fire telephone remotes, emergency/ stewards telephone, roaming telephones and disabled toilet alarms from the master control panel; Indicators for 'power', 'incoming call', 'refuge areas active', 'system healthy', 'processor restart', 'common fault', 'processor fault'; Mounting height 1400-1500mm AFFL; 230VAC input with 14V internal power supply; include for all mounting grounds and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 26.1.1

A	Control Panel; Ref: DRP; Location: Entrance lobby	1	nr			

Fittings

Disabled Refuge Remote Outstation; supply and installation (including wiring); complete; Hands-free, two-way communication Type B outstation; Features: Green colour, Induction loop output to feed external amplifier, Surface mountable, Calls shall be reset at the control panel, Hands free operation, Speech steered, Powered from the line, One remote unit shall be installed per refuge area, The outstations in the external play areas (3 No.) shall be minimum IP65+ rated (to be custom made), Mounting height: 900mm - 1200mm to panel centre; include for all mounting grounds and accessories; all in strict accordance with the Electrical Engineers Specification Part 1, Section 26.1.2

B	Outstation Speech Unit	2	nr			

General Earthing and Bonding

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification

C	General Earthing and Bonding; complete	1	Item			

General

Testing and commissioning; all in accordance with Engineers Specification

D	Testing and commissioning	1	Item			

Operating and maintenance manuals; all in accordance with Engineers Specification

E	Operating and maintenance manuals	1	Item			

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Working drawings; all in accordance with Engineers Specification					
A	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
B	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
C	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
D	Identification plates, labels and the like	1	Item			
	(65) SECURITY & PROTECTION - LIGHTNING PROTECTION					
	System					
	Lightning Protection Installation; installation; testing and commissioning; complete; A Level IV lightning protection system shall be installed in accordance with IS EN 62305:2011; The system shall consist of a series of 25x3mm aluminium lightning conductor tapes bonded to the aluminium rooftop, which will act as the air termination network, and terminated at earth pits at various ground level locations. all in strict accordance with the Electrical Engineers Specification Part 1, Section 31 and Drawing 2999-SMK-LR-DR-E-6900					
E	Lightning Protection System	1	Item			
	Fittings					
	Stricke pads; installed on the apex of the pitched roof areas; c/w saddle supports; complete; as per Engineers Specifications Part 1, Section 31					
F	Strike pads	1	Item			
	High conductivity PVC coated, annealed copper; conductor tape fitted at roof level; PVC cover shall be provided to all horizontal conductors; fitted with non matalic clips suitable for copper tape, screw fixed; include for square tape clamps as required; complete; as per Engineers Specifications Part 1, Section 31					
G	25mm x 3mm Lightning Conductor tape	1	Item			
	Lightning Protection bond from the air termination network to items of plant, roof lights, guttering etc; complete; as per Engineers Specifications Part 1, Section 31					
H	Lightning Protection bond - roof lights	1	Item			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Lightning Protection bond - handrails	1	Item			
B	Lightning Protection bond - Flues	1	Item			
C	Lightning Protection bond - Roof covering to structural Steel	1	Item			
D	Lightning Protection bond - Steel Columns	1	Item			
E	Lightning Protection bond - PV Panels	1	Item			
F	Lightning Protection bond - Access Hatch	1	Item			
	Down Conductors and Earthing points; shall be bonded to the air termination network and drop externally down the outside of the building at 10m intervals around the outside perimeter. The down conductors shall be fixed to the external facade of the building at 1m centres using standard D/C clips. A bi-metallic clamp shall be fitted to each down conductor); complete; as per Engineers Specifications Part 1, Section 31					
G	Down Conductors and Earthing points	17	nr			
	Lightning protection strike counter; located adjacent to main surge protection equipment within main switchgear; counter to be supplied by lightning potection supplier with integration by switchgear supplier; complete; as per Engineers Specifications and Drawing 2999-SMK-LR-DR-E-6201					
H	Lightning protection strike counter	1	nr			
	<u>General Earthing and Bonding</u>					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strict accordance with the Electrical Engineers Specification					
J	General Earthing and Bonding; complete	1	Item			
	<u>General</u>					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
K	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
L	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
M	Working drawings; complete	1	Item			

To Collection €

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
A	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
B	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
C	Identification plates, labels and the like; complete	1	Item			
	(65) SECURITY & PROTECTION - EARTHING					
	System					
	Earthing and Bonding installation; testing and commissioning; The contractor shall undertake to effectively earth the whole of the electrical installation in accordance with the NSAI I.S. 10101:2020. Main equipotential earth bonding should be provided from each of the following items, as a minimum, to the main earthing bar: Incoming Water Main, Incoming Gas Main, Metal drainage pipes, Structural Steelwork, Main Heating Pipework, Main Ventilation Ductwork, Lightning Protection System, Comms Rooms, Supplementary earth bonding shall be carried out on extraneous metal parts at the following locations: Metallic Wireways and Containment, Suspended Ceiling Grids, Wash Hand Basins, Showers, Sinks, WC's, Cleaners Sinks, Catering equipment, Metal worktops, Plantroom Pipework (e.g. across pumps, valves, vessels, etc.); all in strict accordance with the Electrical Engineers Specification Part 1, Section 34; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-XX-SC-E-6201					
D	Earthing and Bonding	1	Item			
	Fittings					
	Earth terminal bar; supply and installation; c/w insulating shrouds to NSAI I.S. 10101:2020 and of suitable capacity for the number and size of cables to be connected; all in strict accordance with the Electrical Engineers Specification Part 1, Section 34.2					
E	Earth Terminal Bar	1	nr			

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Mains and Sub-mains cables					
	Earth conductor cable; supply and installation complete; Cable: 195mm2 LSF green/yellow cable; Design parameters as defined within I.S 10101: 2020 regulations; all in accordance with the Electrical Engineers Specification and Drawings E-6201					
A	From MSB to earth terminal bar	1	Item			
	Earth conductor cable; supply and installation complete; Cable: 240mm2 LSF green/yellow cable; all in accordance with the Electrical Engineers Specification and Drawings E-6201					
B	From MSB to earth pits	1	Item			
	Main equipotential earth bonding; Cable: 195mm2 LSF green/yellow cable; be provided from each of the following items, as a minimum, to the main earthing bar; all in accordance with the Electrical Engineers Specification and Drawings E-6201					
C	Incoming Water Main	1	Item			
D	Incoming Gas Main	1	Item			
E	Metal drainage pipes	1	Item			
F	Structural Steelwork	1	Item			
G	Main Heating Pipework	1	Item			
H	Main Ventilation Ductwork	1	Item			
J	Lightning Protection System	1	Item			
K	Eircom DP	1	Item			
	Main equipotential earth bonding; Cable: 16mm2 LSF green/yellow cable; be provided from each of the following items, as a minimum, to the main earthing bar; all in accordance with the Electrical Engineers Specification and Drawings					
L	Comms cabinet (Ref: IDF)	1	Item			
M	Comms cabinet (Ref: IDF)	1	Item			
	Supplementary earth bonding shall be carried out on extraneous metal parts at the following locations; Design parameters as defined within I.S 10101: 2020 regulations; all in accordance with the Electrical Engineers Specification					
N	Metallic Wireways and Containment	1	Item			
P	Suspended Ceiling Grids	1	Item			
Q	Wash Hand Basins	1	Item			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Showers	1	Item			
B	Sinks	1	Item			
C	WC's	1	Item			
D	Cleaners Sinks	1	Item			
E	Catering equipment	1	Item			
F	Metal worktops	1	Item			
G	Plant room Pipework	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
H	General Earthing and Bonding	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
J	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
K	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
L	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
M	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
N	As built drawings; complete	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
A	Identification plates, labels and the like; complete	1	Item			
	(65) SECURITY & PROTECTION - SURGE PROTECTION					
	System					
	Transient & Overvoltage Protection installation, testing and commissioning; The Contractor shall be responsible for the supply and installation of all incoming and outgoing cables (of all types) to be provided with Lightning/Surge Protection devices. The electrical contractor shall ensure allowance for surge protection at all panels within his scope and those provided by others; The devices shall be suitable for a TNC-S system of earthing. The devices shall be capable of suppressing lightning, voltage spikes and surges. The device shall be low measured limiting voltage performance on switching generated ring wave transients, incorporating metal oxide varistor suppressor design and low impedance surge paths. Type C MCB's shall be fitted in series with each device. Each device shall have an indicator to denote if the device has operated; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13.9, Part 2, Part 3 and Drawings 2999-SMK-ZZ-XX-SC-E-6201					
B	Transient & Overvoltage Protection	1	Item			
	Fittings					
	Surge Suppression Devices; installation (including wiring); complete; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13.9 and Drawings 2999-SMK-ZZ-XX-SC-E-6201					
C	SPD Ref: 2; to Switch board Ref: DB-SITE	1	Item			
D	SPD Ref: 3; to Switch board Ref: MSB	1	Item			
E	SPD Ref: 3; to Switch board Ref: DB.GPL1.MT	1	Item			
F	SPD Ref: 3; to Switch board Ref: DB.GPL2.MT	1	Item			
G	SPD Ref: 3; to Switch board Ref: DB.GPL.MP	1	Item			
H	SPD Ref: 3; to Switch board Ref: DB.DCC	1	Item			
J	SPD Ref: 3; to Switch board Ref: DB.CR	1	Item			
K	SPD Ref: 3; to BMS Control Panel	1	Item			
L	SPD Ref: 3; to Lift Control Panel	1	Item			
M	SPD Ref: 3; to External Heat Pumps	1	Item			

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	SPD Ref: 5; to Fire Alarm Panel	1	Item			
B	SPD Ref: 5; to Disable Refuse Panel	1	Item			
C	SPD Ref: 5; to Intruder Alarm Panel	1	Item			
D	SPD Ref: 5; to PV Panels Array 01	1	Item			
E	SPD Ref: 5; to PV Panels Array 02	1	Item			
F	SPD Ref: 5; to PV Panels Array 03	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
G	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
H	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
J	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
K	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
L	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
M	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
N	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	(68) BMS WIRING INSTALLATIONS					
	System					
	BMS Wiring Installation; testing and commissioning; complete; Electrical Contractor must provide and issue as installed drawings for all electrical cabling associated with mechanical services. All wiring for mechanical services must be carried out under this contract to include wiring for heating, ventilation etc. The wiring to all mechanical devices must be taken from dedicated MCC (motor control centre) panels supplied as a 'Free Issue' item by the Mechanical Contractor as part of the BMS installation, and must be installed and connected up by the electrical contractor. Generally, the MCC panels must be installed in boiler houses, plant rooms, etc. all in accordance with the Mechanical Specification, Electrical Specification Part 1, Part 2, Part 3, Part 4 and Drawing 2838-SMK-ZZ-L0-DR-M-5801, 2838-SMK-ZZ-L1-DR-M-5802, 2838-SMK-ZZ-LL-DR-M-5850					
A	Mechanical & BMS Wiring Installation	1	Item			
	Equipment					
	Mechanical Control Panel; Mechanical and BMS wiring installation, testing and commissioning; complete; The Contractor shall allow for all wiring associated with the installation of the MCC and BMS outstations; The Contractor shall allow for all switchgear as indicated on the electrical services connection schedules and reflected on the electrical services layouts; all in accordance with the Mechanical Engineers Specification and Drawing M-5850					
B	Mechanical Control Centre; Ref: BMS Panel, Location: Heating Plant Room	1	Item			
	Fittings					
	BMS final connections and wiring installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ELV / control wiring cables fed from the BMS panel (Location: LG floor heating plant room) to mechanically operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing M-5850					
C	Fire Alarm interface	1	nr			
D	Link to Existing School BEMS Panel; External grade CAT 6A cable	1	nr			
E	Link to Local Comms Cabinet; CAT 6A cable bacnet connection	1	nr			
F	Pump module controller linked to BMS ASHP-01	1	nr			
G	Pump module controller linked to BMS ASHP-02	1	nr			
H	Main distribution board, Surge protection alarm link	1	nr			
J	Boiler BLR-01, Enable/fault	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Boiler BLR-02, Enable/fault	1	nr			
B	Gas fired water heater WH-01, Enable/fault	1	nr			
C	Pressurisation unit PU-01, High/ low level fault	1	nr			
D	LPHW Pump PMP-01, Enable/fault	1	nr			
E	LPHW Pump PMP-02, Enable/fault	1	nr			
F	LPHW Pump PMP-03, Enable/fault	1	nr			
G	LPHW Pump PMP-04, Enable/fault	1	nr			
H	DHW Return Pump PMP-05, Enable/fault	1	nr			
J	Heat meter pulsed signal	7	nr			
K	Gas detection CP1, valve position/status	1	nr			
L	Heating manifold 1 wiring station, Enable/fault	1	nr			
M	Heating manifold 2 wiring station, Enable/fault	1	nr			
N	Heating manifold 3 wiring station, Enable/fault	1	nr			
P	Heating manifold 4 wiring station, Enable/fault	1	nr			
Q	Heating manifold 5 wiring station, Enable/fault	1	nr			
R	Heating manifold 6 wiring station, Enable/fault	1	nr			
S	Heating manifold 7 wiring station, Enable/fault	1	nr			
T	Heating manifold 8 wiring station, Enable/fault	1	nr			
U	Heating manifold 9 wiring station, Enable/fault	1	nr			
V	Heating manifold 10 wiring station, Enable/fault	1	nr			
W	Heating manifold 11 wiring station, Enable/fault	1	nr			
X	Heating manifold 12 wiring station, Enable/fault	1	nr			
Y	Heating manifold 13 wiring station, Enable/fault	1	nr			
Z	Cold water booster pump BS01, Enable/fault	1	nr			
AA	LPHW Buffer vessel electric immersion, Enable/fault	1	nr			
BB	ASHP-01, Enable/fault	1	nr			
CC	Boiler master controller, Enable/fault	1	nr			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Outdoor air temp sensor	1	nr			
B	Outdoor frost thermostat	1	nr			
C	ASHP-01 primary flow immersion temperature sensor	1	nr			
D	ASHP-01 primary return immersion temperature sensor	1	nr			
E	Boiler header flow temperature sensor	1	nr			
F	Boiler header return temperature sensor	1	nr			
G	Boiler header high limit stat	1	nr			
H	Pressurisation unit low level alarm	1	nr			
J	Gas detection (boiler house) input - automatic reset	1	nr			
K	Boiler master controller interface connection	1	nr			
L	LPHW heating circuit flow temp sensor, PMP-01	1	nr			
M	LPHW heating circuit return temp sensor, PMP-01	1	nr			
N	LPHW heating circuit flow temp sensor, PMP-02	1	nr			
P	LPHW heating circuit return temp sensor, PMP-02	1	nr			
Q	LPHW heating circuit flow temp sensor, PMP-03	1	nr			
R	LPHW heating circuit return temp sensor, PMP-03	1	nr			
S	LPHW heating circuit flow temp sensor, PMP-04	1	nr			
T	LPHW heating circuit return temp sensor, PMP-04	1	nr			
U	Buffer vessel inlet flow temperature sensor	1	nr			
V	Buffer vessel inlet return temperature sensor	1	nr			
W	Buffer vessel contents temperature sensor	4	nr			
X	Buffer vessel outlet flow temperature sensor	1	nr			
Y	Buffer vessel outlet return temperature sensor	1	nr			
Z	LPHW header temperature sensor - flow	1	nr			
AA	LPHW header temperature sensor - return	1	nr			
BB	Domestic monobloc heat pump supply	1	nr			
CC	Domestic monobloc heat pump supply - primary flow temperature sensor	1	nr			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Domestic monobloc heat pump supply - primary return temperature sensor	1	nr			
B	3-port diverting valve - monoblock heat pump	1	nr			
C	Cold feed temp sensor to DHW pre-heat cylinder	1	nr			
D	Hot water pre-heat, temperature sensor low level	1	nr			
E	Hot water pre-heat, temperature sensor mid level	1	nr			
F	Hot water pre-heat, temperature sensor high level	1	nr			
G	Hot water pre-heat flow, temperature sensor	1	nr			
H	Gas fired water heater flow, temperature sensor	1	nr			
J	3-port diverting valve - anti-legionella	1	nr			
K	Anti-legionella return pump	1	nr			
L	Anti-legionella cycle - temperature sensor	1	nr			
M	DHW flow temperature sensor	1	nr			
N	DHW return temperature sensor	1	nr			
P	DHW high limit sensor	1	nr			
Q	Cold water tank float switch, section 1	1	nr			
R	Cold water tank float switch, section 2	1	nr			
S	Cold water tank - high level alarm	1	nr			
T	Cold water tank - low level alarm	1	nr			
U	Mains water incoming meter, pulsed signal	1	nr			
V	Heating plantroom gas meter, pulsed signal	1	nr			
W	Intruder alarm input	1	nr			
X	Flue riser Co2 sensor alarm	1	nr			
Y	MVHR units, Enable/fault	14	nr			
Z	AC unit, Enable/fault	1	nr			
AA	Run on timer	4	nr			
BB	Cold Water tank, leak detection sensing cable	1	nr			
CC	2-port solnoid valve - mains water	1	nr			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Electrical switchboard meters - modbus	14	nr			
B	ASHP - Interface Modbus/BacNet	1	nr			
C	Temperature stats, power & control cable	40	nr			
D	Non-essential LV switch gear outputs - ground/first floor	18	nr			
E	Networl link to PV system monitoring /status, CAT 6A cable	1	nr			
	Final Circuits (including all points terminations)					
	Final Circuits; installation, testing and commissioning; Complete; Final circuits shall be fed from local sub-distribution board; Installation: Sub-circuit wiring shall be drawn in concealed galvanised steel conduit and/or galvanised steel trunking; all in accordance with the Electrical Engineers Specification and Drawing M-5850					
	Final Circuits - BMS Panel; Location: Heating Plant Room					
F	Power Services - Boiler BLR-01	1	nr			
G	Power Services - Boiler BLR-02	1	nr			
H	Power Services - Gas fired water heater WH-01	1	nr			
J	Power Services - Pressurisation Unit PU-01	1	nr			
K	Power Services - LPHW pump PMP-01	1	nr			
L	Power Services - LPHW pump PMP-02	1	nr			
M	Power Services - LPHW pump PMP-03	1	nr			
N	Power Services - LPHW pump PMP-04	1	nr			
P	Power Services - LPHW pump PMP-05	1	nr			
Q	Power Services - Heat meter	5	nr			
R	Power Services - Gas leak detection panel CP1	1	nr			
S	Power Services - Heating manifold wiring station 1 - 13	13	nr			
T	Power Services - Cold wate rbooster pump BS-01	1	nr			
U	Power Services - Buffer vessel electic immersion	1	nr			
V	Power Services - ASHP-01	1	nr			
W	Power Services - Boiler master controller	1	nr			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	General Earthing and Bonding; complete		Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
B	Testing and commissioning; complete		Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
C	Operating and maintenance manuals; complete		Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
D	Working drawings; complete		Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
E	Co-ordination drawings;complete		Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
F	As built drawings; complete		Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
G	Identification plates, labels and the like; complete		Item			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	(68) MECHANICAL WIRING INSTALLATIONS					
	Mechanical Wiring Installation; testing and commissioning; complete; Electrical Contractor must provide and issue as installed drawings for all electrical cabling associated with mechanical services. All wiring for mechanical services must be carried out under this contract to include wiring for heating, ventilation etc. The wiring to all mechanical devices must be taken from dedicated MCC (motor control centre) panel/ local switch boards; all in accordance with the Mechanical and Electerical Specification and Drawings					
A	Mechanical Wiring Installation	1	Item			
	Fittings					
	Ancillary frost protection heater mechanical wiring provisions and final connections (ONLY); installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ ELV control wiring cables to mechaincally operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing					
B	Ancillary frost protection heater	2	nr			
	Ventilation system mechanical wiring provisions and final connections (ONLY); installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ELV control wiring cables to mechaincally operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing					
C	Heat recovery units	14	nr			
D	Air Conditioning Heat pump Unit	1	nr			
E	Extract Fans	6	nr			
F	Extract Canopy	1	nr			
G	AC Room Controller; Ref: AC	1	nr			
H	MHRV Wall Controller; Ref: C	14	nr			
J	CO2 Monitoring Control Panel; Ref: Co2	11	nr			
K	Presence Detector; Ref: PIR	22	nr			
L	Co2 duct sensor	15	nr			
M	Room Temperature Stats; Ref: T	1	nr			
				To Collection €		

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

Compressed Air mechanical wiring provisions and final connections (ONLY); installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ELV control wiring cables to mechaincally operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing

A	Dental Air Compressor; Ref: CA-01; Location: Roof	1	nr			
B	Dental Chair	2	nr			

Vacuum delivery system mechanical wiring provisions and final connections (ONLY); installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ELV control wiring cables to mechaincally operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing

C	Dental Vacuum Pump; Ref: VA-01; Location: Roof	1	nr			
D	Dental Chair	2	nr			

<u>General Earthing and Bonding</u>

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers

E	Generally	1	Item			

<u>General</u>

Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents

F	Testing and commissioning; complete	1	Item			

Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents

G	Operating and maintenance manuals; complete	1	Item			

Working drawings; all in accordance with the Electrical Engineers Specification Documents

H	Working drawings; complete	1	Item			

Co- ordination drawings; all in accordance with the Electrical Engineers Specification Documents

J	Co- ordination drawings;complete	1	Item			

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
A	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
B	Identification plates, labels and the like; complete	1	Item			
	ELECTRICAL INSTALLATIONS					
	Sundries and Builders Work					
	General Attendances					
C	Provide all general attendances in accordance with Arm 4.	1	Item			
D	Provide use of the Main Contractors tempory roads and hardstandings.	1	Item			
E	Provide use of the Main Contractors scaffolding.	1	Item			
F	Provide use of the Main Contractors standing power operated hoisting plant.	1	Item			
G	Provide accommodation for the subcontractors staff for eating, site lavatories, site washing facilities and cloakroom facilities.	1	Item			
H	Each sub-contractor shall be permitted the free use, in common with other trades engaged on the site, of any available water supply, temporary plumbing and electrical services.	1	Item			
J	Provide temporary distribution systems for lighting, power, water and fuel for the execution of the Electrical services works, including testing and commissioning, and pay all ongoing operation charges.	1	Item			
K	Provide safe and dry storage accommodation for the sub-contractors materials, plant and tools.	1	Item			
L	Provide space for the provision by the sub-contractors of their own site offices.	1	Item			
M	Provide temporary telephone services to the Electrical Contractors temporary office and pay all charges associated with installation and operation.	1	Item			
N	Include for unloading, hoisting/cranage and placing into position all items of heavy plant supplied by the subcontractors.	1	Item			
P	Allow for maintaining all ducts, chases , trenches, trunking, etc., clean and free of all water, debris and rodents at all times.	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Allow for making good and fire sealing of all builders work opes with proprietary sealant to Architects details, where services penetrate fire zones.	1	Item			
B	Fire proofing (material) around ducts and pipework shall be the responsibility of the Main Contractor	1	Item			
C	Timber grounds shall be provided within stud partitions to facilitate fixing of wall mounted accessories	1	Item			
	Special Attendances					
D	Provide all special attendances in accordance with Arm 4 Work Section B Clause 3.1	1	Item			
E	Provide temporary access roads and hardstanding in connection with heavy items of plant and the like, forming part of the site establishment works	1	Item			
F	Provide scaffolding internal and external to the building to facilitate installation of high-level electrical services during the contract	1	Item			
G	Provide use of the Main Contractors standing power operated hoisting plant.	1	Item			
H	Provide adequate barriers/tape/signage of exclusion zoning in relation to use of access equipment and ACOPs for working at height	1	Item			
J	Provide construction signage (internal and external) in relation to M&E services e.g live systems etc.	1	Item			
K	Provide temporary lighting and power in accordance with IS10101 Wiring Regulations.	1	Item			
L	Provide protection to all M&E services installations installed during the works including protection against debris and water ingress	1	Item			
M	Provide fire stopping to all electrical services on the vertical and horizontal planes throughout the entire buildings	1	Item			
N	Ensure close coordination during the building phase to ensure electrical, ventilation and mechanical services are installed and integrated within the building fabric as designed.	1	Item			
P	Provide grounds and fixings for suspension of Electrical services; Electrical loading = 10kg/m Mechanical loading = 40kg/m	1	Item			
Q	Provide boxing out of containment and pipework as necessary, boxing to be accessible with screwed access.	1	Item			
R	Main contractor shall employ a full time M&E Co-ordinator for the duration of the contract works and their duties shall include but not limited to details set out within the specification A2.4 Part 1 of 4 particular specification document	1	Item			
				To Collection €		

					€	c
	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Contractor shall be aware that drawings are indicative only including the minimum ope sizes; It will be the contractors responsibility in conjunction with their in-house M&E services coordinator to produce construction stage builders works drawings for DT comment	1	Item			
B	Provide safe access and task lighting for electrical sub-contractor to all sections of school roofspace	1	Item			
C	Provide safe access for electrical sub-contractor to all sections of the site	1	Item			
D	The M&E installation within the SEN accommodation is to be a fully recessed installation. The contractor shall include for casting in of all electrical services and recessing of all radiators within the wall panels	1	Item			
E	Seal all incoming services to prevent ingress of vermin	1	Item			
F	Fire Stopping to all services penetrations throughout	1	Item			
G	Attendance to electrical sub-contractor	1	Item			
H	Provide accommodation for the subcontractors staff for eating, site lavatories, site washing facilities and cloakroom facilities.	1	Item			
J	Each sub-contractor shall be permitted the free use, in common with other trades engaged on the site, of any available water supply, temporary plumbing and electrical services.	1	Item			
K	Provide safe and dry storage accommodation for the sub-contractors materials, plant and tools.	1	Item			
L	Provide space for the provision by the sub-contractors of their own site offices.	1	Item			
M	Provide temporary telephone services to the Electrical Contractors temporary office and pay all charges associated with installation and operation.	1	Item			
N	Provide tempory power supplies (3 phase 400V and maximum loading 15kVA) for welding, handtools, and for commissioning, including infrastructure and all charges fot the contractors use of the facility.	1	Item			
P	Provide scaffolding additional to the main contractors standing scaffolding, or access towers if required.	1	Item			
Q	Protection/Maintenance, provide covers for placing on live equipment/fittings in areas under construction at the start of each work day and removing the covers at the end of each work day	1	Item			
R	Provide facilities for safe removal and disposal of all materials off site	1	Item			
S	Provide a week by week program detailing the Mechanical and Electrical service activities	1	Item			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
A	Provide for heating / drying out the building as and when necessary to comply with their program. This may be done (at the clients specific consent) with the installed conventional heating system (if available). Be responsible, however, for providing the fuel to do this. Be responsible for maintaining background heat until the building is handed over to the client, after the heating system has been commissioned	1	Item			
B	Provide and maintain the specific temperatures and humidity levels	1	Item			
C	Provide Builders Attendances to all utility services as follows; Gas Networks Ireland, Eir, Virgin Media, Local Authority, ESB Networks.	1	Item			
D	Fire stopping requirements of all services penetrations through fire compartment structures to be the responsibility of the building contractor. In addition, all pipework, ductwork, containment and service penetrations shall be fire-stopped where passing through every wall, floor and ceiling regardless if its a fire compartment or not by main contractor. Refer to M&E services drawings indicating main routes of M&E infrastructure. All instances of firestopping shall be labelled and certified using CE certified products including fire-pillows for use inside electrical trunkings.	1	Item			
	Unload, hoist, distrubute and place in position the following items of heavy plant and equipment					
E	Main switch board	1	Item			
F	Sub-distridution boards	1	Item			
G	MCC panel	1	Item			
H	Containment	1	Item			
J	Cabling	1	Item			
K	Lighting	1	Item			
L	PV Panels	1	Item			
	Sundries & Builders Work					
	General					
M	Marking positions of holes, mortices and chases	1	Item			
N	Testing & Commissioning	1	Item			
P	Preparing drawings of "as completed" installations	1	Item			
Q	Identification plates, labels and the like; Provide and fit colour identification markers to ceiling hatches to mark the location of isolating devices within ceiling voids	1	Item			
R	Keys, tools and spares	1	Item			

To Collection €

	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Equipment supports; provide mounting grounds for the installation of the following fittings; making good structure and finishes; in strict accordance with the Architects/ Services Engineers drawings, schedule and specifications					
	Equipment supports					
A	Luminaires; 25mm thick plywood grounds; size 600 x 600mm; complete	466	nr			
B	Lighting control presence detectors; ceiling mounts; 25mm thick plywood grounds; size 300 x 300mm; complete	52	nr			
C	Fire detectors; 25mm thick plywood grounds; size 300 x 300mm; complete	136	nr			
D	Door hold open devices; complete	14	nr			
E	Protection devices; 25mm thick plywood grounds; size 300 x 300mm; complete	42	nr			
	Forming or cutting holes/mortices/chases and the like; including sleeves/plates, intumescent collars; making good structure and finishes; include for a fully completed installation where nothing must remain to be done to the installation by others; in strict accordance with the Architects/ Services Engineers drawings, schedule and specifications					
F	cutting or forming holes is deemed to include all finishes and decorations both sides of the structure		note			
G	cutting or forming opes is deemed to include the making good and sealing of the ope		note			
	Cutting or forming holes in precast concrete external walls; include for building in sleeves; making good all finishes on completion					
H	not exceeding 100mm dia opes	1	Item			
	Cutting or forming holes in precast concrete internal walls various thicknesses; include for building in sleeves; making good all finishes on completion					
J	not exceeding 100mm dia opes	1	Item			
K	500mm x 200mm opes	30	nr			
L	800mm x 200mm opes	2	nr			
M	1200mm x 200mm opes	4	nr			
	For ducts/pipes through suspended concrete floor slab; include for building in sleeves; making good all finishes on completion					
N	not exceeding 100mm diameter opes	1	Item			

To Collection €

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Cutting or forming holes in ceiling finishes; include for building in sleeves; making good all finishes on completion					
A	not exceeding 25mm diameter opes	1	Item			
B	50mm dia opes	89	nr			
C	85mm dia opes	92	nr			
D	100mm opes	52	nr			
E	175mm opes	115	nr			
F	600mm x 600mm opes	175	nr			
	Chasing to precast walls for concealed installations; include for intumsent fire and acoustic internal socket box inserts; making good all structures and finishes; all in accordance with the Architects /Service Engineers drawings, schedule and specification					
G	Power points	50	nr			
H	Lighting points	30	nr			
J	Data points	20	nr			
K	Fittings, equipment & control gear	50	nr			
	Fire stopping system to multiple and single service penetrations; including intumescent boards, fire stop laminate; intumescent foams and mastic; intumescent pillows; intumescent putty; mineral wool rigid batts; intumescent collars and sealants to achieve 1 hour fire resistance; all in accordance with the Architects specification					
	Special works were services pass through structures; precast concrete external walls, making good all finishes on completion					
L	not exceeding 100mm dia opes	1	Item			
	Special works were services pass through structures; precast concrete internal walls, making good all finishes on completion					
M	not exceeding 100mm dia opes	1	Item			
N	500mm x 200mm opes	30	nr			
P	800mm x 200mm opes	2	nr			
Q	1200mm x 200mm opes	4	nr			
				To Collection €		

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	(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
	Special works were services pass through structures; suspended concrete floor slab, making good all finishes on completion					
A	not exceeding 100mm diameter opes	1	Item			
	Special works were services pass through structures; ceiling finishes, making good all finishes on completion					
B	not exceeding 25mm diameter opes	1	Item			
C	50mm dia opes	89	nr			
D	85mm dia opes	92	nr			
E	100mm opes	52	nr			
F	175mm opes	115	nr			
G	600mm x 600mm opes	175	nr			
	General Items					
	General builderwork attendances; for the installation of the following items; making good all finishes on completion					
H	Fire Alarm; door hold open device installation; complete	14	nr			
J	Access control; Electro-magnetic locks to door and frame installation; complete	8	nr			
	PAINTING AND DECORATING					
	Painting					
	Solvent-borne paint systems; 1. System performance: Ss_40_90_60/210 Design of coating system; 2. System manufacturer: Dulux Trade or equal approved; 3. Initial coats: Pr_35_31_66_81 Solvent-borne metal primers; 4. Finishing coats: Pr_35_31_22_80 Solvent-borne gloss finishes Interior & Exterior Metal Paint; 5. Execution: Ss_40_90_60/620 Preparation for coating systems generally; Ss_40_90_60/603; Handling and storage of coating materials; Ss_40_90_60/607 Wet paint signs; Ss_40_90_60/610; Control samples of coating systems; 6. System completion: Ss_40_90_60/800 Information to be provided on completion; Ss_40_90_60/895 Verification of performance; all as per Architects Specification Ss_40_90_60_80					
	Pipes, ducts and the like					
K	girth not exceeding 300mm	1,000	m			
				To Collection €		

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(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)					
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(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION (Cont)

COLLECTION

Page No. Building/360

(6-) ELECTRICAL INSTALLATIONS - NEW EXTENSION
Carried to Summary

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	(66) LIFT SERVICES INSTALLATION					
	Notes					
A	The tendering contractors are referred to ARM 4 supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		note			
B	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		note			
C	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings will be carried out by the Works Specialist under the terms of the main contract. The Electrical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		note			
	ALTERNATIVE RULES FOR THE MEASUREMENT OF ELECTRICAL SERVICES					
	(67) TRANSPORT					
	System					
	Transport installation, testing and commissioning; complete; The contractor shall all for the Installation of 1nr 630kgs eight person passenger gearless lift car and controls; complete with doors; control system; drives; alarm and communication system; to serve two stops with two entrances; all in accordance with the Electrical Engineers Passenger Lift Services Specification					
D	Transport Installation	1	Item			
				To Collection €		

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(66) LIFT SERVICES INSTALLATION (Cont) Equipment Passenger lift car, doors and controls; supply and installation (including wiring); complete; Type of lift: Traction MRL Passenger Lift; Rated Load: 630kg/ 8 persons; No. of Floors served: 2 Floors - 1 Stops (Ground and 1st floor); Position of openings: Refer to Architectural Drawings; Clear internal lift well dimensions (to be measured on site): 1810mm Shaft Width, 1810mm Shaft Depth, 1400mm Pit Depth, 3600mm Headroom, 7650mm Travel; Internal Car Finishes: Car Walls: Internal panelling with recessed joints on all 4 walls in eggshell PVC finish on a galvanised sheet steel base and 42mm tubular satin chrome handrail to be provided on 1 walls. Toe guard in stainless steel. 1/2 height non-tinted mirror to be provided on back wall. Colour of wall panelling to be agreed with architect & engineer prior to ordering; Car Operating Panel: Alphanumeric liquid crystal display showing car position & direction, containing lift data plate with load specifications and remote elevator monitoring information, finished surround in stainless steel with a brushed finish. Operating panel runs full height of car providing maximum illumination. Target buttons finished in solid stainless steel with backlit floor numbering, including Braille characters; Ceiling: Flat panelled eggshell textured white PVC finish on a galvanised sheet steel base, with LED recessed luminaires.In-car lighting to achieve 100-lux; Shaft lighting to achieve: Lighting: minimum 50-lux @ 1-metre above the car-roof within its vertical projection, minimum 50-lux above @ 1-metre above pit floor everywhere a person can stand/work and/or move between the working areas, minimum 20-lux outside the locations defined above, excluding shadows created by car or component; Car Flooring: Flooring shall be hard wearing marmoleum. Colour to be agreed with architect & engineer prior to ordering; Induction loop system: The lift car intercom system shall be provided with an induction loop system; Loudspeaker grill with inter-communication unit: Yes;					
			To Collection €		

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(66) LIFT SERVICES INSTALLATION (Cont) Bi-lingual voice annunciation: The lift communication system shall be supplied fully equipped to support bi-lingual Irish/English languages in accordance with Department of Education & Science TGD guidelines; UCM: The lift shall also include equipment required to fully comply with the above EN standards for unintended car movement (UCM) while at floor level and to protect against ascending car overspeed; Car Doors & Supply Details: Car Dimensions (inside): Minimum 1100mm Width x 1400mm Depth x 2200mm Height; Car Door Design/finish: Brushed Stainless steel; Door Opening Dimensions: Minimum 900mm wide x 2100mm height centre opening doors; Fire Rated Doors: Yes: Minimum 120 minutes; Door Protection: Anti-evacuation, electro mechanical device to prevent forced opening of car doors when lift is outside any landing zone. Mechanical door protection shall re-open car and landing doors if an obstruction is encountered during the closing cycle. Full height infrared obstruction protection ensuring the doors cannot close if there is any body part obstructing the door opening; Power Supply: TPN, 400 Volts, 50 Hertz, 3 phase & neutral supply by contractor to suit proposed lift. Electrical supply to suit proposed lift. Refer to LV distribution schematic for supply cable size; Landing Fixtures & Signals: Car front returns: Finished in brushed stainless steel; Car position indicator: These shall be provided at each floor level. Combined hall position indicator & signal hall lantern, sophisticated high-resolution LCD. Brushed stainless steel finish; Call Buttons: These shall be provided at each floor level. They shall be Illuminating, micro-movement push button type in Brushed stainless steel finish. A key switch shall also be provided at each floor level to enable authorised school personnel to control usage and operation of the lift; Independent service key switch: At each level, Brushed Stainless Steel Finish; User Keyswitch: To enable School to control and authorise use of the Lift as required;					
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	(66) LIFT SERVICES INSTALLATION (Cont)						
A	Door Landing Surround architrave/elevation: Brushed stainless steel architrave; Each lift entrance shall be provided with a 2total-frame/full depth" solution where the front elevation of the lift doors is aligned flush with the bordering blockwork walls on each side and above. A facing section shall extend for a distance not less than 200mm on either side and above the lift door to fully protect the wall elevations adjacent the lift entrance at each floor level; Door Controller: A closed loop variable frequency controlled door operator shall be provided to drive the car and landing doors fully automatically. The open and close speed profile shall be software based and reprogrammable via a test tool; In the event of the door meeting an obstruction during closing, re-opening will occur by way of a motor slip detection device; The time interval for which the lift remains open when a car stops at a landing shall be independently adjustable for response to car calls and response to hall calls. The maximum time to completely open and completely close the doors shall be 8 seconds. The manufacturer shall guarantee a complete door time of 10 seconds. The maximum door noise measured one metre from the landing entrance shall not exceed 55 dB (A); Communication System: Auto dialler and telephone links shall be supplied and installed between the lift pit, top of car, the car itself and a link to Central Monitoring Agency as required under European Legislation; A GSM/IP Telephone or GSM/GSM auto dialler shall be supplied and connection shall be provided and the tender shall include for one years subscription to a central monitoring station; Access Control: Access control to be provided on at landing of each floor to control lift access/usage of lift. Include for integration with network-based; Ladders: access control system serving remainder of building. Ladders shall be in accordance with EN131-1 and stored to avoid tripping for safe deployment upon emergency. A safety feature in conformance with EN81-20:2014 which prevents the lift from operation shall be installed if the ladders are not in stored position;						

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	(66) LIFT SERVICES INSTALLATION (Cont)					
A	Additional Requirements: Gears: Gear box with VVVF, Variable frequency drive; An AC Closed Loop, Variable Frequency, motion control and velocity profile shall be provided. The micro-computer based speed control system shall incorporate a digital closed loop feedback system ensuring the actual lift speed is in line with a dictated pattern during all phases of travel, namely acceleration, full running speed and deceleration. All phases of travel shall be controlled regardless of load or direction of travel; Traction Ropes: 4 No. 10mm diameter; Car and Counterweight Guides: 90x75x16 machines steel 50x50x05; Car indicator: LCD Indicator, 1 lighting, Overload signalization in car;Speed: 1.0m/s minimum; Travel distance: Ground to Second floor 7650mm (FFL to FFL) (Refer to architectural drawings). To be measured by contractor prior to contract start; Control Systems: Microprocessor controller providing full collective simplex operation; Lift Machine Location: Machine Room at top of lift shaft and integrated; Speed Control: Yes; BS Applies: Yes; EN 81-70 latest revision applies: Yes; Inductive Loop: Yes; RCD Protection on Supply: Yes; Emergency Lowering Device: Must be battery operated bi-directional; Safety Gear: Bi directional progressive, The car safety gear shall be mounted on the members of the frame and shall be operated by an over speed governor. Guide shoes shall be mounted to top and bottom of the car frame to engage the guide rails and ensure smooth car operation; Waiting Time: TBC; Starts Per Hour: No. of motor starts 120 minimum; Levelling Accuracy: +/- 3mm; To compensate for rope stretch under various load conditions, an automatic levelling system shall be furnished to ensure the car stays within the floor-levelling zone at all times; Ventilation: Yes - Car fan; Emergency lighting:Internal car emergency lights to provide a minimum of 5 lux on the floor;					
B	Power Failure and/or Fire Alarm Operation: If the lift experiences a failure in the electrical power supply or if the fire alarm activates, the lift shall automatically slowly return to the ground floor of the building and all doors shall open automatically and remain open until the power has been restored. This shall include overriding any access control restrictions that may apply; Fire Alarm Interface: Yes; Load Testing: All testing shall be in accordance with the above standards Static & dynamic load testing required. This shall also include the setting of the overload indicator light; BCar: The manufacture of the lift is to provide full detailed design including all BCAR Design Certificates; Emergency Stop: To be provided in pit; TESTING, COMMISSIONING & WARRANTY: Testing: Suitable design tests shall have been made to ensure the unit meets the requirements of the Electro Magnetic Compatibility Regulations. Load tests shall be carried out on site in the presence of the engineer. A minimum of 5 working days shall be given to the engineer prior to these tests being carried out. The completed installation shall be inspected and tested to ensure it meets the requirements of the Lift Regulations 1997. The lift manufacturer shall provide a full comprehensive warranty on the lift installation, which shall commence at the date of practical completion. The lift manufacturer shall undertake to provide in the first year a warranty to cover any parts and material, which may become defective. This will include all labour and the response time to any call outs shall not exceed eight hours. This shall be inclusive of the defects liability period;					
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	(66) LIFT SERVICES INSTALLATION (Cont)					
A	Operations & Maintenance Manuals (O&M): The contractor shall be responsible for compiling a lift O&M manual. It shall take the form of two completed sets of plan prints in hard copy and an electronic copy on 2004 .dwg AutoCAD/Format. The manual shall eventually form part of the overall H&S file for site and shall contain: Index, General description of the installation, equipment used and method of operation of the installation, Handbooks, maintenance instructions, drawings and spare parts list for all components, plant and equipment used in the contract works, Schedule of routine maintenance complete with routine oil and grease points and recommended lubricants. Schedule of periodic and preventative maintenance for specialised equipment, Wiring Diagrams of plant, etc., Manufacturers Service Manuals for all specialised plant giving all details, as listed above, Schedules of equipment supplied giving names of manufacturer, serial number of plant, electrical supply and power rating, Outline design data of plant, Test and performance data, Commissioning Certificates, A set of as installed drawings showing the complete installation and incorporating any changes or additions to the installation, carried out during the course of the contract, Parts lists for identification of spares & replacements, A full manual including drawings shall also be provided in electronic format; Commissioning Certificates, A set of as installed drawings showing the complete installation and incorporating any changes or additions to the installation, carried out during the course of the contract, Parts lists for identification of spares & replacements, A full manual including drawings shall also be provided in electronic format,					
B	The cost of the preparation and submission of the 'As Fitted' drawings shall be included in the appropriate space in the Lump Sum Form of Tender. Tenderers shall note that the drawings are required to be submitted to the consulting engineers for approval and/or comment not later than two weeks before the programmed completion date for the works. One set of the prints is to be handed over to the employer at the Hand-Over Inspection. Under nocircumstances will a certificate of practical completion be issued until "As Fitted" drawings and operation and maintenance manuals have been produced and accepted by the Engineers/Employer; In the event of a failure of the Contractor to supply a full set of documents, the engineers shall deduct up to 10% of the contact value, to cover the costs incurred in producing these documents by a third party, on behalf of the client; Traction Cables: The contractor shall undertake responsibility of maintenance of the lift traction cables and guarantee them for the first 5 years after handover without any expense to the Employer. Any traction cables which become worn, frayed or degraded below British/European standards shall be replaced free of charge to the Employer within the first 5 years following handover; Warranty: A comprehensive warranty shall be provided for the first 12months. The date of commencement shall be based on issue of the engineers/architects substantial completion certificate. Within the first 12 months warranty the contractor shall respond to any call outs within a four-hour period 365 days per year.The warranty package shall cover all parts and labour cost for the first 12 months and any call outs associated with any failure in the lift operation. This shall include failure in plant, parts, general defects and also cover faults generated through misuse of the lift including acts of vandalism; all in accordance with the Electrical Engineers Passenger Lift Services Specification					
C	Passenger lift car, doors and controls	1	nr			

