

MCLA SPECIFICATION

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Secondary School

Doc Ref: 26 08

Stage: Tender

Project Details: Stanhope Secondary School, Manor
St, Stoneybatter, Co. Dublin

Completed by: David Farrell

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1.0 PROJECT INTRODUCTION

Specification		Tender Purposes Only
At	Stanhope Secondary School	
For	Board of Management Stanhope Secondary School	
Project Ref:	26 08	
Doc Ref:	Spec – T01	
Date:	July 2026	

This document has been prepared by MCLA and under the supervision and to the satisfaction of:
 Liam McLoughlin,
 MCLA,
 Unit 4B, Elm House,
 Millennium Park,
 Naas, Co. Kildare.

To whom the copyright of this document belongs.

This specification shall be read in conjunction with all drawings, details, schedules and other information issued by MCLA and works shall be carried out accordingly unless otherwise instructed. Note: All sections of specifications, schedules etc. to be adhered to and to be priced by section. The Contractor's attention is drawn to the description of works outlined in the Building Specification including Specification of Materials & Workmanship; the detailed requirements of the Drawings; Schedule of Works; other Schedule Information as applicable and any other such documents referred to by the Architect which must be carefully read before pricing. No extra cost for additional work will be allowed unless clearly outside the meaning or may not be reasonably inferred from the Drawings and Specification documents.

NOTE: Prospective tenderers are required to visit the site prior to submitting their tender by arrangement with MCLA as a condition of tendering, in order to ensure that the full extent and scope of works required under the contract are understood. Evidence of prospective tenderers having visited the site will be required by signing a register on-site. This is to allay any doubts as to what works are required, in the interests of both the contracting authority and the selected tenderer ultimately charged with delivery of the scope of works. Any failure to observe this condition of tendering will result in the exclusion of the tenderer concerned.

NZEB Compliance: Contractor to familiarise themselves with the requirements of compliance with the NZEB Building regulations. Contractor to ensure that the project is constructed in accordance with the Latest Irish regulations and fully compliant with NZEB as specified.

INTRODUCTION

Refurbishment works to 2no science labs & Storeroom at Stanhope Secondary School, Manor St, Stoneybatter, Co. Dublin

ALL SPECIFIED PRODUCTS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS DETAIL AND INSTRUCTION. ANY VARIANCES BETWEEN ARCHITECTS, ENGINEERS AND MANUFACTURERS SPECIFICATION SHOULD BE HIGHLIGHTED AT TENDER STAGE AS PART OF TENDERING CONTRACTORS TENDER RETURN.

Below mentioned clauses to be read together Galileo Energy Services drawings & specifications. Mechanical, electrical and structural items mentioned in this document shall be superseded by structural engineers & M&E consultants' specification where available.

Where the tenderer proposes substitution of a product of different manufacture to that specified, notification to the architect must be included in the **Returned tender submission**. The tenderer is bound to submit for verification documentary evidence that the alternative product is equivalent in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, certified English translations of any foreign language documents will be required. Any proposal for use of an alternative product must also include proposals for substitution of compatible accessory products and variation of details necessary, and before ordering products, provide revised drawings, specification and manufacturers guarantees as required by the architect.

Wherever products are specified by proprietary name and the phrase "or equivalent" is not included, it is to be deemed included

SITE VISITS

All arrangements for visiting the site and any enquiries pertaining there to are to be made through:

MCLA
Unit 4B, Elm House
Millennium Park
Naas, Co. Kildare.
Tel: 045 854 900
E: info@mclarchitecture.ie

SITE ADDRESS

Stanhope Secondary School
Manor St,
Stoneybatter,
Dublin 7,
D07 YP03

CLIENT

BOM Stanhope Street Secondary School
7 Stanhope St,
Stoneybatter,
Dublin 7,
D07 W0Y0
Tel: (01) 671 0419
E: info@stanhopessecondary.ie

QUANTITY SURVEYOR

Lambert Surveyors
Claregate Street,
Co. Kildare
Tel: 045 542 698
E: mlambert@lambertsurveyors.com

ARCHITECT & PROJECT SUPERVISOR (DESIGN PROCESS)

MCLA, Unit 4B
Elm House
Millennium Park
Naas, Co. Kildare.
Tel: 045 854 900
E: info@mclarchitecture.ie

MECHANICAL & ELECTRICAL (M&E) ENGINEER

Galileo Energy Services
Unit A6,, M4 Business Park,
Maynooth Road, Celbridge,
Co. Kildare,
Tel: (01) 627 4103
E: gerd@galileoenergy.ie

2.0 PRELIMINARIES AND CONDITIONS OF CONTRACT

SITE CONDITIONS / SITE SURVEY

Tender parties shall visit the site and satisfy themselves as to all conditions under which the works will be executed particularly with regard to access, condition and Integrity of existing structures within the vicinity of the proposed works, quantity of materials necessary and any other matter which may affect this tender. No extra cost will be allowed in respect of items which would have been apparent or reasonably foreseeable during a proper site visit.

PROJECT SUPERVISOR (CONSTRUCTION STAGE)

The role of Project Supervisor (Construction Stage) shall be undertaken by the main contractor for the duration of the contract. Alternatively, the successful tenderer may appoint a suitably qualified person or firm to act in this role on their behalf.

PROJECT PHASING

A Single phasing strategy to be include with date particulars to be set out in Articles of Agreement Contract with all parties involved, Contractor is to liaise with project Architect as phasing is not a requirement.

TIMES WHERE CONSTRUCTION CAN TAKE PLACE

NOTE WORKS WILL BE CARRIED OUT WITHIN ACTIVE SCHOOL ENVIRONMENT SURROUNDING TEMPORARY COMPOUND & WORKS AREA, WORKS ARE TO BE CARRIED OUT BETWEEN 8.00 AND 17.30 FROM MONDAY TO FRIDAY AND SATURDAYS TO BE FROM 9.00 – 13.00

Dates where works take place may be subject to minor revision prior to the successful appointment of the Contractor. Architect / Contractor to liaise prior to works commencing in order to agree a schedule prior to Contract Agreement.

ACCESS & SECURITY

The chosen contractor is to liaise with Architect in order to agree a schedule of security and temporary access to the building. A plan of all the proposed routes included in the works should be agreed before commencement of works as the building is to remain fully functional in the regular working hours set out above.

The contractor is to note that at all times, access to and from the site is to be via the vehicular entrance/ exit to the rear of the site and pedestrian access via front public pathway. No access will be available or permitted via adjoining properties. The contractor will indemnify the employer against any damage or loss to the adjoining buildings/structures etc. (not being part of the work) caused by the contractor or his other agents, window contractor etc. Whether or not the damage or loss is as a result of the negligence of the contractor or his agents etc. The Contractor shall provide at all times during the execution of the works and the defects liability period proper means of access, with ladders, gangways, etc. and as necessary attendance to move and adapt same as directed, for the inspection or measurement of the works by the Architects, or their representatives.

SITE CLEARANCE, DEMOLITIONS & ALTERATIONS TO EXISTING STRUCTURES

Unless otherwise described all old materials arising from site clearance, demolitions & alterations to existing structures are to become the property of the Contractor who is to allow any credit therefore. Clearing away of such old materials, including deleterious or hazardous materials, shall be deemed to be included within the site clearance & demolition items. Proper and appropriate methods of disposal of deleterious & hazardous materials shall be the responsibility of the main contractor. Suitable material arising from demolition & site clearance may be selected for use as site fill subject to agreement with structural engineer. Dust shall be kept to a minimum.

Demolition works shall be carried out in accordance with B.S.6187:2011- Code of practice for full and partial demolition. The use of explosives shall not be permitted. Burning of site materials arising shall not be permitted. The contractor shall be responsible for protecting remaining adjoining buildings or structures or party walls or public roads and paths and for providing adequate supports at all stages of demolition works. The contractor shall be held responsible for any damage to adjoining buildings or structures caused during the works or as a result of works. Temporary screens, coverings and protection materials shall be provided by the Contractor. The Architect is to be notified of Ordinance Survey marks found on structures scheduled for demolition. Such marks are not to be removed unless instructions to do so are given by the architect. Demolition works shall include associated foundations, substructures, drainage etc.

LOCATION OF SKIP / WASTE MATERIALS

The chosen contractor is to liaise with Architect in order to agree the location of skip / waste materials. Refer to architects' drawings for provisional location, TBC prior to works commencing on site.

INSTALLATION / ERECTION OF SCAFFOLDING

All scaffolding to be certified and be installed by suitably trained and certified scaffolding contractor. All the appropriate physical barriers/ scaffolding, safety rails, toe boards, securing to the existing structure etc. to be used as required for work at high level and installed fully compliant with the H S A regulations. Refer to the HSA Guidelines "Code of Practice For Safety In Roof work & Access / Working Scaffolds". Along with all the other relevant Published HSA guidelines must be adhered to at all times. The contractor to allow for scaffolding to remain in place for the full duration of works as required. All roof works must be complete with approval by architect prior to removal of scaffolding.

HOARDING AND SITE SEPERATION

To separate and secure the works fully the contractor will erect temporary hoarding along the edge of the work zone within the site as shown on the contractors traffic management plan to allow the safe construction of the works whilst maintaining the safety of the **Stanhope Secondary School** management Students and visitors to the premises. The hoarding shall be decorated/painted to a reasonable standard (colour to architect's specification) on the road side for the duration of the works. The hoarding shall be secured and made stable at all times during its use. The contractor may at his own discretion and risk, use existing front boundary structures as hoarding to the site when appropriate should he consider the same to be appropriate and necessary and whereby suitable access can be formed. It is the responsibility of the contractor to obtain necessary approvals/consents/hoarding licenses etc. before commencing the relevant

elements of the works. The Contractor shall securely erect the Architects site board to an agreed location.

HEALTH AND SAFETY

The contractor shall at all times maintain the site in a clean and safe condition, and shall carry out the works in an orderly and safe manner as set out in the Preliminary Health and Safety Report where provided. The Contractor shall be appointed as Project Supervisor (Construction Stage) and will be required to fulfil the roles and responsibilities of the Project Supervisor (Construction Stage) as set out and defined in S.I. No. 504/2006 - Safety, Health and Welfare At Work (Construction) Regulations 2006 and he/she shall ensure the above and maintain suitable records and issue relevant notices in accordance with the Health and Safety and Welfare at Works Acts. As Project Supervisor (Construction Stage) the Contractor shall prepare and hand over a copy of the Safety File to the client before Practical Completion can be certified. The Contractor shall be responsible for provision of all documents and drawings, including as built drawings, necessary for the Safety File and should allow for this in his costs.

SAFETY OFFICER

The contractor shall allow for having an adequately trained Safety Officer on site at all times and who shall be responsible for health and safety issues arising on site.