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	(66) LIFT SERVICES INSTALLATION (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
B	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
C	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
D	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
E	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
F	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
G	Identification plates, labels and the like	1	Item			
	LIFT INSTALLATIONS: SUNDRIES & BUILDERWORK					
	The Contractor must note the following					
H	The Electrical Installations design packages are to be priced in accordance with the Specification and Drawings as prepared by the Services Consultant and the relevant services co-ordination is to include for all works contained there in		Note			
J	The contractor must consult the Builders Works Drawings and Schedule as prepared by Semple McKillop Consulting Engineers when pricing the following works. No additional funding will be authorized for the requirement of any additional labour, plant or materials set out within the Services Engineers documents which are not sufficiently outlined in the pricing document. Should the contractor believe there are any additional works which are not specifically outlined within this pricing document they should include for the same here.		Note			

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	(66) LIFT SERVICES INSTALLATION (Cont)					
A	The Contractor is to note that the building has been designed to achieve air tightness levels of less than 3m3/h/m2 of measured envelope area at a test pressure of 50Pa. The Contractor is to take care in the selection of materials and workmanship to ensure that the air tightness levels specified above are attained.		Note			
B	The Tenderer / Contractor is advised that the following items are to be read in conjunction with the Architects and Structural Engineers Drawings and Specifications and his tender submission will be deemed to include for the scope, standard and quality in terms of Components and Installation as set out in the Architect's and Structural Engineer's Drawings and Specifications		Note			
	The Contractor must include for the following					
C	compliance with Services Engineers drawings, schedule and specifications	1	Item			
D	completion demonstrations / walk-through demonstrations with Design Engineers, Architects and Client including demonstrations/instructing & DVD productions, seasonal commissioning and re -commissioning as specified	1	Item			
E	compliance with Health & Safety requirements	1	Item			
F	employment of a clean as you go policy and removal of waste from site in accordance with EC directives	1	Item			
G	complete underground and over-ground survey of existing mechanical services and detailing of same on AutoCAD drawing	1	Item			
H	provide method statements for all works	1	Item			
J	amount for collateral warranty	1	Item			
K	liaising with the Electrical Contractor to co-ordinate the electrical installation	1	Item			
L	liaising with the Lift Contractor to co-ordinate the electrical installation	1	Item			
	<u>General Attendances</u>					
M	Provide all general attendances in accordance with Arm 4.	1	Item			
N	Provide use of the Main Contractors tempory roads and hardstandings.	1	Item			
P	Provide use of the Main Contractors scaffolding.	1	Item			
Q	Provide use of the Main Contractors standing power operated hoisting plant.	1	Item			
R	Provide accommodation for the subcontractors staff for eating, site lavatories, site washing facilities and cloakroom facilities.	1	Item			
S	Each sub-contractor shall be permitted the free use, in common with other trades engaged on the site, of any available water supply, temporary plumbing and electrical services.	1	Item			
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	(66) LIFT SERVICES INSTALLATION (Cont)					
A	Provide temporary distribution systems for lighting, power, water and fuel for the execution of the Electrical services works, including testing and commissioning, and pay all ongoing operation charges.	1	Item			
B	Provide safe and dry storage accommodation for the sub-contractors materials, plant and tools.	1	Item			
C	Provide space for the provision by the sub-contractors of their own site offices.	1	Item			
D	Provide temporary telephone services to the Electrical Contractors temporary office and pay all charges associated with installation and operation.	1	Item			
E	Include for unloading, hoisting/cranage and placing into position all items of heavy plant supplied by the subcontractors.	1	Item			
F	Allow for maintaining all ducts, chases , trenches, trunking, etc., clean and free of all water, debris and rodents at all times.	1	Item			
G	Allow for making good and fire sealing of all builders work opes with proprietary sealant to Architects details, where services penetrate fire zones.	1	Item			
H	Fire proofing (material) around ducts and pipework shall be the responsibility of the Main Contractor	1	Item			
J	Timber grounds shall be provided within stud partitions to facilitate fixing of wall mounted accessories	1	Item			
	Special Attendances					
K	Provide all special attendances in accordance with Arm 4 Work Section B Clause 3.1	1	Item			
L	Provide tempory roads and hardstandings in connection with heavy items of plant.	1	Item			
M	Provide weatherproof covered storage and accomodation including lighting, power, heating, ventilation, water and drainage services	1	Item			
N	Provide tempory power supplies (3 phase 400V and maximum loading 15kVA) for welding, handtools, and for commissioning, including infrastructure and all charges fot the contractors use of the facility.	1	Item			
P	Provide scaffolding additional to the main contractors standing scaffolding, or access towers if required.	1	Item			
Q	Protection of the works the Main Contractor is responsible for providing adequate protection at all times for the Mechanical services installation	1	Item			
R	Protection/Maintenance, provide covers for placing on live equipment/fittings in areas under construction at the start of each work day and removing the covers at the end of each work day	1	Item			

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	(66) LIFT SERVICES INSTALLATION (Cont)					
A	Access, provide external access to high level on building facade to permit the installation of any external equipment/fittings and for the removal of existing services as required		Item			
B	Provide external access to high level on building facade to permit the installation of any external equipment/fittings and for the removal of existing services as required	1	Item			
C	Construct a lift shaft as detailed on the Engineers drawings; Building tolerances shall be to +/- 25mm	1	Item			
D	Provide 2,500kg lifting beam; cast in; painted; SWL marking;	1	Item			
E	Provide machine support lifting beam; 3,000mm long to lift 630kg	1	Item			
F	Provide wire mesh safety screen to divide lift wells	1	Item			
G	Provide well division steel for multi lifts	1	Item			
H	Paint lift shaft walls to Architects specification	1	Item			
J	Allow for any works requested by Lift contractor; such as grouting around lift doors etc.	1	Item			
K	Allow for protecting all adjacent finishes and the like while the work is in progress	1	Item			
	Unload, hoist, distrubute and place in position the following items of heavy plant and equipment					
L	Lift Control Panel	1	nr			
M	Guide rails	1	Sets			
N	Lift Car	1	nr			
	Sundries & Builders Work					
	General					
	Marking the position of holes, mortices, chases or the like					
P	Testing and Commissioning	1	Item			
Q	Providing operating and maintenance manuals	1	Item			
R	Preparing Drawings of "as completed" installations	1	Item			
S	Identification plates, labels and the like	1	Item			
T	Key, tools and spares	1	Item			
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	(66) LIFT SERVICES INSTALLATION (Cont)					
	Forming or cutting holes; including metal sleeves/plates, intumescent collars to give 1 hour fire resistance; making good structure and finishes; include for a fully completed installation where nothing must remain to be done to the installation by others; in strict accordance with the architects/ Services Engineers drawings, schedule and specifications					
A	cutting or forming holes is deemed to include all finishes and decorations both sides of the structure		note			
B	cutting or forming opes is deemed to include the making good and sealing of the ope around the pipe or duct		note			
	Froming or cuttign holes; through lift shaft walls					
C	Forming ventilation ope; 300 x 300mm wide within shaft wall; including wall louvre	3	nr			
D	Forming floor indicator ope; 200 x 100 x 30mm deep	2	nr			
E	Forming floor controller ope; 50 x 100 x 30mm deep	2	nr			
	Fire stopping system to multiple and single service penetrations; including intumescent boards, fire stop laminate; intumescent foams and mastic; intumescent pillows; intumescent putty; mineral wool rigid batts; intumescent collars and sealants to achieve 1 hour fire resistance; all in accordance with the Architects specification P12					
	Special works were services pass through structures; internal walls, making good all finishes on completion					
F	Forming ventilation ope; 300 x 300mm wide within shaft wall; including wall louvre	3	nr			
G	Forming floor indicator ope; 200 x 100 x 30mm deep	2	nr			
H	Forming floor controller ope; 50 x 100 x 30mm deep	2	nr			
	Provide the following labours in association with the lift installation					
	General Items					
J	Forming concrete buffer stools in lift shaft	1	Item			
K	Provision of permanent access ladders, steps and guard rails for machine room and pit	1	Item			
				To Collection €		

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(66) LIFT SERVICES INSTALLATION (Cont)					
COLLECTION					
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Page No. Building/375					
(66) LIFT SERVICES INSTALLATION **Carried to Summary**					

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	(71) DISPLAY, CIRCULATING FITTINGS - SIGNAGE					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. For details of the nature and extent of the works to be carried out in this section, the Tenderer's shall refer to all Architect's Drawings and Specifications		note			
D	2. Not withstanding that this Bill of Quantities is measured in accordance with the Agreed Rules of Measurement, the tenderer should note the following section is not measured in strict accordance with ARM. The Tenderer must include everything necessary to complete the works as no claims on the grounds on want of knowledge will be entertained whatsoever.		note			
	FITTINGS					
	Fitting, Equipment and Furniture					
	Fixed internal architectural signage systems Internal Signage; Description: Internal Signage; System manufacturer: Vista Systems or equivalent; Sign type: Curved Vista wall sign (channels on both sides), consists of clear anodized aluminum sign holder extrusion, two gray plastic (ABS) end caps, and an ADA compliant lens (clear with one color raised text - clear Braille). Printed insert provided by the customer or sign shop; *Graphic Application: Paper; *Lens Type: ADA Compliant; *Installation: Mount to a wall - Installer's Discretion; Fixings: Adhesive; Samples required: Provide samples with Signage submittal; all in accordance with Architects Drawing 23-16/TD-6301 and Architects Specification Ss 40 10 40 30					
	Fittings; Internal Signage, Wall Mounted; as per Architect's Specification and Drawing 23-16/TD-6301					
E	Signage Type 02; Size 225mm long x 150mm high; silver Anodized aluminum frame/ back panel with changable paper inlay and non reflective perspex cover; 17mm high embossed text in 'Sanser If' font type; 20mm high embossed text in 'Sanser If' font type; Braille tactile symbol (Including room number) to bottom left corner; Braille tactile symbol applied to perspex cover	23	nr			
F	Signage Type 03; Size 250mm long x 150mm high; Embossed symbol and text; Braille tactile symbol; Standard universally recognized public information signage	3	nr			

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	(71) DISPLAY, CIRCULATING FITTINGS - SIGNAGE (Cont)					
A	Signage Type 04; Size 225mm long x 150mm high; silver Anodized aluminum frame/ back panel with changable paper inlay and non reflective perspex cover; 17mm high embossed text in 'Sanser If' font type; 20mm high embossed text in 'Sanser If' font type; Braille tactile symbol (Including room number) to bottom left corner; Braille tactile symbol applied to perspex cover	2	nr			
B	Signage Type 05; Size 250mm long x 150mm high; Embossed symbol and text; Braille tactile symbol; Standard universally recognized public information signage	2	nr			
C	Signage Type 08; Entrance lobby sign	1	nr			
	Fittings; Internal Signage, Projecting Signage					
D	Projecting Signage; size: to be agreed; with and including fixings to background structure; in locations to be agreed	12	nr			
	Fixed internal architectural signage systems Directional Signage; Description: Internal Signage; System manufacturer: Vista Systems or equivalent; Sign type: Curved Vista wall sign (channels on both sides), consists of clear anodized aluminum sign holder extrusion, two clear anodized (Aluminum) end caps, black plastic divider, 1 - 1mm Glossy/Non-Glare lenses divided into no of sections, as required. Printed insert provided; *Graphic Application: Paper; *Lens Type: Top Lens - ADA Compliant/Bottom Lenses - 1mm Glossy/Non-Glare; *Installation: Mount to the wall - Installer's Discretion; Fixings: Mechanically fixed, suspended from ceiling; Samples required: Provide samples with Signage submittal; all in accordance with Architects Drawing 23-16/TD-6301 and Architects Specification Ss_40_10_40_30					
	Fittings; Internal Signage, Ceiling Mounted; as per Architect's Specification and Drawing 23-16/TD-6301					
E	Signage Type 06; Size 900mm long x 200mm high; 20mm test in 'Sanser If' font type; all in accordance with Architects Specification and Drawing 23-16/TD-6301	5	nr			
	External Building Signage; Description: School Logo Signage. Mounted to wall; Material: 3mm laser cut stainless steel lettering, brushed finish, raised with stainless steel locator pops; Sign size: Letters -TBC. Number of Letters as per Architects drawings; Content: School name-Colour and Font style to be confirmed with Client; all in accordance with Architects Drawing 23-16/TD-6301 and Architects Specification Pr_40_10_77_77					
	Fittings; External Signage; as per Architect's Specification and Drawing 23-16/ TD-6301					
F	External Signage; Size 1790mm long x 3520mm high; Signage; Signage to be provided on entrance feature wall - to include school logo and name in both irish and English; 400mm built up powder coated aluminum; 40mm deep; Font Arial; RAL Colour to be confirmed; Signage design to be confirmed by school; School crest will have depth of return to match letters; The face of the built up crest decorated with a 7 year outdoor vinyl and protected with an over laminate; Signage to be pin mounted with brass locator fixing to make letters	1	nr			

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(71) DISPLAY, CIRCULATING FITTINGS - SIGNAGE (Cont)					
COLLECTION					
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(71) DISPLAY, CIRCULATING FITTINGS - SIGNAGE **Carried to Summary**					

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	(74) SANITARY FITTINGS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	FLOOR WALL AND CEILING FINISHES					
	System Partitions					
	Panel cubicle systems; Description: Male & Female cubicle systems; System manufacturer: Venesta Washroom Systems Ltd; Product reference: Unity Cubicle or Similar or equal approved; Size; Height: 2070; Colour: tbc; Accessories: Document M compliant grab rails and door pulls Venesta coat hook; Colour: TBC - colour swatches to be approved; Execution; System completion:; as per Architects Specification Ss_25_12_60_60					
	Fittings; Partitions					
C	Cubicles; overall length 6275mm, incorporating 7nr cubicles 1490mm wide, 2200mm high overall; 7nr doors approx 750mm wide opening; 7nr dividing panel; coat hook to fixed to each cubicle door at 1400mm above FFL; assembling by bolting and screwing; fixing to masonry with screws; all in strict accordance with the manufacturer's instructions	4	nr			
	IPS System; Full height IPS system concealed cistern; 18mm Moisture resistant chipboard with HPL (high pressure laminate) to select colour with metal framing system, VEPPS Postformed HPL# faced pre-plumbed washroom wall lining system with Locks or similar or equal approved; as per Architects Drawing 23-16/TD-4025					
	Fittings; IPS duct panel					
D	Concealed Cistern Unit to unisex WCs; 1nr overall size 850mm wide x 3150mm high x 230mm deep; include for all head, side and skirting panels; all in accordance with Architects Drawings and Specification	9	nr			
E	Concealed Cistern Unit to unisex WCs; 1nr overall size 900mm wide x 3150mm high x 230mm deep; include for all head, side and skirting panels; all in accordance with Architects Drawings and Specification	1	nr			
F	Concealed Cistern Unit to unisex WCs; 1nr overall size 1230mm wide x 3150mm high x 230mm deep; include for all head, side and skirting panels; all in accordance with Architects Drawings and Specification	1	nr			

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	(74) SANITARY FITTINGS (Cont)					
	GENERAL GLAZING					
	Special Glazing					
	Large mirrors; Description: Provide mirrors to all toilet areas as per Architects drawings; Materials and standards; Safety requirements: To BS 6262-4 and BS 6262-6; Materials: Safety glass, Class 3 to BS EN 12600; Thickness: 6mm; Finish: Silvered to give maximum reflection, free from tarnishing, discoloration, scratches and other defects visible in the designed viewing conditions. Reflection undistorted; Backing: Board; Edges; Treatment: Polished; Profile: Beveled, 6 mm; Provision for fixing: Adhered to wall securely; Execution: Pr_25_71_53/610 Installing mirrors See Pr_30_31_76_77 Silicone construction joint sealants in Ss_25_13_50_51 Masonry wall leaf systems Render Finish; as per Architects Specification Pr_25_71_53_46					
	Mirrors					
A	Mirror; 450 x 1200mm x 6mm thick; silvered 6mm float glass; adhered to wall	5	nr			
B	Mirror; 450 x 1000mm x 6mm thick; 6.4mm thick safety glass	1	nr			
C	Mirror; 700 x 1200mm x 6mm thick; 6.4mm thick safety glass	1	nr			
D	Mirror; 1000 x 1245mm x 6mm thick; 6.4mm thick safety glass	4	nr			
	FITTINGS					
	Fittings, Equipment and Furniture					
	Provide and fit the following Sanitary fittings; include for all screws, washers etc; all fixings; all as per Architects Sanitary ware Schedule and Specification N13					
	Fittings; Male Changing/Shower Room (03)					
E	Shower; S1305(MY) - Kirn Shower Panel With Thermostatic Lever Valve	7	nr			
F	WC; E8963 Sandringham 21 close coupled raised height WC pan, 75cm projection with floor fixing kit; Lip Height: 400mm; Pan projection: 670mm; Cistern & cover: E8968 Sandringham 21 Close Coupled 6/4 litre single flush valve, bottom supply and internal overflow; E9076 Sandringham 21 seat and cover; S406701 Contour 21 seat retaining buffers, white	2	nr			
G	WHB; Trough Sink S1212(01) Edit 120cm solid surface wash-trough; A4852(AA) Sensor flow 21 compact washbasin mounted spout with integral sensor, 3.7 litre per minute aerated spray outlet, combined inlet servicing valve and filter, mains (x2)	1	nr			

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	(74) SANITARY FITTINGS (Cont)					
	Fittings; UA Shower/WC (04)					
A	Doc M WC Pack; WC: S0683 Doc M Contour 21+ peninsular care pack close coupled WC pan, water saving delay fill cistern with spatula lever, grab rails, 2 hinged arm support, toilet roll holder, seat no cover with retaining buffers, larger washbasin, copper tails on TMV3 mixer tap (Doc M packs are available both right- and left-hand corner arrangement. For right hand arrangement the cistern flush lever should be fitted on the left of the cistern); S3054 Contour 21 close coupled raised height toilet bowl with horizontal outlet, 75cm projection with floor fixing kit; S8910 Trap 1L" plastic bottle, 75mm seal, multi-purpose outlet S6454 Contour 21 grab rail straight 60cm long x 35mm diameter; S6452 Contour 21 grab rail straight 45cm long x 35mm diameter; S6360 Contour 21 hinged support rail 80 x 35mm diameter, Doc M compliant; S6363 Toilet roll holder for Contour 21 hinged arm rail; S9137 Bracket concealed with clamps and centre waste support for Portman 21 washbasins 60 and 50cm; A6697 Contour 21+ 1 hole thermostatic basin mixer, single sequential lever with copper tails. S2256 Portman 21 washbasin 60cm, 1 tap hole with overflow, no chain-stay hole; S8733 Waste 1L" brass anti theft swivel plug waste, 80mm slotted tail; S3654 Contour 21 close coupled 4.5 litre delay fill single flush syphon cistern for 75cm projection bowl, bottom supply, internal overflow with secure cover fastener, no lever; S4066 Contour 21 toilet seat only, top fixing hinges and retaining buffers; S4420 Spatula cistern lever, close coupled.	1	nr			
B	Shower Room; S0755 Shower room pack with folding shower seat and back support in grey, 3x 60cm grabrails, 45cm grab rail, 80cm hinged arm, lever operated exposed shower valve, Dual head shower kit, shower curtain and rails; A6876 Contour 21+ thermostatic exposed shower valve with fast-fix wall bracket and thermal cleanse feature; A5691 Ideal-rain Dual shower system with M1 rain-shower, fixed riser, M3 hand spray and diverter for exposed mixers; S6632 Shower seat, folding 650mm projection fixed height; S6635 Multi-System back support fixed height. S6454 Contour 21 grab rail straight 60cm long x 35mm diameter; S6452 Contour 21 grab rail straight 45cm long x 35mm diameter; S6360 Contour 21 hinged support rail 80 x 35mm diameter, Doc M Compliant; S6750 Multi-System shower curtain 1500x2000mm; S6751 Contour 21 angled shower curtain rail 1200 x 1200mm; S5093 Clothes hook screw to wall, plastic; B1364 Category 5 hose retainer for wall fixing which screws to the wall to limit hand spray movement, to prevent back siphonage in category 5 installations	1	nr			
	Fittings; Referee Room (05)					
C	Shower; S1305(MY) - Kirn Shower Panel With Thermostatic Lever Valve	1	nr			
D	WC; E8963 Sandringham 21 close coupled raised height WC pan, 75cm projection with floor fixing kit; Lip Height: 400mm; Pan projection: 670mm; Cistern & cover: E8968 Sandringham 21 Close Coupled 6/4 litre single flush valve, bottom supply and internal overflow; E9076 Sandringham 21 seat and cover; S406701 Contour 21 seat retaining buffers, white.	1	nr			

To Collection €

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	(74) SANITARY FITTINGS (Cont)					
A	WHB; S2122(01) Contour 21 37cm handrinse washbasin, 1 tap hole, no overflow, no chain-stay hole, bottom outlet; Washbasin Wall Fixings; S9110(67) Hangers concealed, Steel; A6697(AA) Contour 21+ 1 hole thermostatic basin mixer, single sequential lever with copper tails; Waste; S8810(01) Waste 1L" plastic strainer, dished pattern 80mm unspotted tail; S8900(AA) Trap 1L" metal bottle, 75mm seal, outlet screwed 1L" BSP male with compression nut and ring	1	nr			
	Fittings; Female Changing/Shower Room (07)					
B	Shower; S1305(MY) - Kirn Shower Panel With Thermostatic Lever Valve	7	nr			
C	WC; E8963 Sandringham 21 close coupled raised height WC pan, 75cm projection with floor fixing kit; Lip Height: 400mm; Pan projection: 670mm; Cistern & cover: E8968 Sandringham 21 Close Coupled 6/4 litre single flush valve, bottom supply and internal overflow; E9076 Sandringham 21 seat and cover; S406701 Contour 21 seat retaining buffers, white	2	nr			
D	WHB; Trough Sink S1212(01) Edit 120cm solid surface wash-trough; A4852(AA) Sensor flow 21 compact washbasin mounted spout with integral sensor, 3.7 litre per minute aerated spray outlet, combined inlet servicing valve and filter, mains (x2)	1	nr			
	Fittings; Female Changing/Shower Room (10)					
E	Shower; S1305(MY) - Kirn Shower Panel With Thermostatic Lever Valve	7	nr			
F	WC; E8963 Sandringham 21 close coupled raised height WC pan, 75cm projection with floor fixing kit; Lip Height: 400mm; Pan projection: 670mm; Cistern & cover: E8968 Sandringham 21 Close Coupled 6/4 litre single flush valve, bottom supply and internal overflow; E9076 Sandringham 21 seat and cover; S406701 Contour 21 seat retaining buffers, white	2	nr			
G	WHB; Trough Sink S1212(01) Edit 120cm solid surface wash-trough; A4852(AA) Sensor flow 21 compact washbasin mounted spout with integral sensor, 3.7 litre per minute aerated spray outlet, combined inlet servicing valve and filter, mains (x2)	1	nr			
	Fittings; Nursing Practise (21)					
H	WHB; S2122(01) Contour 21 37cm handrinse washbasin, 1 tap hole, no overflow, no chain-stay hole, bottom outlet; Washbasin Wall Fixings S9110(67) Hangers concealed, Steel; A6697(AA) Contour 21+ 1 hole thermostatic basin mixer, single sequential lever with copper tails; Waste S8810(01) Waste 1L" plastic strainer, dished pattern 80mm unspotted tail; S8900(AA) Trap 1L" metal bottle, 75mm seal, outlet screwed 1L" BSP male with compression nut and ring	2	nr			

To Collection €

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	(74) SANITARY FITTINGS (Cont)					
	Fittings; Changing Place Toilet (23)					
A	WC: S0682 Doc M Contour 21+ peninsular care pack close coupled WC pan, water saving delay fill cistern with spatula lever, grab rails, 2 hinged arm support, toilet roll holder, seat no cover with retaining buffers. (Doc M packs are available both right- and left-hand corner arrangement. For right hand arrangement the cistern flush lever should be fitted on the left of the cistern); S3054 Contour 21 close coupled raised height toilet bowl with horizontal outlet, 75cm projection with floor fixing kit; S8910 Trap 1L" plastic bottle, 75mm seal, multi-purpose outlet S6454 Contour 21 grab rail straight 60cm long x 35mm diameter; S6452 Contour 21 grab rail straight 45cm long x 35mm diameter; S6360 Contour 21 hinged support rail 80 x 35mm diameter, Doc M compliant; S6363 Toilet roll holder for Contour 21 hinged arm rail; S3654 Contour 21 close coupled 4.5 litre delay fill single flush syphon cistern for 75cm projection bowl, bottom supply, internal overflow with secure cover fastener, no lever; S4066 Contour 21 toilet seat only, top fixing hinges and retaining buffers; S4420 Spatula cistern lever, close coupled.	1	nr			
B	Height adjustable changing table; 00.154.00.0001 Astor Bannerman Invincible Changing Table	1	nr			
C	Overhead Hoist; 00.047.10.0001 Astor ABW-CP	1	nr			
D	Height adjustable wall mounted wash basin; 00.047.10.0001 Astor ABW-CP	1	nr			
E	Shower; 02.300.20.0069 Triton Omnicare Electric Shower	1	nr			
	Fittings; Male Changing/Shower Room 02 (24)					
F	Shower; S1305(MY) - Kirn Shower Panel With Thermostatic Lever Valve	7	nr			
G	WC; E8963 Sandringham 21 close coupled raised height WC pan, 75cm projection with floor fixing kit; Lip Height: 400mm; Pan projection: 670mm; Cistern & cover: E8968 Sandringham 21 Close Coupled 6/4 litre single flush valve, bottom supply and internal overflow; E9076 Sandringham 21 seat and cover; S406701 Contour 21 seat retaining buffers, white	2	nr			
H	WHB; Trough Sink S1212(01) Edit 120cm solid surface wash-trough; A4852(AA) Sensor flow 21 compact washbasin mounted spout with integral sensor, 3.7 litre per minute aerated spray outlet, combined inlet servicing valve and filter, mains (x2)	1	nr			

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	(74) SANITARY FITTINGS (Cont)					
	Fittings; Servery (26)					
A	Double Bowl & Double Drainer Sink; Stainless Steel double bowl double drainer sink, 1800 x 600mm deep; Table-top twin hole mixer with water-free Long Life tap heads adjustable centres from 100 to 240mm. and spout 3/4# L.167. Flat inlets M1/2#. Flow rate 47l/min. at 3 bar. 10 year warranty. Low pressure suited; Concept Blue washbasin mixer 1 hole with pop-up waste. Suitable for balanced supplies. Inlets with flexible hoses and connections for 15mm copper pipes. Fitted with a 5 lpm outlet flow regulator. When installed in commercial applications, A5900AA a 15mm thermostatic blending valve must be used. Unregulated flow rate 4.7 litres per minute at 0.2 bar. Flow rate with fitted regulator 5 Litres per minute @ 3 bar pressure. Dedicated Drinking Tap BB9993 Concept Blue Kitchen Mixer # 1 hole, tubular spout; Note: tap to receive permanent marking/ identification highlighting drinking water use only	1	nr			
	Fittings; UA Shower/WC (31)					
B	Doc M WC Pack; WC: S0683 Doc M Contour 21+ peninsular care pack close coupled WC pan, water saving delay fill cistern with spatula lever, grab rails, 2 hinged arm support, toilet roll holder, seat no cover with retaining buffers, larger washbasin, copper tails on TMV3 mixer tap (Doc M packs are available both right- and left-hand corner arrangement. For right hand arrangement the cistern flush lever should be fitted on the left of the cistern); S3054 Contour 21 close coupled raised height toilet bowl with horizontal outlet, 75cm projection with floor fixing kit; S8910 Trap 1L" plastic bottle, 75mm seal, multi-purpose outlet S6454 Contour 21 grab rail straight 60cm long x 35mm diameter; S6452 Contour 21 grab rail straight 45cm long x 35mm diameter; S6360 Contour 21 hinged support rail 80 x 35mm diameter, Doc M compliant; S6363 Toilet roll holder for Contour 21 hinged arm rail; S9137 Bracket concealed with clamps and centre waste support for Portman 21 washbasins 60 and 50cm; A6697 Contour 21+ 1 hole thermostatic basin mixer, single sequential lever with copper tails. S2256 Portman 21 washbasin 60cm, 1 tap hole with overflow, no chain-stay hole; S8733 Waste 1L" brass anti theft swivel plug waste, 80mm slotted tail; S3654 Contour 21 close coupled 4.5 litre delay fill single flush syphon cistern for 75cm projection bowl, bottom supply, internal overflow with secure cover fastener, no lever; S4066 Contour 21 toilet seat only, top fixing hinges and retaining buffers; S4420 Spatula cistern lever, close coupled.	1	nr			
C	Shower Room; S0755 Shower room pack with folding shower seat and back support in grey, 3x 60cm grabrails, 45cm grab rail, 80cm hinged arm, lever operated exposed shower valve, Dual head shower kit, shower curtain and rails; A6876 Contour 21+ thermostatic exposed shower valve with fast-fix wall bracket and thermal cleanse feature; A5691 Ideal-rain Dual shower system with M1 rain-shower, fixed riser, M3 hand spray and diverter for exposed mixers; S6632 Shower seat, folding 650mm projection fixed height; S6635 Multi-System back support fixed height. S6454 Contour 21 grab rail straight 60cm long x 35mm diameter; S6452 Contour 21 grab rail straight 45cm long x 35mm diameter; S6360 Contour 21 hinged support rail 80 x 35mm diameter, Doc M Compliant; S6750 Multi-System shower curtain 1500x2000mm; S6751 Contour 21 angled shower curtain rail 1200 x 1200mm; S5093 Clothes hook screw to wall, plastic; B1364 Category 5 hose retainer for wall fixing which screws to the wall to limit hand spray movement, to prevent back siphonage in category 5 installations	1	nr			

To Collection €

(74) SANITARY FITTINGS (Cont)

	Fittings; Unisex WCS (32)					
A	WC; WC Pan E8974(01) Sandringham 21 back-to-wall toilet bowl with horizontal outlet; WC Seat E1316(01) Uni toilet seat and cover	12	nr			
B	Concealed Cistern; Cistern S3326(67) Conceala 3 dual flush 6/4 litre cistern, side inlet, pneumatic actuation, easy adjustable to low water volumes (4.5/3 or 4/2.6 litres), internal overflow, flush pipe included, no button/flush plate; WC Actuator S1082(AA) Conceala 3 dual flush plate	12	nr			
C	Washbasin; E7979(01) Concept Sphere 45cm semi countertop washbasin, 1 tap hole with overflow; Brass-ware BD246(AA) Ceraplan single lever basin mixer, with click waste; Trap S8910(67) Trap 1L" plastic bottle, 75mm seal, multipurpose outlet	10	nr			
D	WHB: Ambient; Washbasin E8945(01) Sandringham 21 washbasin 50cm, 1 tap hole, with overflow no chain-stay hole; Pedestal E8976(01) Sandringham 21 pedestal; Brass-ware B3307(AA) Sandringham SL 21 basin mixer, no waste with 5 litre per minute eco flow regulator; Waste S8733(AA) Waste 1L" brass anti theft swivel plug waste, 80mm slotted tail; Trap S8910(67) Trap 1L" plastic bottle, 75mm seal, multipurpose outlet	1	nr			
E	Vanity Unit; Complete; overall dimension 2945mm long x 300mm wide; incorporating 5nr countertop wash hand basins (supplied by others); with and including 150mm upstand to rear; include for worktop, main panels & under panels as per Architect's Drawing; include for all fixings and sealings ; all in accordance with Architect's Specification and Architect's Drawing 20-16/TD-4025; Location Unisex Toilets	2	nr			
F	Cleaner Sink; all in accordance with Architect's Specification and Architect's Drawing 20-16/TD-4025; Location Unisex Toilets	1	nr			
	Fittings; Dental Studies Practise (39)					
G	Sink; Stainless Steel single bowl 1200 x 600mm deep (insulated on underside), single drainer sink; Table-top twin hole mixer with water-free Long Life tap heads adjustable centres from 100 to 240mm. and spout 3/4# L.167. Flat inlets M1/2#. Flow rate 47l/min. at 3 bar. 10 year warranty. Low pressure suited Concept Blue washbasin mixer 1 hole with pop-up waste. Suitable for balanced supplies. Inlets with flexible hoses and connections for 15mm copper pipes. Fitted with a 5 lpm outlet flow regulator. When installed in commercial applications, A5900AA a 15mm thermostatic blending valve must be used. Unregulated flow rate 4.7 litres per minute at 0.2 bar. Flow rate with fitted regulator 5 Litres per minute @ 3 bar pressure BB9993 Concept Blue Kitchen Mixer # 1 hole, tubular spout	2	nr			

To Collection €

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	(74) SANITARY FITTINGS (Cont)					
	Fittings; Dental Studies (40/41)					
A	Sink; Stainless Steel single bowl 1200 x 600mm deep (insulated on underside), single drainer sink; Table-top twin hole mixer with water-free Long Life tap heads adjustable centres from 100 to 240mm. and spout 3/4# L.167. Flat inlets M1/2#. Flow rate 47l/min. at 3 bar. 10 year warranty. Low pressure suited Concept Blue washbasin mixer 1 hole with pop-up waste. Suitable for balanced supplies. Inlets with flexible hoses and connections for 15mm copper pipes. Fitted with a 5 lpm outlet flow regulator. When installed in commercial applications, A5900AA a 15mm thermostatic blending valve must be used. Unregulated flow rate 4.7 litres per minute at 0.2 bar. Flow rate with fitted regulator 5 Litres per minute @ 3 bar pressure BB9993 Concept Blue Kitchen Mixer # 1 hole, tubular spout	2	nr			
	Fittings; Pharmacy Tech (42)					
B	Sink; Stainless Steel single bowl 1200 x 600mm deep (insulated on underside), single drainer sink; Table-top twin hole mixer with water-free Long Life tap heads adjustable centres from 100 to 240mm. and spout 3/4# L.167. Flat inlets M1/2#. Flow rate 47l/min. at 3 bar. 10 year warranty. Low pressure suited Concept Blue washbasin mixer 1 hole with pop-up waste. Suitable for balanced supplies. Inlets with flexible hoses and connections for 15mm copper pipes. Fitted with a 5 lpm outlet flow regulator. When installed in commercial applications, A5900AA a 15mm thermostatic blending valve must be used. Unregulated flow rate 4.7 litres per minute at 0.2 bar. Flow rate with fitted regulator 5 Litres per minute @ 3 bar pressure BB9993 Concept Blue Kitchen Mixer # 1 hole, tubular spout	1	nr			
	Fittings; Circulation (20/28)					
C	Water Fountain; Fountain S1292(MY) Purita 900mm pedestal drinking fountain complete with bottle filler	2	nr			
	Fittings, Equipment and Furniture					
	Provide and fit the following Accessories; include for all screws, washers etc; all fixings					
	Accessories					
D	Grab Rails S6454(AC) Contour 21 grab rail straight 60cm long x 35mm diameter; as per Sanitary Schedule	15	nr			
E	Clothes hooks; Description: Stainless steel face fixed double coat hook 100 x 18mm Thick MDF with VGS grade laminate; Form: Coat hooks on wall mounted backplate. See detail; Material: Stainless steel; as per Architects Specification 40_30_78_15	196	nr			
F	Stylish brushed stainless steel 2 roll toilet paper dispenser; as per Architects Drawing	3	nr			
G	Disposal bin; as per Architects Drawing	2	nr			
				To Collection €		

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	(74) SANITARY FITTINGS (Cont)					
A	Electric hand dryer; as per Architects Drawing	4	nr			
B	Paper tower dispenser	2	nr			
C	Alarm pull chord with 2x red bangles; one at 100mm a FFL and the other at 800mm AFFL	6	nr			
D	High speed and heavy duty hand dryers	4	nr			
E	AISI 316 stainless steel, toilet roll holder	10	nr			
F	Lockable and refillable 400ml compact soap dispenser manufactured from hygienic 304 stainless steel	8	nr			
G	Generic wall mounted wide paper roll holder	1	nr			
H	Rollout privacy screen; Overall size - 2250mm long x 2260mm high	1	nr			
J	Colostomy shelf; Overall size - 490mm long x 250mm wide	1	nr			
				To Collection €		

(74) SANITARY FITTINGS (Cont)

COLLECTION

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(74) SANITARY FITTINGS
Carried to Summary

					€	c
	(76) STORAGE, SCREENING FITTINGS - BLINDS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	NOTES					
C	1. For details of the nature and extent of the works to be carried out in this section, the Tenderer's shall refer to all Architect's Drawings and Specifications		note			
D	2. Not withstanding that this Bill of Quantities is measured in accordance with the Agreed Rules of Measurement, the tenderer should note the following section is not measured in strict accordance with ARM. The Tenderer must include everything necessary to complete the works as no claims on the grounds on want of knowledge will be entertained whatsoever.		note			
	FITTINGS					
	Fitting, Equipment and Furniture					
	Roller blinds; Description: Mechoshade manually operated units (or equivalent) with Thermoveil Shade cloth 1300 series dense basket weave sunscreen material (or similar equal Approved), 3% openess factor (9-12% visible light transmission) and manual operated shade system Mecho/5 wide bracket chain driven roller system. Standards: To BS 5867-1, BS 5867-2 and BS EN 13120. Position: Refer to Architectural Drawings; Dimensions (minimum width x depth): Refer to Architectural Drawings. Head rail: Material: Zinc plated steel. Colour: White. Blinds: Material: Polyester. Finish: Refer to Architectural Drawings. Colour: Shade cloth to be light in colour and selected by Architect. Tube: Material: Extruded aluminum. Operation: Manual, stainless steel ball chain. Testing: Solar transmittance. Appearance and tolerance. Safety factor. A test certificate as in Appendix C of Fire Safety of furnishings and fittings in place of assembly should be supplied for each item. Accessories: Powder coated steel fixing brackets. Cord or ball-chain tensioning system. Ball-chain safety connector. Execution: Pr_30_59_07/630 Installing blinds; As per Architects Specification Pr_30_59_07_72.					
	Furniture, Furnishings; Type A					
E	Overall size 1360mm wide x 2785mm high; complete	1	nr			
F	Overall size 2710mm wide x 2785mm high; complete	10	nr			
G	Overall size 2805mm wide x 3045mm high; complete	1	nr			
H	Overall size 4960mm wide x 3045mm high; complete	1	nr			

To Collection €

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	(76) STORAGE, SCREENING FITTINGS - BLINDS (Cont)					
A	Overall size 5523mm wide x 2785mm high; complete	8	nr			
B	Overall size 11890mm wide x 3045mm high; complete	1	nr			
				To Collection €		

(76) STORAGE, SCREENING FITTINGS - BLINDS (Cont)

COLLECTION

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(76) STORAGE, SCREENING FITTINGS - BLINDS
Carried to Summary

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
C	NOTES					
D	1. The Tenderer is advised that the use of melamine faced chip board WILL NOT be permitted in any circumstances	1	note			
E	2. General standards for materials and finishes for fitted furniture; Core Materials for laminated worktops and components - High density chipboard to IS EN 312-3 type P3, class E1 formaldehyde content; Moisture resistant board to EN 312-5 type P5, class E1 formaldehyde content; Dry Fibre Board (MDF) to IS EN 622-5 Class E1 formaldehyde content; Moisture resistant board to IS EN 622-5 MDF.H, class E1 formaldehyde content; Plywood to conform with I.S. EN 1072, I.S. EN 314 and I.S. EN 636; All the above fibre board products to be tested to EN120 to have less than 8mg/100g free formaldehyde content (Class E1). Surface preparation: Prepare surfaces in accordance with decorative coating manufacturer's recommendations	1	note			
F	3. For details of the nature and extent of the works to be carried out in this section, the Tenderer's shall refer to all Architect's Drawings and Specifications	1	note			
G	4. All timber used in the construction of FURNITURE AND FITTINGS within this section to be accredited by the Forestry Standards Council (FSC) standard for sustainable timber; Refer to Architectural Room Layouts and Room Data Sheets for details, sizes and location of Furniture and Equipment; All furniture and equipment to comply with DoES Fitted Furniture Specification and Standards; The build up of furniture listed below generally only applies to fixed furniture and use of alternative materials and finishes of equal or higher specification and performance are permitted; In all cases however fully detailed fabrication drawings at a suitable scale must be provided by the subcontractor and agreed prior to any fabrication	1	note			
	MINIMUM STANDARDS FOR MATERIALS AND FINISHES					
	Core material for worktops, doors and carcasses:					
H	Dry Fibre Board (MDF) to IS En 622-5 Class E1 formaldehyde content tested to EN 120. Moisture resistant board to IS EN 622-5 MDF.H, class E1 formaldehyde content tested to EN 120.	1	note			
J	Core materials to be finished with plastic laminates to comply with IS EN 438, grade HGS/HGP (including vertical panels, shelves and doors). Balancing laminate to be used in all cases.	1	note			

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
A	Edges of all laminates (if not post formed) to be finished with solid colour laminate (2mm thickness), PVC or hardwood edges to seal all edges.	1	note			
B	Solid timber to comply with IS EN 942, Class J10. FSC/PEFC chain of custody certification required for all timber and timber products, including MDF.	1	note			
	Metal frames:					
C	Generally 60 x 30mm mild steel frame with welded caps and adjustable feet. Epoxy powder coated to selected RAL colour	1	note			
	Ironmongery:					
D	Stainless steel door handles, reversed fixed through doors. High quality stainless steel or nickel plated self-closing hinges (180 degrees) and high quality cylinder style lock on master keyed system to suit the school's requirements;	1	note			
E	Hardwood plinth size to be coordinated with skirting height in rooms	1	note			
	General					
F	Alternative materials and finishes of equal or higher specification and performance are permitted.	1	note			
G	Drawings to be read in conjunction with specification.	1	note			
H	Minimum worktop height to be 710mm.	1	note			
	ADMIN OFFICE (1Nr)					
	FITTINGS					
	Fitting, Equipment and Furniture					
	Base storage Unit consisting of double door and countertop; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4509.					
	Furniture, Furnishings; Storage Unit with double door and countertop					
J	1200mm wide x 600mm deep x 860mm high	3	nr			
	Countertop; As per Architect's Detail Drawing 23-16/TD-4509.					
	Furniture, Furnishings; Countertop					
K	Countertop; complete; overall dimension 3585 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			

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(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)

GENERAL CLASSROOM (2Nr)

FITTINGS

Fitting, Equipment and Furniture

Sliding storage unit; 20x15mm mdf top panel. Robust aluminum sliding door, faced with white board or notice board material. 100x38mm softwood frame. heavy duty, high quality sliding door system. 20mm mdf shelf. 50x50mm softwood supporting frame; As per Architect's Detail Drawing 23-16/TD-4507.