TIME FOR COMPLETION

The time for completion shall date from the day when instructions shall be sent to the Contractor to begin the works. The work must be carried out with due diligence and expedience and the whole works including any additional works ordered by the Architect must be completed to the Architect's satisfaction. The Architect shall be at liberty, however, to extend the time for completion of the works if in his opinion completion shall be delayed by circumstances outside the control of the Contractor. Possession of the site shall be granted as soon as is possible after agreement of contract and works shall commence as soon as is possible. Completion of the works shall be as soon as is possible after possession of site. The Project Supervisor Construction Stage shall review the duration of the proposed program for the project as advised by the Contractor and shall confirm (or otherwise comment) on the practicality of same. The works shall be considered to be complete only from the date of issue by the Architect of the Certificate of Practical Completion.

PRIME COST & PROVISIONAL SUMS

Prime costs are not permitted in public works contracts therefore won't be accepted within the tender submission for the proposed works.

BUILDING REGULATIONS AND CONTROLS

The Contractor is to conform to the provisions of all Acts passed and adopted by Oireachtas Eireann or the state/European Union which may in any way affect the works and observe all orders, rules and regulations of the Municipal Authorities and shall indemnify the Employer against all claims or liabilities. All works shall be carried out to comply with the requirements of the current Building Regulations, current Technical Guidance Documents inclusive of current revisions & amendments and all relevant Codes of Practice at the time of construction. The

Contractor shall supply all due notice of operations to the Local Authority as may be required and shall obtain all necessary licences, consents, approvals etc. as may be required. The Contractor shall provide for making all necessary connections for water, drainage etc. or other services and pay all charges connected therewith, with the exception of such levies associated with conditions of the Planning Approval. On practical completion of the contract the contractor will be required to furnish to the architects a certificate stating that the works (including window-contract works) have been built in accordance with the provisions of the latest Building Regulations. The Contractor shall include for adherence to all conditions of the Planning Approval. The Contractor shall include for adherence to all conditions of any Fire Certificate approval documents and shall be inclusive of all finally agreed drawings, documents & final approval documents.

EXTRA WORK

In no case will any claim for extra work be granted unless such work has been authorised in writing by the Architect and a price agreed upon before such work is commenced. No variation shall vitiate the Contract, and any authorised variations (additions or deductions) which shall be instructed by the Employer shall be measured and valued at the rates set out in the Schedule of Rates or in cases where no appropriate rate exists in the original at rates prevailing in the area at the time that the works in question were executed.

FOREMAN

The Contractor shall keep a competent foreman constantly on the works. He shall keep accurate measurements and a daily record of works. The foreman shall be responsible for the supervision of provision of informed instruction to personnel for the duration of the works. The foreman shall be required to remain based onsite and shall be empowered to act in the Contractor's absence and for all purposes as the Contractor's general agent. The foreman shall have good experience in carpentry, joinery & plastering.

RESPONSIBILITY

The Contractor is to take entire charge of the building works from commencement of the work to the completion of same and make good all injuries, damage and repairs occasioned or rendered necessary to same by causes over which the Contractor shall have control. He is to take the proper precautions to prevent such happenings and take all risks and hold the Employer harmless from any claims for injuries to persons, animals and things or for structural damage to property, happenings from any neglect, default, want of proper care, misconduct on the part of the Contractor or anyone in his employ, during the execution of the works.

INSPECTION

Where variation work may be instructed, work shall remain available for inspection and shall be passed by the Architect with any variation work to measure by him prior to covering up. Works covered up on breach of this instruction may be uncovered at the Contractor's expense and set out to the Architect's satisfaction. The Architect is to be given a minimum of 3 days' notice prior to milestone inspections as outlined in the Preliminary Inspection plan

INCLEMENT WEATHER

The whole of the works shall be protected as necessary during inclement weather, including covering walls & felt, supplying all necessary sheathing, screens etc. Any work damaged as a result of inclement weather shall be removed and re-instated by the Contractor as its own expense.

PROVISIONS FOR TEMPORARY SEALING THE BUILDING

The chosen contractor is to allow for the provision of temporary sealing the building during works if the situation arises which causes works to temporarily stop on site as the building is currently fully operational.

CASE UP

The Contractor is to case up and protect the work by other tradesmen and be responsible for and make good or pay for making good of any work which may suffer from want of such casing and protection.

CLEAR AWAY

The contractor shall remove all rubbish and debris from the site of the works and maintain in a relatively clean condition for the duration of the contract and shall effectively clean all areas and make good all defacements at completion and leave all to the entire satisfaction of the Architect.

CLEANING ON COMPLETION

All floors, paving's etc. to be scrubbed, all glass to be cleaned on both sides of windows and doors, all gulley's, gutters, pipe heads etc., to be cleaned out and the premises left clean perfect and water tight upon completion and shall make good all damage occasioned to same.

ATTENDANCE

The contractor shall allow for all attendance and give every facility and assistance to other tradesmen, Engineers etc. employed on the works and shall allow the use of his plant, scaffolding and water etc. free of charge. The contractor shall be responsible for the management of the works and for his work fitting in with the work of other trades. Contractor to cover up and protect work done by other tradesmen and be responsible for any loss or damage that may be suffered from want of same.

PRICE SCHEDULE OF RATES

The successful Contractor shall be required to lodge with the Architect within 14 days' notice of acceptance of this tender a priced and detailed schedule showing the rates on which his estimate was built up. All extra work will be measured and priced thereby.