Furniture, Furnishings; Sliding storage unit

A	3400mm wide x 600mm deep x 2350mm high	2	nr		

Base storage Unit consisting of double door and countertop; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4027.

Furniture, Furnishings; Storage Unit with double door and countertop

B	1200mm wide x 600mm deep x 860mm high	3	nr		

Countertop; As per Architect's Detail Drawing 23-16/TD-4027.

Furniture, Furnishings; Countertop

C	Countertop; complete; overall dimension 4610 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr		

COMPUTER ROOM (1Nr)

FITTINGS

Fitting, Equipment and Furniture

Computer worktop; 30mm thick mdf worktop with decorative high pressure laminate; As per Architect's Detail Drawing 23-16/TD-4501.

Furniture, Furnishings; Computer worktop

D	Computer worktop; complete; overall dimension 1900 x 900 x 750mm high; complete; all in accordance with Architect's Specification	3	nr		
E	Computer worktop; complete; overall dimension 4220 x 900 x 750mm high; complete; all in accordance with Architect's Specification	5	nr		

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
	Teaching wall unit; 20mm mdf top panel. Softwood framing rail. 20mm mdf door. Edgewood bearer. 15mm mdf backing panel. Sliding partitions to be white boards; As per Architect's Detail Drawing 23-16/TD-4501.					
	Furniture, Furnishings; Teaching Wall Unit					
A	6550mm long as per Architects Drawing	1	nr			
	DENTAL PRACTISE (1Nr)					
	FITTINGS					
	Fitting, Equipment and Furniture					
	Base storage Unit; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4030.					
	Furniture, Furnishings; Storage Unit					
B	600mm wide x 600mm deep x 860mm high	2	nr			
	Base storage corner unit; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4030.					
	Furniture, Furnishings; Storage corner unit					
C	900mm wide x 600mm deep x 860mm high	2	nr			
	Base storage Unit consisting of double door and countertop; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4030.					
	Furniture, Furnishings; Storage Unit with double door and countertop					
D	1200mm wide x 600mm deep x 860mm high	5	nr			
	Belmont Eurus S8 Ambidextrous Chair; As per Architect's Detail Drawing 23-16/TD-4030.					
	Furniture, Furnishings; Chair					
E	Chair	2	nr			

(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)

	Countertop; As per Architect's Detail Drawing 23-16/TD-4030.				
	Furniture, Furnishings; Countertop				
A	Countertop; complete; overall dimension 1500 x 600 x 860mm high; complete; all in accordance with Architect's Specification	2	nr		
B	Countertop; complete; overall dimension 3150 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr		
C	Countertop; complete; overall dimension 3300 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr		
	High level Storage Shelving unit; As per Architect's Detail Drawing 23-16/ TD-4030.				
	Furniture, Furnishings; Shelving unit				
D	758mm wide x 300mm deep x 600mm high	2	nr		
	DENTAL STUDIES (2Nr)				
	FITTINGS				
	Fitting, Equipment and Furniture				
	Base storage Unit; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4031.				
	Furniture, Furnishings; Storage Unit				
E	600mm wide x 600mm deep x 860mm high	3	nr		
	Base storage corner unit; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4031.				
	Furniture, Furnishings; Storage corner unit				
F	900mm wide x 600mm deep x 860mm high	4	nr		

To Collection €

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
	Base storage Unit consisting of double door and countertop; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4031.					
	Furniture, Furnishings; Storage Unit with double door and countertop					
A	1200mm wide x 600mm deep x 860mm high	8	nr			
	Countertop; As per Architect's Detail Drawing 23-16/TD-4031.					
	Furniture, Furnishings; Countertop					
B	Countertop; complete; overall dimension 1360 x 600 x 860mm high; complete; all in accordance with Architect's Specification	2	nr			
C	Countertop; complete; overall dimension 2400 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			
D	Countertop; complete; overall dimension 2560 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			
E	Countertop; complete; overall dimension 3100 x 600 x 860mm high; complete; all in accordance with Architect's Specification	2	nr			
	High level Storage Shelving unit; As per Architect's Detail Drawing 23-16/ TD-4031					
	Furniture, Furnishings; Shelving unit					
F	758mm wide x 300mm deep x 600mm high	2	nr			
	GENERAL STORE (2Nr)					
	FITTINGS					
	Fitting, Equipment and Furniture					
	5- tier adjustable shelving; As per Architect's Detail Drawing 23-16/TD-4014.					
	Furniture, Furnishings; Adjustable shelving					
G	1950mm wide x 600mm deep	1	nr			
H	2015mm wide x 600mm deep	1	nr			
J	2050mm wide x 600mm deep	1	nr			
K	3390mm wide x 600mm deep	1	nr			
L	3500mm wide x 600mm deep	1	nr			

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
	HOTDESK ROOM (1Nr)					
	FITTINGS					
	Fitting, Equipment and Furniture					
	Computer worktop; 30mm thick mdf worktop with decorative high pressure laminate; As per Architect's Detail Drawing 23-16/TD-4010.					
	Furniture, Furnishings; Computer worktop					
A	Computer worktop; complete; overall dimension 1900 x 900 x 750mm high; complete; all in accordance with Architect's Specification	2	nr			
B	Computer worktop; complete; overall dimension 4130 x 900 x 750mm high; complete; all in accordance with Architect's Specification	1	nr			
	Sliding storage unit; 20x15mm mdf top panel. Robust aluminum sliding door, faced with white board or notice board material. 100x38mm softwood frame. heavy duty, high quality sliding door system. 20mm mdf shelf. 50x50mm softwood supporting frame; As per Architect's Detail Drawing 23-16/TD-4502.					
	Furniture, Furnishings; Sliding storage unit					
C	5500mm wide x 450mm deep x 2350mm high	1	nr			
	MULTIPURPOSE ROOM (1Nr)					
	FITTINGS					
	Fitting, Equipment and Furniture					
	Countertop; As per Architect's Detail Drawing 23-16/TD-4022.					
	Furniture, Furnishings; Countertop					
D	Countertop; complete; overall dimension 1800 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			
E	Countertop; complete; overall dimension 2525 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			
F	Countertop; complete; overall dimension 3955 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			
G	Countertop; complete; overall dimension 4730 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			

(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)

NURSING PRACTISE ROOM (1Nr)

FITTINGS

Fitting, Equipment and Furniture

Sliding storage unit; 20x15mm mdf top panel. Robust aluminum sliding door, faced with white board or notice board material. 100x38mm softwood frame. heavy duty, high quality sliding door system. 20mm mdf shelf. 50x50mm softwood supporting frame; As per Architect's Detail Drawing 23-16/TD-4503.

Furniture, Furnishings; Sliding storage unit

A	4560mm wide x 450mm deep x 2350mm high	1	nr		

Surface mounted cubicle track, with curtain; As per Architect's Detail Drawing 23-16/TD-4017.

Furniture, Furnishings; Surface mounted cubicle track, with curtain

B	3100mm wide x 2700mm deep	4	nr		

Tracked Hoist System to Pr_65_80_47_04 Assisted transfer hoists; As per Architect's Detail Drawing 23-16/TD-4017.

Furniture, Furnishings; Tracked Hoist System

C	Generally	1	nr		

NURSING STORE (1Nr)

FITTINGS

Fitting, Equipment and Furniture

Lockable Storage cabinet; As per Architect's Detail Drawing 23-16/TD-4504.

Furniture, Furnishings; Storage cabinet

D	2450mm wide x 600mm deep x 2150mm high	1	nr		
E	4285mm wide x 900mm deep x 2150mm high	1	nr		

To Collection €

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
	PHARMACY TECH (1Nr)					
	FITTINGS					
	Fitting, Equipment and Furniture					
	Base storage Unit; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4032.					
	Furniture, Furnishings; Storage Unit					
A	600mm wide x 600mm deep x 860mm high	2	nr			
	Countertop; As per Architect's Detail Drawing 23-16/TD-4032.					
	Furniture, Furnishings; Countertop					
B	Countertop; complete; overall dimension 1200 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr			
	Tall storage unit; 20x15mm mdf top panel. Robust aluminum sliding door. 100x38mm softwood frame. heavy duty, high quality sliding door system. 20mm mdf shelf. 50x50mm softwood supporting frame; As per Architect's Detail Drawing 23-16/ TD-4512.					
	Furniture, Furnishings; Tall storage unit					
C	900mm wide x 600mm deep x 1800mm high	4	nr			
	Pharmacy counter and shelving; As per Architect's Detail Drawing 23-16/TD-4032.					
	Furniture, Furnishings; Pharmacy counter and shelving					
D	2000mm wide x 600mm deep x 900mm high	1	nr			
	Standalone Meeting Pod for consultations - two no. seats and table included in pod; As per Architect's Detail Drawing 23-16/TD-4032.					
	Furniture, Furnishings; Meeting Pod					
E	2200mm wide x 1200mm deep x 2145mm high	1	nr			

To Collection €

(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)

REFREE ROOM (1Nr)

FITTINGS

Fitting, Equipment and Furniture

Timber seating slats; 70x25mm varnished softwood timber seating slats on ms frame painted black mounted to wall stainless steel coat hooks at 450mm c/c mounted on 100x18mm thick mdf with VGS grade laminate over seating; As per Architect's Detail Drawing 23-16/TD-4005.

Furniture, Furnishings; Timber seating slats

A	2075mm wide x 350mm deep	2	nr		

SERVERY ROOM (1Nr)

FITTINGS

Fitting, Equipment and Furniture

5- tier adjustable shelving; As per Architect's Detail Drawing 23-16/TD-4506.

Furniture, Furnishings; Adjustable shelving

B	1285mm wide x 600mm deep	1	nr		
C	2485mm wide x 600mm deep	2	nr		
D	2700mm wide x 600mm deep	1	nr		

Base storage Unit; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4506.

Furniture, Furnishings; Storage Unit

E	600mm wide x 600mm deep x 860mm high	7	nr		

Base storage Unit consisting of double door and countertop; 18mm thick mdf with HGS grade laminate side of shelves to be finished with colour pvc edging to match colour of shelves. 25x50mm softwood carcassing primed and painted in colors to architects selection; As per Architect's Detail Drawing 23-16/TD-4506.

Furniture, Furnishings; Storage Unit with double door and countertop

F	1200mm wide x 600mm deep x 860mm high	2	nr		

(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)

Countertop; As per Architect's Detail Drawing 23-16/TD-4506.

Furniture, Furnishings; Countertop

A	Countertop; complete; overall dimension 2850 x 600 x 860mm high; complete; all in accordance with Architect's Specification	1	nr		

Cooker extract hood; As per Architect's Detail Drawing 23-16/TD-4506.

Furniture, Furnishings; Cooker extract hood

B	Generally	1	nr		

Electric cooker; As per Architect's Detail Drawing 23-16/TD-4506.

Furniture, Furnishings; Electric cooker

C	600mm wide x 600mm deep x 900mm high	1	nr		

Drawer unit 4 nr door and countertop; As per Architect's Detail Drawing 23-16/ TD-4506.

Furniture, Furnishings; Drawer unit

D	500mm wide x 600mm deep x 860mm high	1	nr		

High level Storage Shelving unit; As per Architect's Detail Drawing 23-16/ TD-4506.

Furniture, Furnishings; Shelving unit

E	758mm wide x 300mm deep x 600mm high	2	nr		

SOCIAL SPACE ROOM (1Nr)

FITTINGS

Fitting, Equipment and Furniture

Polly pods - Platinum 4 Seat High wall booth with table with power and charging options; As per Architect's Detail Drawing 23-16/TD-4015.

Furniture, Furnishings; Polly pods

F	1200mm wide x 800mm deep x 710mm high	3	nr		

To Collection €

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
	Polly pods - Platinum 2 Seat High wall booth with table with power and charging options; As per Architect's Detail Drawing 23-16/TD-4015.					
	Furniture, Furnishings; Polly pods					
A	1200mm wide x 575mm deep x 710mm high	2	nr			
	STAFF OFFICE ROOM (1Nr)					
	FITTINGS					
	Lockable Storage Cabinets; As per Architect's Detail Drawing 23-16/TD-4505.					
	Furniture, Furnishings; Lockable Storage Cabinets					
B	2700mm wide x 600mm deep x 2400mm high	1	nr			
	CHANGING PLACE TOILET (1Nr)					
	FITTINGS					
	Tracked Hoist System to Pr_65_80_47_04 Assisted transfer hoists; As per Architect's Detail Drawing 23-16/TD-4019.					
	Furniture, Furnishings; Tracked Hoist System					
C	Generally	1	nr			
	FEMALE CHANGING SHOWER (2Nr)					
	FITTINGS					
	Timber seating slats; 70x25mm varnished softwood timber seating slats on ms frame painted black mounted to wall stainless steel coat hooks at 450mm c/c mounted on 100x18mm thick mdf with VGS grade laminate over seating; As per Architect's Detail Drawing 23-16/TD-4007.					
	Furniture, Furnishings; Timber seating slats					
D	800mm wide x 350mm deep	2	nr			
E	1135mm wide x 350mm deep	2	nr			
F	1300mm wide x 350mm deep	2	nr			
G	1700mm wide x 350mm deep	2	nr			
				To Collection €		

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	(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
A	1900mm wide x 350mm deep	2	nr			
B	1950mm wide x 350mm deep	2	nr			
C	2700mm wide x 350mm deep	2	nr			
D	4300mm wide x 350mm deep	2	nr			
E	4500mm wide x 350mm deep	2	nr			
F	6135mm wide x 350mm deep	2	nr			
G	7500mm wide x 350mm deep	2	nr			
H	7750mm wide x 350mm deep	2	nr			
	MALE CHANGING SHOWER (2Nr)					
	FITTINGS					
	Timber seating slats; 70x25mm varnished softwood timber seating slats on ms frame painted black mounted to wall stainless steel coat hooks at 450mm c/c mounted on 100x18mm thick mdf with VGS grade laminate over seating; As per Architect's Detail Drawing 23-16/TD-4003.					
	Furniture, Furnishings; Timber seating slats					
J	800mm wide x 350mm deep	4	nr			
K	1500mm wide x 350mm deep	4	nr			
L	2205mm wide x 350mm deep	4	nr			
M	2350mm wide x 350mm deep	4	nr			
N	7535mm wide x 350mm deep	4	nr			
P	7660mm wide x 350mm deep	4	nr			
	UNISEX WC (1Nr)					
	FITTINGS					
	2- tier adjustable shelving; As per Architect's Detail Drawing 23-16/TD-4506.					
	Furniture, Furnishings; Adjustable shelving					
Q	2150mm wide x 350mm deep	1	nr			

To Collection €

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(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE (Cont)					
COLLECTION					
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(76) STORAGE, SCREENING FITTINGS - FITTED FURNITURE **Carried to Summary**					

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SITEWORKS

					€	c
	(10) SITE PREPARATION					
	DEMOLITIONS AND ALTERATIONS					
	GENERAL					
A	THE ONUS IS ON THE CONTRACTOR TO VISIT THE SITE OF THE WORKS AND TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF THE WORKS AND ALL OTHER MATTERS THAT MIGHT INFLUENCE HIS PRICE OR TIME FOR COMPLETION OF THE WORKS (ARRANGEMENTS TO VISIT THE SITE SHOULD BE MADE WITH THE EMPLOYER'S REPRESENTATIVE). THE CONTRACTOR MUST INCLUDE WITHIN HIS PRICE FOR ALL WORKS IN CONNECTION WITH THE DEMOLITION WORKS AND WORKS TO THE EXISTING BUILDINGS, WHICH COULD BE REASONABLY FORESEEN OR IMPLIED BY THE TENDER DOCUMENTS. NO CLAIMS ON THE GROUNDS OF WANT OF KNOWLEDGE IN RESPECT OF THE ABOVE WILL BE ENTERTAINED WHATSOEVER.	1	item			
B	All demolition work is to be carried out in accordance with BS 6187 and the Health and Safety Executive Guidance Notes GS29/1, 3 and 4; All operatives must be appropriately skilled and experienced for the type of work and must hold or be training to obtain relevant CITB Certificates of Competence; All site staff responsible for supervision and control of work are to be experienced in the assessment of the risks involved and in the methods of demolition to be used.	1	item			
C	Demolition work is to be entrusted only to workmen with experience in this type of work, and all precautions must be taken to avoid accidents and to safeguard persons and property.	1	item			
D	All excess builders rubble, topsoil, demolished materials etc, that is to be disposed off site, must be disposed in a licensed landfill site approved by the local authority.	1	item			
E	The Contractor shall provide and maintain all necessary temporary fencing, hoarding, fans, planked footways, gaurdrails, gantries and the like for the protection of the Public and meeting the requirements of the Local Authority.	1	item			
F	The Contractor is to include for all necessary scaffolding, hoisting and other facilities required for carrying out the works. Contractor also to make provisions for adequately supporting all structures if required.	1	item			
G	The Contractor should include herein for all costs associated with obtaining the appropriate licences, as these must be undertaken prior to any works being carried out	1	item			
H	The Contractors attention is drawn to the presence of existing services; due care must be taken when excavating in the proximity of existing buildings and boundaries	1	item			
J	When pricing the following items, the Contractor's attention is drawn to the information contained in the Works Requirements & Appendices of this Pricing Document. The Contractor's rates are to include for all items specifically referred to or implied therein. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.	1	item			
				To Collection €		

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	(10) SITE PREPARATION (Cont)					
A	The Contractor must provide a method statement to the Architect for approval, outlining in detail the manner in which he proposes to carry out the removal of the asbestos materials contained within the site.	1	item			
B	The Contractor shall report to the Employer's Representative any bench marks or other survey information found on any structures that are to be demolished; any bench marks or information found must not be removed or destroyed unless instructed by the Employer's Representative	1	item			
C	The Contractor must note that any work carried out to or which affects new or existing services must be in accordance with the byelaws or regulations of the relevant statutory authority	1	item			
D	The Contractor should include herein for all costs associated with the locating and marking the positions of services affected by the demolition work; Contractor shall arrange with the appropriate authorities for the locating and marking of the positions of the mains services	1	item			
E	The Contractor must arrange with the appropriate authorities, before demolition is commenced, for the disconnection of services and removal of fixtures, fittings, furniture and equipment	1	item			
F	The Contractor must take adequate precautions to prevent fire or explosion caused by gas or vapour	1	item			
G	The Contractor must reduce dust by periodically spraying general demolition works with water during any alteration works to masonary etc.	1	item			
H	The Contractor must take adequate precautions to protect site operatives and the general public from health hazards associated with dangerous fumes and dust arising during the course of the works	1	item			
J	The Contractor should include herein for all costs associated with the temporary support and protection of adjoining property and buildings; Contractor must repair any damage caused at his own expense; Contractor must not leave any unnecessary or unstable projections and report any exposed or apparent defects to the Employer's Representative	1	item			
K	The Contractor must illuminate and protect and dangerous openings as necessary	1	item			
L	The Contractor should include herein for all costs associated with the removal of any timber infected by fungal/insect attack; the timber must be removed from the building and destroyed as soon as possible	1	item			
M	The Contractor must include herein for submitting to the Architect / Engineer, prior to commencement, the order and method of each operation. This is to include proposed methods of propping, shoring, protection of adjoining properties, areas, etc.	1	item			
N	The demolition shall be carried out without damage to adjoining properties. If such damage should occur, the Contractor shall reinstate and make good at his own expense.	1	item			

To Collection €

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	(10) SITE PREPARATION (Cont)					
A	The Contractor shall ensure the safety of works and public during demolition works. Demolition work should be carried out so as to cause minimum inconvenience to the public and to adjoining owners.	1	item			
B	The Contractor shall include herein for clearly indicating, in writing, the manner of demolition i.e. machine, mechanical tools, piece by piece hand method etc. for each area	1	item			
C	The Contractor must note that no method of demolition which will transmit vibration into adjoining properties shall be permitted.	1	item			
D	The contractor must peruse the Architects and Engineers drawings and check all dimensions on site. No claim on the grounds of discrepancies between on site dimensions and drawings, in regards to demolition and associated works, will be entertained whatsoever.	1	item			
E	The contractor must include herein for ensuring that all services, electricity, gas, telecomunications, water, sewage, etc., are made safe prior to demolition	1	item			
F	The contractor is to report to the Architect / Engineer details of any underground chambers, vaults, walls, etc., discovered during demolition work.	1	item			
G	The contractor must prevent access to unauthorised persons to partly demolished structures and must leave the site safe at close of each days work.	1	item			
H	Care must be taken to prevent debris from overloading any part of the structure	1	item			
J	The Contractor shall ensure that the impact of the works on the surroundings are in accordance with the set maximum levels for vibration and noise as defined in the guidelines presented in the relevant codes of practice.	1	item			
	DEMOLITIONS AND ALTERATIONS					
	General Information					
	Information					
K	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved for works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications		note			
L	The Contractors attention is drawn to the presence of existing services; due care must be taken when excavating in the proximity of existing buildings and boundaries		note			
M	The following demolition works include for disposal off-site of debris material		note			
				To Collection €		

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	(10) SITE PREPARATION (Cont)					
	DEMOLITIONS AND ALTERATIONS - SITE CLEARANCE					
	General Clearance					
A	Existing mesh fence and associated gate to be demolished and removed off-site; approx. height: 2400mm: approximately 210m long; include for grubbing up and disposal of existing concrete footings and backfilling with Grade C16/ 20 S3 lean mix to Engineer's satisfaction; disposal of all materials off-site; Tendering Contractor to visit the site in accordance with the Invitation To Tender to assess the full extent of the works to be completed. No claims on the grounds of want of knowledge will be entertained whatsoever; refer to Engineers Drawings	1	item			
B	Existing Double Gates to football pitch to be demolished carefully, stored and then re-used (measured elsewhere); approx. size: 2250mm wide x 2400mm high; include for grubbing up and disposal of existing concrete footings and backfilling with Grade C16/20 S3 lean mix to Engineer's satisfaction; disposal of all materials off-site; Tendering Contractor to visit the site in accordance with the Invitation To Tender to assess the full extent of the works to be completed. No claims on the grounds of want of knowledge will be entertained whatsoever; refer to Engineers Drawings	2	nr			
	ALTERATIONS					
	Removing					
	Plumbing and Engineering Installations					
C	Removal and disposal of existing storm manholes (2 No.); include grubbing up, removal of covers and disposal offsite; backfilling with Grade C16/20 S3 lean mix to Engineer's satisfaction; price should be based on 2000mm - 2500mm deep; refer to Engineers Drawings	1	item			
D	Removal, disposal, making good and backfilling existing storm lines/ sewer runs throughout the proposed site; include for grubbing up and disposal of all pipework; 225mm dia. cast iron pipe; pipe length; Approx 32m; include fittings, etc.; include for disposal & making good where necessary; backfilling with Grade C16/20 S3 lean mix to Engineer's Satisfaction; price should be based on 2000mm - 2500mm deep; complete; refer to Engineers Drawings	1	item			
E	Removal and disposal of existing foul manholes (2 No.); include grubbing up, removal of covers and disposal offsite; backfilling with Grade C16/20 S3 lean mix to Engineer's satisfaction; price should be based on 2000mm - 2500mm deep; refer to Engineers Drawings	1	item			
F	Removal, disposal, making good and backfilling existing foul lines/ sewer runs throughout the proposed site; include for grubbing up and disposal of all pipework; 150mm dia. cast iron pipe; pipe length; Approx 60m; include fittings, etc.; include for disposal & making good where necessary; backfilling with Grade C16/20 S3 lean mix to Engineer's Satisfaction; price should be based on 2000mm - 2500mm deep; complete; refer to Engineers Drawings	1	item			
				To Collection €		

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	(10) SITE PREPARATION (Cont)					
A	Removal, disposal, making good and backfilling existing watermain pipe throughout the proposed site; include for grubbing up and disposal of all pipework; 150mm dia. cast iron pipe; pipe length; Approx 25m; include fittings, etc.; include for disposal & making good where necessary; backfilling with Grade C16/20 S3 lean mix to Engineer's Satisfaction; complete; refer to Engineers Drawings	1	item			
B	Removal, disposal, making good and backfilling all existing site services installations - electrical installations (above and below ground); power Ducts; Length: 28m; Diameter: 100mm; throughout the proposed site; include for grubbing up and disposal of all ducting, fittings, valves, junctions, covers, junction boxes, pits, manholes, tanks, meters, etc.; include for disposal & making good where necessary; backfilling with Grade C16/20 S3 lean mix to Engineer's Satisfaction; complete; Tendering Contractor to visit the site in accordance with the Invitation To Tender to assess the full extent of the works to be completed. No claims on the grounds of want of knowledge will be entertained whatsoever; Contractor to assess existing drainage on site before pricing this item; refer to M&E Engineers Drawings	1	item			
	EXCAVATION AND EARTHWORK					
	Excavation					
	Removing					
	Trees					
C	Girth 0.45 - 1.5m	3	nr			
D	Girth 1.5 - 3.0m	5	nr			
	Hedges					
E	Generally	40	m			
	Site vegetation					
F	Generally, scrub, vegetation etc., disposing off-site	3,639	m2			
	Excavation					
	Topsoil for preservation					
G	Average depth approx. 200mm	3,639	m2			
	Reduce levels					
H	Depth not exceeding 2.00m	2,430	m3			

To Collection €

					€	c
	(10) SITE PREPARATION (Cont)					
	Extra on Excavation Items for:					
	Breaking up existing					
A	Reinforced Concrete; Concrete slab; 100mm; complete; include for associated concrete kerbs	31	m3			
B	Hard surfaces; Tarmacadam surface; 140mm thick; complete	282	m2			
	Disposal					
	Water					
C	Surface	1	item			
D	Ground	1	item			
	Topsoil					
E	Disposal off site	728	m3			
	Excavated material; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Disposal off site	926	m3			
G	Disposal off site; made ground material; Disposal to an inert waste licensed landfill	1,433	m3			
H	Disposal off site; existing concrete; Disposal to a suitable licensed waste disposal facility	31	m3			
J	Disposal off site; existing Tarmac; Disposal to a suitable licensed waste disposal facility	40	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
K	Average thickness exceeding 250mm	39	m3			
	Filling with excavated material to be obtained from off site spoil heaps; depositing and compacting as specified by the Employer's Representative					
	To make up levels					
L	Average thickness exceeding 250mm	15	m3			
				To Collection €		

					€	c
	(10) SITE PREPARATION (Cont)					
	WORK OUTSIDE THE BOUNDARY OF THE SITE					
	Extra Over For: -					
A	A portion of the works in this section are outside the boundary of the site; see Architect's & Engineer's Drawings	1	item			

To Collection €

				€	c
(10) SITE PREPARATION (Cont)					
COLLECTION					
Page No. Siteworks/1					
Page No. Siteworks/2					
Page No. Siteworks/3					
Page No. Siteworks/4					
Page No. Siteworks/5					
Page No. Siteworks/6					
Page No. Siteworks/7					
(10) SITE PREPARATION **Carried to Summary**					

					€	c
	(30) SITE ENCLOSURES - MESH FENCING					
	SURFACE PAVINGS, FENCING AND LANDSCAPING					
	Metal post and rail fencing systems New Entrance Gates and Railing; Description: Powder coated mild steel new entrance gates and railings; Product; Vehicular gate: 150 x 150 mm powder coated mild steel hollow support posts, set into concrete foundation as per manufacturer#s instructions; 15 mm diameter solid powder coated mild steel vertical members at 100 mm centres fixed to 100 x 75 mm galvanised mild steel hollow section frame; Size: Gate 6000 mm wide, gate and railing 1800 mm high above ground level, refer to Architect#s drawings; Accessories: 20 mm diameter case hardened barrel bolt and receiver with Chubb shackle padlock, 2 no. 20 mm diameter case hardened drop bolts and receivers, 150 x 150 x 100 mm deep hinged bolt receiver and slamming plate, galvanised spud blocks set in concrete to hold gates in the open position; Pedestrian gate: 80 mm diameter powder coated mild steel hollow support posts (to match existing), set into concrete foundation as per manufacturer#s instructions; 15 mm diameter solid powder coated mild steel vertical members at 100 mm centres fixed to 50 x 10 mm galvanised mild steel flat plate frame; Accessories: 20 mm diameter case hardened barrel bolt and receiver; Rails: 80 mm diameter powder coated mild steel hollow support posts (to match existing), set into concrete foundation as per manufacturer#s instructions; 15 mm diameter solid powder coated mild steel vertical members at 100 mm centres fixed to 50 x 10 mm galvanised mild steel flat plate frame; System manufacturer: Contractor to submit proposals, complete with drawings and certification; Execution: Ss_25_14_63/605 Alignment of fences; Ss_25_14_63/607 Fencing work generally; include for all necessary end posts, corner posts, fixings, caps, clips, security screws, excavation, disposal, backfilling, concrete footing, mesh reinforcement, formwork and fixings; all in accordance with the Architect's Specification Ss_25_14_63_51 and Drawing 0103					
	Open Mesh Steel Panel Fencing System					
A	2100mm high above ground level	41	m			
	Extra over for					
B	Angle posts; 60x60x2 SHS posts, 2100mm high above ground level and 900mm below ground level; set in 450x450x600mm deep concrete grade C28/35 base	1	nr			
C	End posts; 60x60x2 SHS posts, 2100mm high above ground level and 900mm below ground level; set in 450x450x600mm deep concrete grade C28/35 base	8	nr			
	Gates					
D	Double gate; opening size approx 6000 x 2100mm high	1	nr			
				To Collection €		

					€	c
	(30) SITE ENCLOSURES - MESH FENCING (Cont)					
	100x100x10 SHS hot dipped galvanised SHS powder coated post; gate posts set in 1000x1000x1000mm C28/35 concrete pocket; top of concrete 300mm below ground level; galvanised to Architect Specification and polyester powder coating to Architects Specification in selected colour, colour to be chosen by the Architect from samples provided on site by the Contractor; complete					
	Gate Posts					
A	100 x 100 SHS posts; 2100mm high above ground level and 900mm below ground level; min 600mm embedment in concrete	2	nr			
				To Collection €		

				€	c
(30) SITE ENCLOSURES - MESH FENCING (Cont)					
COLLECTION					
Page No. Siteworks/9					
Page No. Siteworks/10					
(30) SITE ENCLOSURES - MESH FENCING **Carried to Summary**					

					€	c
	(30) SITE ENCLOSURES - ASHP COMPOUND					
	EXCAVATION AND EARTHWORK					
	General Information					
	Information					
A	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved for works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications		note			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
	Excavation					
	Excavation					
	Filling with hardcore to be obtained off-site; Clause 804 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
C	Average thickness exceeding 250mm	21	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
D	Average thickness exceeding 250mm	14	m3			
	Surface treatments					
	Levelling and compacting; bottom of excavations					
E	Horizontal	92	m2			
				To Collection €		

					€	c
	(30) SITE ENCLOSURES - ASHP COMPOUND (Cont)					
	CONCRETE WORK					
	In-situ Concrete					
	Concrete cubes for testing					
	Provide for making concrete cubes from freshly mixed concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification					
A	Size 150 x 150 x 150mm	6	nr			
	In-situ Concrete; Reinforced					
	Grade C30/37					
	Beds					
B	Generally; Reinforced	37	m3			
	Reinforcement					
	Fabric					
	A393 mesh reinforcement; 350mm laps; 350mm end laps; all in strict accordance with the Engineers Drawings and Specification					
C	Horizontal	92	m2			
	Formwork					
	Formwork Generally					
	Sides of beds					
D	Height or width 250 - 500mm	54	m			
E	Extra over for forming recess in floor slab for district heating pipe; comprising 110mm dia x 400mm deep recess; include for cutting to all angles and corners	10	nr			
				To Collection €		

					€	c
	(30) SITE ENCLOSURES - ASHP COMPOUND (Cont)					
	SURFACE PAVINGS, FENCING AND LANDSCAPING					
	Fencing					
	Precast concrete post and panel fencing systems Heat Pump Enclosure; Description: Concrete post and timber panel fence to heat pump enclosure; System manufacturer: Contractor to submit proposals; Posts: Concrete H posts at max 1800 mm centres, 1800 mm high above ground level, concrete H posts set into concrete base as per manufacturer#s instructions; Posts cast into 450x450x600mm deep concrete grade C28/35 base, starting 300mm below ground level; posts embedded 600mm minimum into foundation; Panels: Sitka spruce, 100 mm x 16 mm pressure treated round top hit and miss vertical timber panels (double sided), 1500 mm high, fixed to 3 no. 70 mm x 30 mm pressure treated horizontal battens; Finish: At least 2 coats zinc-rich paint; Base panels: 50 mm x 300 mm x 1800 mm concrete base panels; Gate: Sitka spruce, 100 mm x 16 mm pressure treated round top hit and miss vertical timber panels (double sided), 1800 mm high, fixed to 3 no. 70 mm x 30 mm pressure treated horizontal battens, with 100 mm x 100 mm pressure treated timber posts; Finish: At least 2 coats zinc-rich paint; Accessories: 3 no. stainless steel heavy duty scotch tee hinges, stainless steel bolt and rim lock; Execution: Ss_25_14_63/605 Alignment of fences; Ss_25_14_63/607 Fencing work generally; Ss_25_14_63/614 Formation of holes for cast-in fence posts; Ss_25_14_63/616 Compacted hardcore settings for fence posts; System completion: Ss_25_14_63/870 Inspection of fencing systems; include for all necessary end posts, corner posts, fixings, caps, clips, security screws, excavation, disposal, backfilling, concrete footing, mesh reinforcement, formwork and fixings; all in accordance with the Architect's Specification Ss_25_14_63_65 and Drawing 103					
	Concrete Post and Timber Panel fencing system					
A	1800mm high above ground level	54	m			
	Gates					
B	Single gate; opening size approx 1187 x 1800mm high	3	nr			

To Collection €

				€	c
(30) SITE ENCLOSURES - ASHP COMPOUND (Cont)					
COLLECTION					
Page No. Siteworks/12					
Page No. Siteworks/13					
Page No. Siteworks/14					
(30) SITE ENCLOSURES - ASHP COMPOUND **Carried to Summary**					

					€	c
	(30) SITE ENCLOSURES - RETAINING WALLS					
	EXCAVATION AND EARTHWORK					
	General Information					
	Information					
A	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved for works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications		note			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
	Excavation					
	Excavation					
	Foundation Trenches					
C	Depth not exceeding 2.00m	96	m3			
	Soft spots					
D	Depth not exceeding 2.00m	5	m3			
	Working Space					
	Foundations					
E	Depth not exceeding 2.00m; backfilling trenches with clause 804 hardcore compliant with SR21 Annex E	71	m2			
	Disposal					
	Water					
F	Surface	1	item			
G	Ground	1	item			
	Excavated material; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
H	Disposal Off-site	96	m3			
J	Disposal Off-site; for soft spots	5	m3			
				To Collection €		

					€	c
	(30) SITE ENCLOSURES - RETAINING WALLS (Cont)					
	Filling with hardcore to be obtained off-site; Clause 804 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
A	Average thickness exceeding 250mm	48	m3			
	Surface treatments					
	Levelling and compacting; bottom of excavations					
B	Horizontal	48	m2			
	CONCRETE WORK					
	In-situ Concrete					
	Concrete cubes for testing					
	Provide for making concrete cubes from freshly mixed concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification					
C	Size 150 x 150 x 150mm	4	nr			
	Grade C12/15					
	Bulk filling to soft spots					
D	Generally; poured on or against earth or unblinded hardcore	5	m3			
	Blinding					
E	Generally; poured on or against earth or unblinded hardcore	3	m3			
	In-situ Concrete; Reinforced					
	Structural concrete; designed concrete; Strength class C40/50; exposure class XC2 to I.S. EN 206 and the Irish National Annex; nominal maximum aggregate size Dmax 20 mm; GGBS addition complying with I.S. EN 15167-1:2006 and providing not less than 30% Portland-cement clinker replacement by mass; CEM I-only concrete not permitted except where prior written approval is obtained in accordance with the specified supply-chain contingency provisions; all in accordance with drawing 230079-X-95-X-F01-DR-SE-7000, Engineer's Specification Clause 4.3.1, Engineer's Specification Table 4.11-2 and the Concrete Work Project-Specific Preamble					
	Foundations					
F	Generally; Reinforced	15	m3			

					€	c
	(30) SITE ENCLOSURES - RETAINING WALLS (Cont)					
	Reinforcement					
	Fabric					
	A393 mesh reinforcement; 350mm laps; 350mm end laps; all in strict accordance with the Engineers Drawings and Specification					
A	Horizontal	48	m2			
	Formwork					
	Formwork; Design and construction of falsework and formwork shall be in accordance with C & S Specification; Type A Finish;This finish is obtained by the use of properly designed formwork or moulds of timber, plywood, plastics, concrete or steel. Small blemishes caused by entrapped air or water may be expected, but the surface should be free from voids, honeycombing and other blemishes.; All as per accordance with Engineer's Drawings and Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 P01 Section 4.21 & 4.22 & 4.27					
	Sides of foundations					
B	Height or width 250 - 500mm	105	m			
	Precast Concrete					
	PRECAST CAPPINGS GENERALLY; Concrete: Components manufacturer's 'proprietary' concrete; Identity: Submit labelled sample; Evidence: Submit third party certification from a UKAS accredited laboratory; Exposure class: N/A; Reinforced components: Submit proposals for type of reinforcement and cover; Matching sample for finish to visible faces: As reference sample; Other requirements: Lay on a full bed of mortar to line and level; Joints are to be equally spaced with sections at opposite ends of wall to be equal in size no less than half the full size of a full coping section; Copings to be mechanically fixed down to wall below, with fixings to contractor's design, and loadings as per Engineer's specification; Forward proposals for joints to architect prior to fabrication of copings/cappings; Coping/Capping DPCs; Placement: Bed in one operation to ensure maximum bond between masonry units, mortar and dpc; Dpcs crossing cavity: Provide rigid support to prevent sagging; All cappings to boundary walls to be vandal-proof cappings to CA approval (Fixing system and Products to be Agrement Certified) unless otherwise clearly shown as in-situ cappings; as per Architect's Drawings & Specification					
	Copings					
C	300 x 50mm; top of walls	53	m			

(30) SITE ENCLOSURES - RETAINING WALLS (Cont)

BRICKWORK AND BLOCKWORK

Blockwork

Aggregate concrete blocks; Manufacturer: To Structural Engineers Specification. Standard: To BS EN 771-3. Block description: To Structural Engineers Specification. Compressive strength: 13N, Characteristic value: To Structural Engineers Specification. Thermal conductivity: To I.S. EN 1745 Masonry and masonry products-Methods for determining design thermal values. table A3. Reaction to fire: Class A1. Euro code 6 # I.S. EN 1996 Design of Masonry Structures # Part 1-2: General Rules Structural Fire Design, defines the methods and calculations to determine the fire resistance of concrete block walls. Execution: Pr_20_93_52/625 Brickwork and blockwork appearance; Pr_20_93_52/690 Laying brick and block masonry units generally; Pr_20_93_52/635 Brickwork and blockwork pointing; Pr_20_93_52/630 Brickwork and blockwork bond; As per Architects Specification Pr_20_93_52_01.

Walls in trench

A	215mm thick	13	m2		
B	440mm thick	41	m2		

Labours

C	On blockwork	1	item		

Cutting holes

D	35mm diameter weep holes; through 440mm thick block concrete wall	35	nr		

Ancillaries to Brickwork / Blockwork

MOVEMENT JOINTS WITH SEALANT TO EXTERNAL CONCRETE BLOCKWORK; Joint preparation and sealant application: As section Z22; Filler: Closed cell polyethylene foam; Thickness: To match design width of joint; Manufacturer: Contractor's choice to be approved; Product reference: Contractor's choice to be approved; Placement: Build in as work proceeds with no projections into cavities and to correct depth to receive sealant system; Sealent: Manufacturer: Contractor's choice to be approved; Product reference: Contractor's choice to be approved; Colour: To match adjoining blockwork; Ties: slip ties to be at max vertical spacing of 225mm and horizontal spacing of 200mm centred around movement joint; wall ties to be at max vertical spacing of 225mm and horizontal spacing of 225mm centred around movement joint; all in accordance with Architects Drawings and Specification & Engineers Drawing

Designed Joints

E	Generally	11	m		

					€	c
	(30) SITE ENCLOSURES - RETAINING WALLS (Cont)					
	METALWORK					
	Non-Structural					
	Flat Top Railing; Height: 1100mm; 50x15mm galvanised mild steel top plate with factory primer and finished on site in two coats selected paint finish, bolted to uprights with M10 cup head square bolts as per Engineers details; 50x50mm galvanised mild steel box section posts with factory primer and finished on site in two coats selected paint finish, bolted to concrete base as per Engineers details; 13mm diameter galvanised mild steel balusters with factory primer and finished on site in two coats selected paint finish at 100mm centres, welded to G.S. horizontal flats as per Engineers details; include for all necessary end posts, corner posts, fixings, caps, clips, security screws, excavation, disposal, backfilling, concrete footing, mesh reinforcement, formwork and fixings; all in accordance with the Architect's Specification and Drawing					
	Composite Items; Railings					
A	1100mm high above top of wall level	53	m			
	DRAINAGE					
	Below Ground					
	Pea Gravel fill bed and surround; granular side and fill cover to be placed uniformly on either side of the pipe in layers not exceeding 150mm, each layer being compacted by hand and tamping until the pipe has a minimum 150mm compacted cover; as per Engineer's Drawings DG0010-01 & Specification					
	Beds and Surround					
B	300 x 300mm to 100mm diameter pipe	53	m			
	Pipework; land drain pipe					
	Pipes; perforated; PVC SN8 pipework and fittings; as per Engineer's Drawings & Specification					
C	100mm diameter; include for geotextile cloth wrapping for protection	53	m			

(30) SITE ENCLOSURES - RETAINING WALLS (Cont)

FLOOR, WALL AND CEILING FINISHES

In-situ Finishes

Multicoat render systems; Description: Render finish to external leaf of external walls. System performance: Ss_25_45_70/210 Resistance to rain penetration; Ss_25_45_70/220 Compressive strength; Ss_25_45_70/230 Thermal conductivity; Ss_25_45_70/236 Performance of factory mixed rendering mortar; Ss_25_45_70/295 Compliance with performance requirements. Standard: To BS EN 13914-1. Substrate preparation: Pr_35_31_66_09 Bonding coats; Pr_35_31_64_12 Cementitious renders. First undercoat: Ss_25_45_70/630 Site mixed rendering mortar. Second undercoat: Ss_25_45_70/630 Site mixed rendering mortar. Final coat: Ss_25_45_70/630 Site mixed rendering mortar. Beads: Pr_35_90_07_72 Render beads. Sealant movement joints: Beads: Pr_35_90_07_72 Render beads. Fixings: Stainless steel screws. Sealant: Pr_30_31_76_77 Silicone construction joint sealants. Samples required: Ss_25_45_70/305 Product samples. System completion: Ss_25_45_70/820 Defective areas; Ss_25_45_70/895 Verification of performance; As per Architect's Specification Ss_25_45_70_55.

Walls

A	Exceeding 300mm wide; to blockwork	37	m2		

Beads/ stops for External Use, Material: PVC-U. Form: Angle bead. Movement bead. Stop bead (standard wing). Stop bead (bell cast). To suit render depth: 19 mm. Colour: White; fixed in strict accordance with the Architect's Drawings and Specification Pr_35_90_07_72 & Pr_35_90_07/650

Sundries

B	External Corner Beads at openings; Horizontal	105	m		
C	External Corner Beads at openings; Vertical	10	m		
D	Stop Beads; Horizontal	105	m		
E	Stop Beads; Vertical	10	m		
F	Stop Bead fixed to base of render at ground in accordance with manufacturers instructions	105	m		

To Collection €

					€	c
	(30) SITE ENCLOSURES - RETAINING WALLS (Cont)					
	PAINTING AND DECORATING					
	Painting					
	Water-based masonry paints; Description: Painting to external walls generally. Manufacturer: Dulux Trade, brand of AkzoNobel. Product reference: Weather shield Maximum Exposure Smooth Masonry Paint. Texture: Smooth. Additives: Fungicide. Execution: Applying coating. Form: Liquid. Texture: Smooth. Colour: To be agreed with ER; As per Architect's Specification Pr_35_31_22_96.					
	Walls; to rendered blockwork; Colour- White					
A	Exceeding 300mm wide	37	m2			
				To Collection €		

				€	c
(30) SITE ENCLOSURES - RETAINING WALLS (Cont)					
COLLECTION					
Page No. Siteworks/16					
Page No. Siteworks/17					
Page No. Siteworks/18					
Page No. Siteworks/19					
Page No. Siteworks/20					
Page No. Siteworks/21					
Page No. Siteworks/22					
(30) SITE ENCLOSURES - RETAINING WALLS **Carried to Summary**					

					€	c
	(30) SITE ENCLOSURES - PLANTER WALLS					
	EXCAVATION AND EARTHWORK					
	General Information					
	Information					
A	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved for works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications		note			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
	Excavation					
	Excavation					
	Foundation Trenches					
C	Depth between not exceeding 2.00m	6	m3			
	Soft spots					
D	Depth between not exceeding 2.00m	1	m3			
	Working Space					
	Foundations					
E	Depth between not exceeding 2.00m; backfilling trenches with clause 804 hardcore compliant with SR21 Annex E	13	m2			
	Disposal					
	Water					
F	Surface	1	item			
G	Ground	1	item			
	Excavated material; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
H	Disposal On-site	3	m3			
J	Disposal Off-site	3	m3			
				To Collection €		

					€	c
	(30) SITE ENCLOSURES - PLANTER WALLS (Cont)					
A	Disposal Off-site; for soft spots	1	m3			
	Filling with material to be obtained on-site; as per Engineer's Specification; compacted as per Engineer's Specification					
	To excavations					
B	Average thickness exceeding 250mm	3	m3			
	Surface treatments					
	Levelling and compacting; bottom of excavations					
C	Horizontal	8	m2			
	CONCRETE WORK					
	In-situ Concrete					
	Concrete cubes for testing					
	Provide for making concrete cubes from freshly mixed concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification					
D	Size 150 x 150 x 150mm	1	nr			
	Grade C12/15					
	Bulk filling to soft spots					
E	Generally; poured on or against earth or unblinded hardcore	1	m3			
	Blinding					
F	Generally; poured on or against earth or unblinded hardcore	1	m3			
	In-situ Concrete; Reinforced					
	Structural concrete; designed concrete; Strength class C40/50; exposure class XC2 to I.S. EN 206 and the Irish National Annex; nominal maximum aggregate size Dmax 20 mm; GGBS addition complying with I.S. EN 15167-1:2006 and providing not less than 30% Portland-cement clinker replacement by mass; CEM I-only concrete not permitted except where prior written approval is obtained in accordance with the specified supply-chain contingency provisions; all in accordance with drawing 230079-X-95-X-F01-DR-SE-7000, Engineer's Specification Clause 4.3.1, Engineer's Specification Table 4.11-2 and the Concrete Work Project-Specific Preamble					
	Foundations					
G	Generally; Reinforced	3	m3			

					€	c
	(30) SITE ENCLOSURES - PLANTER WALLS (Cont)					
	Reinforcement					
	Fabric					
	A393 mesh reinforcement; 350mm laps; 350mm end laps; all in strict accordance with the Engineers Drawings and Specification					
A	Horizontal	8	m2			
	Formwork					
	Formwork; Design and construction of falsework and formwork shall be in accordance with C & S Specification; Type A Finish;This finish is obtained by the use of properly designed formwork or moulds of timber, plywood, plastics, concrete or steel. Small blemishes caused by entrapped air or water may be expected, but the surface should be free from voids, honeycombing and other blemishes.; All as per accordance with Engineer's Drawings and Specification 230079-X-X-X-XX-SP-DBFL-SE-0001 P01 Section 4.21 & 4.22 & 4.27					
	Sides of foundations					
B	Height or width not exceeding 250mm	17	m			
	BRICKWORK AND BLOCKWORK					
	Brickwork					
	Clay bricks; Description: Clay Facing Bricks. Manufacturer: Ibstock Brick Ltd. Product reference: Staffordshire Blue Brindle Smooth - Clay bricks. Standard: To BS EN 771-1. Brick description: Facing brick. Work size (length x width x height): 215 x 102 x 65 mm. Tolerances Mean value: T2. Range: R1. Compressive strength Mean compressive strength (minimum): 75 N/mm2. Durability designation: F2-S2. Density Gross dry: 1650 kg/m3. Water absorption: 7%. Configuration: Vertically perforated. Thermal conductivity: 1.19 K. Appearance: Brick Colour To Match Existing External grey concrete blocks. Work size (length x width x height): 215 x 102 x 65 mm; As per Architects Specification Pr_20_93_52_15.					
	Walls					
C	100mm thick	5	m2			
D	Extra over for 215mm wide brick soilder course capping	8	m			
	Labours					
E	On brickwork	1	item			

(30) SITE ENCLOSURES - PLANTER WALLS (Cont)

Blockwork

Aggregate concrete blocks; Manufacturer: To Structural Engineers Specification. Standard: To BS EN 771-3. Block description: To Structural Engineers Specification. Compressive strength: 13N, Characteristic value: To Structural Engineers Specification. Thermal conductivity: To I.S. EN 1745 Masonry and masonry products-Methods for determining design thermal values. table A3. Reaction to fire: Class A1. Euro code 6 # I.S. EN 1996 Design of Masonry Structures # Part 1-2: General Rules Structural Fire Design, defines the methods and calculations to determine the fire resistance of concrete block walls. Execution: Pr_20_93_52/625 Brickwork and blockwork appearance; Pr_20_93_52/690 Laying brick and block masonry units generally; Pr_20_93_52/635 Brickwork and blockwork pointing; Pr_20_93_52/630 Brickwork and blockwork bond; As per Architects Specification Pr_20_93_52_01.

Walls in trenches

A	215mm thick	4	m2		

Walls

B	100mm thick	5	m2		

Labours

C	On blockwork	1	item		

Ancillaries to Brickwork / Blockwork

MOVEMENT JOINTS WITH SEALANT TO EXTERNAL CONCRETE BLOCKWORK; Joint preparation and sealant application: As section Z22; Filler: Closed cell polyethylene foam; Thickness: To match design width of joint; Manufacturer: Contractor's choice to be approved; Product reference: Contractor's choice to be approved; Placement: Build in as work proceeds with no projections into cavities and to correct depth to receive sealant system; Sealent: Manufacturer: Contractor's choice to be approved; Product reference: Contractor's choice to be approved; Colour: To match adjoining blockwork; Ties: slip ties to be at max vertical spacing of 225mm and horizontal spacing of 200mm centred around movement joint; wall ties to be at max vertical spacing of 225mm and horizontal spacing of 225mm centred around movement joint; all in accordance with Architects Drawings and Specification F30 613 & Engineers Drawing

Designed Joints

D	Generally	2	m		

To Collection €

				€	c
(30) SITE ENCLOSURES - PLANTER WALLS (Cont)					
COLLECTION					
Page No. Siteworks/24					
Page No. Siteworks/25					
Page No. Siteworks/26					
Page No. Siteworks/27					
(30) SITE ENCLOSURES - PLANTER WALLS **Carried to Summary**					

					€	c
	(30) SITE ENCLOSURES - REUSE EXISTING GATES					
	SURFACE PAVINGS, FENCING AND LANDSCAPING					
	EXISTING DOUBLE GATES TO BE REUSED; Open mesh steel panel general purpose gates; Manufacturer: Submit proposals; Product reference: Submit proposals; Standard: To Architect Specification; Height: 2400 mm; Mesh and wire: Welded mesh, 200 mm vertical x 50 mm horizontal x 6 mm vertical wire diameter x 8+ 8 mm horizontal wire diameter, plastics coated to Architect Specification; Posts: Galvanized rectangular hollow section, green plastics coated; Maximum centres of posts: 3 m; Posts cast into 450x450x600mm deep concrete grade C28/35 base, starting 300mm below ground level; posts embedded 600mm minimum into foundation; Bottom of fencing: Anchored to a concrete sill; Accessories: 2No. Double leaf entrance gate at pedestrian entrance and Double gates at vehicular entrance / exits per drawing; Conformity: Submit manufacturer's and installer's certificates, to Architect Specification; Colour: Fence Type 2 - Black; include for additional fixings and works required for stepping details and clip detail as per Architect's Drawing; include for all necessary end posts, corner posts, fixings, caps, clips, security screws, excavation, disposal, backfilling, concrete footing, mesh reinforcement, formwork and fixings; all in accordance with the Architect's Specification and Drawing					
	Gates					
A	Double gate; approx. opening size approx 2250 x 2400mm high	2	nr			
	100x100x10 SHS hot dipped galvanised SHS powder coated post; gate posts set in 1000x1000x1000mm C28/35 concrete pocket; top of concrete 300mm below ground level; galvanised to Architect Specification and polyester powder coating to Architects Specification in selected colour, colour to be chosen by the Architect from samples provided on site by the Contractor; complete					
	Gate Posts					
B	100 x 100 SHS posts; 2400mm high above ground level and 900mm below ground level; min 600mm embedment in concrete	4	nr			
				To Collection €		

				€	c
(30) SITE ENCLOSURES - REUSE EXISTING GATES (Cont)					
COLLECTION					
Page No. Siteworks/29					
(30) SITE ENCLOSURES - REUSE EXISTING GATES **Carried to Summary**					

					€	c
	(40) ROADS, PATHS, PAVINGS - ROAD					
	EXCAVATION AND EARTHWORK					
	Excavation					
	Filling with hardcore to be obtained off-site; Clause 808 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
A	Average thickness not exceeding 250mm	121	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
B	Average thickness exceeding 250mm	241	m3			
	Surface treatments					
	Levelling and compacting; blinding with quarry dust					
C	Horizontal; 50mm thick; to hardcore	802	m2			
	SURFACE PAVING FENCING AND LANDSCAPING					
	Insitu Surface Pavings					
	Road Surfacing; 40mm thick polymer modified stone mastic asphalt PMSMA SMA 10 surf PMB 65/105-60 DES: to CL 942; laid on 60mm DBM binder course AC 20 dense bin 40/60 rec: to CL 906; laid on 80mm DBM road base AC 32 dense bin 40/60 rec: to CL 906; to TII 900 Series; rolled with 10-12.5 tonne roller; as per Engineer's Specification and Drawing					
	Roads, on blinded hardcore base					
D	180mm thick; three coat work; to falls and cross falls	802	m2			
E	Extra over for forming 75mm high table top crossing; 1:20 ramp; coloured street print finish on 40mm wearing course to TII 900 Series; laid on 60mm thick of 20mm aggregate size dense binder course asphalt concrete to TII 900 Series; laid on 100mm thick of 32mm aggregate size dense base course asphalt concrete to TII 900 Series; 5000mm width x 5650mm long; include for white thermoplastic 'sharks teeth' markings painted as per Engineer's Drawing; include for all associated road markings, include for stimsonnite reflective road studs; include for any additional excavation, disposal, hardcore, etc. required to complete the works; as per Engineer's Drawing and Specification	1	nr			

To Collection €

					€	c
	(40) ROADS, PATHS, PAVINGS - ROAD (Cont)					
A	Extra over for forming joint to existing finishes; edges of existing carriageway to be cut back by 500mm with a rotary saw to form a vertical face and primed in accordance with TII 900 Series; include for planing existing finishes where required; where the roadbase is to be laid in two layers, the upper layer of the roadbase should be stepped into the existing pavement by a minimum of 1000mm, with the basecourse and wearing course to be each stepped in a further 1000mm minimum respectively; include for regulating course; include for neat bitumen pour joint between new and existing; as per Engineer's Drawing & Specification	11	m			
	Sundries					
	Membrane to Engineer's Specification; Geotextile or equivalent; include for all necessary laps and joints; to manufacturers instructions; as per Engineer's Specification & Drawings C400					
B	Horizontal	1,604	m2			
	Line markings to Macadam surfaces to Architect's Specification; Prepare and apply two coats approved thermoplastic road marking paint; all in strict accordance with Road Safety Markings Association standard specification document for road markings and road studs (Stanspec) and Architect's Specification and Engineer's Drawing					
	Line marking					
C	RRM 001; Continuous Single Centre Line; 100mm thick	14	m			
D	RRM 017; Stop Line; 200mm wide	3	m			
E	RRM 018; Yield Line; 200mm thick	4	m			
F	RRM 018C; Cycle Track Yield Line; 100mm thick	4	m			
G	RPC 001; Zebra Crossing and Pedestrain lines; 7000mm long	1	nr			
	Letters and Figures					
H	M 114; Worded Stop Marking; 2800mm long	1	nr			
J	M 115C; Cycle Track Yield Marking; 1875mm High	2	m			
K	M 116; Cycle Symbol; 750mm wide x 1200mm long	2	nr			
L	RRM 005; Lane Indication Arrows; 3600mm long	1	nr			

To Collection €

					€	c
	(40) ROADS, PATHS, PAVINGS - ROAD (Cont)					
	Preformed Paving and Edging Units					
	Precast concrete kerb; 125mm wide x 250mm high; set in concrete haunching 300mm wide x 400mm deep, mix ST4; include for joints as per Engineer's requirements; include for all necessary haunching in lean mix concrete, as per Engineer's Specification					
	Kerbs; concrete foundation and haunching; formwork					
A	125 x 250mm deep concrete kerb	275	m			
B	Extra over for curved work	46	m			
C	Extra over for drop kerb	6	m			
	MISCELLANEOUS WORKS					
	Contractor to allow for an independent tester to undertake pyrite tests of the stone material to be used in the hardcore build up to verify that the hardcore material used on site complies with the chemical requirements in IS EN 13242 & S.R. 21 Annex E (The percentage of Total Sulphur content in hardcore shall be limited in accordance with S.R. 21). Hardcore material to be stockpiled on site and a composite sample taken. Hardcore is not to be placed prior to the testing of the site material to be used. (See Engineers Specification)					
D	Generally	1	item			
	Contractor to allow for an on-site CBR Test. (See Engineers Specification)					
E	Generally	1	item			
				To Collection €		

				€	c
(40) ROADS, PATHS, PAVINGS - ROAD (Cont)					
COLLECTION					
Page No. Siteworks/31					
Page No. Siteworks/32					
Page No. Siteworks/33					
(40) ROADS, PATHS, PAVINGS - ROAD **Carried to Summary**					

					€	c
	(40) ROADS, PATHS, PAVINGS - CAR PARKING					
	EXCAVATION AND EARTHWORK					
	Excavation					
	Filling with hardcore to be obtained off-site; Clause 808 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
A	Average thickness not exceeding 250mm	152	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
B	Average thickness exceeding 250mm	91	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
C	Average thickness exceeding 250mm	91	m3			
	Surface treatments					
	Leveling and compacting; blinding with quarry dust					
D	Horizontal; 50mm thick; to hardcore	606	m2			
E	SURFACE PAVING, FENCING AND LANDSCAPING					
F	Preformed Paving and Edging Units					

					€	c
	(40) ROADS, PATHS, PAVINGS - CAR PARKING (Cont)					
	Paving system permeable paving to carpark; Description: Permeable paving to carpark; System manufacturer: Tobermore or equivalent; Product reference: Hydropave Shannon Duo Permeable Block Paving or equivalent; Standard: To BS EN 1338; Physical properties; Colour: TBC; Finish: Smooth; Dimensions and associated tolerances; Nominal sizes: 208 x 173 x 60 mm, 173 x 173 x 60 mm; Weathering resistance: Class 3; Abrasion resistance: Class 3; Slip resistance: Extremely low (>75 USRV); Recycled content (minimum): Not less than 12%; Efflorescence: Minimum 12 hour vapour curing to significantly reduce the possibility of efflorescence; Drainage void width: 5% to accommodate correct grit grading, reduced maintenance and maximise drainage flow rate; Permeability: 29,000 L/s/ha; Strength: >3.6 MPa; BREEAM rating: A (A+ can be achieved when used with recycled sub-base); Surface finish: Hard wearing surface layer with a minimum layer of 4 mm and >350 kg/m3 cement; As per Architects Specification Ss_30_14_90_12 and Drawing					
	Paving					
A	Exceeding 300mm wide; 60mm thick	606	m2			
	Sundries					
	Membrane to Engineer's Specification; Geotextile or equivalent; include for all necessary laps and joints; to manufacturers instructions; as per Engineer's Specification & Drawings C400					
B	Horizontal	606	m2			
	Line markings to Macadam surfaces to Architect's Specification; Prepare and apply two coats approved thermoplastic road marking paint; all in strict accordance with Road Safety Markings Association standard specification document for road markings and road studs (Stanspec) and Architect's Specification and Engineer's Drawing					
	Line marking					
C	RRM 013; Perpendicular Parking Bay Markings; 100mm thick	284	m			
D	RRM 015; Disabled Persons' Parking Bay Symbol with buffer zone; 2500mm x 1200mm wide Symbol; 1200 wide buffer zone	4	nr			
E	Blue thermoplastic surfacing to disabled car parking bays	101	m2			
F	Green thermoplastic surfacing to EV car parking bays	118	m2			
	Letters and Figures					
G	RRM 034; EV Symbol; 1200mm x 2500mm long	4	nr			

					€	c
	(40) ROADS, PATHS, PAVINGS - CAR PARKING (Cont)					
	Precast concrete pin kerb; 50mm wide x 150mm high; set in concrete haunching 300mm wide x 400mm deep, mix ST4; include for joints as per Engineer's requirements; include for all necessary haunching in lean mix concrete, as per Engineer's Specification					
	Kerbs; concrete foundation and haunching; formwork					
A	50mm wide x 150mm high concrete kerb	292	m			
B	Extra over for drop kerb	118	m			
	MISCELLANEOUS WORKS					
	Contractor to allow for an independent tester to undertake pyrite tests of the stone material to be used in the hardcore build up to verify that the hardcore material used on site complies with the chemical requirements in IS EN 13242 & S.R. 21 Annex E (The percentage of Total Sulphur content in hardcore shall be limited in accordance with S.R. 21). Hardcore material to be stockpiled on site and a composite sample taken. Hardcore is not to be placed prior to the testing of the site material to be used. (See Engineers Specification)					
C	Generally	1	item			
	Contractor to allow for an on-site CBR Test. (See Engineers Specification)					
D	Generally	1	item			
				To Collection €		

				€	c
(40) ROADS, PATHS, PAVINGS - CAR PARKING (Cont)					
COLLECTION					
Page No. Siteworks/35					
Page No. Siteworks/36					
Page No. Siteworks/37					
(40) ROADS, PATHS, PAVINGS - CAR PARKING **Carried to Summary**					

					€	c
	(40) ROADS, PATHS, PAVINGS - PAVING					
	EXCAVATION AND EARTHWORK					
	Excavation					
	Filling with hardcore to be obtained off-site; Clause 808 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
A	Average thickness not exceeding 250mm	114	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
B	Average thickness exceeding 250mm	114	m3			
	Surface treatments					
	Leveling and compacting; blinding with quarry dust					
C	Horizontal; 50mm thick; to hardcore	756	m2			
	SURFACE PAVING, FENCING AND LANDSCAPING					
	Preformed Paving and Edging Units					
	Paving systems Pedestrian paving to Main Entrance; Description: Paving blocks; System manufacturer: Tobermore or equivalent; Product reference: Tegula Concrete Block Paving (Tegula 80 mm) or equivalent; Physical properties; Colour: TBC; Finish: Tumbled; Profile; Paver type: Regular plan form; Dimensions and associated tolerances; Nominal sizes: As per manufacturer#s standard; Weathering resistance: Class 3; Slip resistance: Mean polished skid resistance value (PSRV): >45, mean unpolished skid resistance value (USRV): >45; Strength: Not less than 3.6 MPa; Fire rating: A1; BREEAM rating: A (A+ can be achieved when used with recycled sub-base).; As per Architects Specification Ss_30_14_90_12 and Drawing					
	Paving					
D	Exceeding 300mm wide; 80mm thick	756	m2			

					€	c
	(40) ROADS, PATHS, PAVINGS - PAVING (Cont)					
	Sundries					
	Membrane to Engineer's Specification; Geotextile or equivalent; include for all necessary laps and joints; to manufacturers instructions; as per Engineer's Specification & Drawings C400					
A	Horizontal	756	m2			
	Precast concrete pin kerb; 50mm wide x 150mm high; set in concrete haunching 300mm wide x 400mm deep, mix ST4; include for joints as per Engineer's requirements; include for all necessary haunching in lean mix concrete, as per Engineer's Specification					
	Kerbs; concrete foundation and haunching; formwork					
B	50mm wide x 150mm high concrete kerb	451	m			
	MISCELLANEOUS WORKS					
	Contractor to allow for an independent tester to undertake pyrite tests of the stone material to be used in the hardcore build up to verify that the hardcore material used on site complies with the chemical requirements in IS EN 13242 & S.R. 21 Annex E (The percentage of Total Sulphur content in hardcore shall be limited in accordance with S.R. 21). Hardcore material to be stockpiled on site and a composite sample taken. Hardcore is not to be placed prior to the testing of the site material to be used. (See Engineers Specification)					
C	Generally	1	item			
	Contractor to allow for an on-site CBR Test. (See Engineers Specification)					
D	Generally	1	item			

To Collection €

				€	c
(40) ROADS, PATHS, PAVINGS - PAVING (Cont)					
COLLECTION					
Page No. Siteworks/39					
Page No. Siteworks/40					
(40) ROADS, PATHS, PAVINGS - PAVING **Carried to Summary**					

					€	c
	(40) ROADS, PATHS, PAVINGS - CONCRETE FOOTPATH					
	EXCAVATION AND EARTHWORK					
	Excavation					
	Filling with hardcore to be obtained off-site; Clause 808 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
A	Average thickness not exceeding 250mm	14	m3			
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
B	Average thickness exceeding 250mm	14	m3			
	Surface treatments					
	Levelling and compacting; blinding with quarry dust					
C	Horizontal; 50mm thick; to hardcore	91	m2			
	CONCRETE WORK					
	In situ concrete					
	Grade C30/37 Concrete					
	Paths; laid on compacted hardcore base					
D	Not exceeding 150mm thick; paths generally	10	m3			
	Sundries					
	Design joints					
	Predetermined construction joints in concrete					
E	Horizontal; 20mm wide filling with 2 Nr layers bituminous felt to IS34; 150mm depth; including formwork	19	m			
	Surface Finishes					
	Brushed finish to wet concrete as per Architect's & Engineer's Specifications					
F	Generally	91	m2			
				To Collection €		

					€	c
	(40) ROADS, PATHS, PAVINGS - CONCRETE FOOTPATH (Cont)					
	Trowelled finish to margins; all labours					
A	100mm wide	89	m			
	Membrane to Engineer's Specification; Geotextile or equivalent; include for all necessary laps and joints; to manufacturers instructions; as per Engineer's Specification & Drawing					
B	Generally	91	m2			
	Preformed Paving and Edging Units					
	Tactile warning paving for crossings as per Architects Specification; Material: Coloured Precast concrete; Manufacturer: Roadstone or equivalent; Product reference: Blistered paving tactile flags; Nominal sizes: 400 x 400 mm; Colour: Buff; as per Engineers Drawing					
	Pavings; cast into concrete footpath / paving					
C	50mm thick; to falls and crossfalls	7	m2			
	Precast concrete pin kerb; 50mm wide x 150mm high; set in concrete haunching 300mm wide x 400mm deep, mix ST4; include for joints as per Engineer's requirements; include for all necessary haunching in lean mix concrete, as per Engineer's Specification					
	Kerbs; concrete foundation and haunching; formwork					
D	50mm wide x 150mm high concrete kerb	89	m			
E	Extra over for curved work	10	m			
	MISCELLANEOUS WORKS					
	Contractor to allow for an independent tester to undertake pyrite tests of the stone material to be used in the hardcore build up to verify that the hardcore material used on site complies with the chemical requirements in IS EN 13242 & S.R. 21 Annex E (The percentage of Total Sulphur content in hardcore shall be limited in accordance with S.R. 21). Hardcore material to be stockpiled on site and a composite sample taken. Hardcore is not to be placed prior to the testing of the site material to be used. (See Engineers Specification)					
F	Generally	1	item			
	Contractor to allow for an on-site CBR Test. (See Engineers Specification)					
G	Generally	1	item			
				To Collection €		

				€	c
(40) ROADS, PATHS, PAVINGS - CONCRETE FOOTPATH (Cont)					
COLLECTION					
Page No. Siteworks/42					
Page No. Siteworks/43					
(40) ROADS, PATHS, PAVINGS - CONCRETE FOOTPATH **Carried to Summary**					

					€	c
	(40) ROADS, PATHS, PAVINGS - GRAVEL BEDS					
	EXCAVATION AND EARTHWORK					
	General Information					
	Information					
A	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications		item			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		item			
	NOTES:					
C	1. All works in this section relates to excavations from formation levels - bulk excavation / filling to make up levels, excavating in rock, removal of contaminated soil all returned with (10) Site Preparation		note			
	Excavation					
	Filling with Gravel; Gravel surface to gravel beds; 50mm thick 14mm aggregate size washed gravel; approved by Architect; as per Architects Specification					
	To make up levels					
D	Average thickness not exceeding 250mm	5	m3			
	Filling with hardcore to be obtained off-site; Clause 808 crushed stone well compacted on firm clean formation; compliant with TII Publications series 800, free from pyrite and macarsite as per Engineer's specification					
	To make up levels					
E	Average thickness not exceeding 250mm	9	m3			
	Surface treatments					
	Levelling and compacting; blinding with quarry dust					
F	Horizontal; 50mm thick; to hardcore	41	m2			
				To Collection €		

					€	c
	(40) ROADS, PATHS, PAVINGS - GRAVEL BEDS (Cont)					
	SURFACE PAVING, FENCING AND LANDSCAPING					
	Preformed Paving and Edging Units					
	Tanalised Timber Edging; Flush finished 150 x 35mm tantalised timber (Tanalith pressure treated Pinus Radiata) edging held in place by ex. 50 x 50 mm Tanalised timber (Tanalith pressure treated Pinus Radiata) pegs driven into ground; As per Architects Specification					
	Timber Edgings					
A	150 x 35mm wide pressure-treated softwood timber edge	117	m			
	Sundries					
	Membrane to Engineer's Specification; Geotextile Thrace PB1000/S8NW Non-woven or equivalent; include for all necessary laps and joints; to manufacturers instructions; as per Engineer's Specification & Drawings C-0120					
B	Horizontal	41	m2			
				To Collection €		

				€	c
(40) ROADS, PATHS, PAVINGS - GRAVEL BEDS (Cont)					
COLLECTION					
Page No. Siteworks/45					
Page No. Siteworks/46					
(40) ROADS, PATHS, PAVINGS - GRAVEL BEDS **Carried to Summary**					

					€	c
	(40) ROADS, PATHS, PAVINGS - GRASSCRETE					
	EXCAVATION AND EARTHWORK					
	General Information					
	Information					
A	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications		item			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		item			
	NOTES:					
C	1. All works in this section relates to excavations from formation levels - bulk excavation / filling to make up levels, excavating in rock, removal of contaminated soil all returned with (10) Site Preparation		note			
	Excavation					
	Filling with granular fill material to be obtained off-site; Choker Course consisting of 2/6.3 clean hard aggregate to IS EN 13242 (40% voids); depositing in 150mm layers maximum thickness; compacting; As per Engineers Specification and Drawing C-003					
	To make up levels					
D	Average thickness not exceeding 250mm	1	m3			
	Filling with granular fill material to be obtained off-site; Base Course consisting of hydraulically bound coarse graded aggregate to IS EN 13242 (40% voids); depositing in 150mm layers maximum thickness; compacting; As per Engineers Specification and Drawing C-003					
	To make up levels					
E	Average thickness not exceeding 250mm	4	m3			
	Filling with granular fill material to be obtained off-site; 4/20mm Coarse graded aggregate to IS EN 13242; depositing in 150mm layers maximum thickness; compacting; As per Engineers Specification and Drawing C-003					
	To make up levels					
F	Average thickness not exceeding 250mm	4	m3			
				To Collection €		

					€	c
	(40) ROADS, PATHS, PAVINGS - GRASSCRETE (Cont)					
	Filling with granular fill material to be obtained off-site; Class 6F2 compliant with TII Publications series 600, free from pyrite and macarsite; depositing in 150mm layers maximum thickness; compacting; as per Engineers Drawings and Specification					
	To make up levels					
A	Average thickness exceeding 250mm	8	m3			
	Surface treatments					
	Levelling and compacting; blinding with quarry screenings					
B	Horizontal; 50mm thick; to hardcore	26	m2			
	SURFACE PAVING, FENCING AND LANDSCAPING					
	Preformed Paving and Edging Units					
	CONCRETE GRASS CELLULAR REINFORCING PAVERS; Manufacturer and reference: Grass Concrete Limited or equivalent; Product reference: Grassblock or equivalent; Type: GB83 406x406x83mm. For overspill car parking; Colour: Natural Concrete; Material: Interconnecting blocks manufactured from machine pressed and vibrated concrete in accordance with ISO9001 based upon a 50N/mm2 compressive strength mix. In accordance with Architects Specification; Grassmix: No.1: (For vehicular parking or amenity areas): 35 g/m2 sowing rate. 50% perennial ryegrass. 20% slender creeping red fescue. 25% strong creeping red fescue. 5% browntop bent; Laying: Method 1 for traffic and general applications as per manufacturer's instructions; Please refer to Grassblock technical literature for exact details; As per Architects Specification adn Engineers Drawing					
	Paving, on compacted sand					
C	Exceeding 300mm wide; 83mm thick	26	m2			
	Sundries					
	Membrane to Engineer's Specification; Geotextile Thrace PB1000/S8NW Non-woven or equivalent; include for all necessary laps and joints; to manufacturers instructions; as per Engineer's Specification & Drawings C-0120					
D	Horizontal	26	m2			
	Precast concrete pin kerb; 50mm wide x 150mm high; set in concrete haunching 300mm wide x 400mm deep, mix ST4; include for joints as per Engineer's requirements; include for all necessary haunching in lean mix concrete, as per Engineer's Specification					
	Kerbs; concrete foundation and haunching; formwork					
E	50mm wide x 150mm high concrete kerb	21	m			
				To Collection €		

				€	c
(40) ROADS, PATHS, PAVINGS - GRASSCRETE (Cont)					
COLLECTION					
Page No. Siteworks/48					
Page No. Siteworks/49					
(40) ROADS, PATHS, PAVINGS - GRASSCRETE **Carried to Summary**					

					€	c
	(50) SITE SERVICES - STORM DRAINAGE					
	DRAINAGE					
	General Information					
	Information					
A	A percentage of the following items are works OUTSIDE THE BOUNDARY OF THE SITE or in PUBLIC HIGHWAYS. The Contractor should visit the site and examine the drawings in order to satisfy himself of the extent of works outside the site boundary. The Contractor's rates are to include for all items necessary for such works. No claims on the grounds of want of knowledge in this respect will be entertained whatsoever.		note			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
C	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
	Drainage Below Ground - Storm Water					
	Excavation					
	Excavating trenches to receive pipes / ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported selected fill material free from stones larger than 40mm, lumps of clay over 100mm, timber, frozen material and vegetable matter; approved by the Engineer; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations; as per Engineer's Drawing					
D	Average Depth 500 - 1000mm	56	m			
E	Average Depth 1000 - 1500mm	122	m			
	Excavating trenches to receive pipes / ducts exceeding 250mm but not exceeding 450mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported selected fill material approved by the Engineer; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations; as per Engineer's Drawing					
F	Average Depth 1000 - 1500mm	95	m			
G	Average Depth 1500 - 2000mm	57	m			

To Collection €

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
	Extra over excavating trenches irrespective of depth					
	Disposal					
A	Ground water	1	item			
B	Surface water	1	item			
	Granular fill bed and surround; 14mm or 5mm graded aggregate or 10mm single sized aggregate; complying with the requirements of the Engineer's Specification; compaction factor value not greater than 0.2 when measured in accordance with Engineer's Specification; well compacted; as per Engineer's Drawings & Specification					
	Beds and Surround					
C	600 x 650mm to 150mm diameter pipe	59	m			
D	750 x 800mm to 300mm diameter pipe	31	m			
E	900 x 950mm to 450mm diameter pipe	27	m			
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class 16/20; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
F	400 x 400mm to 100mm diameter pipe	56	m			
G	450 x 450mm to 150mm diameter pipe	63	m			
H	600 x 600mm to 300mm diameter pipe	95	m			
	PVC marker tape "Heptape" or equivalent					
J	Continuous strip laid during trench backfill, 100mm above pipework	249	m			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
K	100mm diameter	56	m			
	Extra over pipework runs for					
L	connection to manholes	1	nr			
M	connection to BIGT	19	nr			
N	T-Junctions; 300 x 300 x 100mm	7	nr			
P	expansion joints in the concrete bed and surround	12	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
	Pipe; perforated pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
A	150mm diameter	59	m			
	Extra over pipework runs for					
B	connection to ICs	10	nr			
C	Heavy Duty Permeable Membrane-polyfelt TS60 or equivalent; girth: 7000mm	59	m			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
D	150mm diameter	63	m			
	Extra over pipework runs for					
E	connection to manholes	7	nr			
F	connection to attenuation system	3	nr			
G	connection to IC	12	nr			
H	connection to road gully	5	nr			
J	T-Junctions; 300 x 300 x 150mm	2	nr			
K	expansion joints in the concrete bed and surround	13	nr			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
L	300mm diameter	126	m			
	Extra over pipework runs for					
M	connection to manholes	9	nr			
N	connection to attenuation system	1	nr			
P	expansion joints in the concrete bed and surround	19	nr			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
Q	450mm diameter	27	m			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
	Extra over pipework runs for					
A	connection to manholes	5	nr			
B	connection to attenuation system	1	nr			
	Accessories					
	Road Gulleys, Complete; 450mm diameter precast gully; gully encased in 150mm concrete grade C20/25; include for 450 x 320mm Class D 400 (IS/EN 124) C.I. gully grating & frame bedded in mortar; gullies to be hinged at right angles to kerb line so they close with direction of traffic with slots at right angle to kerb; include for rodding eye fixed with stopper and galvanised; include for chain; include for concrete surround to gully grating; include for 160mm diameter uPVC bend if required at connection; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints and finishes; all as per Engineers Specification and Drawing C-052					
C	Trapped; 450mm diameter; 150mm outlet; heavy duty cast iron gully grating	5	nr			
	Back Inlet Gully Trap; complete; as per Architect's Specification Q10; Manufacturer: Contractor to submit proposals for selection by ER; Type: Back inlet Bottle gully (roddable); Cover: Square topped grating to be galvanised steel to requirements of BS EN1253: Part 2. Grating to allow for surface water collection; Support: 300x300x200mm deep concrete base and lean mix of concrete (no richer than I in 18) should support the Bottle Gully; surrounded with granular backfill. To ensure the gully is easily accessible for cleaning out, its base should be within easy reach from ground level; jointed to PVC pipes; include for all excavation, disposal, backfilling, concrete, formwork, etc; as per Architect's Specification					
D	Back Inlet Gully Trap; 100mm outlet; galvanised cast iron grid cover	19	nr			
	Inspection Chambers					
	Inspection Chambers, Complete; Blockwork Inspection Chamber; Internal Dims: 600x600mm diameter; 600mm x 600mm opening in slab; 225mm C25/30 Concrete base on 75mm grade C12/15 bliding concrete; 50mm cross fall; Manhole Construction: 215mm thick 20N/mm2 concrete block work in accordance with IS EN 771-3; Pipes built into chamber wall or joint formed with watertight seals; Refer to drawing STD-WW-07 for backfill and bedding details; 1 to 3 courses of class B engineering bricks to Engineer's Specification set in C50/60 mortar; cover to be set as per manufacturers specification; sealed manhole cover to suit IS EN 124 loading; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints, concrete lintols and finishes; all as per Engineers Drawings and Specification					
E	Depth to invert 500 - 1000mm	12	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
	Manholes					
	Manholes, Complete; Precast Manhole; Internal Dims: 1200mm diameter; 600mm x 600mm opening in slab; 500mm C30/37 mm Reinfoced Concrete Foundations on 75mm grade C12/15 bliding concrete; invert in base should be formed with cast in-situ concrete C25/30 20mm aggregate finished with a 1:3 cement sand mortar; Manhole Construction: 150mm thick grade C16/20 in-situ concrete suround; Precast concrete manhole rings to IS 420 in conjunction with IS EN 1917:2004; 1:3 cement:sand mortar with steel towel finish at a 1:30 slope towards the channel; when chamber is occupied where the pipe; precast RC roof slab shall be 225mm thick in Class 30N/20mm with 40mm cover to steel; 1 to 3 courses of class B engineering bricks to Engineer's Specification set in C50/60 mortar; short length pipe and pipe joint external to manhole shall not exceed 600mm from the inner face of manhole wall; pipe should be cut flush with the inside surface of the manhole wall so that the channel extends the full length of the manhole; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints, concrete lintols and finishes; all as per specification and Engineers Specification and Drawing					
A	Depth to invert 1000 - 1500mm	7	nr			
B	Depth to invert 1500 - 2000mm	1	nr			
	Hydrobrake Manhole, complete with Hydrobrake System to Limit Outflow to 2L/S/HA; Complete; include for tapered base to chamber, penstock gate valve, remotely operated stopper mounted in support guide bracket fixed under manhole cover; include for overflow pipe at level equal to top of attenuation tank; internal diameter 1200mm; 300mm thick CL C25/30 mass concrete base, 1775x1775mm; laid on 50mm thick concrete blinding; precast chamber mahole to IS EN 1917 & IS 420:2004; include for taper section or reducing slab as per Engineer's drawings; precast chamber to be surrounded with 150mm thick concrete C20/25; 1775x1775x200mm thick precast RC cover slab class 30N/20mm with 40mm cover to steel to take full traffic loading, include for 600x600 and 300x300 ope for access; 1 to 2 courses of solid engineering brick CL B to IS EN 771 set in 1:3 cement mortar between cover slab and 2no. access cover; include for short length pipes & joints, toe holes, backfilling to sides of manhole, mortar bedding, rocker pipes, construction joints, all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, concrete lintols and finishes; all as per Engineer's Specification Drawing					
C	Depth to invert 1500 - 2000mm	1	nr			
	Sundries					
	Perforated half circle channel pipes; bedding and jointing in cement mortar (1:2)					
D	100mm; curved, 1200mm long	1	nr			
E	150mm; curved, 1200mm long	1	nr			
F	150mm; straight, 1200mm long	3	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
A	300mm; curved, 1200mm long	4	nr			
B	300mm; straight, 1200mm long	1	nr			
C	450mm; curved, 1200mm long	2	nr			
D	450mm; straight, 1200mm long	1	nr			
	Benching; clause 20/20 concrete; finished in 2:1 snad cement mortar with a smooth trowel finish; 1 in 30 slope towards channel; as per Engineer's Specification					
E	benching in bottoms; 1200mm diameter; trowelling	9	nr			
	Standard rungs; 25mm diameter solid mild steel; 360mm wide x 119mm high x 270mm long; 300mm c/c; galvanised to the latest version of BS EN ISO 1461:2009					
F	270mm tails	49	nr			
	Approved pattern cast iron manhole cover and frame; Class D400 to IS/EN 124; 150mm deep; non rock design; closed keyways; manufactured from sphericial graphite cast iron (ductile cast iron), 600x600 clear opening; cover and frame coated in bitumen or other approved material; cover to have a minimum mass of 140kg/m2; frame bedding area shall be 80,000mm2 min; frames shall be designed to prevent covers falling into manholes; frames shall be bedded on approved mortar to manufacturers instructions					
G	Ope size 600 x 600mm	9	nr			
	Composite Item					
H	Petrol Interceptor; Bypass Petrol Interceptor - KLARGESTER type NSBE010 or equivalent; 2069mm long x 1220mm diameter; installed on 300mm thick Grade C28/35 concrete base with A393 mesh reinforcement; backfilling sides with 400mm (min) thick Grade lean mix back fill surround; 300mm thick grade C28/35 concrete cover slab with A393 mesh reinforcement; include for excavating, disposal, earthwork support, formwork, backfilling etc. to pit to suit unit; include for pipework reducers from 250mm diameter to pipework diameter to match inlets & outlets; include for all works associated with alarm system; incldue for 110mm uPVC vent pipe; include for access shaft extensions to suit unit and site; 2 courses of Class B engineering brick between cover and cover slab; D400 cover and frame; include for surrounding frames with a 1:3 cement:sand collar 150mm wide x 100mm thick; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints and finishes; all in strict accordance with the Engineer's Specification and Drawing and Manufacturers Details	1	nr			