INSURANCE

The Contractor shall be solely liable for and shall indemnify the Employer in respect of and shall insure against any liability due to injury to person's workmen's compensation or damage to property or loss of property. The Contractor shall make full provision for complying with the

Conditions of Contract, relative to Fire Insurance Compensation for injury, Third Party Risks, All Risks etc.

MASTER PROGRAMME

The Contractor shall, before gaining possession of the site, prepare and submit his proposed master programme for the execution of the works for comment by the Architect. The master programme shall incorporate:

- The dates of possession and for completion named in the Appendix to the Condition of Contract.
- The dates as determined or proposed for commencement and completion of all trades including those window-contracted.
- Such dates as can be made available for procurement, delivery to site of materials, commencement and completion of execution of all contracts for works not forming part of this Contract which the Employer has placed or intends to place direct and the existence of which have been known to the Contractor.

Thereafter the Contractor shall amend and revise the master programme as required by the Conditions of Contract and as required by the Architect. In so doing, the Contractor shall obtain from all window-contractors, and use his best endeavours to obtain from all contractors including those made known to him during the course of the Contract) any updating in their progress or programme which has occurred or is likely to occur and incorporate this in the revised master programme.

CO-ORDINATION OF SITE WORKS

The Contractor shall be responsible for the co-ordination and proper execution and completion of the works and the protection of the site, The Contractor shall in accordance with his programme obtain and submit to the Engineer for his approval all builder's work details including shop drawings from window-contractors and suppliers, whether nominated or not. The Contractor shall arrange and attend such meetings as are necessary to ensure that the information requirements of all window-contractors are met and to establish their requirements for holes, chases, recesses, fixings and the like before the work is put in hand, to avoid conflict with other work. The Contractor shall be responsible for the setting out of the works in accordance with the drawings and Architect's instructions and shall be responsible for rectifying errors at its own expense.

NOMINATED SUPPLIERS AND WINDOW - CONTRACTORS

All expenses in connection with the unloading, storing, and return of packings of goods and materials described as PC shall be allowed for by the Contractor. The Contractor shall allow in his price for all necessary building work (forming openings, making good etc.,) in connection with the work of window-contractors. Should the Contractor window-let any portion of the works, it shall only be with competent contractors and trades persons within the parameters of the Specification & Schedule documents which shall be applied insofar as it may be applicable to their work. The Contractor shall be responsible for ensuring that all persons carrying out work as part of the Contract shall be made fully aware of the standards required.

GENERAL ATTENDENCES

The contractor shall allow for all attendance and give every facility and assistance to other tradesmen, Engineers etc. employed on the works and shall allow the use of his plant, scaffolding and water etc. free of charge. The contractor shall be responsible for the management of the works and for his work fitting in with the work of other trades. Contractor to cover up and protect work done by other tradesmen and be responsible for any loss or damage that may be suffered from want of same.

MAINTENANCE

The Contractor shall be responsible for maintaining the works for a period of 12 months from the certified date of Practical Completion. Before the end of the Maintenance Period the Contractor shall make good all defects, including shrinkages and settlements, to the entire satisfaction of the Architect.

DAYWORKS

No day works shall be allowed unless the permission of the Architect has been obtained in writing. Day works sheets shall be presented to the Architect during the execution of Authorised day work, and they shall itemise the works executed with a clear statement of time and full particulars of the materials chargeable to every item. No day works shall be allowed for works which can be measured. Contractors are to state in their tenders the percentage profit they require on the net cost of day work

TAX CLEARANCE AND VAT

The contractor shall be registered with the Revenue Commissioners for income tax purposes and shall furnish, prior to acceptance of tender a current Certificate of Authorization (Form C2). The contractor shall warrant that it is and will be at all times during the course of the contract including final certification/defects liability period, registered for VAT and will on requesting payment provide a VAT invoice as necessary including VAT registration number.

COMPLIANCE & STANDARDS OF MATERIALS GENERALLY

The material and workmanship shall be to the satisfaction of the Architect and shall be the best of their respective kinds and in accordance with Sections B & C of the Specification document. Materials shall comply with the current building regulation. Materials shall bear a CE Marking in accordance with the provisions of the Construction Products Regulation. Materials shall comply with an appropriate harmonised standard or European Technical Assessment in accordance with the provisions of the Construction Products Regulation or comply with an appropriate Irish Standard or Irish Agreement Certificate or with an alternative national technical specification of any State which is a contracting party to the Agreement on the European Economic Area, which provides in use an equivalent level of safety and suitability. All goods and materials shall be of Irish manufacture and supply as far as possible with manufacturer's and supplier's instructions and relevant Irish or British Codes of Practice to be strictly adhered to where applicable. All goods and materials shall be subject to such tests and provision of samples as may be deemed necessary. The Architect may require any materials used on the contract to be tested to ensure that it conforms to the specification and where the tests show that it does not, the Contractor shall be responsible for the test so ordered. All dimensions and levels to be checked and verified on site prior to construction and any

discrepancies to be reported to the Architect immediately. Do not scale off drawings. Setting out to be carried out by the Contractor after site clearance and in accordance with the architect's drawings. No foundations shall be poured till the setting out is approved and finalized. On practical completion of the contract the contractor will be required to furnish to the architects a certificate stating that the works (including window contract works) have been built in accordance with the provisions of the latest Building Regulations.

PLANT, TOOLS, SCAFFOLDING ETC

The Contractor shall provide everything required, whether or not mentioned in this specification or shown on the drawings provided that it may be reasonably inferred, whether labour, plant materials, materials, cartage, internal and external scaffolding hoisting, fixing, tackle and tools superintendence and hoarding etc. for the safe, proper and expeditious executions of the works. The methods of work employed by the contractor in relation to the works are entirely the contractor's own responsibility.