To Collection €

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
	Mains					
	Connection to existing					
A	Connecting new storm manhole to existing storm drain; locating and diverting flows; connecting new manhole to existing drain; include for carefully excavating by hand; form new connection into manhole; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and Drawing	1	nr			
	Testing and Commissioning					
B	TESTING OF SEWERS: All foul and storm drainage pipes to be tested in accordance with clause 3.20 Recommendations for Site Development Works for Housing areas by the DOE&LG. The contractor is to engage an engineer with professional indemnity insurance to supervise all air/water tests on sewer mains and watermains before backfilling. Manhole infiltration Manholes shall be tested for infiltration according to clause 3.21 Recommendations for Site Development Works for Housing areas by the DOE&LG.	1	item			
C	1. PREPARATION: (a) The section of pipeline to be tested shall consist of one class of pipe only. (b) Pipe joints shall be left exposed during the test. (c) Each pipe opening shall be securely plugged by means of screw down sewer plugs, fitted across the diameter of the pipes.	1	item			
D	2. FLUSHING: (a) Before backfilling or haunching, each length of sewer or drain between manholes, or such lengths as may be decided upon by the Test Engineer/Supervisor, shall be cleaned through (e.g. by dragging a suitable rubber plunger through the pipe). (b) A sufficient interval of time shall be allowed to elapse to permit the joints to set to the satisfaction of the Test Engineer/Supervisor.	1	item			
E	3. PRESSURE TESTING: Air Test: (i) Air shall be pumped into the line by suitable means until a pressure of 100mm head of water is indicated on a U-tube connected to the system. (ii) The system shall be allowed to stabilise, and pumped again until the pressure of 100mm is reached once more. (iii) The air pressure shall not fall to less than 75mm head during a period of 5 minutes without further pumping. Failure to pass an air test should not be taken as conclusive. When failure occurs, a water test should be undertaken. Acceptance or rejection of the line under test should be based on the results of this water test.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
A	Water Test: (iv) A hydraulic pressure of not less than 1.2 meters and not more than 2.5 meters of water over the soffit of the sewer shall be applied to the higher end of the test section by means of a standpipe. (v) The section under test shall be allowed to stand for 1 hour to accommodate absorption. The head at the lower end shall not exceed 6.0 metres, and steeply graded sewers shall be tested in sections where the latter pressure would be exceeded if the whole section were tested at once. (vi) The loss of water over the test period shall be measured by adding water to the standpipe from a measuring vessel at 10-minute intervals and noting the quantity required to maintain water level in the standpipe. (vii) The average quantity of water added shall not exceed 0.5 litres of water per mm bore of main per 100m of pipeline per 24 hours. (viii) The Test Pressure shall be maintained for at least twenty minutes and the pipes shall bear the test without signs of leakage or injury either on the joints or on the barrels. Any defective joints or pipes shall be removed and made good to the satisfaction of the Test Supervisor.	1	item			
B	4. INFILTRATION TEST: (a) On completion, an infiltration test will be carried out unless otherwise directed by the Test Engineer/Supervisor, by collecting the discharge of the section under test in a vessel of known capacity. Non-pressure pipelines and manholes shall be inspected and tested for infiltration, after backfilling. All inlets to the system shall be effectively closed, and any residual flow shall be deemed to be infiltration. (b) The rate of infiltration shall not exceed 0.1 litres per second, per metre diameter per kilometre of pipe. (c) Notwithstanding the satisfactory completion of the above inspection or test, if there is any discernible flow of water entering the sewers or manholes which can be seen either by visual or CCTV inspection, the Developer shall take measures as are necessary to stop such infiltration. The contractor Engineer shall conduct these tests and an Engineers Certification shall be submitted in regard to sewer tests prior to completion of the development.	1	item			
C	WATER TIGHTNESS OF MANHOLES, CHAMBERS AND PUMP CHAMBERS; These shall be inspected to ensure that they are watertight with no identifiable flow of water penetrating the chamber.	1	item			
D	FAILURE OF TESTS & REMEDIAL WORKS; The failing of tests and any subsequent remedial works must be notified to the Consultant Engineer. Remedial works to be approved by Consultant Engineer. Further tests to be carried out and any further remedial works completed until the required tests yield a PASS result. All pipelines or manholes that are defective will have to be rectified by the Developer at their own expense.	1	item			
E	CLEANING OF SEWERS, DRAINS & MANHOLES; At the time of completion of the drainage works, the developer should ensure, to the satisfaction of the local authority, that all sewers, drains and manholes within the site are clean and free from obstructions. This is to be carried out prior to internal inspections such as CCTV surveys.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
A	AS-BUILT INSPECTIONS & SURVEYS CCTV; A CCTV survey must be carried out by an independent contractor of the as-built foul and storm drainage main drainage lines and associated manholes, as shown on the engineering drawings, on completion of the works. The CCTV survey is also to include all the permitter drainage as shown on the architects drawing and is to include all the under slab pipe work upto the floor pop ups. Provide continuous recording with still photographs. Illumination to be of adequate intensity. The CCTV survey shall include a DVD of recordings and narrative report. Report to include photographs of each manhole and clearly identify the manhole and location on site by providing a site layout showing the positions of all manholes relative to the road and/or dwelling outline. Two copies of the report and DVD to be submitted to the Consultant Engineer prior to practical completion. The CCTV survey to be submitted to the Consultant Engineer for review and any pipelines or manholes that are defective will have to be rectified by the Developer. A repeat CCTV survey is to be carried out for this section of pipeline or manhole, this is at the Developers own expense. Complete testing to be done in two different stages: Initially a copy of the CCTV survey including a diagrammatic layout of the sewer is to be submitted to the engineer prior to backfilling of works. On completion of works a cctv survey is to be carried out on the existing and new drainage in the public sewer. The contractor is to carry out a cctv survey of all public sewers in the vicinity of the site including all spurs into the public sewer coming out of the site.	1	item			
B	AS-BUILT SURVEY; Upon completion of all ground works, in relation to services and drainage, an as-built topographical survey must be submitted including - location of manholes relative to the building outline - cover and invert levels and pipe diameters - location of gullies relative to the road edge - identify the location and type of drainage pipeline for the entire drainage length - location and type of service access points - identify the location and type of each service run around the site for its entire length This is to be submitted to the Consultant Engineer for review prior to practical completion. The topographical survey is to be submitted in AutoCAD 2010 with two hard copies of adequate scale.	1	item			
	WORK OUTSIDE THE BOUNDARY OF THE SITE					
	Extra Over For: -					
C	A portion of the works in this section are outside the boundary of the site; see Architect's & Engineer's Drawings	1	item			

To Collection €

					€	c
	(50) SITE SERVICES - STORM DRAINAGE (Cont)					
	ATTENUATION SYSTEM					
	EXCAVATION AND EARTHWORK					
	Excavation					
	Excavation					
	Reduce Levels					
A	Depth not exceeding 2.00m	423	m3			
	Working Space					
	Foundations; excavations					
B	Depth not exceeding 2.00m; backfilling with imported hardcore	294	m2			
	Disposal					
	Excavated material; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
C	Disposal Off site	423	m3			
	Filling with hardcore to be obtained off-site; 35/50mm clean washed crushed stone blinded with 8/12 clean crushed sand ; depositing in 150mm layers maximum thickness					
	To make up levels					
D	Average thickness not exceeding 250mm	53	m3			
E	Average thickness exceeding 250mm	248	m3			
				To Collection €		

(50) SITE SERVICES - STORM DRAINAGE (Cont)

DRAINAGE

Below Ground

Surface water underground attenuation tank; Chambers shall be Stormtech SC-740 or equivalent; the installed chamber system shall provide the load factors specified in the aashto LRFD bridge design specifications section 12.12 for earth and live loads, with consideration for impact and multiple vehicle presences; chambers shall meet ASTM F 2418 05 Standard specification for polypropylene (PP) corrugated wall stormwater collection chambers; installed as per manufacturer's recommendations; include for all end caps, underdrain pipework and fittings, distribution pipework, outlets, isolator rows, inspection ports, pvc riser pipework and fittings, floor box frame and lid c/w stainless steel cap screw lid closure, floor box surrounded in class c concrete; as per Engineer's Specification and Drawings 1301

Attenuation Tank

A	Depth of Chambers 760mm; to accomodate 87.5m3 of rainwater	1	nr		
B	Depth of Chambers 760mm; to accomodate 87.5m3 of rainwater	1	nr		
C	Sundries				
	Woven geotextile or equivalent; layers around base and sides fo excavation and to top of stone for protection; all necessary laps and joints; to manufacturers instructions and Engineer's Specification and Drawings				
D	Generally	993	m2		
	Woven Geotextile or equivalent; layers between foundation stone and chambers; all necessary laps and joints; to manufacturers instructions and Engineer's Specification and Drawings				
E	Generally	993	m2		

To Collection €

				€	c
(50) SITE SERVICES - STORM DRAINAGE (Cont)					
COLLECTION					
Page No. Siteworks/51					
Page No. Siteworks/52					
Page No. Siteworks/53					
Page No. Siteworks/54					
Page No. Siteworks/55					
Page No. Siteworks/56					
Page No. Siteworks/57					
Page No. Siteworks/58					
Page No. Siteworks/59					
Page No. Siteworks/60					
Page No. Siteworks/61					
(50) SITE SERVICES - STORM DRAINAGE **Carried to Summary**					

					€	c
	(50) SITE SERVICES - STORM DIVERSION					
	DRAINAGE					
	General Information					
	Information					
A	A percentage of the following items are works OUTSIDE THE BOUNDARY OF THE SITE or in PUBLIC HIGHWAYS. The Contractor should visit the site and examine the drawings in order to satisfy himself of the extent of works outside the site boundary. The Contractor's rates are to include for all items necessary for such works. No claims on the grounds of want of knowledge in this respect will be entertained whatsoever.		note			
B	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
C	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
	Drainage Below Ground - Storm Water Diversion					
	Excavation					
	Excavating trenches to receive pipes / ducts exceeding 250mm but not exceeding 450mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported selected fill material approved by the Engineer; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations; as per Engineer's Drawing					
D	Average Depth 1000 - 1500mm	34	m			
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
E	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	7	m			
	Disposal					
F	Ground water	1	item			
G	Surface water	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DIVERSION (Cont)					
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class 16/20; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
A	675 x 675mm to 375mm diameter pipe	34	m			
	PVC marker tape "Heptape" or equivalent					
B	Continuous strip laid during trench backfill, 100mm above pipework	34	m			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
C	375mm diameter	34	m			
	Extra over pipework runs for					
D	connection to manholes	3	nr			
	Accessories					
	Manholes					
	Manholes, Complete; Precast Manhole; Internal Dims: 1350mm diameter; 600mm x 600mm opening in slab; 500mm C30/37 mm Reinfoced Concrete Foundations on 75mm grade C12/15 bliding concrete; invert in base should be formed with cast in-situ concrete C25/30 20mm aggregate finished with a 1:3 cement sand mortar; Manhole Construction: 150mm thick grade C16/20 in-situ concrete suround; Precast concrete manhole rings to IS 420 in conjunction with IS EN 1917:2004; 1:3 cement:sand mortar with steel towel finish at a 1:30 slope towards the channel; when chamber is occupied where the pipe; precast RC roof slab shall be 225mm thick in Class 30N/20mm with 40mm cover to steel; 1 to 3 courses of class B engineering bricks to Engineer's Specification set in C50/60 mortar; short length pipe and pipe joint external to manhole shall not exceed 600mm from the inner face of manhole wall; pipe should be cut flush with the inside surface of the manhole wall so that the channel extends the full length of the manhole; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints, concrete lintols and finishes; all as per specification and Engineers Specification and Drawing					
E	Depth to invert 1000 - 1500mm	2	nr			
	Sundries					
	Perforated half circle channel pipes; bedding and jointing in cement mortar (1:2)					
F	375mm; straight, 1200mm long	2	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DIVERSION (Cont)					
	Benching; clause 20/20 concrete; finished in 2:1 snad cement mortar with a smooth trowel finish; 1 in 30 slope towards channel; as per Engineer's Specification					
A	benching in bottoms; 1350mm diameter; trowelling	2	nr			
	Standard rungs; 25mm diameter solid mild steel; 360mm wide x 119mm high x 270mm long; 300mm c/c; galvanised to the latest version of BS EN ISO 1461:2009					
B	270mm tails	10	nr			
	Approved pattern cast iron manhole cover and frame; Class D400 to IS/EN 124; 150mm deep; non rock design; closed keyways; manufactured from sphericial graphite cast iron (ductile cast iron), 600x600 clear opening; cover and frame coated in bitumen or other approved material; cover to have a minimum mass of 140kg/m2; frame bedding area shall be 80,000mm2 min; frames shall be designed to prevent covers falling into manholes; frames shall be bedded on approved mortar to manufacturers instructions					
C	Ope size 600 x 600mm	2	nr			
	Mains					
	Connection to existing					
D	Connecting new storm manhole to existing storm drain; locating and diverting flows; connecting new manhole to existing drain; include for carefully excavating by hand; form new connection into manhole; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and Drawing	2	nr			
	Testing and Commissioning					
E	TESTING OF SEWERS: All foul and storm drainage pipes to be tested in accordance with clause 3.20 Recommendations for Site Development Works for Housing areas by the DOE&LG. The contractor is to engage an engineer with professional indemnity insurance to supervise all air/water tests on sewer mains and watermains before backfilling. Manhole infiltration Manholes shall be tested for infiltration according to clause 3.21 Recommendations for Site Development Works for Housing areas by the DOE&LG.	1	item			
F	1. PREPARATION: (a) The section of pipeline to be tested shall consist of one class of pipe only. (b) Pipe joints shall be left exposed during the test. (c) Each pipe opening shall be securely plugged by means of screw down sewer plugs, fitted across the diameter of the pipes.	1	item			
G	2. FLUSHING: (a) Before backfilling or haunching, each length of sewer or drain between manholes, or such lengths as may be decided upon by the Test Engineer/Supervisor, shall be cleaned through (e.g. by dragging a suitable rubber plunger through the pipe). (b) A sufficient interval of time shall be allowed to elapse to permit the joints to set to the satisfaction of the Test Engineer/Supervisor.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DIVERSION (Cont)					
A	3. PRESSURE TESTING: Air Test: (i) Air shall be pumped into the line by suitable means until a pressure of 100mm head of water is indicated on a U-tube connected to the system. (ii) The system shall be allowed to stabilise, and pumped again until the pressure of 100mm is reached once more. (iii) The air pressure shall not fall to less than 75mm head during a period of 5 minutes without further pumping. Failure to pass an air test should not be taken as conclusive. When failure occurs, a water test should be undertaken. Acceptance or rejection of the line under test should be based on the results of this water test.	1	item			
B	Water Test: (iv) A hydraulic pressure of not less than 1.2 meters and not more than 2.5 meters of water over the soffit of the sewer shall be applied to the higher end of the test section by means of a standpipe. (v) The section under test shall be allowed to stand for 1 hour to accommodate absorption. The head at the lower end shall not exceed 6.0 metres, and steeply graded sewers shall be tested in sections where the latter pressure would be exceeded if the whole section were tested at once. (vi) The loss of water over the test period shall be measured by adding water to the standpipe from a measuring vessel at 10-minute intervals and noting the quantity required to maintain water level in the standpipe. (vii) The average quantity of water added shall not exceed 0.5 litres of water per mm bore of main per 100m of pipeline per 24 hours. (viii) The Test Pressure shall be maintained for at least twenty minutes and the pipes shall bear the test without signs of leakage or injury either on the joints or on the barrels. Any defective joints or pipes shall be removed and made good to the satisfaction of the Test Supervisor.	1	item			
C	4. INFILTRATION TEST: (a) On completion, an infiltration test will be carried out unless otherwise directed by the Test Engineer/Supervisor, by collecting the discharge of the section under test in a vessel of known capacity. Non-pressure pipelines and manholes shall be inspected and tested for infiltration, after backfilling. All inlets to the system shall be effectively closed, and any residual flow shall be deemed to be infiltration. (b) The rate of infiltration shall not exceed 0.1 litres per second, per metre diameter per kilometre of pipe. (c) Notwithstanding the satisfactory completion of the above inspection or test, if there is any discernible flow of water entering the sewers or manholes which can be seen either by visual or CCTV inspection, the Developer shall take measures as are necessary to stop such infiltration. The contractor Engineer shall conduct these tests and an Engineers Certification shall be submitted in regard to sewer tests prior to completion of the development.	1	item			
D	WATER TIGHTNESS OF MANHOLES, CHAMBERS AND PUMP CHAMBERS; These shall be inspected to ensure that they are watertight with no identifiable flow of water penetrating the chamber.	1	item			
E	FAILURE OF TESTS & REMEDIAL WORKS; The failing of tests and any subsequent remedial works must be notified to the Consultant Engineer. Remedial works to be approved by Consultant Engineer. Further tests to be carried out and any further remedial works completed until the required tests yield a PASS result. All pipelines or manholes that are defective will have to be rectified by the Developer at their own expense.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - STORM DIVERSION (Cont)					
A	CLEANING OF SEWERS, DRAINS & MANHOLES; At the time of completion of the drainage works, the developer should ensure, to the satisfaction of the local authority, that all sewers, drains and manholes within the site are clean and free from obstructions. This is to be carried out prior to internal inspections such as CCTV surveys.	1	item			
B	AS-BUILT INSPECTIONS & SURVEYS CCTV; A CCTV survey must be carried out by an independent contractor of the as-built foul and storm drainage main drainage lines and associated manholes, as shown on the engineering drawings, on completion of the works. The CCTV survey is also to include all the permitter drainage as shown on the architects drawing and is to include all the under slab pipe work upto the floor pop ups. Provide continuous recording with still photographs. Illumination to be of adequate intensity. The CCTV survey shall include a DVD of recordings and narrative report. Report to include photographs of each manhole and clearly identify the manhole and location on site by providing a site layout showing the positions of all manholes relative to the road and/or dwelling outline. Two copies of the report and DVD to be submitted to the Consultant Engineer prior to practical completion. The CCTV survey to be submitted to the Consultant Engineer for review and any pipelines or manholes that are defective will have to be rectified by the Developer. A repeat CCTV survey is to be carried out for this section of pipeline or manhole, this is at the Developers own expense. Complete testing to be done in two different stages: Initially a copy of the CCTV survey including a diagrammatic layout of the sewer is to be submitted to the engineer prior to backfilling of works. On completion of works a cctv survey is to be carried out on the existing and new drainage in the public sewer. The contractor is to carry out a cctv survey of all public sewers in the vicinity of the site including all spurs into the public sewer coming out of the site.	1	item			
C	AS-BUILT SURVEY; Upon completion of all ground works, in relation to services and drainage, an as-built topographical survey must be submitted including - location of manholes relative to the building outline - cover and invert levels and pipe diameters - location of gullies relative to the road edge - identify the location and type of drainage pipeline for the entire drainage length - location and type of service access points - identify the location and type of each service run around the site for its entire length This is to be submitted to the Consultant Engineer for review prior to practical completion. The topographical survey is to be submitted in AutoCAD 2010 with two hard copies of adequate scale.	1	item			
	WORK OUTSIDE THE BOUNDARY OF THE SITE					
	Extra Over For: -					
D	A portion of the works in this section are outside the boundary of the site; see Architect's & Engineer's Drawings	1	item			

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(50) SITE SERVICES - STORM DIVERSION (Cont)					
COLLECTION					
Page No. Siteworks/63					
Page No. Siteworks/64					
Page No. Siteworks/65					
Page No. Siteworks/66					
Page No. Siteworks/67					
(50) SITE SERVICES - STORM DIVERSION **Carried to Summary**					

					€	c
	(50) SITE SERVICES - FOUL DRAINAGE					
	DRAINAGE					
	General Information					
	Information					
A	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		Note			
B	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		Note			
	Drainage Below Ground - Foul Water					
	Excavation					
	Excavating trenches to receive pipes / ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported selected fill material approved by the Engineer; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
C	Average Depth 500- 1000mm	54	m			
D	Average Depth 1000- 1500mm	51	m			
E	Average Depth 1500- 2000mm	78	m			
	Extra over excavating trenches irrespective of depth					
	Disposal					
F	Ground water	1	item			
G	Surface water	1	item			
	Granular fill bed and surround; 14mm or 5mm graded aggregate or 10mm single sized aggregate; complying with the requirements of the Engineer's Specification; compaction factor value not greater than 0.2 when measured in accordance with Engineer's Specification; well compacted; as per Engineer's Drawings & Specification					
	Beds and Surround					
H	600 x 650mm to 150mm diameter pipe	78	m			

To Collection €

					€	c
	(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class C20/25; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
A	400 x 400mm to 100mm diameter pipe	54	m			
B	450 x 450mm to 150mm diameter pipe	51	m			
	PVC marker tape "Heptape" or equivalent					
C	Continuous strip laid during trench backfill, 100mm above pipework	182	m			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
D	100mm diameter	54	m			
	Extra over pipework runs for					
E	connection to AJ	15	nr			
F	connection to BIGT	13	nr			
G	expansion joints in the concrete bed and surround	11	nr			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
H	150mm diameter	129	m			
	Extra over pipework runs for					
J	connection to manholes	13	nr			
K	connection to foul pump station	1	nr			
L	connection to AJ	11	nr			
M	T-Junctions; 150 x 150 x 150mm	11	nr			
N	expansion joints in the concrete bed and surround	11	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
	Accessories					
	Back Inlet Gully Trap; complete; as per Architect's Specification Q10; Manufacturer: Contractor to submit proposals for selection by ER; Type: Back inlet Bottle gully (roddable) to requirements of BS4660: 2000; Cover: Square topped grating to be galvanised steel to requirements of BS EN1253: Part 2. Grating to allow for surface water collection; Support: 300x300x200mm deep concrete base and lean mix of concrete (no richer than I in 18) should support the Bottle Gully; surrounded with granular backfill. To ensure the gully is easily accessible for cleaning out, its base should be within easy reach from ground level; jointed to PVC pipes; include for all excavation, disposal, backfilling, concrete, formwork, etc; as per Architect's Specification					
A	Back Inlet Gully Trap; 100mm outlet; galvanised cast iron grid cover	54	nr			
	Access junctions to Engineer's Specification; complete with cast iron access cover; bedding and surrounding in concrete Grade 25N20; backfilling with granular material; including all necessary excavations, disposal, dewatering, back filling, etc; as per Engineers Drawings and Specification					
B	Access junction; 150mm / 225mm outlets; include for all depth extensions	11	nr			
	Manholes					
	Manholes, Complete; Precast Manhole; Internal Dims: 1200mm diameter; 600mm x 600mm opening in slab; 225mm C28/35 Mass Concrete Foundations concrete; invert in base should be formed with cast in-situ concrete C25/30 20mm aggregate finished with a 1:3 cement sand mortar; Manhole Construction: 150mm thick grade C16/20 in-situ concrete suround; Precast concrete manhole rings to IS 420 in conjunction with IS EN 1917:2004; 1:3 cement:sand mortar with steel towel finish at a 1:30 slope towards the channel; when chamber is occupied where the pipe; precast RC roof slab shall be 200mm thick in Class C25/30 with 40mm cover to steel; 1 to 3 courses of class B engineering bricks to Engineer's Specification set in C50/60 mortar; short length pipe and pipe joint external to manhole shall not exceed 600mm from the inner face of manhole wall; pipe should be cut flush with the inside surface of the manhole wall so that the channel extends the full length of the manhole; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints, concrete lintols and finishes; all as per Irish Water Details STD-WW-10					
C	Depth to invert 500 - 1000mm	1	nr			
D	Depth to invert 1000 - 1500mm	2	nr			
E	Depth to invert 1500 - 2000mm	1	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
	Sundries					
	Perforated half circle channel pipes; bedding and jointing in cement mortar (1:2)					
A	150mm; curved, 1200mm long	5	nr			
B	150mm; straight, 1200mm long	2	nr			
	Benching; clause 20/20 concrete; finished in 2:1 snad cement mortar with a smooth trowel finish; 1 in 30 slope towards channel; as per Engineer's Specification					
C	benching in bottoms; 1200mm diameter; trowelling	4	nr			
	Standard rungs; 25mm diameter solid mild steel; 360mm wide x 119mm high x 270mm long; 300mm c/c; galvanised to the latest version of BS EN ISO 1461:2009					
D	270mm tails	20	nr			
	Approved pattern cast iron manhole cover and frame; Class D400 to IS/EN 124; 150mm deep; non rock design; closed keyways; manufactured from sphericial graphite cast iron (ductile cast iron), 600x600 clear opening; cover and frame coated in bitumen or other approved material; cover to have a minimum mass of 140kg/m2; frame bedding area shall be 80,000mm2 min; frames shall be designed to prevent covers falling into manholes; frames shall be bedded on approved mortar to manufacturers instructions					
E	Ope size 600 x 600mm	4	nr			
	Mains					
	Connection to existing					
F	Connecting new foul drain to existing foul manhole; locating and diverting flows; connecting new drain to existing manhole; include for carefully excavating by hand; form new connection into manhole; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and Drawing	1	nr			
	Testing and Commissioning					
G	The contractor is to include for the employment of a chartered engineer with Professional Indemnity insurance to €6.5m to supervise and witness the installation and backfilling of all air tests/ water & other Irish Water QA as required under the Irish Water Quality Assurance (QA) field inspection requirements manual, January 2018 version 2.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
A	It is a requirement of the main contractor to agree the required QA with the IW field inspectors, retain all the QA documents on site & repair any defects. The main contractors chartered engineer & the main contractor are responsible for agreeing on site conformance with IW prior to hand over of the works to IW. The price for all the above is deemed to be included in the main contractors tender sum.	1	item			
B	TESTING OF SEWERS: All foul and storm drainage pipes to be tested in accordance with clause 3.20 Recommendations for Site Development Works for Housing areas by the DOE&LG. The contractor is to engage an engineer with professional indemnity insurance to supervise all air/water tests on sewer mains and watermains before backfilling. Manhole infiltration Manholes shall be tested for infiltration according to clause 3.21 Recommendations for Site Development Works for Housing areas by the DOE&LG.	1	item			
C	1. PREPARATION: (a) The section of pipeline to be tested shall consist of one class of pipe only. (b) Pipe joints shall be left exposed during the test. (c) Each pipe opening shall be securely plugged by means of screw down sewer plugs, fitted across the diameter of the pipes.	1	item			
D	2. FLUSHING: (a) Before backfilling or haunching, each length of sewer or drain between manholes, or such lengths as may be decided upon by the Test Engineer/Supervisor, shall be cleaned through (e.g. by dragging a suitable rubber plunger through the pipe). (b) A sufficient interval of time shall be allowed to elapse to permit the joints to set to the satisfaction of the Test Engineer/Supervisor.	1	item			
E	3. PRESSURE TESTING: Air Test: (i) Air shall be pumped into the line by suitable means until a pressure of 100mm head of water is indicated on a U-tube connected to the system. (ii) The system shall be allowed to stabilise, and pumped again until the pressure of 100mm is reached once more. (iii) The air pressure shall not fall to less than 75mm head during a period of 5 minutes without further pumping. Failure to pass an air test should not be taken as conclusive. When failure occurs, a water test should be undertaken. Acceptance or rejection of the line under test should be based on the results of this water test.	1	item			
F	Water Test: (iv) A hydraulic pressure of not less than 1.2 meters and not more than 2.5 meters of water over the soffit of the sewer shall be applied to the higher end of the test section by means of a standpipe. (v) The section under test shall be allowed to stand for 1 hour to accommodate absorption. The head at the lower end shall not exceed 6.0 metres, and steeply graded sewers shall be tested in sections where the latter pressure would be exceeded if the whole section were tested at once. (vi) The loss of water over the test period shall be measured by adding water to the standpipe from a measuring vessel at 10-minute intervals and noting the quantity required to maintain water level in the standpipe. (vii) The average quantity of water added shall not exceed 0.5 litres of water per mm bore of main per 100m of pipeline per 24 hours. (viii) The Test Pressure shall be maintained for at least twenty minutes and the pipes shall bear the test without signs of leakage or injury either on the joints or on the barrels. Any defective joints or pipes shall be removed and made good to the satisfaction of the Test Supervisor.	1	item			
				To Collection €		

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	(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
A	4. INFILTRATION TEST: (a) On completion, an infiltration test will be carried out unless otherwise directed by the Test Engineer/Supervisor, by collecting the discharge of the section under test in a vessel of known capacity. Non-pressure pipelines and manholes shall be inspected and tested for infiltration, after backfilling. All inlets to the system shall be effectively closed, and any residual flow shall be deemed to be infiltration. (b) The rate of infiltration shall not exceed 0.1 litres per second, per metre diameter per kilometre of pipe. (c) Notwithstanding the satisfactory completion of the above inspection or test, if there is any discernible flow of water entering the sewers or manholes which can be seen either by visual or CCTV inspection, the Developer shall take measures as are necessary to stop such infiltration. The contractor Engineer shall conduct these tests and an Engineers Certification shall be submitted in regard to sewer tests prior to completion of the development.	1	item			
B	WATER TIGHTNESS OF MANHOLES, CHAMBERS AND PUMP CHAMBERS; These shall be inspected to ensure that they are watertight with no identifiable flow of water penetrating the chamber.	1	item			
C	FAILURE OF TESTS & REMEDIAL WORKS; The failing of tests and any subsequent remedial works must be notified to the Consultant Engineer. Remedial works to be approved by Consultant Engineer. Further tests to be carried out and any further remedial works completed until the required tests yield a PASS result. All pipelines or manholes that are defective will have to be rectified by the Developer at their own expense.	1	item			
D	CLEANING OF SEWERS, DRAINS & MANHOLES; At the time of completion of the drainage works, the developer should ensure, to the satisfaction of the local authority, that all sewers, drains and manholes within the site are clean and free from obstructions. This is to be carried out prior to internal inspections such as CCTV surveys.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
A	AS-BUILT INSPECTIONS & SURVEYS CCTV; A CCTV survey must be carried out by an independent contractor of the as-built foul and storm drainage main drainage lines and associated manholes, as shown on the engineering drawings, on completion of the works. The CCTV survey is also to include all the permitter drainage as shown on the architects drawing and is to include all the under slab pipe work upto the floor pop ups. Provide continuous recording with still photographs. Illumination to be of adequate intensity. The CCTV survey shall include a DVD of recordings and narrative report. Report to include photographs of each manhole and clearly identify the manhole and location on site by providing a site layout showing the positions of all manholes relative to the road and/or dwelling outline. Two copies of the report and DVD to be submitted to the Consultant Engineer prior to practical completion. The CCTV survey to be submitted to the Consultant Engineer for review and any pipelines or manholes that are defective will have to be rectified by the Developer. A repeat CCTV survey is to be carried out for this section of pipeline or manhole, this is at the Developers own expense. Complete testing to be done in two different stages: Initially a copy of the CCTV survey including a diagrammatic layout of the sewer is to be submitted to the engineer prior to backfilling of works. On completion of works a cctv survey is to be carried out on the existing and new drainage in the public sewer. The contractor is to carry out a cctv survey of all public sewers in the vicinity of the site including all spurs into the public sewer coming out of the site.	1	item			
B	AS-BUILT SURVEY; Upon completion of all ground works, in relation to services and drainage, an as-built topographical survey must be submitted including - location of manholes relative to the building outline - cover and invert levels and pipe diameters - location of gullies relative to the road edge - identify the location and type of drainage pipeline for the entire drainage length - location and type of service access points - identify the location and type of each service run around the site for its entire length This is to be submitted to the Consultant Engineer for review prior to practical completion. The topographical survey is to be submitted in AutoCAD 2010 with two hard copies of adequate scale.	1	item			
				To Collection €		

				€	c
(50) SITE SERVICES - FOUL DRAINAGE (Cont)					
COLLECTION					
Page No. Siteworks/69					
Page No. Siteworks/70					
Page No. Siteworks/71					
Page No. Siteworks/72					
Page No. Siteworks/73					
Page No. Siteworks/74					
Page No. Siteworks/75					
(50) SITE SERVICES - FOUL DRAINAGE **Carried to Summary**					

					€	c
	(50) SITE SERVICES - FOUL DIVERSION					
	DRAINAGE					
	General Information					
	Information					
A	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		Note			
B	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		Note			
	Drainage Below Ground - Foul Water					
	Excavation					
	Excavating trenches to receive pipes / ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported selected fill material approved by the Engineer; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
C	Average Depth 500- 1000mm	29	m			
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
D	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	7	m			
	Disposal					
E	Ground water	1	item			
F	Surface water	1	item			
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class C20/25; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
G	450 x 450mm to 150mm diameter pipe	29	m			

					€	c
	(50) SITE SERVICES - FOUL DIVERSION (Cont)					
	PVC marker tape "Heptape" or equivalent					
A	Continuous strip laid during trench backfill, 100mm above pipework	29	m			
	Pipe; PVC SN8 pipework and fittings; to Engineer's Specification					
	Pipes; loose couplers and ceiling ring joints in the running length					
B	150mm diameter	29	m			
	Extra over pipework runs for					
C	connection to manholes	6	nr			
D	expansion joints in the concrete bed and surround	6	nr			
	Manholes					
	Manholes, Complete; Precast Manhole; Internal Dims: 1200mm diameter; 600mm x 600mm opening in slab; 225mm C28/35 Mass Concrete Foundations concrete; invert in base should be formed with cast in-situ concrete C25/30 20mm aggregate finished with a 1:3 cement sand mortar; Manhole Construction: 150mm thick grade C16/20 in-situ concrete suround; Precast concrete manhole rings to IS 420 in conjunction with IS EN 1917:2004; 1:3 cement:sand mortar with steel towel finish at a 1:30 slope towards the channel; when chamber is occupied where the pipe; precast RC roof slab shall be 200mm thick in Class C25/30 with 40mm cover to steel; 1 to 3 courses of class B engineering bricks to Engineer's Specification set in C50/60 mortar; short length pipe and pipe joint external to manhole shall not exceed 600mm from the inner face of manhole wall; pipe should be cut flush with the inside surface of the manhole wall so that the channel extends the full length of the manhole; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints, concrete lintols and finishes; all as per Irish Water Details STD-WW-10					
E	Depth to invert 0 - 500mm	2	nr			
F	Depth to invert 500 - 1000mm	1	nr			
	Sundries					
	Perforated half circle channel pipes; bedding and jointing in cement mortar (1:2)					
G	150mm; curved, 1200mm long	3	nr			
H	150mm; straight, 1200mm long	1	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DIVERSION (Cont)					
	Benching; clause 20/20 concrete; finished in 2:1 snad cement mortar with a smooth trowel finish; 1 in 30 slope towards channel; as per Engineer's Specification					
A	benching in bottoms; 1200mm diameter; trowelling	3	nr			
	Standard rungs; 25mm diameter solid mild steel; 360mm wide x 119mm high x 270mm long; 300mm c/c; galvanised to the latest version of BS EN ISO 1461:2009					
B	270mm tails	7	nr			
	Approved pattern cast iron manhole cover and frame; Class D400 to IS/EN 124; 150mm deep; non rock design; closed keyways; manufactured from sphericial graphite cast iron (ductile cast iron), 600x600 clear opening; cover and frame coated in bitumen or other approved material; cover to have a minimum mass of 140kg/m2; frame bedding area shall be 80,000mm2 min; frames shall be designed to prevent covers falling into manholes; frames shall be bedded on approved mortar to manufacturers instructions					
C	Ope size 600 x 600mm	3	nr			
	Mains					
	Connection to existing					
D	Connecting new foul drain to existing foul manhole; locating and diverting flows; connecting new drain to existing manhole; include for carefully excavating by hand; form new connection into manhole; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and Drawing	1	nr			
	Testing and Commissioning					
E	The contractor is to include for the employment of a chartered engineer with Professional Indemnity insurance to €6.5m to supervise and witness the installation and backfilling of all air tests/ water & other Irish Water QA as required under the Irish Water Quality Assurance (QA) field inspection requirements manual, January 2018 version 2.	1	item			
F	It is a requirement of the main contractor to agree the required QA with the IW field inspectors, retain all the QA documents on site & repair any defects. The main contractors chartered engineer & the main contractor are responsible for agreeing on site conformance with IW prior to hand over of the works to IW. The price for all the above is deemed to be included in the main contractors tender sum.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DIVERSION (Cont)					
A	TESTING OF SEWERS: All foul and storm drainage pipes to be tested in accordance with clause 3.20 Recommendations for Site Development Works for Housing areas by the DOE&LG. The contractor is to engage an engineer with professional indemnity insurance to supervise all air/water tests on sewer mains and watermains before backfilling. Manhole infiltration Manholes shall be tested for infiltration according to clause 3.21 Recommendations for Site Development Works for Housing areas by the DOE&LG.	1	item			
B	1. PREPARATION: (a) The section of pipeline to be tested shall consist of one class of pipe only. (b) Pipe joints shall be left exposed during the test. (c) Each pipe opening shall be securely plugged by means of screw down sewer plugs, fitted across the diameter of the pipes.	1	item			
C	2. FLUSHING: (a) Before backfilling or haunching, each length of sewer or drain between manholes, or such lengths as may be decided upon by the Test Engineer/Supervisor, shall be cleaned through (e.g. by dragging a suitable rubber plunger through the pipe). (b) A sufficient interval of time shall be allowed to elapse to permit the joints to set to the satisfaction of the Test Engineer/Supervisor.	1	item			
D	3. PRESSURE TESTING: Air Test: (i) Air shall be pumped into the line by suitable means until a pressure of 100mm head of water is indicated on a U-tube connected to the system. (ii) The system shall be allowed to stabilise, and pumped again until the pressure of 100mm is reached once more. (iii) The air pressure shall not fall to less than 75mm head during a period of 5 minutes without further pumping. Failure to pass an air test should not be taken as conclusive. When failure occurs, a water test should be undertaken. Acceptance or rejection of the line under test should be based on the results of this water test.	1	item			
E	Water Test: (iv) A hydraulic pressure of not less than 1.2 meters and not more than 2.5 meters of water over the soffit of the sewer shall be applied to the higher end of the test section by means of a standpipe. (v) The section under test shall be allowed to stand for 1 hour to accommodate absorption. The head at the lower end shall not exceed 6.0 metres, and steeply graded sewers shall be tested in sections where the latter pressure would be exceeded if the whole section were tested at once. (vi) The loss of water over the test period shall be measured by adding water to the standpipe from a measuring vessel at 10-minute intervals and noting the quantity required to maintain water level in the standpipe. (vii) The average quantity of water added shall not exceed 0.5 litres of water per mm bore of main per 100m of pipeline per 24 hours. (viii) The Test Pressure shall be maintained for at least twenty minutes and the pipes shall bear the test without signs of leakage or injury either on the joints or on the barrels. Any defective joints or pipes shall be removed and made good to the satisfaction of the Test Supervisor.	1	item			
				To Collection €		

					€	c
	(50) SITE SERVICES - FOUL DIVERSION (Cont)					
A	4. INFILTRATION TEST: (a) On completion, an infiltration test will be carried out unless otherwise directed by the Test Engineer/Supervisor, by collecting the discharge of the section under test in a vessel of known capacity. Non-pressure pipelines and manholes shall be inspected and tested for infiltration, after backfilling. All inlets to the system shall be effectively closed, and any residual flow shall be deemed to be infiltration. (b) The rate of infiltration shall not exceed 0.1 litres per second, per metre diameter per kilometre of pipe. (c) Notwithstanding the satisfactory completion of the above inspection or test, if there is any discernible flow of water entering the sewers or manholes which can be seen either by visual or CCTV inspection, the Developer shall take measures as are necessary to stop such infiltration. The contractor Engineer shall conduct these tests and an Engineers Certification shall be submitted in regard to sewer tests prior to completion of the development.	1	item			
B	WATER TIGHTNESS OF MANHOLES, CHAMBERS AND PUMP CHAMBERS; These shall be inspected to ensure that they are watertight with no identifiable flow of water penetrating the chamber.	1	item			
C	FAILURE OF TESTS & REMEDIAL WORKS; The failing of tests and any subsequent remedial works must be notified to the Consultant Engineer. Remedial works to be approved by Consultant Engineer. Further tests to be carried out and any further remedial works completed until the required tests yield a PASS result. All pipelines or manholes that are defective will have to be rectified by the Developer at their own expense.	1	item			
D	CLEANING OF SEWERS, DRAINS & MANHOLES; At the time of completion of the drainage works, the developer should ensure, to the satisfaction of the local authority, that all sewers, drains and manholes within the site are clean and free from obstructions. This is to be carried out prior to internal inspections such as CCTV surveys.	1	item			
				To Collection €		

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	(50) SITE SERVICES - FOUL DIVERSION (Cont)					
A	AS-BUILT INSPECTIONS & SURVEYS CCTV; A CCTV survey must be carried out by an independent contractor of the as-built foul and storm drainage main drainage lines and associated manholes, as shown on the engineering drawings, on completion of the works. The CCTV survey is also to include all the permitter drainage as shown on the architects drawing and is to include all the under slab pipe work upto the floor pop ups. Provide continuous recording with still photographs. Illumination to be of adequate intensity. The CCTV survey shall include a DVD of recordings and narrative report. Report to include photographs of each manhole and clearly identify the manhole and location on site by providing a site layout showing the positions of all manholes relative to the road and/or dwelling outline. Two copies of the report and DVD to be submitted to the Consultant Engineer prior to practical completion. The CCTV survey to be submitted to the Consultant Engineer for review and any pipelines or manholes that are defective will have to be rectified by the Developer. A repeat CCTV survey is to be carried out for this section of pipeline or manhole, this is at the Developers own expense. Complete testing to be done in two different stages: Initially a copy of the CCTV survey including a diagrammatic layout of the sewer is to be submitted to the engineer prior to backfilling of works. On completion of works a cctv survey is to be carried out on the existing and new drainage in the public sewer. The contractor is to carry out a cctv survey of all public sewers in the vicinity of the site including all spurs into the public sewer coming out of the site.	1	item			
B	AS-BUILT SURVEY; Upon completion of all ground works, in relation to services and drainage, an as-built topographical survey must be submitted including - location of manholes relative to the building outline - cover and invert levels and pipe diameters - location of gullies relative to the road edge - identify the location and type of drainage pipeline for the entire drainage length - location and type of service access points - identify the location and type of each service run around the site for its entire length This is to be submitted to the Consultant Engineer for review prior to practical completion. The topographical survey is to be submitted in AutoCAD 2010 with two hard copies of adequate scale.	1	item			
				To Collection €		

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(50) SITE SERVICES - FOUL DIVERSION (Cont)					
COLLECTION					
Page No. Siteworks/77					
Page No. Siteworks/78					
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Page No. Siteworks/81					
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(50) SITE SERVICES - FOUL DIVERSION **Carried to Summary**					

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	(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	DRAINAGE					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
	Drainage Below Ground - Foul Water					
	Excavation					
	Excavating trenches to receive pipes / ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported selected fill material approved by the Engineer; disposal of surplus soil off site					
E	Average Depth 1000 - 1500mm	4	m			
F	Average Depth 1500 - 2000mm	3	m			
	Extra over excavating trenches irrespective of depth					
	Around existing services crossing excavations					
G	Storm pipe; crossing excavations	1	nr			
H	Watermain pipe; crossing excavations	1	nr			
	Disposal					
J	Ground water	1	item			
K	Surface water	1	item			
				To Collection €		

(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)

Granular fill bed and surround; 14mm or 5mm graded aggregate or 10mm single sized aggregate; complying with the requirements of the Engineer's Specification; compaction factor value not greater than 0.2 when measured in accordance with Engineer's Specification; well compacted; as per Engineer's Drawings & Specification

Beds and Surround

A	500 x 500mm to 100mm diameter pipe	4	m		
B	600 x 650mm to 150mm diameter pipe	3	m		

PVC marker tape "Heptape" or equivalent

C	Continuous strip laid during trench backfill, 100mm above pipework	6	m		

Pipe; PVC SN8 pipework and fittings; to Engineer's Specification

Pipes; loose couplers and ceiling ring joints in the running length

D	100mm diameter	4	m		

Extra over pipework runs for

E	connection to manholes	1	nr		
F	connection to foul pump station	1	nr		

Pipe; PVC SN8 pipework and fittings; to Engineer's Specification

Pipes; loose couplers and ceiling ring joints in the running length

G	150mm diameter	3	m		

Extra over pipework runs for

H	connection to manholes	2	nr		

To Collection €

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	(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)					
	Manholes					
	Rising Main Discharge Manhole; Internal Dims: 1500mm diameter; 900mm x 900mm opening in slab; 1500x1500x300mm C30/37 Reinfoced Concrete Foundations with A393 mesh top and bottom on 75mm grade C12/15 bliding concrete; Benching concrete grade C25/30 finished with 1:3 cement sand mortar; Rising Main Manhole Construction: 150mm thick grade C20/25 in-situ concrete suround; Precast concrete manhole rings to IS 420 in conjunction with IS EN 1917:2004; precast RC roof slab shall be 225mm thick in Class 30N/20mm; 1No. MIN., 3No. MAX. of Class B engineering brick set in C50/60 mortar; Cover and frame shall comply to IS EN 124 and BS 7903; D400 covers; include for forming openings in manhole surround and precast rings for 225mm dia storm pipe; 1no. 80mm dia pipes ope and 225mm dia pipe ope; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, concrete lintols and finishes; all as per specification and Engineers Specification and Drawing C14 and Irish water detail STD-WW-29					
A	Depth to invert 500 - 1000mm	1	nr			
	Sundries					
	Perforated half circle channel pipes; bedding and jointing in cement mortar (1:2)					
B	100mm; curved, 1500mm long	1	nr			
C	150mm; straight, 1500mm long	1	nr			
	Benching; clause 20/20 concrete; finished in 2:1 snad cement mortar with a smooth trowel finish; 1 in 30 slope towards channel; as per Engineer's Specification					
D	benching in bottoms; 1200mm diameter; trowelling	1	nr			
	Standard rungs; 25mm diameter solid mild steel; 360mm wide x 119mm high x 270mm long; 300mm c/c; galvanised to the latest version of BS EN ISO 1461:2009					
E	270mm tails	4	nr			
	Approved pattern cast iron manhole cover and frame; Class D400 to IS/EN 124; 150mm deep; non rock design; closed keyways; manufactured from sphericial graphite cast iron (ductile cast iron), 600x600 clear opening; cover and frame coated in bitumen or other approved material; cover to have a minimum mass of 140kg/m2; frame bedding area shall be 80,000mm2 min; frames shall be designed to prevent covers falling into manholes; frames shall be bedded on approved mortar to manufacturers instructions					
F	Ope size 600 x 600mm	1	nr			
				To Collection €		

(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)

Mains

Connection to existing

A	Connecting new foul drain to existing foul manhole; locating and diverting flows; connecting new drain to existing manhole; include for carefully excavating by hand; form new connection into manhole; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and Drawing	1	nr		

Testing and Commissioning

B	Flush out the whole of the installation with water to remove all silt and debris before final testing, before CCTV inspection if specified and immediately before handover. Safely dispose of washings and any detritus without discharging them into sewers or watercourses; as per Engineer's Specification	1	item		
C	Give CA advance notice to allow the opportunity to attend all tests and inspections. Give the Statutory Authority appropriate notice to enable pipelines to be inspected and tested as required. Provide water, assistance and apparatus as required. All lengths of drain, manholes and inspection chambers must pass the tests specified. If permitted test loss or infiltration is exceeded, remedy defect(s) before retesting after an appropriate period; as per Engineer's Specification	1	item		
D	Water / air testing of gravity drains and private sewers up to DN300; To ensure that pipelines are sound and properly installed, air test short lengths to BS 8301, paragraph 25.6.3 immediately after completion of bedding / surround. For final checking and statutory authority approval, water test to BS 8301, paragraph 25.6.2 all lengths of pipeline from terminals and connections to manholes/chambers and between manholes/ chambers; as per Engineer's Specification	1	item		
E	Testing of adoptable and large private sewers; Test sewers up to and including DN 750 size in accordance with BS 8005:Part1 as follows: Initially, before backfilling, by air test as paragraph 13.3. Finally, after backfilling, by water test as paragraph 13.4. Test sewers over DN 750 size before and after backfilling with appropriate equipment on short sections or at joints in accordance with BS 8005:Part 1, paragraph 13.5. After backfilling check at manholes for infiltration into sewers in accordance with BS 8005:Part 1, paragraph 13.6; as per Engineer's Specification	1	item		
F	Water testing of manholes / inspection chambers; Before backfilling test each manhole or chamber in accordance with BS 8301, paragraph 25.7 for: Exfiltration: Drop in water level to be not more than relevant dimension in Table 9. Infiltration: Inflow to be not more than 5 litres per hour per manhole; as per Engineer's Specification	1	item		

To Collection €

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	(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)					
A	CCTV inspection of pipelines; Carry out and record internal inspection of all pipes 100mm in diameter and over with CCTV equipment. Provide all necessary equipment, including suitable covered accommodation for viewing monitor screen, together with personnel experienced in operation of the equipment and interpretation of the results. Ensure that adequate intensity of illumination within pipe(s) is maintained. Provide for continual position recording, still photographs and stopping movement of the camera at any point requested by CA. Provide copy of videotape recording to CA. Obtain instructions from CA on remedying any defects, which may be revealed; as per Engineer's Specification	1	item			
B	CCTV inspection of adoptable pipelines; Permit the Sewerage Authority or its agent to provide equipment and personnel to carry out and record internal CCTV inspection of all pipes and associated manholes after completion. Where pipelines are under highways, all construction except for laying of the wearing course must be completed before the inspection. Obtain instructions from CA on remedying any defects, which may be revealed; as per Engineer's Specification	1	item			
C	Lifting Keys; Provide suitable lifting keys for each type of access cover and hand over to the Employer at Practical Completion	1	item			
	FOUL PUMPING STATION & VALVE CHAMBER					
	DRAINAGE					
	General Information					
	Information					
D	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
E	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
				To Collection €		

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	(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)						
	Drainage Below Ground - Foul Water						
	Like Items; Proprietary Units; Foul Pumping Station & Valve Chamber						
A	Supply & Installation of Foul Pump System, Associated Valves, Wet well Chamber and associated Valve Chamber; all in accordance with the Engineer's Specification for Foul Pumping Station and Associated Infrastructure; complete; Pump station to have two submersibile pumps; Pumps to be provided on a duty / standby control arrangement; Plater to be provided near top of wet well chamber to allow nomination of the pumps; Include for Wet and Control Kiosk by FM Environmental; Electrical and control equipment to be located in a vandal resistant Kiosk situated adjacent to the pumping station, complete with ammeter for each pump, hours run meter for each pump, socket to accept a power supply from a portable standby generator, etc. include for concrete hard standing and 450mm thick concrete plinths; Telemetry outstation to be provided for data reporting to maintance contractor; Alert system and call out emergency response to be provided in the event of plant breakdown or malfunction; Flow metering facilities to be provided; Covers to wet well and valve chamber are to be 'Galco Assist Lift Access Covers' or equivalent with safety grid and LPS 1175 SR3 security rating; Pumps guide rails to be of galvanised mild steel or stainless steel (grade 316) and certified, stainless steel lifting chain (designed to BS4942); Discharge pipework within the wet well to be complete with bends, tee-pieces, fittings, etc. to link the wet well pipework to the valve chamber pipework; Pipework within the valve chamber to incorporate isolation valves (one per pump installed), non-return valves (one per pump installed), bends, teepieces, Flange adaptors; All pipework and valves to be of ductile iron PN16; Pump motors to be high efficiency with Class F insulation and IP68 rating; include indicator plates; include for vent stack and wash down;						
B	include for wet well manhole; Internal Dims: 1900mm diameter; 4200mm deep; 1400mm x 900mm opening in slab; 100mm wide x 60mm deep must be left around top edge of clear opening; 2700x2700x300mm C30/37 Reinfoced Concrete Foundations with A393 mesh top and bottom on 75mm grade C12/15 bliding concrete; Precast Concrete DN1800 Standard Catch Pit; Benching 45 degree min. slope; Wet well Construction: 300mm thick grade C20/25 in-situ concrete suround; Precast concrete manhole rings to IS 420 in conjunction with IS EN 1917:2004; precast RC roof slab shall be 225mm thick in Class 30N/20mm with 40mm cover to steel; include for forming openings in chamber surround and precast rings for 225mm dia storm pipe; 3no. 80mm dia pipes ope;						
					To Collection €		

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	(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)					
A	include for Pumping Station Valve Chamber, Complete; Internal Dims: 2150mm x 1800mm wide; 1400mm x 900mm opening in slab; 100mm wide x 60mm deep must be left around top edge of clear opening; 300mm C30/37 mm Reinfoced Concrete Foundations on 75mm grade C12/15 bliding concrete; Valve Chamber Construction: 225mm thick grade C20/25 in-situ concrete suround; precast RC roof slab shall be 225mm thick in Class 30N/20mm with 40mm cover to steel; include for concrete trust block to bend; include for forming openings in valve chamber surround for 2 no. non return valves opes; 2no. 150 dia. cable opes; spigot pipe ope; flexible couplings ope; 2no. 80mm dia ope; 100mm dia pipe ope; include for forming openings in chamber surround; including all necessary excavation, excavating below ground water level; disposal, working space, earthwork support, dewatering, backfilling, concrete, formwork, reinforcement, construction joints, concrete lintols and finishes; all as per Engineers Civil Specification, Performance Specification for Foul Pumping Station & Associated Infrastructure and Drawing 1301					
B	Composite Item; Foul Pump System, Storage Tank, Wet well Chamber, associated Valve Chamber, Duct Chamber and Flow Meter Chamber; complete	1	item			
				To Collection €		

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(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN (Cont)					
COLLECTION					
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Page No. Siteworks/85					
Page No. Siteworks/86					
Page No. Siteworks/87					
Page No. Siteworks/88					
Page No. Siteworks/89					
Page No. Siteworks/90					
(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN Carried to Summary					

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	(50) SITE SERVICES - WATERMAIN					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	DRAINAGE/SERVICES - WATERMAIN DIVERSION					
	Builders Work in Connection With Watermains					
	Excavation					
	Excavating trenches to receive pipes / ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported compacted stone fill in strict accordance with Irish Water guidelines; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
C	Average Depth 1000 - 1500mm	156	m			
	Extra over excavating trenches irrespective of depth					
	Disposal					
D	Ground water	1	item			
E	Surface water	1	item			
	Granular fill bed and surround; 14mm or 5mm graded aggregate or 10mm single sized aggregate; complying with the requirements of the Engineer's Specification; compaction factor value not greater than 0.2 when measured in accordance with Engineer's Specification; well compacted; as per Engineer's Drawings & Specification					
	Beds and surrounds					
F	600 x 600mm to 150mm diameter pipes / ducts	156	m			
	PVC marker tape "Heptape" or equivalent					
G	Continuous strip laid during trench backfill, 100mm above pipework	156	m			

To Collection €

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	(50) SITE SERVICES - WATERMAIN (Cont)					
	Water warning mesh; Blue polythene warning mesh; in accordance with the Engineer's Specification					
A	Continuous strip laid during trench backfill, 400mm wide water warning mesh; 350mm below the finished ground surface with steel tracer wire; include for tieing to valves	156	m			
	Watermain pipework; HDPE Type PE100 SDR 11 watermain pipe					
	Watermain; including all rubber ring joints in running length; include for concrete anchor blocks					
B	150mm diameter	156	m			
	Extra over pipework runs for					
C	Bends; 150mm diameter	5	nr			
D	Connection to sluice valve	4	nr			
E	Connection to hydrant	2	nr			
	Pipework Accessories					
F	Sluice Valves shall be resilient seated and shall comply with Engineer's Specification; All Sluice Valves shall be anticlockwise closing; thrust blocks (not shown on drawing) to be provided as per STD-W-28 at all tees, bends, tapers, dead ends and pipes at steep slopes; flanged tailpeices as required for the watermains to be fitted; anti corrosion tape to be provided around buried flanges; connected to watermain; include for VJ couplings; include for spindle extension where required; include all necessary ties, connections and fittings; all in strict accordance with the Local Authority's regulations and the Engineer's Specification (Chamber measured elsewhere); as per Engineer's Specification & Drawings & Irish Water Standard Detail STD-W-15	2	nr			
G	Fire Hydrant; All Hydrants, surface box frames and covers shall comply with the relevant provisions of the Engineer's Specification; Fire Hydrants shall be Type 2, the hydrant inlet shall be 80mm diameter with PN16; all hydrants shall be clockwise closing; thrust blocks (not shown on drawings) to be provided as per Standard Drawing STD-W-28 at all tees, bends, tapers, dead ends and pipes at steep slopes; size and type of outlet and direction of closing shall comply with the requirements of the planning authority; connected to watermain; include all necessary VJ couplings, flanged riser pieces, flanged tees, double flanged spool pieces, ties, connections and fittings; anti-corrosion tape to be provided around buried flanges; all in strict accordance with the Local Authority's regulations (Chamber measured elsewhere);as per Engineer's Specification & Drawings & Irish Water Standard Detail STD-W-18	1	nr			
				To Collection €		

(50) SITE SERVICES - WATERMAIN (Cont)

Identification plates; In accordance with Engineer's Specification

A	Identification plates; sluice valve marker plate, on precast concrete post; excavation, backfilling and disposal, concrete surround, as per Engineers Specification	2	nr		
B	Identification plates; fire hydrant marker plate, on precast concrete post; excavation, backfilling and disposal, concrete surround, as per Engineers Specification	1	nr		

Chambers

Sluice Valve chamber; 150mm minimum thick C25/30 concrete base on 75mm of lean mix concrete blinding, grade C15/40; 215mm thick solid blockwork walls; bedded in cement mortar; allow for sand/cement fill around pipework; 150mm thick concrete roof slab c/w opening for 445 x 280mm cover; include for sluice valve cover, Group 4, 445 x 280mm frame opening; cover and frame to be bedded on mortar; overall internal dimensions 600 x 600mm; include for support plinth; all blockwork to be taken clear of pipes and suitabily arched or supported by concrete lintols; top of cover slab to be 50mm below FGL in roads and footpaths and at FGL in fields and grass margin; include for concrete surround to perimeter of manhole cover; include for 50mm diameter drain in chamber; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints and finishes; all as per specification and Engineers Specification and Drawings & Irish Water Standard Detail STD-W-15

C	600 x 600mm minimum internal dimensions; depth 1000 - 1500mm	2	nr		

Fire Hydrant chamber; 100mm minimum thick C25/30 concrete base on 75mm of lean mix concrete blinding, grade C15/40; 215mm thick solid blockwork walls; bedded in cement mortar; allow for sand/cement fill around pipework; 150mm thick concrete roof slab c/w opening for 445 x 280mm cover; include for hydrant cover; 445 x 280mm frame opening; cover and frame to be bedded on mortar; overall internal dimensions 600 x 600mm; include for support plinth; all blockwork to be taken clear of pipes and suitabily arched or supported by concrete lintols; top of cover slab to be 50mm below FGL in roads and footpaths and at FGL in fields and grass margin; include for concrete surround to perimeter of manhole cover; include for 50mm diameter drain in chamber; including all necessary excavation, disposal, working space, earthwork support, dewatering, backfilling, formwork, reinforcement, construction joints and finishes; all as per Engineers Specification and Drawings & Irish water Standard Detail STD-W-18

D	900 x 900mm minimum internal dimensions; depth 1000 - 1500mm	1	nr		

To Collection €

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	(50) SITE SERVICES - WATERMAIN (Cont)					
	Concrete bases/Anchor blocks					
	Excavate; level and compact bottoms of excavation; part backfill; dispose of surplus; The formation level of all anchor blocks shall be prepared by hand at specified depths below the trench formation level and the bearing area shall be excavated carefully by hand to avoid over excavation. Following preparation and approval of the formation, the Contractor shall provide and lay a 50.0 mm depth Class 7.5/20 concrete to prevent deterioration of the formation during fixing of bends and fittings and the erection of anchor block formwork. The anchor blocks shall be constructed in Class 20/25 concrete to the dimensions shown on Irish Water - Water Infrastructure Standard Details.as per Engineer's Drawings					
A	size 450 x 450 x 600mm deep anchor blocks; complete	5	nr			
	Mains					
	Connection to existing watermain pipe					
B	Connection to existing watermain pipe; 150mm diameter; provide opening for new watermains connection; carefully excavate by hand to locate existing live watermain; include for all fittings including flange adaptors, flanged tees, HDPE branch etc required to make the connection; including all excavation, disposal, working space, backfilling; making good; reinstate all finishes to match existing; maintain flow at all times; Connection to be co-ordinated with Engineer; it will be the duty of the Contractor to seek all necessary road opening licences, permissions, etc including any Irish Water / Local Authority / Group Water Scheme connection levies; The connection must be made in accordance with Local Authority Guideliens and trench backfilled in accordance with Civil/Structural Engineering Spec and Guidelines for the Opening, Backfilling and Reinstatement of Trenches in Public Roads - Dept of Env & Local Gov 2002 and Specification for the Reinstatement of Openings in Highways HUAC 2010; all new fittings, branches and ferrules to be installed as per Local Authority requirements and Irish Water Requirements; The Contractor shall carry out any investigations, searches, tests, trial holes, slit trenches, and trial holes necessary to locate existing services at his own expense; all as per Engineer's Specification	2	nr			
	Testing and Commissioning					
C	PREPARATION: (a) The section of pipeline to be tested shall consist of one class of pipe only. (b) Pipe joints shall be left exposed during the test. (c) Sufficient backfill shall be placed around the pipe to prevent excessive movement during the test. (d) The pipes shall be tested in such lengths, up to a maximum length of 800 metres. (e) The ends of the section to be tested shall be blanked off using bolted blank flanges or fused end caps, adequately strutted or anchored to solid undisturbed ground. (f) Blank flanges or end caps shall be fitted with appropriate tappings to enable flushing out and filling of the pipeline and to accommodate the necessary pressure gauges. (g) Testing against a closed valve is not permitted, and these shall be in fully open position during the test. (h) Air valves and hydrants shall be subjected to the Test Pressure and should be inspected whilst the main is under pressure to ensure that they are not leaking.	1	item			

To Collection €

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	(50) SITE SERVICES - WATERMAIN (Cont)					
A	FLUSHING: (a) The section to be tested shall be thoroughly flushed with fresh clean water. A flushing velocity of at least 1 metre per second should be maintained. (b) Flushing shall be continued until the Testing Engineer/ Supervisor is satisfied that the section under test has been thoroughly cleaned.	1	item			
B	DISINFECTION: (a) After flushing, the mains shall be filled with chlorinated water, having a minimum chlorine content of 20 mg/litre (20 p.p.m.). This water shall be left standing in the pipeline for at least 24 hours. (b) The chlorinated water shall then be drained off, and shall be treated to dilute the chlorine to a level of 0.5 mg/l before discharge to a sewer or watercourse. (c) The mains shall then be thoroughly flushed again with potable water from the supply, or with water having a minimum chlorine content of 0.5 mg/l provided by the Developer if none is available from the Public Mains. (d) After thorough flushing, a bacteriological test shall be carried out on the main. The test must show that the water in the new mains is in accordance with the Chemical and Bacteriological Water Quality Requirements of the European Communities (Quality of Water Intended for Human Consumption) Regulations (current version, including any amendments or additions thereto).	1	item			
C	SETTING UP THE PRESSURE TEST: (a) The test position shall be located at the lower end of the pipeline profile. (b) The section under test shall be filled with water, ensuring all air has been eliminated from it. The pipe shall be filled slowly to avoid risk of damage due to surge. (c) After filling it shall be left under operating pressure for a period in order to achieve stable conditions. (d) All air vents shall be closed and the system left to stabilise for 2 to 3 hours. The Test Pressure may then be applied.	1	item			
D	PRESSURE TESTING: (a) Pressure shall be applied at a constant and consistent rate by pumping with the Test Pump, until the Test Pressure is achieved. (b) The Test Pressure shall be maintained by additional pumping as required for 30 minutes. (c) The pressure shall then be reduced to 2 bars (30 p.s.i. or 68 ft or 20 metres) by rapid bleeding from the system. (d) Pressure gauge readings shall then be noted as follows: (i) At 2-minute intervals for the first 10 minutes (5 readings) (ii) At 5-minute intervals for the next 30 minutes (4 readings) (iii) At 10-minute intervals for the next 60 minutes (6 readings) (e) After 30 minutes at a pressure of 2 bars, the pressure in a leaktight system will have stabilised at approximately 4 bars (60 p.s.i. approximately), and should not fall away. A test failure will be indicated by a falling pressure. (f) If a drop in pressure occurs, the quantity of water added in order to re-establish the Test Pressure shall be carefully measured. The maximum allowable leakage from the main which has been subjected to the Test Pressure and allowed to stand under pressure for 24 hours shall not exceed 0.1 litres per mm bore of main per 1000m of pipe under test. (g) If the test is not satisfactory the fault shall be found and rectified. All defective pipes, whether cracked, porous, leaking or exhibiting other faults shall be removed and replaced by new pipes. All leaking joints shall be made good. Burning, plugging, stopping or other repairs to porous or faulty pipes will not be permitted.	1	item			
				To Collection €		

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	(50) SITE SERVICES - WATERMAIN (Cont)					
A	TESTING OF THERMOPLASTIC PRESSURE PIPELINES: The testing of thermoplastic pressure pipelines shall be carried out in accordance with the procedures in A Guide to testing of water supply pipelines and sewer rising mains, published by WRc.	1	item			
B	COMPLETION TEST (FOR STAGE DEVELOPMENTS) (a) Where the water service main system within a development has been tested in stages, a Completion test shall be carried out on the entire system before it can be taken over by the Council. (b) The Test Pressure shall be full static pressure on the system, or the total normal pumping head in the case of pumped systems. The Test Pressure shall be applied for a period of not less than 6 hours or more than 24 hours. The leakage rate shall not exceed 0.11 litres per mm bore of main per 1000m of pipeline per 24 hours.	1	item			
C	TEST PRESSURES: The Test Pressure shall be as outlined below for the various types and classes of pipe, unless otherwise specified in the documents or directed by the Test Engineer/Supervisor. Pipelines shall be tested in sections, under an internal water pressure as per details in Engineer's Specification; The Test Pressure for gravity mains is the Rated Pressure or 1.5 times the maximum static head, whichever is greater. For pumping mains the Test Pressure is the Rated Pressure or 1.5 times the maximum working pressure, whichever is greater. The above Test Pressure shall apply at the highest point of the section under test but the Developer shall ensure that no pipe on the pipeline under test is subjected to more than twice the normal working pressure for the class of pipe under test.	1	item			
D	Watermains should be tested at 1.5 times the working pressure for one hour in the presence of a member of staff from the waterworks department; details of testing procedure to be discussed on site with Contractor	1	item			
E	All testing (pressure chlorination & bacterial) tests to be in accordance with Local Authorities specification; the Engineer is to inspect the pressure test after the water control meters are installed. All hydrants & valves are to be included in the test	1	item			
				To Collection €		

				€	c
(50) SITE SERVICES - WATERMAIN (Cont)					
COLLECTION					
Page No. Siteworks/92					
Page No. Siteworks/93					
Page No. Siteworks/94					
Page No. Siteworks/95					
Page No. Siteworks/96					
Page No. Siteworks/97					
(50) SITE SERVICES - WATERMAIN **Carried to Summary**					

					€	c
	(50) SITE SERVICES - GAS					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	DRAINAGE/SERVICES - GAS MAIN					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 1nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported compacted stone fill; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations; as per Engineer's Drawing					
E	Average Depth 500 - 1000mm	256	m			
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
F	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	50	m			
G	Excavating existing grass and making good to match existing after excavation and drainage runs have been laid	206	m			

To Collection €

					€	c
	(50) SITE SERVICES - GAS (Cont)					
	Around existing services parallel excavations					
A	Storm pipe; parallel excavations	60	m			
	Around existing services crossing excavations					
B	Storm pipe; crossing excavations	5	nr			
C	Foul pipe; crossing excavations	5	nr			
D	Watermain pipe; crossing excavations	2	nr			
E	ESB Duct; crossing excavations	2	nr			
F	EIR Duct; crossing excavations	2	nr			
	Disposal					
G	Ground Water	1	item			
H	Surface Water	1	item			
	Sand bed and surround; to Engineer's Specification					
	Beds and surrounds					
J	290 x 215mm, to 90mm pipes / ducts	256	m			
	PVC marker tape "Heptape" or equivalent					
K	Continuous strip laid during trench backfill, 100mm above pipework	256	m			
	Mechanical Installations					
	Gas pipework as per Engineer's Specification & Gas Suppliers details; complete					
	Pipework					
L	Installation only of gas pipework; size: 90mm; pipe to be supplied by Gas Supplier; complete	256	m			
	MECHANICAL INSTALLATIONS					
	Generally					
	General; complete; refer to M&E Drawings, M&E Mechanical Engineering General Specification					
	General					
M	Testing and commissioning; all in accordance with Engineers specification documents and drawings	1	Item			

To Collection €

					€	c
	(50) SITE SERVICES - GAS (Cont)					
A	Operating and maintenance manuals; all in accordance with Engineers specification documents and drawings	1	Item			
B	Working drawings; all in accordance with Engineerss specification documents and drawings	1	Item			
C	Co- ordination drawings; all in accordance with Engineers specification documents and drawings	1	Item			
D	As built drawings; all in accordance with Engineers specification documents and drawings	1	Item			
E	Identification plates, labels and the like; all in accordance with Engineers specification documents and drawings	1	Item			
F	Builderswork; forming and cutting holes, mortices, chases or the like, providing grounds, lifting, re-fixing and replacing as required existing chequer plates, floor boards or raised access floor panels etc. and amking good, all in accordance with Engineers specification documents and drawings	1	Item			
G	Fire stopping and other associated fire protection works; all in accordance with Engineers specification documents and drawings	1	Item			
				To Collection €		

				€	c
(50) SITE SERVICES - GAS (Cont)					
COLLECTION					
Page No. Siteworks/99					
Page No. Siteworks/100					
Page No. Siteworks/101					
(50) SITE SERVICES - GAS **Carried to Summary**					

					€	c
	(50) SITE SERVICES - DISTRICT HEATING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	DRAINAGE/SERVICES - DISTRICT HEATING					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 2nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported compacted stone fill; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations; as per Engineer's Drawing					
E	Average depth 500 - 1000mm	37	m			
	Extra over excavating trenches irrespective of depth					
	Disposal					
F	Ground water	1	item			
G	Surface water	1	item			

					€	c
	(50) SITE SERVICES - DISTRICT HEATING (Cont)					
	Sand bed and surround; to Engineer's Specification					
	Beds and Surrounds					
A	464 x 251mm; to 1nr 63mm pipe & 126mm pipe	37	m			
	PVC marker tape; "Heptape" or equivalent					
B	Continuous strip; laid during trench backfill; 100mm above pipework	37	m			
	Pipework					
	63mm diameter ID pipe					
C	Laid in trenches	37	m			
D	Extra over for easy sweep bends	2	nr			
	Pipework					
	126mm diameter OD pipe					
E	Laid in trenches	37	m			
F	Extra over for easy sweep bends	2	nr			
	MECHANICAL INSTALLATIONS					
	Generally					
	General; complete; refer to M&E Drawings, M&E Mechanical Engineering General Specification					
	General					
G	Testing and commissioning; all in accordance with Engineers specification documents and drawings	1	Item			
H	Operating and maintenance manuals; all in accordance with Engineers specification documents and drawings	1	Item			
J	Working drawings; all in accordance with Engineerss specification documents and drawings	1	Item			
K	Co- ordination drawings; all in accordance with Engineers specification documents and drawings	1	Item			
L	As built drawings; all in accordance with Engineers specification documents and drawings	1	Item			
M	Identification plates, labels and the like; all in accordance with Engineers specification documents and drawings	1	Item			

To Collection €

					€	c
	(50) SITE SERVICES - DISTRICT HEATING (Cont)					
A	Builderswork; forming and cutting holes, mortices, chases or the like, providing grounds, lifting, re-fixing and replacing as required existing chequer plates, floor boards or raised access floor panels etc. and amking good, all in accordance with Engineers specification documents and drawings	1	Item			
B	Fire stopping and other associated fire protection works; all in accordance with Engineers specification documents and drawings	1	Item			
	Notes					
C	The tendering contractors are referred to ARM 4 supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		Note			
D	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		Note			
E	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings will be carried out by the Works Specialist under the terms of the main contract. The Mechanical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		Note			
				To Collection €		

(50) SITE SERVICES - DISTRICT HEATING (Cont)

ALTERNATIVE RULES FOR THE MEASUREMENT OF MECHANICAL INSTALLATIONS

(50) SITE SERVICES (MAINLY MECHANICAL) - EXTERNAL PLANT AREA

System

Heat Pump installation, testing and commissioning; The Contractor shall supply, install, test and commission 1no. electrical fully packaged high efficiency, low noise, Air Source Heat Pump (ASHP) mounted externally and assocaited pipework as indicated on the design drawings with a performance specification in accordance with Part 4: Equipment Schedule; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4.1, Section 1 and Drawing 2999-SMK-ZZ-XX-DR-M-5001, 2999-SMK-ZZ-LL-DR-M-5150

Equipment

Air Source Heat Pump; supply and installation complete; Description: High Efficiency Low Noise External Air Source Heat Pumps; Heating Capacity: 44.3 kW; CoP: 3.26 W/W; SCoP: 4.7 W/W; Efficiency: 186 %; Compressor Type: Scroll or Screw; Minimum Number of Compressors: 1; Global Warming Potential: 3 GWP; Refrigerant Type: R290 or better with a lower GWP; Total Refrigerant Charge: 6.5 kg; Outdoor Air Temp: -3.0 °C; Integral Hydronic Kit c/w on board primary pumps: Required; Fluid Type: Water; In/Out Fluid Temp: 50.0/55.0 °C; Fluid Flowrate: 6.1 m3/h; Circuit Pressure Drop: 20.5 kPa; Pump Available Pressure Drop: 152.6 kPa; Max Sound Power: 78.6 dBA; Super Low Noise: Required; Nominal Voltage Supply: 3/400/50 Ph/V/Hz; Maximum Absorbed Power: 22.6 kW; Maximum Absorbed Current: 60.6 A; Discharge Direction: Vertical; Nominal Dimensions: 1940 x 1260 x 2375mm L x W x H; Construction: Galvanised Sheet Steel painted with polyurenate powder enamel c/w removable panels; Source Heat Exchanger: Cu/Al pipes and fins with hydrophilic coating 'Blue Fins'; User Heat Exchanger: Braze Welded Plate Heat Exchanger (AISI 316 Stainless Steel) c/w closed cell insulation and discharge temp sensor for anti-freeze protection; Control & Protection Devices: Required - IP54 & ATEX protection; Control Panel: Microprocessor based c/w display showing all operational icons and connections for MODBUS protocols; Serial Interface Card RS485: Required to allow the controller to communicate using Modbus Protocol; Head Pressure Control: This device, using a pressure probe installed on the source heat exchanger, controls the fan speed with respect to the ambient conditions; Accessories: Rubber Anti-vibration feet/pad, Condensate Drip Tray, Anti Freeze Kit, Pressure Gauges, Master / Slave Cascade Control system, Outdoor Air Temperature Sensor for Weather Compensation, Hydraulic Kit comprising centrifugal circulating pump c/w safety valve & fill/drain point; Defrost Method: Reverse Cycle; Defrost Control: Sensor for outdoor temperature; Warranty: 5 year parts and labour; include for all accessories; all in strict accordance with the Mechanical Specification Part 4, Section 1.1

A	Air Source Heat Pump; Ref: ASHP-01; Location: External Plant Compound	1	nr			

To Collection €

(50) SITE SERVICES - DISTRICT HEATING (Cont)

Accessories associated with Primary Equipment

Isolation valves; for isolation of LPHW pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

A	40mm Isolation Valves	5	nr		

Strainer valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

B	40mm STR Valves	1	nr		

3 - Port Motorised Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

C	40mm 3- Port Mototrised Valves	1	nr		

Commissioning Set; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

D	40mm Commissioning Set	1	nr		

Drain Cock Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

E	40mm Drain Cock Valve	2	nr		

Double Regulating Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

F	40mm Double Regulating Valve	1	nr		

Non-Close Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

G	40mm Non- Close Valve	2	nr		

Non Return Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

H	40mm Non-Return Valve	1	nr		

Temperature Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2

J	40mm Temperature Sensor	2	nr		

To Collection €

					€	c
	(50) SITE SERVICES - DISTRICT HEATING (Cont)					
	Temperature Gauge; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	40mm Temperature Gauge	2	nr			
	Heat Meter; Heat meters shall be provided on each of the heating circuits, between the flow and return pipework, and shall be wired back to the BEMS panel providing a pulsed output signal indicating energy consumption on the front-end ;include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	Heat Meter	1	nr			
	Distribution					
	Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5001					
C	63mm ID/ 126mm OD diameter pipework	1	Item			
	Medium Grade Black Mild steel pipework and fittings; include for all fixings and supports; include for all elbows, expansion bellows; unions and tees necessary to complete the work, all pipework up to 50mm to be screw joints, pipework above 50mm to be welded, plant room pipework to be flanged; all connections to valves shall be screwed; Painting: two coat of zinc chromate primer prior to fitting of insulation; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1					
D	40mm diameter pipework	1	Item			
E	50mm diameter pipework; header arrangement	1	Item			
	Insulation					
	Foiled faced fibreglass insulation; to all new pipework services; class A1, CFC and HCFC free with ozone depletion factor of zero; Thermal conductivity not exceeding 0.04W/m2K at 100°C; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4.2					
	Insulation, 40mm thick					
F	to 40mm diameter pipework	1	Item			
G	to 50mm diameter pipework	1	Item			
	Insulation Jackets; Velcro fixed pump jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
H	General Valves & Plant	1	Item			
				To Collection €		

					€	c
	(50) SITE SERVICES - DISTRICT HEATING (Cont)					
	Aluminium Cladding; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
A	to 40mm diameter pipework	1	Item			
B	to 50mm diameter pipework	1	Item			
C	to General Valves & Plant	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
D	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
E	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
F	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
G	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
H	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
J	Identification plates, labels and the like	1	Item			
				To Collection €		

				€	c
(50) SITE SERVICES - DISTRICT HEATING (Cont)					
COLLECTION					
Page No. Siteworks/103					
Page No. Siteworks/104					
Page No. Siteworks/105					
Page No. Siteworks/106					
Page No. Siteworks/107					
Page No. Siteworks/108					
Page No. Siteworks/109					
(50) SITE SERVICES - DISTRICT HEATING **Carried to Summary**					

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	DRAINAGE/SERVICES - DISTRICT HEATING EXSITING BUILDING					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 2nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported compacted stone fill; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations; as per Engineer's Drawing					
E	Average depth 500 - 1000mm	69	m			
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
F	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	69	m			

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Around existing services parallel excavations					
A	Storm pipe; parallel excavations	20	m			
	Around existing services crossing excavations					
B	Storm pipe; crossing excavations	3	nr			
C	Foul pipe; crossing excavations	3	nr			
D	Watermain pipe; crossing excavations	3	nr			
E	ESB Duct; crossing excavations	3	nr			
F	EIR Duct; crossing excavations	3	nr			
	Disposal					
G	Ground water	1	item			
H	Surface water	1	item			
	Sand bed and surround; to Engineer's Specification					
	Beds and Surrounds					
J	464 x 251mm; to 1nr 63mm pipe & 126mm pipe	23	m			
K	617 x 327mm; to 1nr 140mm pipe & 202mm pipe	47	m			
	PVC marker tape; "Heptape" or equivalent					
L	Continuous strip; laid during trench backfill; 100mm above pipework	69	m			
	Pipework					
	63mm diameter ID pipe					
M	Laid in trenches	23	m			
N	Extra over for easy sweep bends	4	nr			
	Pipework					
	126mm diameter OD pipe					
P	Laid in trenches	23	m			
Q	Extra over for easy sweep bends	4	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Pipework					
	140mm diameter ID pipe					
A	Laid in trenches	47	m			
B	Extra over for easy sweep bends	4	nr			
	Pipework					
	202mm diameter OD pipe					
C	Laid in trenches	47	m			
D	Extra over for easy sweep bends	4	nr			
	MECHANICAL INSTALLATIONS					
	Generally					
	General; complete; refer to M&E Drawings, M&E Mechanical Engineering General Specification					
	General					
E	Testing and commissioning; all in accordance with Engineers specification documents and drawings	1	Item			
F	Operating and maintenance manuals; all in accordance with Engineers specification documents and drawings	1	Item			
G	Working drawings; all in accordance with Engineerss specification documents and drawings	1	Item			
H	Co- ordination drawings; all in accordance with Engineers specification documents and drawings	1	Item			
J	As built drawings; all in accordance with Engineers specification documents and drawings	1	Item			
K	Identification plates, labels and the like; all in accordance with Engineers specification documents and drawings	1	Item			
L	Builderswork; forming and cutting holes, mortices, chases or the like, providing grounds, lifting, re-fixing and replacing as required existing chequer plates, floor boards or raised access floor panels etc. and amking good, all in accordance with Engineers specification documents and drawings	1	Item			
M	Fire stopping and other associated fire protection works; all in accordance with Engineers specification documents and drawings	1	Item			
				To Collection €		

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Notes					
A	The tendering contractors are referred to ARM 4 supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		Note			
B	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		Note			
C	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings will be carried out by the Works Specialist under the terms of the main contract. The Mechanical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		Note			
				To Collection €		

(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)

ALTERNATIVE RULES FOR THE MEASUREMENT OF MECHANICAL INSTALLATIONS

(50) SITE SERVICES (MAINLY MECHANICAL) - EXTERNAL PLANT AREA

System

Heat Pump installation, testing and commissioning; The Contractor shall supply, install, test and commission 1no. electrical fully packaged high efficiency, low noise, Air Source Heat Pump (ASHP) mounted externally and assocaited pipework as indicated on the design drawings with a performance specification in accordance with Part 4: Equipment Schedule; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4.1, Section 1 and Drawing 2999-SMK-ZZ-XX-DR-M-5001, 2999-SMK-ZZ-LL-DR-M-5151

Equipment

Air Source Heat Pump; supply and installation complete; Description: High Efficiency Low Noise External Air Source Heat Pumps; Heating Capacity: 138.7kW; CoP: 3.86 W/W; SCoP: 4.1 W/W; Efficiency: 160.9 %; Compressor Type: Semi-Hermetric Piston Compressors; Minimum Number of Compressors: 2; Global Warming Potential: 3 GWP; Refrigerant Type: R290 or better with a lower GWP; Total Refrigerant Charge: 20 kg; Outdoor Air Temp: -3.0 °C; Integral Hydronic Kit c/w on board primary pumps: Required; Fluid Type: Water; In/Out Fluid Temp: 70.0/ 65.0 °C; Fluid Flowrate: 23.9m3/h; Circuit Pressure Drop: 18.6 kPa; Pump Available Pressure Drop: 121.4 kPa; Max Sound Power: 94.1dBA; Super Low Noise: Required; Nominal Voltage Supply: 3/400/50 Ph/V/Hz; Maximum Absorbed Power: 77.9 kW; Maximum Absorbed Current: 168 A; Discharge Direction: Vertical; Nominal Dimensions: 5350 x 1300 x 2550 (L x W x H); Construction: Galvanised Sheet Steel painted with polyurenate powder enamel c/w removable panels; Source Heat Exchanger: Cu/Al pipes and fins with hydrophilic coating 'Blue Fins'; User Heat Exchanger: Braze Welded Plate Heat Exchanger (AISI 316 Stainless Steel) c/w closed cell insulation and discharge temp sensor for anti-freeze protection; Control & Protection Devices: Required - IP54 & ATEX protection; Control Panel: Microprocessor based c/w display showing all operational icons and connections for MODBUS protocols; Serial Interface Card RS485: Required to allow the controller to communicate using Modbus Protocol; Head Pressure Control: This device, using a pressure probe installed on the source heat exchanger, controls the fan speed with respect to the ambient conditions; Accessories: Rubber Anti-vibration feet/pad, Condensate Drip Tray, Anti Freeze Kit, Pressure Gauges, Master / Slave Cascade Control system, Outdoor Air Temperature Sensor for Weather Compensation, Hydraulic Kit comprising centrifugal circulating pump c/w safety valve & fill/drain point; Defrost Method: Reverse Cycle; Defrost Control: Sensor for outdoor temperature; Warranty: 5 year parts and labour; include for all accessories; all in strict accordance with the Mechanical Specification Part 4, Section 1.1