HOLIDAYS WITH PAY ETC.

The Contractor shall be responsible for and include in his tender for all costs and expense in connection with workpeople including but not limited to:

- a) National Insurance Contributions
- b) Pensions
- c) Holidays with Pay Scheme for Building and Civil Engineering Industries
- d) Travelling time, expenses. Fares and transport
- e) Guaranteed time.
- f) Non-productive time and other expenses in connection with overtime.
- g) Provision of all necessary supervision, including a competent foreman.
- h) Any other disbursements arising from the employment of labour.

SAFEGUARDING THE WORKS

The Contractor shall be responsible and allow for safeguarding the works, materials and plant against damage or theft including all necessary watching and lighting for the security of the works and the protection of the public. The contractor shall insure himself for loss of any equipment or damage to the property by others. A temporary alarm system is to be installed in order to protect the property for the duration of the works.

NOISE

The Contractor's attention is drawn to the Control of Pollution Act 1974 with particular reference to the provision of Sections 60 and 61 of this Act. Refer project phasing and working hours above as noise restrictions will be in place during active school hours.

PROTECTION OF EXISTING SERVICES

The Contractor shall protect, uphold and maintain all existing public and private services during the execution of the Works. The Contractor is to make good any damage due to any cause within his control at his own expense or pay any costs and charges in connection therewith.

WATER FOR THE WORKS

The Contractor shall provide clean fresh water for use on the works, pay all charges and fees in connection therewith, provide all temporary storage, plumbing service connections etc., and clear way and make good on completion.

LIGHTING AND POWER FOR THE WORKS

The Contractor shall provide all artificial lighting and power for the use on the Works, pay all charges in connection therewith, provide all temporary supply, leads, fittings, etc. and clear away and make good on completion unless otherwise agreed with the Architect and the Client. Otherwise, the Contractor may utilize existing available supplies where applicable, on site whereby the Contractor will be responsible for fees for the use of electricity. The Contractor shall isolate the supply of the areas of work as necessary and ensure the remaining electrical installation is safe for continued usage and for use during the contract period in areas occupied by the client.

STORAGE OF MATERIALS

The Contractor shall agree with the Architect the location of a secure and Lockable room on the site for the storage and protection of all materials including materials of all nominated sub-contractors and to make good on completion all work disturbed due to the room being so used.

NEIGHBOURING PROPERTY

The Contractor shall ensure no disturbance to neighbours where applicable and to make good at his own expense, any damage caused to neighbour's property. The Contractor shall be responsible for liaising & informing neighbours in advance of works that may directly or indirectly affect them, with reasonable notice and shall provide a statement to the architect outlining how such works may be successfully executed with minimum disruption to neighbours.

PROTECTING, DRYING, CLEANING AND TESTING THE WORKS

The Contractor shall:

- Provide for carefully covering up and protecting the works and any adjoining property exposed by these works, from inclement weather.
- Provide for removing all rubbish from the site both as it accumulates from time to time and at completion.
- Provide for cleaning the building inside and out, and leaving the whole of the works clean, ready for occupation and Dry out and control the humidity of the works as may be necessary to facilitate the progress and satisfactory completion of the works including the works of nominated window-contractors.

The Contractor may use the permanent services installation partly or wholly for this purpose as and when available bearing all costs and paying all charges including the provision of a qualified attendant staff and the cost of fuel and equipment. Any damage to permanent installations is to be made good at the Contractor's expense.

Removal of water: The Contractor shall be responsible for all pumping that may be required to maintain the works in a dry state down to the level of the bottom of excavations from whatever water source. No accumulation of water shall be permitted during the completion of the works.

PROVIDE EVERYTHING NECESSARY

The Contractor shall provide everything required, whether or not mentioned in this specification or indicated in any supporting documents & drawings, provided that it may be reasonably inferred from the drawings & documents provided, whether labour, scaffolding, plant materials, superintendence, hoarding etc. for the safe proper and expeditious execution of the works. The methods of work employed by the Contractor in relation to the works are entirely the Contractor's own responsibility.

TEMPORARY SUPPORTS

The contractor shall be solely responsible for designing and carrying out all necessary temporary works where and if required, including falsework, and for taking all necessary steps to ensure the continuous stability for the duration of the contract of the adjacent neighbouring structures, footpaths, roads and lands. A Chartered Engineer, or other suitably experienced and qualified person as approved by the Engineer, shall on behalf of the Contractor, carry out a detailed structural survey and appraisal of the buildings on adjoining sites as may be necessary, and shall design and prepare detailed drawings for the temporary works in accordance with the recommendations of the relevant British Standards. These proposals shall incorporate any and all amounts of temporary works indicated on the Architects or Engineer's drawings but such temporary works shall not be assumed by the Contractor to be sufficient in themselves for any purpose. Work near adjacent buildings or pavements shall be executed in such a manner as will not endanger these existing buildings or pavements. Temporary works and falseworks shall be designed to comply with BS 5975:2019 - Code of practice for temporary works procedures and the permissible stress design of falsework and other National Standards as may be appropriate. No temporary supports shall be removed until the requisite strength of all members and connections of the permanent works has been achieved. The erection sequence for precast work shall be submitted to the Engineer for approval so that its effects on the permanent Works may be considered. The Contractor shall liaise with specialist suppliers and window contractors when designing the temporary works and shall take due regard of their requirements. Prior to any works commencing on site the Contractor shall submit his detailed proposals for temporary works to the Engineer; approval or acceptance wholly or in part by the Engineer of the proposals or failure on the part of the Engineer to observe any defects or deficiency in the proposals submitted shall not relieve the Contractor of any of his responsibility. The Contractor shall be responsible for obtaining all necessary approvals, clearances, permissions, wayleaves etc. to carry out the temporary works. The Contractor's attention is drawn to the fact that he must comply with all Factory Acts, Government Regulations, etc. in relation to temporary works, scaffolding etc.