A	Air Source Heat Pump; Ref: ASHP-03; Location: External Plant Compound	1	nr		
B	Air Source Heat Pump; Ref: ASHP-04; Location: External Plant Compound	1	nr		

To Collection €

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Accessories associated with Primary Equipment					
	Isolation valves; for isolation of LPHW pipework; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	65mm Isolation Valves	14	nr			
	Strainer valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	65mm STR Valves	2	nr			
	3 - Port Motorised Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
C	65mm 3- Port Mototrised Valves	2	nr			
	Commissioning Set; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
D	65mm Commissioning Set	2	nr			
	Drain Cock Valves; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
E	65mm Drain Cock Valve	4	nr			
	Double Regulating Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
F	65mm Double Regulating Valve	2	nr			
	Non-Close Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
G	65mm Non- Close Valve	2	nr			
	Non Return Valve; include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
H	65mm Non-Return Check Valve	2	nr			
	Temperature Sensor; linked to BMS; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
J	65mm Temperature Sensor	4	nr			
				To Collection €		

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Temperature Gauge; include for all accessories and fittings; complete; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
A	65mm Temperature Gauge	4	nr			
	Heat Meter; Heat meters shall be provided on each of the heating circuits, between the flow and return pipework, and shall be wired back to the BEMS panel providing a pulsed output signal indicating energy consumption on the front-end ;include for all fittings and accessories; all in accordance with the Mechanical Engineers Specification Part 3, Section 2					
B	Heat Meter	2	nr			
	Distribution					
	Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5001					
C	140mm ID/ 202mm OD diameter pipework	1	Item			
	Medium Grade Black Mild steel pipework and fittings; include for all fixings and supports; include for all elbows, expansion bellows; unions and tees necessary to complete the work, all pipework up to 50mm to be screw joints, pipework above 50mm to be welded, plant room pipework to be flanged; all connections to valves shall be screwed; Painting: two coat of zinc chromate primer prior to fitting of insulation; all in strict accordance with the Mechanical Engineers Specification Part 3, Section 1					
D	65mm diameter pipework	1	Item			
E	90mm diameter pipework; header arrangement	1	Item			
	Insulation					
	Foiled faced fibreglass insulation; to all new pipework services; class A1, CFC and HCFC free with ozone depletion factor of zero; Thermal conductivity not exceeding 0.04W/m2K at 100°C; all joints taped and sealed; all in strict accordance with the Mechanical Engineers Specification Part 1, Section 4.2					
	Insulation, 40mm thick					
F	to 65mm diameter pipework	1	Item			
G	to 90mm diameter pipework; header arrangement	1	Item			
	Insulation Jackets; Velcro fixed pump jackets; supply and installation; complete; all in accordance with the Mechanical Engineers Specification					
H	General Valves & Plant	1	Item			
				To Collection €		

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Aluminium Cladding; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification					
A	to 65mm diameter pipework	1	Item			
B	to 125mm diameter pipework; header arrangement	1	Item			
C	to General Valves & Plant	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
D	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
E	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
F	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
G	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
H	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
J	Identification plates, labels and the like	1	Item			
	Notes					
K	The tendering contractors are referred to ARM 4 supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		Note			
L	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple McKillop Consulting Engineers.		Note			
				To Collection €		

(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)

A	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings will be carried out by the Works Specialist under the terms of the main contract. The Mechanical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		Note			

ALTERNATIVE RULES FOR THE MEASUREMENT OF MECHANICAL INSTALLATIONS

(50) SITE SERVICES (MAINLY MECHANICAL) - 2012 EXTENSION HEATING MAINS REPLACEMENT

System

Heating mains replacement for 2012 extension installation, testing and commissioning; The works comprise the removal of existing 65 mm flow and return pre-insulated MDPE heating pipework and the installation of new 2 no. 63 ID / 126 OD pre-insulated steel heating mains to supply the 2012 building extension; all in strict accordance with the Mechanical Engineers Specifications and Drawing 2999-SMK-ZZ-XX-DR-M-5001

Distribution

Pre-insulated, self-compensating, flexible heating pipework and fittings; Miniumum heat loss of 0.216W/m; Insulation: closed cell PUR foam wrapped in corrugated HD PEXa; Operating temp: 95°C; tested to 6 bar; include for all accessories; all in strict accordance with the Mechanical Engineers Specification and Drawings M-5001

B	63mm ID/ 126mm OD diameter pipework	1	Item			

Insulation

Aluminium Cladding; 18mm gauge aluminium, fixed with self-tapping screws; all in strict accordance with the Mechanical Engineers Specification

C	to 125mm diameter pipework; header arrangement	1	Item			
D	to General Valves & Plant	1	Item			

General

Testing and commissioning; all in accordance with Engineers Specification

E	Testing and commissioning	1	Item			

Operating and maintenance manuals; all in accordance with Engineers Specification

F	Operating and maintenance manuals	1	Item			

To Collection €

					€	c
	(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
	Working drawings; all in accordance with Engineers Specification					
A	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
B	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
C	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
D	Identification plates, labels and the like	1	Item			
				To Collection €		

				€	c
(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING (Cont)					
COLLECTION					
Page No. Siteworks/111					
Page No. Siteworks/112					
Page No. Siteworks/113					
Page No. Siteworks/114					
Page No. Siteworks/115					
Page No. Siteworks/116					
Page No. Siteworks/117					
Page No. Siteworks/118					
Page No. Siteworks/119					
Page No. Siteworks/120					
(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING **Carried to Summary**					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - ESB DIVERSION					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE SERVICES (MAINLY ELECTRICAL) - ESB					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	The contractor shall also ascertain whether or not there are any E.S.B. cables on the site and arrange for their removal so that it does not delay site progress. All, redundant site services/site services made redundant, for all utilities and services, will be removed as part of the contract.	1	item			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 2nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	16	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - ESB DIVERSION (Cont)					
	Excavating trenches to receive 3nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
A	Average depth 500 - 1000mm	113	m			
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
B	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	10	m			
	Around existing services crossing excavations					
C	Storm pipe; crossing excavations	2	nr			
D	Foul pipe; crossing excavations	2	nr			
	Disposal					
E	Ground water	1	item			
F	Surface water	1	item			
	Sand bed and surround; to Engineer's Specification					
	Beds and Surrounds					
G	475 x 225mm; to 2nr 100mm duct	16	m			
H	650 x 225mm; to 3nr 100mm duct	113	m			
	PVC Red marker tape; "Heptape" or equivalent					
J	Continuous strip; laid during trench backfill; 100mm above pipework	128	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
K	Continuous strip; laid during trench backfill; 300mm above pipework	128	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - ESB DIVERSION (Cont)					
	Ductwork; uPVC duct; to ESB Speciifcation; Red					
	100mm dia.; include for draw-wire					
A	Laid in trenches	368	m			
B	Extra over for easy sweep bends complete with puddle flanges; set in concrete	33	nr			
	Chambers					
	Draw pit chamber; complete; excavating pits from stripped level 1000x1000x800mm deep internally; dispose of surplus soil; grading bottom; earthwork support; open bottom pit filled with 50mm course gravel for drainage; RC3 concrete base on 50mm blinding grade gen 3; Concrete roof slab grade C25 c/w opening for cover and frame; 225mm thick Class B engineering brickwork in english bond; Walls: 1000mm high with 50mm rebate for removable cover; include for openings for ducts; Heavy duty cast iron cover and frame to Engineer's Specification bedded in epoxy mortar; include for step irons; all pvc pipes to fall away from building and all pits should not waterlog; pipes to be buried 750mm below ground level; include for backfilling to sides of chamber where necessary; all in accordance with M & E Engineers Drawing					
C	Average depth not exceeding 1000mm	6	nr			
	Sundries					
D	Connecting new ESB line to existing ESB Line; include for forming new connection; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and drawings	2	nr			
E	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
F	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
G	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
H	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
J	Provide markings/signage of ESB cables at locations as agreed with Local Engineering Officer and in accordance with ESB Specifications; as per Engineer's Drawing	1	item			
K	Provide all necessary attendances and builders work in association with disconnecting and removing existing underground ESB supply; complete	1	item			
				To Collection €		

				€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - ESB DIVERSION (Cont)					
COLLECTION					
Page No. Siteworks/122					
Page No. Siteworks/123					
Page No. Siteworks/124					
(60) SITE SERVICES (MAINLY ELECTRICAL) - ESB DIVERSION **Carried to Summary**					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE SERVICES (MAINLY ELECTRICAL) - ESB					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	The contractor shall also ascertain whether or not there are any E.S.B. cables on the site and arrange for their removal so that it does not delay site progress. All, redundant site services/site services made redundant, for all utilities and services, will be removed as part of the contract.	1	item			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 3nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	120	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
A	Breaking out existing roadway and associated make-up; saw cutting surface; include for reinstating bitmac surfacing and all associated hardcore makeup; comprising 40mm thick polymer modified stone mastic asphalt PMSMA SMA 10 surf PMB 65/105-60 DES: to CL 942; laid on 60mm DBM binder course AC 20 dense bin 40/60 rec: to CL 906; laid on 80mm DBM road base AC 32 dense bin 40/60 rec: to CL 906; to TII 900 Series; rolled with 10-12.5 tonne roller; laid on 150mm deep clause 808 stone sub-base; laid on 300mm deep clause 6F2 capping layer; including geogrid membranes; include for fair jointing to fair edges; include for breaking out and reinstating all kerbing required; disposal of excavated material off site; all in accordance with the Engineer's Specification	10	m			
B	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	80	m			
	Around existing services crossing excavations					
C	Storm pipe; crossing excavations	6	nr			
D	Foul pipe; crossing excavations	6	nr			
E	Watermain pipe; crossing excavations	6	nr			
F	ESB Duct; crossing excavations	6	nr			
G	EIR Duct; crossing excavations	6	nr			
	Disposal					
H	Ground water	1	item			
J	Surface water	1	item			
	Sand bed and surround; to Engineer's Specification					
	Beds and Surrounds					
K	650 x 225mm; to 3nr 100mm duct	120	m			
	PVC Red marker tape; "Heptape" or equivalent					
L	Continuous strip; laid during trench backfill; 100mm above pipework	120	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
M	Continuous strip; laid during trench backfill; 300mm above pipework	120	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Ductwork; uPVC duct; to ESB Speciifcation; Red					
	100mm dia.; include for draw-wire					
A	Laid in trenches	360	m			
B	Extra over for easy sweep bends complete with puddle flanges; set in concrete	24	nr			
	Chambers					
	Draw pit chamber; complete; excavating pits from stripped level 1000x1000x800mm deep internally; dispose of surplus soil; grading bottom; earthwork support; open bottom pit filled with 50mm course gravel for drainage; RC3 concrete base on 50mm blinding grade gen 3; Concrete roof slab grade C25 c/w opening for cover and frame; 225mm thick Class B engineering brickwork in english bond; Walls: 1000mm high with 50mm rebate for removable cover; include for openings for ducts; Heavy duty cast iron cover and frame to Engineer's Specification bedded in epoxy mortar; include for step irons; all pvc pipes to fall away from building and all pits should not waterlog; pipes to be buried 750mm below ground level; include for backfilling to sides of chamber where necessary; all in accordance with M & E Engineers Drawing					
C	Average depth not exceeding 1000mm	4	nr			
	Sundries					
D	Connecting new ESB line to existing substation; include for forming new connection; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and drawings	3	nr			
E	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
F	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
G	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
H	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
J	Provide markings/signage of ESB cables at locations as agreed with Local Engineering Officer and in accordance with ESB Specifications; as per Engineer's Drawing	1	item			
K	Provide all necessary attendances and builders work in association with disconnecting and removing existing underground ESB supply; complete	1	item			
				To Collection €		

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)

Notes

A	The tendering contractors are referred to ARM 4 supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		Note		
B	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple & McKillop Consulting Engineers.		Note		
C	Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings will be carried out by the Works Specialist under the terms of the main contract. The Electrical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist.		Note		

ALTERNATIVE RULES FOR THE MEASUREMENT OF ELECTRICAL SERVICES

(60) SITE SERVICES (MAINLY ELECTRICAL) - REPLACEMENT OF EXISITNG LV MAIN DISTRIBUTION BOARD

System

Replacement existing LV main distribution board, installation, testing and commissioning; complete; The The Contractor shall allow for the supply and installation of all switchgear, distribution boards and sub mains cables in accordance with the drawings and attached specification; The Contractor shall be responsible for safe off-loading, receiving, storage, positioning and fixing of the boards and shall be liable for any damage to boards during installation; The Contractor shall submit working drawings to the Engineer for approval prior to manufacture of switchgear; the contractor shall allow for liaising with the ESB; all in accordance with the Electrical Engineers Specification Part 1, Section 13, 14; Part 2; Part 3; Part 4, Section 2 and Drawings 2999-SMK-ZZ-XX-SC-E-6200

D	Replacement of existing LV installations	1	Item		

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Equipment					
	Main Switch Board; supply and installation (including wiring) complete; Switchboard Classification: Form 4B, Type 2, Multi-Cubicle; Enclosure: Metal clad unit fabricated from 2.5mm thick sheet electro galvanised Iron phosphated steel plate, 2mm thick sheet steel enclosure doors, minimum protective rating of IP 54; Mounting: Floor mounted; distribution board to provide 30% spare capacity for future expansion; complete with and include for all PVC cables, bush bar system, TP&N's, MCCB's, MCB's, RCBO's; HOA switches, Integral isolating switches, CTU's, open/closed contractors; remote key switches, phase indicator lamps, time clocks, metering, surge protection, power factor correction equipment and automatic changeover; space for integral switch board; earth terminal; Labels: Traffolyte, black on white, screw on type, to all chambers inside nd outside the panel; Testing and commissioning: in accordance with current standards; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13 Part 2; Part 3; Part 4, Section 2 and Drawings E-6200					
A	Main Switch board Ref: MSB 'MDC'; complete; Location: Customer switchroom adjacent remote ESB substation	1	nr			
	Fittings					
	Multi-function digital meter; supply and installation; complete; Parameters to be measured include kW, kilowatt hours, kVARh, kVA, voltage, and current displayed on a three-line backlit LCD display; with link back to BMS; installation as per manufacturers recommendations; all in accordance with the Electrical Engineers Specifications Part 1, Section 13.10					
B	Multi-function digital meter	14	nr			
	Power factor correction equipment; supply and installation; complete; The power factor correction (PFC) equipment shall be an integral component of the main switch panel; It shall operate automatically in stages, as specified in the contract drawings; PFC compartment shall be c/w a suitably sized fan to maintain adequate air circulation; all in accordance with the Electrical Engineers Specifications Part 1, Section 13.8					
C	Power factor correction equipment	1	nr			
	Firemans switch; supply and installation (including wiring); complete; linked to 630A MCCB in main switchboad MDC; to be clearly labeled "School Campus Firemans Switch"; all in accordance with specification and drawing E-6200					
D	Firemans Switch; Ref: No.1	1	nr			
	Insulated Matting/Carpet; 1000mm wide x full length of switch board, standards to comply with the International Standard; complete; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.3.5					
E	Insulated matting; Main switch board	1	nr			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Main switchboard drawing; 'A1' framed drawing of the switchboard to be installed within the switch room; the drawing shall be framed with a perspex cover; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.3.7					
A	Main switchboard drawing	1	nr			
	First Aid Chart; "Electrical review" first aid charts, Size 508mm x 381mm; Detailing instructions for dealing with electric shock; wall hung at each switchboard and subboard; include for all accessories; in strict accordance with the Electrical Engineers Specification Part 1, Section 13.20					
B	First Aid Chart	6	nr			
	Mains and Sub-mains cables					
	Supply and Installation of sub-mains cable from Existing Main Distribution Board MSB 'MDC'; Location: Site switch room adjacent ESB substation; to MSB located in new school extension; Sub-mains distribution shall be via XLPE/LSF/SWA/LSF armored cables laid in under ground ducts; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6200					
C	Submains Ref: 10; MSB to DB-ASTRO TURF; 4core 150sq.mm XLPE/SWA/LSF + 95sq.mm CPC	1	Item			
D	Submains Ref: 12; MSB, DB-GPL1.MT to MSB-M1; 2 x 4core 240sq.mm XLPE/SWA/LSF + 150sq.mm CPC	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
E	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
F	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
G	Operating and maintenance manuals; complete	1	nr			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
A	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
B	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
C	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
D	Identification plates, labels and the like; complete	1	Item			
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING					
	System					
	Earthing and Bonding installation; testing and commissioning; The contractor shall undertake to effectively earth the whole of the electrical installation in accordance with the NSAI I.S. 10101:2020. Main equipotential earth bonding should be provided from each of the following items, as a minimum, to the main earthing bar: Incoming Water Main, Incoming Gas Main, Metal drainage pipes, Structural Steelwork, Main Heating Pipework, Main Ventilation Ductwork, Lightning Protection System, Comms Rooms, Supplementary earth bonding shall be carried out on extraneous metal parts at the following locations: Metallic Wireways and Containment, Suspended Ceiling Grids, Wash Hand Basins, Showers, Sinks, WC's, Cleaners Sinks, Catering equipment, Metal worktops, Plantroom Pipework (e.g. across pumps, valves, vessels, etc.); all in strict accordance with the Electrical Engineers Specification Part 1, Section 34; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-XX-SC-E-6200					
E	Earthing and Bonding	1	Item			
	Fittings					
	Earth terminal bar; supply and installation; c/w insulating shrouds to NSAI I.S. 10101:2020 and of suitable capacity for the number and size of cables to be connected; all in strict accordance with the Electrical Engineers Specification Part 1, Section 34.2					
F	Earth Terminal Bar	1	nr			

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Mains and Sub-mains cables					
	Earth conductor cable; supply and installation complete; Cable: 195mm2 LSF green/yellow cable; Design parameters as defined within I.S 10101: 2020 regulations; all in accordance with the Electrical Engineers Specification and Drawings E-6200					
A	From MSB 'MDC' to earth terminal bar	1	Item			
	Earth conductor cable; supply and installation complete; Cable: 240mm2 LSF green/yellow cable; all in accordance with the Electrical Engineers Specification and Drawings E-6201					
B	From MSB to earth pits	1	Item			
	Main equipotential earth bonding; Cable: 185mm2 LSF green/yellow cable; be provided from each of the following items, as a minimum, to the main earthing bar; all in accordance with the Electrical Engineers Specification and Drawings E-6200					
C	ASHP-01/02	1	Item			
D	Eircom DP	1	Item			
E	Structural Steelwork	1	Item			
	Main equipotential earth bonding; Cable: 195mm2 LSF green/yellow cable; be provided from each of the following items, as a minimum, to the main earthing bar; all in accordance with the Electrical Engineers Specification and Drawings E-6200					
F	Incoming Water Main	1	Item			
G	Incoming Gas Main	1	Item			
H	Metal drainage pipes	1	Item			
J	Main Heating Pipework	1	Item			
K	Main Ventilation Ductwork	1	Item			
L	Lightning Protection System	1	Item			
	Main equipotential earth bonding; Cable: 16mm2 LSF green/yellow cable; be provided from each of the following items, as a minimum, to the main earthing bar; all in accordance with the Electrical Engineers Specification and Drawings					
M	Comms cabinet (Ref: MDF)	1	Item			

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Supplementary earth bonding shall be carried out on extraneous metal parts at the following locations; Design parameters as defined within I.S 10101: 2020 regulations; all in accordance with the Electrical Engineers Specification					
A	Plant room Pipework	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
B	General Earthing and Bonding	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
C	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
D	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
E	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
F	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
G	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
H	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	(60) SITE SERVICES (MAINLY ELECTRICAL) - SURGE PROTECTION					
	System					
	Transient & Overvoltage Protection installation, testing and commissioning; The Contractor shall be responsible for the supply and installation of all incoming and outgoing cables (of all types) to be provided with Lightning/Surge Protection devices. The electrical contractor shall ensure allowance for surge protection at all panels within his scope and those provided by others; The devices shall be suitable for a TNC-S system of earthing. The devices shall be capable of suppressing lightning, voltage spikes and surges. The device shall be low measured limiting voltage performance on switching generated ring wave transients, incorporating metal oxide varistor suppressor design and low impedance surge paths. Type C MCB's shall be fitted in series with each device. Each device shall have an indicator to denote if the device has operated; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13.9, Part 2, Part 3 and Drawings 2999-SMK-ZZ-XX-SC-E-6200					
A	Transient & Overvoltage Protection	1	Item			
	Fittings					
	Surge Suppression Devices; installation (including wiring); complete; all in strict accordance with the Electrical Engineers Specification Part 1, Section 13.9 and Drawings 2999-SMK-ZZ-XX-SC-E-6201					
B	SPD Ref: 3; to Switch board Ref: MSB-MT	1	Item			
C	SPD Ref: 3; to Switch board Ref: DG-01	1	Item			
D	SPD Ref: 3; to Switch board Ref: DG-02	1	Item			
E	SPD Ref: 3; to Switch board Ref: DG-03	1	Item			
F	SPD Ref: 3; to Switch board Ref: ASTRO-TURF	1	Item			
G	SPD Ref: 3; to Switch board Ref: EV	1	Item			
H	SPD Ref: 3; to ASHP-01	1	Item			
J	SPD Ref: 3; to ASHP-02	1	Item			
K	SPD Ref: 5; to Fire Alarm Panel	1	Item			
L	SPD Ref: 5; to Gas Alarm Panel	1	Item			
M	SPD Ref: 5; to Calorifier	1	Item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	General Earthing and Bonding; complete	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers Specification Documents					
B	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers Specification Documents					
C	Operating and maintenance manuals; complete	1	Item			
	Working drawings; all in accordance with the Electrical Engineers Specification Documents					
D	Working drawings; complete	1	Item			
	Co-ordination drawings; all in accordance with the Electrical Engineers Specification Documents					
E	Co-ordination drawings;complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers Specification Documents					
F	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers Specification Documents					
G	Identification plates, labels and the like; complete	1	Item			
	Notes					
H	The tendering contractors are referred to ARM 4 supplement 2, Agreed Alternative Rules for the Measurement of Services Installations (Issue 1, 2013), used in the production of this section of the pricing document.		Note			
J	The following works are to be priced in accordance with the detailed design; performance specifications and scheme drawing numbers (list included in the Works Requirements) as prepared by Semple & McKillop Consulting Engineers.		Note			
				To Collection €		

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)

A Builders work in connection with the contract works such as cutting or drilling of holes, forming apertures, chases in walls, floors and ceilings will be carried out by the Works Specialist under the terms of the main contract. The Electrical Specialist shall be responsible for the correct marking out of all attendances, and all other cutting to be performed by the Works Specialist. — Note

ALTERNATIVE RULES FOR THE MEASUREMENT OF ELECTRICAL SERVICES

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO NEW SCHOOL EXTENSION

System

Power to New School Extension installation, testing and commissioning; complete; The electrical contractor shall provide all wiring and power supplies associated with the installation of new dedicated power supply to the new school extension fed from the existing schools MDB; all in accordance with the Electrical Engineers Specification Part 1, Section 11; Part 2; Part 3; Part 4 and Drawing 2999-SMK-LX-DR-ME-6001, 2999-SMK-ZZ-XX-SC-E-6200

B New School Extension Power Installation — 1 Item

Mains and Sub-mains cables

Supply and Installation of sub-mains cable from Existing Main Distribution Board MSB 'MDC'; Location: Site switch room adjacent ESB substation; to MSB located in new school extension; Sub-mains distribution shall be via XLPE/LSF/SWA/LSF armored cables laid in under ground ducts; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6200

C Submains Ref: 12; MSB, DB-GPL1.MT to MSB; 2 x 4core 240sq.mm XLPE/SWA/LSF + 150sq.mm CPC — 1 Item

General Earthing and Bonding

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification

D Generally — 1 Item

General

Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings

E Testing and commissioning; complete — 1 Item

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
A	Operating and maintenance manuals; complete	1	nr			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
B	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
C	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
D	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
E	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

				€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION (Cont)					
COLLECTION					
Page No. Siteworks/126					
Page No. Siteworks/127					
Page No. Siteworks/128					
Page No. Siteworks/129					
Page No. Siteworks/130					
Page No. Siteworks/131					
Page No. Siteworks/132					
Page No. Siteworks/133					
Page No. Siteworks/134					
Page No. Siteworks/135					
Page No. Siteworks/136					
Page No. Siteworks/137					
Page No. Siteworks/138					
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION **Carried to Summary**					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE LIGHTING SERVICES					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	Please refer to M&E Engineer's Data Sheets for information on Equivalent Products		note			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 2nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	241	m			
	Excavating trenches to receive 4nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
G	Average depth 500 - 1000mm	282	m			

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING (Cont)					
	Extra over excavating trenches irrespective of depth					
	Disposal					
A	Ground water	1	item			
B	Surface water	1	item			
	Sand bed and surround; to Engineer's Specification					
	Beds and Surrounds					
C	475 x 225 mm; to 2nr 100mm duct	241	m			
D	825 x 225 mm; to 4nr 100mm duct	282	m			
	PVC Red marker tape; "Heptape" or equivalent					
E	Continuous strip; laid during trench backfill; 100mm above pipework	523	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
F	Continuous strip; laid during trench backfill; 300mm above pipework	523	m			
	Ductwork; uPVC duct; to ESB Specification; Red					
	100mm dia.; include for draw-wire					
G	Laid in trenches	1,609	m			
H	Extra over for easy sweep bends complete with puddle flanges; set in concrete	64	nr			
	Lamp standard bases complete; excavation not exceeding 2000mm deep; grading bottoms; earthwork support; disposal of surplus excavated soil by removal off site; including alignment with wedges to Engineer's approval					
	Lamp standard bases					
J	650 x 650 x 1000mm deep Grade C28/35 reinforced concrete; including 2nr 100mm ducts from chamber to column in line with cable entry; concrete base and surround; backfilling with hardcore to top of trench; all as per Engineer's Specification and Drawing	13	nr			
				To Collection €		

(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING (Cont)

Chambers

Draw pit chamber; complete; excavating pits from stripped level 1000x1000x800mm deep internally; dispose of surplus soil; grading bottom; earthwork support; open bottom pit filled with 50mm course gravel for drainage; RC3 concrete base on 50mm blinding grade gen 3; Concrete roof slab grade C25 c/w opening for cover and frame; 225mm thick Class B engineering brickwork in english bond; Walls: 1000mm high with 50mm rebate for removable cover; include for openings for ducts; Heavy duty cast iron cover and frame to Engineer's Specification bedded in epoxy mortar; include for step irons; all pvc pipes to fall away from building and all pits should not waterlog; pipes to be buried 750mm below ground level; include for backfilling to sides of chamber where necessary; all in accordance with M & E Engineers Drawing

A	Average depth not exceeding 1000mm	17	nr			

Sundries

B	Connecting new line to existing chamber; include for forming new connection; include for all fittings, etc.; making good and reinstating all work and surfaces disturbed to match existing; maintain flow at all times; all in strict accordance with the Engineer's specification and drawings	1	nr			
C	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
D	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
E	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
F	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
G	The installation shall comply with ETCI Regulations	1	item			
H	The Contractor shall be responsible for the co-ordination of services	1	item			
J	The Contractor shall provide a Completion Certificate for the Public Lighting System	1	item			
K	All light columns to have a permanent label installed on the column. Labels to be agreed with ESB prior to installation	1	item			

To Collection €

(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING (Cont)

(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING

System

Site Lighting Services installation, testing and commissioning; complete; ; All lighting columns shall be wired in XLPE/SWA cables; all in accordance with the Electrical Engineers Specification Part 1, Section 10, Part 2, Part 3, Part 4 and Drawing 2999-SMK-LX-DR-ME-6002

A	Site Lighting Services	1	Item		

Fittings

LED Column Mounted Luminaire c/w lamps and mounting kits/ fixing brackets; supply and installation (including wiring); complete; Mounting: Post top or Side tilt; include for all internal wiring and fittings; all in accordance with the Electrical Engineers Specification Part 4, Section 4

B	LED road light; Lamps: 24 LED's; Body: Die cast aluminium; Diffuser: Tempered flat glass; IK Rating: IK10; IP Rating: IP66; Total connected load: 52w; Mounting: 60mm diameter side entry with 0° tilt, Adjustable to -5° tilt or post-top with 5° or 10° tilt	13	nr		

Lighting Column; supply and installation (including wiring) complete; Column: octagonal galvanised tubular columns with gear door; Column Finish: hot dipped galvanised inside and out, painted/powder coated grey; Shaft diameter: 76mm and base diameter 168mm; Cable entry opening min size 150mm x 50mm, with a root mount depth of 800mm min. include for all internal wiring and fittings; complete; all in accordance with the Electrical Engineers Specification Section 10

C	Lighting Columns; 6m high c/w single bracket arm	13	nr		

Final Circuits (including all points terminations)

Final Circuits; installation, testing and commissioning; Complete; Final circuits shall be fed from the main/ sub-distribution boards; Circuits shall be wired with insulated XPLE/SWA cables; standards to Engineers Specification; in under ground ducts; Cable sizes are as follows: 3 core 10.0mm2 with a separate 6.0mm earth; all in strict accordance with the Electrical Engineers Specification Section 10

Final Circuits - MSB - SITE

D	Site Lighting; Single Phase; 10Amp MCB	8	nr		

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
B	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
C	Operating and maintenance manuals; complete	1	nr			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
D	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
E	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
F	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
G	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

				€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING (Cont)					
COLLECTION					
Page No. Siteworks/140					
Page No. Siteworks/141					
Page No. Siteworks/142					
Page No. Siteworks/143					
Page No. Siteworks/144					
(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING **Carried to Summary**					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	The contractor shall also ascertain whether or not there are any E.S.B. cables on the site and arrange for their removal so that it does not delay site progress. All, redundant site services/site services made redundant, for all utilities and services, will be removed as part of the contract.	1	item			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 2nr ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	98	m			
	Extra over excavating trenches irrespective of depth					
	Disposal					
G	Ground water	1	item			
H	Surface water	1	item			

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR (Cont)					
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class 16/20; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
A	485 x 235mm; to 1nr 110mm duct and 1nr 100mm duct	98	m			
	PVC Red marker tape; "Heptape" or equivalent					
B	Continuous strip; laid during trench backfill; 100mm above pipework	98	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
C	Continuous strip; laid during trench backfill; 300mm above pipework	98	m			
	Ductwork; uPVC duct; LV Power					
	100mm dia.; include for draw-wire					
D	Laid in trenches	98	m			
E	Extra over for 90 degree bends	4	nr			
	Ductwork; uPVC duct; Comms					
	110mm dia.; include for draw-wire					
F	Laid in trenches	98	m			
G	Extra over for 90 degree bends	4	nr			
	Chambers					
	Draw pit chamber; complete; excavating pits from stripped level 1000x1000x800mm deep internally; dispose of surplus soil; grading bottom; earthwork support; open bottom pit filled with 50mm course gravel for drainage; RC3 concrete base on 50mm blinding grade gen 3; Concrete roof slab grade C25 c/w opening for cover and frame; 225mm thick Class B engineering brickwork in english bond; Walls: 1000mm high with 50mm rebate for removable cover; include for openings for ducts; Heavy duty cast iron cover and frame to Engineer's Specification bedded in epoxy mortar; include for step irons; all pvc pipes to fall away from building and all pits should not waterlog; pipes to be buried 750mm below ground level; include for backfilling to sides of chamber where necessary; all in accordance with M & E Engineers Drawing					
H	Average depth not exceeding 1000mm	4	nr			
	Sundries					
J	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR (Cont)					
A	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
B	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
C	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
D	Provide markings/signage of ESB cables at locations as agreed with Local Engineering Officer and in accordance with ESB Specifications; as per Engineer's Drawing	1	item			
E	Provide all necessary attendances and builders work in association with disconnecting and removing existing underground ESB supply; complete	1	item			
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR					
	System					
	Mechanical Wiring of Petrol Interceptor installation, testing and commissioning; complete; The electrical contractor shall provide all wiring and power supplies associated with the oil/petrol interceptor system as detailed on the wiring schematic. The external tank shall be located remote from the building and the electrical contractor shall be required to provide control wiring from this external tank location to the oil/petrol interceptor control panel in the plant room; all in accordance with the Electrical Engineers Specifications and Drawing 2999-SMK-LX-DR-ME-6001					
F	Petrol Interceptor Power Installation	1	Item			
	Fittings					
	Petrol Interceptor mechanical wiring provisions and final connections (ONLY); installation, testing and commissioning; complete; The Electrical Specialist shall include for the supply and installation of all LV/ELV control wiring cables to mechaincally operated items installed under this contract; cables shall be drawn in trunking/ cable trays; all in accordance with the Electrical Engineers Specifications and Drawing					
G	Control panel	1	nr			
H	Sensor	1	nr			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR (Cont)					
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
A	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
B	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
C	Operating and maintenance manuals; complete	1	nr			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
D	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
E	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
F	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
G	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

				€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR (Cont)					
COLLECTION					
Page No. Siteworks/146					
Page No. Siteworks/147					
Page No. Siteworks/148					
Page No. Siteworks/149					
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR Carried to Summary					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	The contractor shall also ascertain whether or not there are any E.S.B. cables on the site and arrange for their removal so that it does not delay site progress. All, redundant site services/site services made redundant, for all utilities and services, will be removed as part of the contract.	1	item			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 1nr ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	5	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP (Cont)					
	Excavating trenches to receive 2nr ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
A	Average depth 500 - 1000mm	44	m			
	Excavating trenches to receive 3nr ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
B	Average depth 500 - 1000mm	33	m			
	Extra over excavating trenches irrespective of depth					
	Disposal					
C	Ground water	1	item			
D	Surface water	1	item			
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class 16/20; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
E	300mm x 225mm; to 1nr 100mm duct	5	m			
F	475mm x 225mm; to 2nr 100mm duct	44	m			
G	650mm x 225mm; to 3nr 100mm duct	33	m			
	PVC Red marker tape; "Heptape" or equivalent					
H	Continuous strip; laid during trench backfill; 100mm above pipework	81	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
J	Continuous strip; laid during trench backfill; 300mm above pipework	81	m			
	Ductwork; uPVC duct; to ESB Speciifcation; Red					
	100mm dia.; include for draw-wire					
K	Laid in trenches	189	m			

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP (Cont)					
A	Extra over for 90 degree bends	6	nr			
	Sundries					
B	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
C	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
D	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
E	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
F	Provide markings/signage of ESB cables at locations as agreed with Local Engineering Officer and in accordance with ESB Specifications; as per Engineer's Drawing	1	item			
G	Provide all necessary attendances and builders work in association with disconnecting and removing existing underground ESB supply; complete	1	item			
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO HEAT PUMP SERVING NEW EXTENSION					
	System					
	Heat Pump power installation, testing and commissioning; complete; The electrical contractor shall provide all wiring and power supplies associated with the heat pump as detailed on the wiring schematic; the heat pump is located remote from the building; all in accordance with the Electrical Engineers Specification Part 1, Part 2; Part 3; Part 4 and Drawing 2999-SMK-LX-DR-ME-6001, 2999-SMK-ZZ-XX-SC-E-6201					
H	Heat Pump Power Installation	1	Item			
	Fittings					
	Isolator Switch; supply and installation (including wiring); complete; c/w back boxes; all in accordance with the electrical specification					
J	Isolator Switch; TPN 200amp (external)	2	nr			

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP (Cont)					
	Mains and Sub-mains cables					
	Supply and Installation of sub-mains cable from Main Distribution Board MSB; Location: Electrical switch room ; to external plant and equipment; Sub-mains distribution within the building shall be via XLPE/LSF/SWA/LSF armored cables laid in underground ducts; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6201					
A	Submains Ref: 5; MSB to ASHP; 4core 35sq.mm XLPE/SWA/LSF +16sq.mm CPC	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
B	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
C	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
D	Operating and maintenance manuals; complete	1	nr			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
E	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
F	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
G	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
H	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

				€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP (Cont)					
COLLECTION					
Page No. Siteworks/151					
Page No. Siteworks/152					
Page No. Siteworks/153					
Page No. Siteworks/154					
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP **Carried to Summary**					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	The contractor shall also ascertain whether or not there are any E.S.B. cables on the site and arrange for their removal so that it does not delay site progress. All, redundant site services/site services made redundant, for all utilities and services, will be removed as part of the contract.	1	item			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 3nr ducts not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	50	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING (Cont)					
	Extra over excavating trenches irrespective of depth					
	Breaking up & Reinstating					
A	Breaking out existing roadway and associated make-up; saw cutting surface; include for reinstating bitmac surfacing and all associated hardcore makeup; comprising 40mm thick polymer modified stone mastic asphalt PMSMA SMA 10 surf PMB 65/105-60 DES: to CL 942; laid on 60mm DBM binder course AC 20 dense bin 40/60 rec: to CL 906; laid on 80mm DBM road base AC 32 dense bin 40/60 rec: to CL 906; to TII 900 Series; rolled with 10-12.5 tonne roller; laid on 150mm deep clause 808 stone sub-base; laid on 300mm deep clause 6F2 capping layer; including geogrid membranes; include for fair jointing to fair edges; include for breaking out and reinstating all kerbing required; disposal of excavated material off site; all in accordance with the Engineer's Specification	18	m			
B	Breaking out footpath; saw cutting surface; include for reinstating surfacing to match existing including Type 808 sub base material where necessary; fair jointing to fair edges; disposal of excavated material off site; include for replacing associated concrete kerbs; all to satisfaction of Engineers Specification & Drawings	26	m			
	Around existing services parallel excavations					
C	Storm pipe; parallel excavations	20	m			
	Around existing services crossing excavations					
D	Storm pipe; crossing excavations	2	nr			
E	Foul pipe; crossing excavations	2	nr			
F	Watermain pipe; crossing excavations	2	nr			
G	ESB Duct; crossing excavations	2	nr			
H	EIR Duct; crossing excavations	2	nr			
	Disposal					
J	Ground water	1	item			
K	Surface water	1	item			
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class 16/20; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
L	650mm x 225mm; to 3nr 100mm duct	50	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING (Cont)					
	PVC Red marker tape; "Heptape" or equivalent					
A	Continuous strip; laid during trench backfill; 100mm above pipework	50	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
B	Continuous strip; laid during trench backfill; 300mm above pipework	50	m			
	Ductwork; uPVC duct; to ESB Speciifcation; Red					
	100mm dia.; include for draw-wire					
C	Laid in trenches	148	m			
D	Extra over for 90 degree bends	12	nr			
	Sundries					
E	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
F	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
G	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
H	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
J	Provide markings/signage of ESB cables at locations as agreed with Local Engineering Officer and in accordance with ESB Specifications; as per Engineer's Drawing	1	item			
K	Provide all necessary attendances and builders work in association with disconnecting and removing existing underground ESB supply; complete	1	item			
				To Collection €		

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING (Cont)

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO HEAT PUMP SERVING EXISTING PLANT ROOM

System

Heat Pump power installation, testing and commissioning; complete; The electrical contractor shall provide all wiring and power supplies associated with the heat pump as detailed on the wiring schematic; the heat pump is located remote from the building; all in accordance with the Electrical Engineers Specification Part 1, Part 2; Part 3; Part 4 and Drawing 2999-SMK-LX-DR-ME-6001, 2999-SMK-ZZ-XX-SC-E-6200

A	Heat Pump Power Installation	1	Item		

Fittings

Isolator Switch; supply and installation (including wiring); complete; c/w back boxes; all in accordance with the electrical specification

B	Isolator Switch; TPN 200amp (external)	2	nr		

Mains and Sub-mains cables

Supply and Installation of sub-mains cable from Main Distribution Board MSB; Location: Electrical switch room ; to external plant and equipment; Sub-mains distribution within the building shall be via XLPE/LSF/SWA/LSF armored cables laid in underground ducts; a separate CPC shall be installed with every sub-mains feed and shall be of the size detailed on the drawings; terminating at both ends; all in strict accordance with the Electrical Engineers Specification and Drawings E-6201

C	Submains Ref: 8; MSB 'MDC' to ASHP-01; 4core 95sq.mm XLPE/SWA/LSF +50sq.mm CPC	1	Item		
D	Submains Ref: 8; MSB 'MDC' to ASHP-02; 4core 95sq.mm XLPE/SWA/LSF +50sq.mm CPC	1	Item		

General Earthing and Bonding

General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification

E	Generally	1	Item		

General

Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings

F	Testing and commissioning; complete	1	Item		

To Collection €

					€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING (Cont)						
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
A	Operating and maintenance manuals; complete	1	nr			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
B	Working drawings; complete	1	Item			
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
C	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
D	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
E	Identification plates, labels and the like; complete	1	Item			
				To Collection €		

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING (Cont)

COLLECTION

Page No. Siteworks/156

Page No. Siteworks/157

Page No. Siteworks/158

Page No. Siteworks/159

Page No. Siteworks/160

(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING
Carried to Summary

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SITE SERVICES (MAINLY ELECTRICAL) - EV					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		Note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		Note			
E	The contractor shall also ascertain whether or not there are any E.S.B. cables on the site and arrange for their removal so that it does not delay site progress. All, redundant site services/site services made redundant, for all utilities and services, will be removed as part of the contract.	1	item			
	Builders work in connection with all installation					
	Excavation					
	Excavating trenches to receive 1nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
F	Average depth 500 - 1000mm	84	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	Excavating trenches to receive 2nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
A	Average depth 500 - 1000mm	58	m			
	Excavating trenches to receive 3nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
B	Average depth 500 - 1000mm	11	m			
	Excavating trenches to receive 4nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
C	Average depth 500 - 1000mm	28	m			
	Extra over excavating trenches irrespective of depth					
	Disposal					
D	Ground water	1	item			
E	Surface water	1	item			
	Plain in-situ concrete bed and surround; minimum 150mm bed; Class 16/20; leanmix concrete backfill; as per Engineer's Drawing					
	Beds and Surrounds					
F	300 x 225mm; to 1nr 100mm duct	34	m			
G	325 x 250mm; to 1nr 125mm duct	50	m			
H	475 x 225mm; to 2nr 100mm duct	58	m			
J	650 x 225mm; to 3nr 100mm duct	11	m			
K	825 x 225mm; to 4nr 100mm duct	28	M			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	PVC Red marker tape; "Heptape" or equivalent					
A	Continuous strip; laid during trench backfill; 100mm above pipework	179	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
B	Continuous strip; laid during trench backfill; 300mm above pipework	179	m			
	Ductwork; uPVC duct					
	100mm dia.; include for draw-wire					
C	Laid in trenches	290	m			
D	Extra over for 90 degree bends	40	nr			
	Ductwork; uPVC duct; Comms					
	125mm dia.; include for draw-wire					
E	Laid in trenches	50	m			
F	Extra over for 90 degree bends	3	nr			
	EV Luci Pillars					
	EV Luci Pillar to Engineer's & ESB Specification; Luci pillars will be manufactured in glass reinforced plastic to fully comply with Electricity Supply Industry Specification ESI 37 and IS EN 60439-5. The same requirements are to be met as for distribution boards in terms of capacity, busbars etc.. The enclosure will have a minimum protection rating of IP64. Each mini-pillar will include: Quick-acting barlock and high security padlock. Set of isolator operating and locking off tools. Spare fuse tray with spare fuses. A 65 Watt switched, fused anti-condensation heater. This heater should incorporate thermostatic control for on and off control. Purpose-made base unit for cable entry. All minipillars will be painted against rusting (stove glass enamel). Colour to match standard manufacturers finish. After final painting treat interior with a cork based paint to reduce level of condensation by providing a thermal barrier between enclosure metalwork and internal air; include for associated concrete base; complete; disposal of excavated material off-site; level and compacting bottom of excavation; earthwork support; all to Engineer's Specification and Drawings					
G	EV Luci Pillar; include for cover and frame	1	nr			

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	EV Luci Pillar Vault and VC2 Cover					
	EV Luci Pillar Vault and VC2 Cover; complete; with ESB Networks Approved Pre-Fabricated and Pre-cast minipillar caults and vault cover; Excavating pits from finished road level; making good surrounding areas where necessary; disposal of excavated material off-site; level and compacting bottom of excavation; earthwork support; 150mm thick 15N concrete base and surrond; cover and frame to suit; include openings for ducts; step irons; cable bearers and brackets; all in accordance to ESB Network Standards					
A	850 x 850 x 900mm deep; include for cover and frame	1	nr			
	Sundries					
B	Allow for sealing all incoming service ductwork to prevent ingress of damp, dirt and vermin	1	item			
C	Allow for clearance between Telecom ducts and ESB ducts and cables over 650 volts; of 300mm vertical clearance at crossings and 600mm lateral clearance in parallel trenches	1	item			
D	Allow for clearance between ESB ducts and cables and other service ducts; 150mm vertical clearance at crossings and 300mm lateral clearance in parallel trenches	1	item			
E	Provide for all necessary attendances on ESB to include liaising with ESB before, during and after installation of electrical services and providing and making available site data for their use	1	item			
F	Provide markings/signage of ESB cables at locations as agreed with Local Engineering Officer and in accordance with ESB Specifications; as per Engineer's Drawing	1	item			
G	Provide all necessary attendances and builders work in association with disconnecting and removing existing underground ESB supply; complete	1	item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV CHARGERS					
	System					
	Power to EV Charging installation, testing and commissioning; complete; The Electrical contractor shall provide an Electric Vehicle Charging point for use by electric plug in vehicles at one location in the car park as indicated on the contract drawings. The contractor shall also install ducting to 20% of the car parking spaces in the development; all underground electrical services cables shall be within ducts; separate underground service ducts shall be provided as part of the builders works element; smart energy mobile subscription services are to be included for the client for the first year; all in accordance with the Electrical Engineers Specification Part 1, Section 12; Part 2; Part 3; Part 4 and Drawing 2999-SMK-ZZ-XX-DR-E-6003, 2999-SMK-ZZ-XX-SC-E-6201					
A	EV Charging Power Installation	1	Item			
	Equipment					
	Mini Pillars; supply and installation; complete; Lucy Zodlion Fortress Pillar or equivalent; Unit type: 100A private; Dimensions: 1110mm lenght x 1294mm height x 400mm depth; Doors: Single; Finished: Black RAL colour finish c/w zinc phosphate resin treatment; Mounting: Root mounted pillar; c/w power circuits, tubular heater and thermostat, House PoE equipment and switches, House relay units, c/w integral distribution board (eCar chanrging); Distribution board: 12 way TPN; Main Incomer: 100A TPN isolator; Circuits supplied from 40A MCB's shall be deployed at the eCar board; include for all PVC cables, bush bar system, TP&N's, MCCB's, MCB's, RCBO's; HOA switches, CTU's, open/closed contactors; remote keyswitches, timeclocks, metering, surge protection, earth therminal bar; Labels: Traffolyte, black on white, screw on type; all in accordance with the Electrical Specification Part 1, Section 12					
B	Mini Pillar c/w Integral distribution board (Ref: eCar Charging)	1	nr			
	EV dual charger and pedestal; 22KW electric double car charger c/w EV smart charging equipment, yearly subscription service and stainless steel mounting pole; supply and installation (including wiring); complete; all in accordance with the Electrical Engineers Specification Part 1, Section 12					
C	Electrical Vechile Charger, complete	1	nr			
	Fittings					
	Isolator Switch; supply and installation (including wiring); complete; c/w back boxes; all in accordance with the electrical specification					
D	Isolator Switch; TPN 40amp (external)	1	nr			

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	Mains and Sub-mains cables					
	Supply and installation of sub-mains cable from Main Distribution Board MSB; Location: Electrical switch room 18; to sub-distribution boards/ Control panels located throughout school building; Sub-mains distribution within the building shall be via XLPE/LSF/SWA/LSF armored cables laid in galvanised steel cable tray/trunking external submains shall be laid in underground ducts; a separate CPC shall be installed with every sub-main; all in strict accordance with the Electrical Engineers Specification and Drawing E-6003					
A	Submains Ref: 11; MSB, DB-GPL1.MT to EV-Mini pillar; 4core 185sq.mm XLPE/SWA/ LSF + 120sq.mm CPC	1	Item			
	Final Circuits					
	Final Circuits; cable installation (including wiring), Complete; Final circuits shall be fed from local sub-distribution boards; Circuits shall be wired with insulated 4c 25mm2 SWA/XPLE/LSZH + 16mm CPC cables; standards to Engineers Specification; cables laid in under ground ducts; all in strict accordance with the Electrical Engineers Specification and Drawing E-6003					
	Final Circuits - E-Car Charge mini pillar					
B	EV charger; Three Phase; 40amp MCB	1	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
C	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with the Electrical Engineers specification documents and drawings					
D	Testing and commissioning; complete	1	Item			
	Operating and maintenance manuals; all in accordance with the Electrical Engineers specification documents and drawings					
E	Operating and maintenance manuals; complete	1	nr			
	Working drawings; all in accordance with the Electrical Engineers specification documents and drawings					
F	Working drawings; complete	1	Item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	Co- ordination drawings; all in accordance with the Electrical Engineers specification documents and drawings					
A	Co- ordination drawings; complete	1	Item			
	As built drawings; all in accordance with the Electrical Engineers specification documents and drawings					
B	As built drawings; complete	1	Item			
	Identification plates, labels and the like; all in accordance with the Electrical Engineers specification documents and drawings					
C	Identification plates, labels and the like; complete	1	Item			
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EV CHARGING COMMS CABLE INSTALLATION					
	System					
	Comms cable to EV charging installation, testing and commissioning; complete; The Electrical contractor shall provide CAT 5/6 cable from EV smart charging equipment to EV dual charger location in the car park as indicated on the contract drawings. The contractor shall also install ducting to 20% of the car parking spaces in the development; all underground electrical services cables shall be within ducts; separate underground service ducts shall be provided as part of the builders works element; smart energy mobile subscription services are to be included for the client for the first year; all in accordance with the Electrical Engineers Specification Part 1, Section 11; Part 2; Part 3; Part 4 and Drawing 2999-SMK-ZZ-XX-DR-E-6003, 2999-SMK-ZZ-XX-SC-E-6201					
D	EV Charging Comms Cable Installation	1	Item			
	Final Circuits					
	CAT 6 cable installation, testing and commissioning; complete; distributed within galvanized steel cable tray/trunking within the building; laid in concealed underground ducts externally on site (measured elsewhere); terminating at both ends; include for all fittings and accessories; all in strict accordance with the Electrical Engineers Specification					
E	Cable from EV smart charging equipment to EV dual charger	1	nr			
	Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
F	Generally	1	Item			

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
A	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
B	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
C	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
D	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
E	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
F	Identification plates, labels and the like	1	Item			
				To Collection €		

				€	c
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV (Cont)					
COLLECTION					
Page No. Siteworks/162					
Page No. Siteworks/163					
Page No. Siteworks/164					
Page No. Siteworks/165					
Page No. Siteworks/166					
Page No. Siteworks/167					
Page No. Siteworks/168					
Page No. Siteworks/169					
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV **Carried to Summary**					

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - ELECTRICAL VEHICLE CHARGER BASE					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	ELECTRICAL VEHICLE CHARGER BASE					
	EXCAVATION AND EARTHWORK					
	General Information					
	Information					
C	The contractor should consult with the Architect and must visit the site to ascertain the extent of the works involved under this section. No variations will be approved for works that ought to have been apparent to the contractor after a site inspection and review of the Architects drawings and specifications	1	item			
	Excavation					
	Excavation					
	To reduce levels					
D	Isolated pits (8nr)	2	m3			
	Working Space					
	Isolated pits: excavations (8nr)					
E	Depth not exceeding 2.00m; backfilling trenches with clause 808 hardcore	11	m2			
	Disposal					
	Water					
F	Surface	1	item			
G	Ground	1	item			

To Collection €

(60) SITE SERVICES (MAINLY ELECTRICAL) - ELECTRICAL VEHICLE CHARGER BASE (Cont)

	Excavated material; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations				
A	Disposal Off-site	2	m3		
	Filling with hardcore to be obtained offsite; sub-base material shall comply with clause 808; depositing in 150mm layers maximum thickness; compacting; compliant with Annex E of SR 21, free from pyrite and macarsite as per Engineer's specification				
	To make up levels				
B	Average thickness not exceeding 250mm	1	m3		
	Surface treatments				
	Leveling and compacting; blinding with quarry dust				
C	Horizontal; 50mm thick; to hardcore	4	m2		
	CONCRETE WORK				
	In-situ Concrete				
	Concrete cubes for testing				
	Provide for making concrete cubes from freshly mixed concrete; transporting and testing cubes; all as per details in Engineer's Concrete Specification				
D	Size 150 x 150 x 150mm	1	nr		
	Grade C16/20 S3				
	Blinding				
E	Generally; poured on or against earth or unblinded hardcore	1	m3		
	In-situ Concrete; Reinforced				
	Grade C28/35				
	Beds				
F	Generally; Reinforced	1	m3		

To Collection €

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - ELECTRICAL VEHICLE CHARGER BASE (Cont)					
	Sundries					
	Surface Finishes					
	Brushed finish to wet concrete					
A	Grading to falls	4	m2			
	Reinforcement					
	Fabric					
	Reference A393; 350mm side laps; 350mm end laps					
B	Horizontal	4	m2			
	Formwork					
	Formwork Generally					
	Edges of beds/slabs; finish to be as per Engineer's Specification					
C	Height or width not exceeding 250mm	24	m			
	Other Items; forming recesses in concrete so wires can feed up to the Electrical Vehicle charger; as per Engineer's Drawing					
D	Generally	8	nr			
	FITTINGS					
	Fittings Equipment and Furniture					
	EV CHARGER GUARDING; Stainless steel guarding; Manufacturer: Submit proposals; Product reference: Submit proposals; Material/ Finish/ Colour: 316 grade stainless steel; length: 750mm; Height above ground: 900mm; 50mm dia. stainless steel tubular rail to structural engineers details; shop painted to selected RAL colour; 60 x 60mm stainless steel vertical upright T section to structural engineers details; 60 x 60mm stainless steel T bar welded to upright to structural engineers details; shop painted to selected RAL colour; Method of setting guardings: Set guardings in holes: 300 x 300 x 300mm deep completely filled with C23/30 concrete; include for all excavation, disposal, backfilling and fixings etc; As per M&E Specification and Drawing					
	Fittings; EV Charger Guarding					
E	Generally	8	nr			

(60) SITE SERVICES (MAINLY ELECTRICAL) - ELECTRICAL VEHICLE CHARGER BASE (Cont)

COLLECTION

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(60) SITE SERVICES (MAINLY ELECTRICAL) - ELECTRICAL VEHICLE CHARGER BASE
Carried to Summary

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	EARTHING STSTEM & LIGHTNING PROTECTION SERVICES					
	General Information					
	Information					
C	When pricing the following items the Contractor's attention is drawn to the location of the site. The Contractor should also visit and check the site. No claims on the grounds of want of knowledge in respect of the above will be entertained whatsoever.		note			
D	Any un-authorised excavations below the required level shall be made up with concrete of the same composition as for drain beds at the Contractors own expense; all as per Architects Specification		note			
E	Tendering Contractor to note that all excavated material is to be disposed on-site and regraded / levelled. Contractor to include within the below rates for all works associated with disposal of the excavated material on-site as directed by the ER and all regrading / levelling works as directed. Contractor to determine if temporary spoil heaps will be required based on their own sequencing of the works - if temporary spoil heaps are required all costs associated with same are to be included within the rate.		item			
	Builders work in connection with all installation					
	Excavation					
F	Excavating trenches to receive 1nr duct not exceeding 250mm diameter, earthwork support to sides of trenches; include for excavating below ground water level; grading bottoms of excavations; backfilling with imported hardcore; disposal of surplus soil off site; All surplus materials to be disposed of off-site to a licenced waste disposal facility granted by the EPA under Section 40 of the Waste Management Act or by the Local Authority under the Waste Facility Permit Regulations					
G	Average depth not exceeding 1000mm	17	m			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION (Cont)					
	Sand bed and surround; to Engineer's Specification					
	Beds and Surrounds					
A	450 x 450mm; to 150mm diameter duct	17	m			
	PVC Red marker tape; "Heptape" or equivalent					
B	Continuous strip; laid during trench backfill; 100mm above pipework	17	m			
	PVC Yellow marker tape; "Heptape" or equivalent					
C	Continuous strip; laid during trench backfill; 300mm above pipework	17	m			
	Ductwork; uPVC duct; to ESB Speciifcation; Red					
	150mm dia.; include for 10mm diameter draw-rope					
D	Laid in trenches	17	m			
	Extra over pipework runs for:					
E	connection to earthing pits	17	nr			
F	long radius bends	17	nr			
	Chambers					
	Lightning earth pits c/w integral test point; approx size 300 x 300 x 300mm deep; concrete manhole by Furse or equivalent; including rod to clamp tape plus test link, driving stud and earth rods; include all necessary excavations; dispose of surplus soil; grading bottom; earthwork support; concrete where necessary; formwork; opening for ducting; including heavy duty cover lid; all in strict accordane with M & E Engineer's Specification and Drawing					
G	Generally	17	nr			
	MECHANICAL INSTALLATIONS					
	System; Site services instalation; Lightning Protection Installation; 25x3mm lightning conductor tapes connected to earth pits (earth pits measured elsewhere); complete; as per Engineer's Specification and Drawing					
	Lightning Protection Installation					
H	Generally	1	item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION (Cont)					
	(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTNING PROTECTION					
	System					
	Lightning Protection Installation; installation; testing and commissioning; complete; The contractor will supply, install, test and commission a level IV lightning protection system (through a specialist) in IS EN62305. The system shall consist of a roof top air terminal network (bonded to all external metal part on or above roof level) connecting through sheathed copper down conductors (minimum size of 3mm x 25mm) to earth pits for each down conductor with all above ground elements coated in PVC to RAL colour of the architect's choice; all in strict accordance with the Electrical Engineers Specification Part 1, Section 31 and Drawings 2999-SMK-ZZ-LR-DR-E-6900					
A	Site Lightning Protection	1	Item			
	Fittings					
	Down Conductors and Earthing points; 25x3mm down conductors from building terminating at ground level within inspection pit; 70 CSA PVC earth copper cable from inspection pit terminating at ground level in a set of earth rods; sureshot exothermic weld; RB205 copper-bond electrode system, CG270 earth rod coupling; RB205 copper-bond electrode system; complete; all in strict accordance with the Electrical Engineers Specification Part 1, Section 31 and Drawings E-6900					
B	Down Conductors & Earthing Points	17	nr			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
C	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
D	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
E	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
F	Working drawings	1	Item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION (Cont)					
	Co-ordination drawings; all in accordance with Engineers Specification					
A	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
B	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
C	Identification plates, labels and the like	1	Item			
	(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE EARTHING & BONDING					
	System					
	Earthing and Bonding installation; testing and commissioning; The contractor shall undertake to effectively earth the whole of the electrical installation in accordance with the ETCI Regulations, I.S. 10101:2020. Main equipotential earth bonding should be provided from each of the following items, as a minimum, to the main earthing bar: Incoming Water Main, Incoming Gas Main, Metal drainage pipes, Structural Steelwork, Main Heating Pipework, Main Ventilation Ductwork, Lightning Protection System, Comms Rooms, Supplementary earth bonding shall be carried out on extraneous metal parts at the following locations: Metallic Wireways and Containment, Suspended Ceiling Grids, Wash Hand Basins, Showers, Sinks, WC's, Cleaners Sinks, Catering equipment, Metal worktops, Plantroom Pipework (e.g. across pumps, valves, vessels, etc.); all in strict accordance with the Electrical Engineers Specification Part 1, Section 34; Part 2; Part 3; Part 4 and Drawings 2999-SMK-ZZ-XX-SC-E-6200, 2999-SMK-ZZ-XX-SC-E-6201					
D	Earthing and Bonding	1	Item			
	Fittings					
	Earthing points c/w inspection box; earth electrodes in accordance with I.S 10101:2020; complete; all in strict accordance with the Electrical Engineers Specification Part 1, Section 32					
E	Earthing Points	4	nr			
	Mains and Sub-mains cables					
	Earth conductor cable; supply and installation complete; Cable size 240mm2 LSF earth; mechanically protected throughtout; all in accordance with the Electrical Engineers Specification Part 1, Section 32 and Drawings E-6201					
F	From earth therminal bar to earth pits	1	Item			
				To Collection €		

					€	c
	(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION (Cont)					
	Earth conductor cable; supply and installation complete;Cable size 16mm2 LSF earth; mechanically protected throughtout; all in accordance with the Electrical Engineers Specification Part 1, Section 32 and Drawings E-6201					
A	From EV mini pillar to earth pit	1	Item			
	General Earthing and Bonding					
	General Earthing and Bonding; Design parameters as defined within I.S 10101: 2020 regulations; all in strlct accordance with the Electrical Engineers Specification					
B	Generally	1	Item			
	General					
	Testing and commissioning; all in accordance with Engineers Specification					
C	Testing and commissioning	1	Item			
	Operating and maintenance manuals; all in accordance with Engineers Specification					
D	Operating and maintenance manuals	1	Item			
	Working drawings; all in accordance with Engineers Specification					
E	Working drawings	1	Item			
	Co-ordination drawings; all in accordance with Engineers Specification					
F	Co-ordination drawings	1	Item			
	As built drawings; all in accordance with Engineers Specification					
G	As built drawings	1	Item			
	Identification plates, labels and the like; all in accordance with Engineers Specification					
H	Identification plates, labels and the like	1	Item			
				To Collection €		

(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION (Cont)

COLLECTION

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(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION
Carried to Summary

					€	c
	(70) SITE FITTINGS					
	FITTINGS					
	Fittings Equipment and Furniture					
	Signage; Road Sign & Posts; signs to Engineer's Specification; fixing to steel post using fasteners to Engineer's specification; inculde for plastic cap at top of post; posts to be 88.9x5mm galvanised CHS x 4000mm long; mild steel with hot dip galvanised finish; galvanised steel secured by collar and bolts; set in 450mm x 450mm x 850mm deep concrete base; C20/25 concrete surround to sihn post; on lean-mix concrete to good ground; backfilling with Clause 804 hardcore; including all excavation of pits; disposal of surplus material off-site compacting and levelling to bottom of excavation; as per Engineer's Drawing C-004 and Specification					
	Fittings; Signage					
A	No Right Turn sign (RUS 012); sign mounted on 1nr pole	1	nr			
B	Stop sign (RUS 027); sign mounted on 1nr pole	1	nr			
C	Disabled Person Parking Bay sign (F204); sign mounted on 1nr pole	4	nr			
D	Cyclists Dismount Warning sign (W 145); sign mounted on 1nr pole	1	nr			
	Benches with backrest; Description: Polyester powder coated stainless steel & timber seat with back support. To yard as per DR-0200; Manufacturer: Hartecast or equivalent; Product reference: HC2033S or equivalent; Material: Polyester powder coated stainless steel & timber; Finish: Polyester powder-coated, as section Z31; Colour: RAL TBC; Size: 2.0 m long; Accessories/ Special requirements: None; Method of fixing: - Benches fixed level;- Proprietary anchored bases; and- Two base plates bolted to 700 x 200 x 300 mm concrete bases 135mm below paving surface; include for concrete foundations, excavation, backfilling and fittings; As per Landscape Architects Specification Q50/220 and drawing 5003 and engineers drawing 127					
	Fittings; Benches with backrest					
E	Overall size on plan: 2000mm long x 601mm wide x 816mm high	3	nr			
	Metal vertical bar pedestrian guard rail systems; Description: Galvanized External guardrail to external doors refer to site details for locations. System manufacturer: Submit proposals. Posts: Galv MS as per Architects detail. Post foundations: to Structural Engineers requirements. Panels: Galv mild steel perforated panel painted to selected colour 4mm thick with 50mm. Panel heights: Varies. Straight section: 50mm diameter Galvanized steel tubing. Finish: Hot-dip galvanized only. Width: 700mm. Fixing: 12mm thick x 120mm diameter plates bolt fixed into concrete foundations as per engineers details; As per Architect's Specification Ss_25_15_60_57.					
	Fittings; External Door Guards					
F	Size; 700mm long x 900mm high	14	nr			
				To Collection €		

					€	c
	(70) SITE FITTINGS (Cont)					
	Stainless steel cycle stands; Description: Bike Stands; Manufacturer: Submit proposals; Stand type: Cycle; Number of stands: Refer to drawing; Base: Base plate bolted to 400 x 400 x 400 mm concrete base 100 mm below paving surface. Base to Engineer's design and specification; Finish as delivered: 1K/2K satin-polished to BS EN 10088-2; Verification; Submittals: CE Mark Declaration of Performance; Timing: Before placement of orders; include for concrete foundations, excavation, backfilling and fittings; As per Architects Specification Pr_40_30_21_84 and drawing 0009					
	Fittings; Bike Stands					
A	Generally	23	nr			
				To Collection €		

(70) SITE FITTINGS (Cont)

COLLECTION

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(70) SITE FITTINGS
Carried to Summary

					€	c
	(80) LANDSCAPING					
	SECTIONAL COMPLETION					
A	Contractor to note that all works in this project are being completed in Sections as per Proposed Site Plan drawings - 23-16/TD-0102; Contractor to take cognisance when pricing the items included in this element as all measurement / items included herein is for the complete Works; no claims on the grounds of want of knowledge will be entertained whatsoever	1	item			
B	Contractor must include either in this item or within their rates within this element for the Works to be completed in Sections	1	item			
	SURFACE PAVING, FENCING AND LANDSCAPING					
	Grassing and Planting					
	Topsoil					
	Obtained from off site; as per Landscape Architect's specification Ref. Q28; rate to include for system outline section of Q28, products section of Q28 and execution section of Q28 unless detailed in seperate measurement below					
C	Filling to a finished depth of 200mm; to grass areas	445	m2			
D	Filling to a finished depth of 450mm; to planting	150	m2			
E	Filling to a finished depth of 1000mm; to trees	24	m2			
	CULTIVATION; Compacted topsoil: Break up to full depth; Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm; Depth: 250mm; Timing: Within a few days before planting; Weather and ground conditions: Suitably dry; Surface: Leave regular and even; Levels: 25 mm above adjoining paving or kerbs and minimum 150 mm below dpc of adjoining buildings; Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding 50 mm; Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate; As per Architects Landscape Specificaition Q31					
	Surface of top soil filling; to grassed and planting areas					
F	Depth: 250mm; generally	619	m2			
	GRADING; Topsoil condition: Reasonably dry and workable; Contours: Smooth and flowing, with falls for adequate drainage; Hollows and ridges: Not permitted; Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc; Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150 mm; Give notice: If required levels cannot be achieved by movement of existing soil; As per Architects Landscape Specificaition Q30					
	Grading; to grassed and planting areas					
G	Generally	619	m2			

					€	c
	(80) LANDSCAPING (Cont)					
	GRADING SUBSOIL; General: Grade to smooth flowing contours to achieve specified finished levels of topsoil; Areas of thicker topsoil: Excavate locally; As per Architects Landscape Specificaition Q28					
	Grading subsoil; to grassed and planting areas					
A	Generally	619	m2			
	SUBSOIL SURFACE PREPARATION; General: Excavate and/ or place fill to required profiles and levels, as section D20; Loosening: Light and noncohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 300 mm; Stiff clay and cohesive subsoils: When ground conditions are reasonably dry, loosen thoroughly to a depth of 450 mm; Rock and chalk subgrades: Lightly scarify to promote free drainage; Stones: Immediately before spreading topsoil, remove stones larger than 75 mm; Remove debris and builders rubble; Note that much of the existing soil is fill material for a partially completed, previous development on site; As per Architects Landscape Specificaition Q28					
	Subsoil surface preparation; to grassed and planting areas					
B	Generally	619	m2			
	Seeding					
	GRASS SEED FOR ALL GRASSED AREAS; Supplier: Contractor's choice; Mixture reference: Submit proposals for high quality product / component appropriate to the use / location and fit for purpose; Application rate: 20-35 g/m2; SEED MIXTURE FOR ROAD VERGES - WILD FLOWER SEED; Supplier: Contractor's choice; Mixture reference: Submit proposals for high quality product / component appropriate to the use / location and fit for purpose; Origin (as defined in the National Plant Specification): Native Irish; Application rate: 5-10 g/m2; QUALITY OF SEEDFOR ALL GRASSED AND PLANTED AREAS; Freshness: Produced for the current growing season; Certification: Blue label certified varieties; Standard: EC purity and germination regulations; Official Seed Testing Station certificate of germination, purity and composition: Submit when requested; Samples of mixtures: Submit when requested; As per Architects Landscape Specificaition Q30					
C	Generally	619	m2			
	WEED CONTROL FOR INVASIVE NON-NATIVE WEEDS; Locations: All planting areas; General: Prevent weeds from seeding and perennial weeds from becoming established, by hoeing and cultivating. Kill off any regrowth with suitable systemic herbicide before mulching; As per Architects Landscape Specificaition Q31					
D	Generally	619	m2			
				To Collection €		

					€	c
	(80) LANDSCAPING (Cont)					
	FERTILIZER FOR ALL GRASSED AREAS; Types: Apply both: Superphosphate with a minimum of 18% water soluble phosphoric acid; A sulphate of ammonia with a minimum of 20% nitrogen; Application: Before final cultivation and three to five days before seeding/turfing; Coverage: Spread evenly, each type at 70 g/m2, in transverse directions; As per Architects Landscape Specificaition Q30					
	Fertilizer; to grassed and planting areas					
A	Generally	619	m2			
	FINAL CULTIVATION; Timing: After grading and fertilizing; Seed bed: Reduce to fine, firm tilth with good crumb structure; Depth: 25 mm; Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted; Remove surface stones/earth clods exceeding: General areas: 20 mm; Fine lawn areas: 10 mm; Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels; As per Architects Landscape Specificaition Q30					
	Final Cultivation; to grassed and planting areas					
B	Generally	619	m2			
	Surface applications; MULCHING PLANTING BEDS; Material: Fine grade bark mulch; Purity: Free of pests, disease, fungus and weeds; Recycled content: Contractor's choice; Preparation: Clear all weeds. Water soil thoroughly; Coverage: 75 mm depth; Finished level of mulch: 30 mm below adjacent grassed or paved areas; As per Architects Landscape Specificaition Q31					
	Applying loose mulch to all shrub planting					
C	Generally	174	m2			
	Surface applications;MULCH MATTING/ GEOTEXTILE FABRIC TO SHRUB PLANTING; Manufacturer: Contractor's choice; Product reference: Submit proposals for high quality product / component appropriate to the use / location and fit for purpose; Type: Jute; Recycled content: Contractor's choice; Timing: Lay before planting; Watering: Water soil thoroughly before laying; Laying: In close contact with soil surface. Lap or butt joints as recommended by manufacturer, with no gaps; Planting: Cut neat slits or flaps. Refit closely around plant stems; Overlay: Mulching planting beds; As per Architects Landscape Specificaition Q31					
	Mipex Layer					
D	Generally	174	m2			

					€	c
	(80) LANDSCAPING (Cont)					
	Shrubs & Perennials; excavate to 480mm depth and backfill with 450mm multi-purpose grade topsoil; supply & plant the following shrub mix as set out in the drawings and in accordance with the spacing stated for each; include for all soil preparation, cultivation, manure, most peat; include for all excavation, disposal, backfilling, drainage; all in accordance with Architects Drawing 0005					
	Shrub planting; Chimonanthus Praecox; Form: 2L					
A	Generally	187	nr			
	Shrub planting; Choisya Temata; Form: 2L					
B	Generally	187	nr			
	Shrub planting; Hypericum Hidcote; Form: 2L					
C	Generally	187	nr			
	Shrub planting; Pieris 'Forest Flame'; Form: 2L					
D	Generally	187	nr			

To Collection €

					€	c
	(80) LANDSCAPING (Cont)					
	Trees; supply & plant the following structure tree planting as set out on the drawings; TREE PITS; Sizes: 75 mm deeper than root system and wide enough to accommodate roots when fully spread; Sloping ground: Maintain horizontal bases and vertical sides with no less than minimum depth throughout; Pit bottoms: With slightly raised centre. Break up to a depth of 150 mm; Treatment: Soil ameliorant and well rotted animal manure and compost worked into pit bottoms; Pit sides: Scarify; Backfilling material: Tree backfilling material; Accessories: Root barrier; TREE PIT ROOT BARRIERS; Locations: To all new trees proposed on Architects landscape drawing; Manufacturer: "Greenleaf Arborsystem or equivalent approved, Agreement certified manufacturer; Product reference: "Reroot 1000" linear pavement protection for the trees proposed for the public pavements "Root Director Modular root protection system" for all trees proposed in the open space areas; Depth of top of root barrier below finished soil level: Flush; Installation: With sides vertical; TREE PIT ACCESSORIES Locations: All tree pits; Manufacturer: Ageement certified. Contractor's choice; Product reference: Submit proposals for high quality product / component appropriate to the use / location and fit for purpose; Type: Perforated plastics irrigation pipe, 50 mm diameter, in circle above and around sides of rootball, with plastics cap. "Greenleaf Arborsystem Root Rain Metro" or equivalent approved, irrigation system will be fitted to all new trees to facilitate watering during the first growing season and during any excessively dry periods thereafter;					
	TREE PIT DRAINAGE; Depth of excavation: Increase from specified size to allow for aggregate layer, with base slightly falling to outlet; Aggregate layer: Clean gravel or broken stone, with no fines, graded 40 to 20 mm; Depth: 200 mm; Drainage pipes: Type: Perforated plastics; Diameter: 80 mm; Position: Lay around perimeter of pit within aggregate layer; Discharge: Connect to soakaway or road gully. Refer to the architectural drawings; Geotextile filter; Manufacturer: Contractor's choice; Product reference: Submit proposals for high quality product / component appropriate to the use / location and fit for purpose; Position: Lay over aggregate before installing tree or backfill; Completed pits: Test for free drainage before planting; As per Landscape Architects Specification Q31					
	Prunus Avium; Form: AHS; Size: 16-18cmg; Height above soil: 3.0-4.0m					
A	Generally	6	nr			
	Quercus Rubra; Form: AHS; Size: 16-18cmg; Height above soil: 3.0-4.0m					
B	Generally	6	nr			
	Betula Pubescens; Form: AHS; Size: 14-16cmg; Height above soil: 3.0-4.0m					
C	Generally	6	nr			
	Betula Pendula; Form: AHS; Size: 14-16cmg; Height above soil: 3.0-4.0m					
D	Generally	6	nr			
				To Collection €		

					€	c
	(80) LANDSCAPING (Cont)					
	Sundries					
	STAKING FOR ALL TREES; Staking: Position first stake appropriate distance from tree on windward side and drive vertically at least 300 mm into bottom of pit before planting; Drive second stake similar distance from opposite side of tree; Backfilling: Consolidate material around stake; Height of stakes: Cut to approximately 900 mm above ground level or as appropriate for particular tree being supplied; Double staking to be used in all areas; Ties: Cushioned and adjustable ties; Tying: Secure tree firmly but not rigidly to stake with at least two ties within 25 mm of top of stake or to cross member f double staking; As per Landscape Architects Specification Q31					
A	Generally	24	nr			
	TREE GUARDS: Manufacturer: Agrement certified supplier; Product reference: submit proposals; Material: Steel tree guard, in ductile cast iron; Finish: Galvanised and polyester powder coated; Colour: neutral; Size: 450mm diameter or to suit 800 X 800 mm tree grille; Accessories/ Special requirements: The tree grille is to be slotted or installed into a galvanised steel support frame, the castings are to be secured by the tree guard and corner locating points; Method of fixing: Bolted to tree grille frame with 300mm hooked galvanised steel anchors as applicable; as per Landscape Architect's Specification Q50					
B	Generally	24	nr			
	Maintenance for defects liability period; as per Architect's Specification					
	MAINTENANCE; Duration: one year including defects period of soft landscaping: Carry out the operations in the following clauses from completion of planting until the end of the rectification period. Frequency of maintenance visits: Allow for monthly during growing season unless agreed otherwise in the agreed maintenance schedule.					
C	Generally	1	item			
	FAILURES OF PLANTING; Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/shrubs that have failed to thrive. Exclusions: Theft or malicious damage after completion. Rectification: Replace with equivalent plants/ trees/ shrubs. Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater. Timing of making good: In accordance with an agreed defects rectification programme.					
D	Generally	1	item			
	CLEANLINESS; Soil and arisings: Remove from hard surfaces and grassed areas. General: Leave the works in a clean tidy condition at completion and after any maintenance operations.					
E	Generally	1	item			
				To Collection €		

					€	c
	(80) LANDSCAPING (Cont)					
	PLANTING MAINTENANCE GENERALLY; Weed control: Maintain weed free area around each tree and shrub. Diameter (minimum): The larger of 1 m or the surface of original planting pit. Keep planting beds clear of weeds: By maintaining full thickness of mulch. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools. Staking: Check condition of stakes, ties, guys and guards. Broken or missing items: Replace. Rubbing: Prevent. Ties: Adjust to accommodate growth. Damage to bark: Cut back neatly with sharp knife. Prevent further damage. Frequency of checks: Every three months. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs. Trees: Spray crown when in leaf during warm weather. Timing: After dusk. Watering: Contractor's choice.					
A	Generally	1	item			
	PLANTING MAINTENANCE - FERTILIZER; Time of year: March or April. Fertilizer: Organic. Manufacturer: Contractor's choice. Product reference: Submit proposals. Application: Evenly spread, carefully incorporating below mulch materials. Application rate: To manufacturer's recommendations.					
B	Generally	1	item			
	PLANTING MAINTENANCE - PRUNING; General: Prune to promote healthy growth and natural shape. Dead, dying, diseased wood and suckers: Remove. Timing: As appropriate to the species. Trees: Favour a single central leading shoot. Arisings: Remove.					
C	Generally	1	item			
	MAINTENANCE INSTRUCTIONS; General: Before end of the maintenance period, submit printed instructions recommending procedures to be established by the Employer for maintenance of the planting work for one full year: Provide a schedule of any ongoing maintenance problems experienced during the defects liability period					
D	Generally	1	item			
	FINAL MULCHING; Timing: At end of the maintenance period. Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary. Planting beds: Remulch. Depth (minimum): 50 mm. Trees: Remulch. Depth (minimum): 50 mm.					
E	Generally	1	item			
				To Collection €		

				€	c
(80) LANDSCAPING (Cont)					
COLLECTION					
Page No. Siteworks/184					
Page No. Siteworks/185					
Page No. Siteworks/186					
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Page No. Siteworks/188					
Page No. Siteworks/189					
Page No. Siteworks/190					
(80) LANDSCAPING **Carried to Summary**					

				€	c
SUMMARY	**Page No.**				
(10) SITE PREPARATION	Siteworks/	8			
(30) SITE ENCLOSURES - MESH FENCING	Siteworks/	11			
(30) SITE ENCLOSURES - ASHP COMPOUND	Siteworks/	15			
(30) SITE ENCLOSURES - RETAINING WALLS	Siteworks/	23			
(30) SITE ENCLOSURES - PLANTER WALLS	Siteworks/	28			
(30) SITE ENCLOSURES - REUSE EXISTING GATES	Siteworks/	30			
(40) ROADS, PATHS, PAVINGS - ROAD	Siteworks/	34			
(40) ROADS, PATHS, PAVINGS - CAR PARKING	Siteworks/	38			
(40) ROADS, PATHS, PAVINGS - PAVING	Siteworks/	41			
(40) ROADS, PATHS, PAVINGS - CONCRETE FOOTPATH	Siteworks/	44			
(40) ROADS, PATHS, PAVINGS - GRAVEL BEDS	Siteworks/	47			
(40) ROADS, PATHS, PAVINGS - GRASSCRETE	Siteworks/	50			
(50) SITE SERVICES - STORM DRAINAGE	Siteworks/	62			
(50) SITE SERVICES - STORM DIVERSION	Siteworks/	68			
(50) SITE SERVICES - FOUL DRAINAGE	Siteworks/	76			
(50) SITE SERVICES - FOUL DIVERSION	Siteworks/	83			
(50) SITE SERVICES - FOUL DRAINAGE - PUMP STATION & RISING MAIN	Siteworks/	91			
(50) SITE SERVICES - WATERMAIN	Siteworks/	98			
(50) SITE SERVICES - GAS	Siteworks/	102			
(50) SITE SERVICES - DISTRICT HEATING	Siteworks/	110			
(50) SITE SERVICES - DISTRICT HEATING EXSITING BUILDING	Siteworks/	121			
(60) SITE SERVICES (MAINLY ELECTRICAL) - ESB DIVERSION	Siteworks/	125			
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EXTENTION	Siteworks/	139			

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(60) SITE SERVICES (MAINLY ELECTRICAL) - SITE LIGHTING	Siteworks/145				
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO PETROL INTERCEPTOR	Siteworks/150				
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP	Siteworks/155				
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO ASHP EXSITING BUILDING	Siteworks/161				
(60) SITE SERVICES (MAINLY ELECTRICAL) - POWER TO EV	Siteworks/170				
(60) SITE SERVICES (MAINLY ELECTRICAL) - ELECTRICAL VEHICLE CHARGER BASE	Siteworks/174				
(60) SITE SERVICES (MAINLY ELECTRICAL) - EARTHING SYSTEM & LIGHTNING PROTECTION	Siteworks/180				
(70) SITE FITTINGS	Siteworks/183				
(80) LANDSCAPING	Siteworks/191				
TOTAL AMOUNT CARRIED TO GENERAL SUMMARY					
Siteworks/1 - Siteworks/191.					

GENERAL SUMMARY

						€	
		GENERAL SUMMARY					
		Amount for:					
A		**PRELIMINARIES**					
B		**BUILDING**					
C		**SITEWORKS**					
D		**Total (excluding VAT)**			€		
		Provide for:					
E		entering into a bond with an approved Insurance Company which will become bound jointly and severally with the Contractor in a sum equal to 12.5% of the contract sum; paying all premiums and expenses arising; complying with all conditions of the bond; lodging the bond with the Architect		Item			
		PROJECT SUPERVISOR					
F		Provide for all costs in respect of: The appointment of project supervisor for the Construction Stage. We agree to nominate a suitably qualified person to provide the required services and have included for all costs associated with the provision of such services to fulfill the function and perform on behalf of the Employer the duties of the Project Supervisor for the Construction Stage as set out in paragraphs 6 & 7 of the safety, Health and Welfare at Works Construction Regulations 2013; complying with the Conditions of the Collateral Agreement including any additional insurance costs **(Exclusive of Value Added Tax)**		Item			
		TOTAL AMOUNT OF TENDER (EXCLUDING VAT) FORWARD TO FORM OF TENDER			€		

APPENDIX A - VAT SCHEDULE

SCHEDULE OF WORKS ITEMS SUBJECT TO VAT AT RATES OTHER THAN SPECIAL BUILDING RATE (13.5%)					
	Notes				
	1. Please list separately the items included in the tender amount (including M&E Items) that are liable for VAT at rates other than the special building rate (13.5%) i.e. 23% to allow for the calculation of the Employer's total VAT outlay on the contract.	Note			
	2. The Employer reserves the right to seek advice from the Revenue Commissioners on the accuracy of the VAT allocations shown and, in the event of a dispute, the opinion of the Revenue Commissioners on the VAT rate appropriate to any item of work shall be final.	Note			
	3. Where the cost of any items are VAT exempt or zero rated zero rated for VAT purposes the relevant items shall be itemised and the amount of the liability at this rate shall be clearly identified	Note			
	4. This schedule is for information purposes only and should not be carried forward to the General summary and will therefore not be included in the Tender amount.	Note			

Ref	Description	Unit	Amount Subject to VAT at rates other than 13.5% €	VAT Percentage Amount e.g. 23% %	Amount of VAT €
	Please See Below Example on How the Schedule is to be Filled Out (For information Purposes Only)	Note			
	The following example should not form any part of the Tenderers calculation	Note			
	Example				
	Light Fittings	Item	€10,000.00	23.00%	€2,300.00
	Works Items				
A					
B		Item			
C		Item			
D		Item			
E		Item			
F		Item			
G		Item			
H		Item			
I		Item			
J		Item			
K		Item			
L		Item			
M		Item			
N		Item			

Ref	Description	Unit	Amount Subject to VAT at rates other than 13.5% €	VAT Percentage Amount e.g. 23% %	Amount of VAT €
	Works Items				
A		Item			
B		Item			
C		Item			
D		Item			
E		Item			
F		Item			
G		Item			
H		Item			
I		Item			
J		Item			
K		Item			
L		Item			
M		Item			
N		Item			
O		Item			
P		Item			
Q		Item			
R		Item			
S		Item			
T		Item			
U		Item			
V		Item			

Ref	Description	Unit	Amount Subject to VAT at rates other than 13.5% €	VAT Percentage Amount e.g. 23% %	Amount of VAT €
	Works Items				
A		Item			
B		Item			
C		Item			
D		Item			
E		Item			
F		Item			
G		Item			
H		Item			
I		Item			
J		Item			
K		Item			
L		Item			
M		Item			
N		Item			
O		Item			
P		Item			
Q		Item			
R		Item			
S		Item			
T		Item			
U		Item			
V		Item			

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General Summary	Pages 1 - 1
Appendix A – VAT Schedule	

Please check that no page is missing or in duplicate.

Contractor's Name : .....

Address : .....

.....

Date : .....

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July 2026

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