QUALITY ASSURANCE

Materials and suppliers are to have been assessed and certified by an approved independent third-party quality assurance scheme.

POINTING

Pointing to be in cement lime mortar (1:1:6) with joints raked out 20mm (3/4") and finished with a weather struck joint unless otherwise described. Re-pointing work to be carried out in accordance with BRE publication 'Good Repair Guide 24'. The Contractor shall prepare pointing samples as required by the Architect for approval & agreement purposes with the Architect prior to commencement of pointing work.

DAMP & ROT

The Contractor shall be responsible for the arrangement of a specialist damp & rot survey & report. The Contractor shall be responsible for the execution of all enabling stripping out and builder's work associated with and as described within the specialist damp & rot report.

TIMBER MATERIALS

TIMBER GENERALLY:

Timber shall be to the best of its respective kind, thoroughly dry, bright, sound, well-conditioned, properly seasoned to suit the particular use, square-edged dye sawn, free from sap, shakes, cracks, warps, waney edges, large loose and dead knots, rot, beetle and other and free from defects or combination of defects rendering it unsuitable for the purpose intended. Timber used for grounds, battens, exposed grounds, exposed battens or fillets shall be treated red deal. All exposed timber faces to be wrought.

Timber used for joinery shall be as follows:

- Red deal of Northern Swedish or Canadian origin.
- Teak sourced from sustainable forest origin.
- Irish Oak.

All hardwood shall be well cut and shall be in conformity with samples approved by the Architect.

HARDWOOD:

Hardwood which is exposed to view in joinery work & hardwood floors shall be selected and totally free from the following defects: Knots, sapwood, waney edges, warping, pith, brittle heart, rot, stain and beetle attack.

Hardwood timber where used in joinery to be finished in paint decoration shall be Poplar of first quality for skirting's, architraves, dado rails, picture rails etc. to minimise shrinkage.

SOFTWOOD:

Softwood timber where used in joinery which will be exposed to view shall be of first quality for skirting's, architraves, dado rails, picture rails etc. Poplar (hardwood), Pine or Red Deal of first quality.

The following defects will not be permitted:

Pith shown on the surface, sloping grain exceeding one in eight, checks, splits and shakes, knots, excepting isolated sound tight knots of less the 19mm diameter, any evidence of beetle attack or rot. Softwood not exposed to view will be accepted with minor defects with the exception of beetle attack or rot. All unwrought timber shall be of first quality fir, larch and spruce unless otherwise stated elsewhere.

Moisture Content: The moisture content of the timber when the joinery is manufactured shall be within the following limits:

- Minimum 15%
- Maximum 20%

PLYWOOD:

Plywood generally shall comply with BS EN 636:2012 Plywood - Specifications (+A1:2015). All plywood shall be WBP bonded first grade and shall be faced with veneer as specified. One side shall be completely free from joints and surface defects. Joints and minor blemishes will be permitted on the reverse side only. Where both sides of the plywood are exposed these shall be totally free of joints and surface defects.

Fire-Proof Board:

Shall be non-combustible, asbestos free, laminate board with calcium silicate matrix reinforced with vermiculite and natural organic fibres.

Wood Veneers:

Wood veneers to be prime quality selected real wood, a sample of which shall be submitted and approved by the Architect. The Architect is to be informed when the whole of the stock is ready for his inspection and approval before work is commenced.

Plastic Laminate:

Plastic laminate shall be of approved make, pattern and grade Formica or equal

Doors generally:

Shall have outer frame widths as shown with an infill of 100% of solid timber, as described or other approved material; all edges to be lipped with hardwood lipping, tongued and grooved to core frame. For veneered doors, where occurring, the lipping shall be checked on both sides to allow the veneer facing to extend to the edges of the door. Locking blocks shall be provided a least 250mm high. Fire resisting doors shall comply with BS 476-22:1987. Fire tests on building materials and structures. Methods for determination of the fire resistance of non-load bearing elements of construction

Ancillary trims:

Proposed ancillary trims and finishing elements to detail. Ancillary trims to be formed from Poplar hardwood unless otherwise indicated. All ancillary trims to be carefully formed at joints and to be plugged & screw fixed with fixings recessed for filling prior to decoration. Proposed picture rails, skirting's, architraves and other ancillary trims and finishing elements to detail. External timber for use in fascia, soffit & bargeboards shall be hardwood for finish to be selected by the Architect.

Glues:

Glues shall be of synthetic resin adhesive to BS EN 301: 2017 Adhesives, phenolic and amino plastic, for load-bearing timber structures. Classification and performance requirements applied strictly in accordance with the manufacturer's instructions.

Preservative treatment - organic:

All floor battens, concealed grounds, timber built into masonry, dry-lining etc. to be pressure impregnated against rot & insect attack. Any cut ends to receive two coats of approved wood

preservative. Double vacuum organic solvent wood preservative treatment shall comply with BS 5707(1997): 1997 specification for preparations of wood preservatives in organic solvents. Treatment shall be in accordance with the following double vacuum schedules and treatment classes.

Minimum Treatment Schedule for Class A Timbers (in external situations)

Timber Species	Initial Vacuum Bar (mins)	Pressure Bar (mins)	Final Vacuum Bar (mins)
Southern Yellow	0.33	1.00	0.83
Teak, Pine, Iroko, Red Deal, White Deal, Ash, Oak	(0)	(40)	(20)

Minimum Treatment Schedule for Class A Timbers (in internal situations)

Timber Species	Initial Vacuum Bar (mins)	Pressure Bar (mins)	Final Vacuum Bar (mins)
Southern Yellow	0.33	0	0.67
Teak, Pine, Iroko, Red Deal, White Deal, Ash, Oak	(3)	(3)	(20)

The times given in the tables are the number of minutes for which the defined vacuum once achieved, is maintained. The initial vacuum is always maintained during flooding. Moisture content to be 18%, BS EN 942: 2007 - Timber in joinery - general requirements. Treatment to take place after cutting and notching.

Re-Treatment of Cut Surfaces:

All known cutting, machining, profiling and notching must be complete prior to assembly. Any unforeseen cutting of treated surfaces must have the Architects approval. Where the Architect gives such approval notches shall be given two liberal brush or spray applications or, where end grain is exposed, timbers shall be steeped in a compatible organic solvent end grain preservative for a period of not less than three minutes. Rip-sawing, planing and heavy sanding will not be permitted unless the timber is returned for re-treatment.

Screws and Nails:

Screws shall comply with BS 1210 and nails to BS 1202-1(2002): 2002 - Specification for nails - part 1: steel nails. In every case the size and material of screws and nails shall be appropriate to the nature of the fixing and of the materials involved.

Specialist Timber Floors:

To be laid in accordance with manufacturer's instructions, guidelines & recommendations.

Moisture Content of Timber:

The moisture content of all structural timber shall not exceed 22% at the time of erection.

Storage Generally:

Store timber and timber products protected from the weather, clear of the ground and supported to prevent distortion. If stored in the open or in damp air conditions enclose

completely with a suitable covering to prevent deterioration and provide for air circulation and ventilation.

Certification:

The Contractor shall provide documents from their timber supplier certifying that all structural timber complies with the specified grading treatment and moisture content requirement.

Protection:

Protect, as necessary, all work described in this Section during the progress of the Works and clean down and leave perfect on completion.

Finishing:

Door leaves are to be finished with Teak lipping's which shall be finished off site as follows:

- Pre-sand all surfaces with 240 grit paper. Spray apply 1 wet coat P/C Basecoat. Granyte 53-024-5030 O.E.A.A.
- When dry sand with 240 grit paper. Spray apply 1 wet coat P/C Basecoat. Granyte 53 024 5030 O.E.A.A.
- When dry sand with 240 grit paper.
- Spray apply 1 wet coat pre catalysed lacquer. Satin Granyte 53 021 5540

Maximum thinning of each coat not to exceed 10%, all in accordance with the manufacturer's instructions. All soft wood, exposed M.D.F. (i.e. skirting's, and door frames) shall be painted by brush on site as follows: -

- Apply 1 No. coat wood/metal primed, sand lightly,
- Apply 2 No. coats oil-based undercoat, sanding lightly between coats,
- Apply 1 No. coat eggshell oil to a selected colour.

TIMBER WORKMANSHIP

Storage:

Timber shall be stored under cover clear of the ground and protected from dampness. Workmanship generally shall be in accordance with BS 1186-2(1988): 1988 - Timber for and workmanship in joinery - specification for workmanship. The whole of the carpentry and joinery work is to be carried out in the best manner. Plates, ceiling joists, etc., shall be in one length where possible. All joints shall be made directly over supports and these shall be scarfed and spiked where required. All woodwork to be neatly assembled by careful matching, cutting, planing and joining's whether by nailing, mortice & Tennon, dowel or other method and to be left solid. All framed work & joinery is to be put in hand upon the general work being commenced but not to be glued & wedged up until the joinery is prepared in readiness for immediate fixing and shall be secured and skilfully executed. All framing is to be assembled with well-fitting mortice & tenon joints and wedged up solid. The Contractor is to be responsible for the sound construction of the components, using the recognised forms of joints in the appropriate positions. The work is to be manufactured according to the best traditions of the trade to the satisfaction of the Architect. All joinery is to be finished with a clear wrought face. Surfaces of softwood intended for painting shall be such that if properly finished with matt paint, imperfections in manufacture will not be apparent. Surfaces of hardwood for gloss or matt transparent finish shall be such that when so finished no imperfections shall be apparent.

Fixing:

Joinery intended to be painted is to be fixed by nails. Nail heads are to be punched below the surface and are to be filled with leadless paste filler. Joinery intended for polishing is to be secretly fixed. Heads of screws are to be let in and pelleted in the same wood and with matching grain. Supply all necessary bracketing, grounds, fillers, moulds, templates, beads, pallets, slips, firrings, wedgings, finishing's, fixings etc. all joinery work generally to be secured as specified and all plugging, grounds, packings, packing and other fixings are to be executed in a proper and workmanlike manner. All joinery members so fixed shall be true horizontally & vertically. Unless timber is impregnated with preservative, the backs of frames etc., to be fixed to walls and all other bedding surfaces are to be painted with two coats preservative before priming. All work to be painted is to be treated with knotting as necessary and given one brush coat of priming to all faces. Surfaces to be joined are not to be primed. The number of coats and methods of application of all finishes are to be as specified. Work is not to commence until the Architect has approved the Contractor's full-size setting-out drawings. Suggestions that the Contractor may wish to make for modifying the construction of the units as shown on the Architect's drawings will only be considered when the shop drawings are examined. No deviation is to be made from the Architect's details without his written approval. Facilities are to be given for the Architect to inspect all work in progress in shops and on the site.

External Joinery:

All external exposed joinery work, doors, frames etc., shall have the joints, tenons, mortices and grooves etc., liberally coated with an approved waterproof glue immediately before framing up so as to be made perfectly watertight and prices are to include for this work. Proposed windows shall be bedded in mastic on cills, wrapped in DPC.

Transport and Protection:

The joinery is to be kept under a waterproof cover during transport and is to be similarly covered if exposed until fixed in position. It is to be handled and stacked carefully to avoid damage.

Make Good Defective Work:

Should any shrinkage and warping occur or any other defects appear in the joinery work before the end of the Defects Liability Period, such defective work is to be taken down and renewed to the Architect's satisfaction and any work disturbed in consequence must be made good at the Contractor's expense.

Plugging:

The term plugging shall mean the provision and fixing of approved proprietary plugs, at the Contractor's option, fixing by means of approved expansion plugs and prices are to include for all necessary wedging and drilling of wood, concrete or brickwork. Where plugging and screwing of door or window frames is measured this shall be deemed to include plugs and screws of adequate size and strength to suit the frame size including proprietary frame fixings as manufactured by 'Upat', 'Rawplug' etc.

STRUCTURAL TIMBERWORK

Scope:

The provision of this specification governs softwood structural timber members in roofs or floors. In the case of conflicting requirements, the contract documents shall govern.

Standards:

The whole of the structural timberwork shall comply with BS EN 1995-1-1 (2004) UK national annex to Eurocode 5: design of timber structures - part 1-1: general - common rules and rules for buildings

Terminology and Species Names:

Timber terms are those of BS EN 565: 2017 Mountaineering equipment - Tape - Safety requirements and test methods. Timber species are the standard names in BS EN 13556: 2003 - Round and sawn timber - Nomenclature of timbers used in Europe

Timber for Structural Members: Stress graded softwood schedule:

Stress grade softwood shall be graded in accordance with BS 4978:2007 Visual strength grading of softwood - specification (+A2:2017) and its species shall comply with BS EN 1995-1-1 (2004) UK national annex to Eurocode 5: design of timber structures - part 1-1: general - common rules and rules for buildings

Location	Use	Species	Stress Grade
Roof	Roof rafters, ceiling joists, Struts, general carcassing	White wood	Grade GS

The species group and stress grade shall be marked on the timber.

BUILDING SERVICES DATA EVIDENCE REQUIRED

Evidence Required for non-default data efficiencies for heating, ventilation and air conditioning Systems

- Performance data on 'CE marked' literature is acceptable provided that the literature refers to the relevant test performance standard.
- Literature from manufacturer referencing the efficiency and relevant test performance standard.
- Accredited test certificates clearly relating to the product in question or as verified by the manufacturer/ supplier as having the same performance as the installed product, must comply with the following:
 - Installation instructions in the test certificate on which the stated performance depends must be adhered to.
 - Test certificates must be in English or be accompanied by a certified English translation. The translation can be from the accredited test house or from a professional translator listed by the Irish translation and interpreters Association or international equivalent.
 - The relevant test performance standard must be stated on the test certificate. The test laboratory must be accredited.
- Heat Pumps, Air Conditioners etc must be compliant with:
 - EU Eco-design and Energy Labelling directives
 - Be CE marked and
 - Have test data certified to EN 14511-4:2018 or EN 14825 (Current version)
- Gas Boilers must be compliant with
 - EU Eco-design and energy labelling directives
 - Be CE marked and
 - Have test data certified to BS EN 15502-1:2021 Gas-fired heating boilers. General requirements

and tests (current version)

- Variable Heat Recovery Efficiency and Variable Speed pumps data
 - Copies of technical data sheets
 - As built drawings and schematics
- Specific Fan Powers to be calculated in accordance with
 - IS EN 1379:2007 Annex D and Appendix E TGD Part L
 - Copies of manufacturers technical data sheets

Evidence Required for non-default Lighting data:

- Performance data on 'CE Marked' literature is acceptable provided that the literature refers to the relevant test performance standard.
- Literature from manufacturer referencing the efficiency relevant test performance standard.
- Accredited Test certificates clearly relating to the product in question or as verified by the manufacturer/supplier as having the same performance as the installed product, must comply with the following:
 - Installation instructions in the test certificate on which stated performance depends must be adhered to
 - Test certificates must be in English or be accompanied by a certified English translation. The translation can be from the accredited test house or from a professional translator listed by the Irish Translators and interpreters Association or international equivalent.
 - The relevant test performance standard must be stated on the test certificate;
 - The test laboratory must be accredited.
- Full lighting design for each zone with
 - Installed power and
 - Installed illuminance
 - As installed layout drawings
 - Signed off by the M&E Engineer
- Technical Data sheets for all lighting controls

ARCHITECTURAL DATA EVIDENCE REQUIRED

Evidence Required for non-default window and rooflight data:

- Copies of invoices from the site identifying the make and model (building address included).
- 'CE MARKED' certificates referring to the relevant standards. Certificate must refer to:
 - Specific Make and model
 - BS EN 14351-1:2006 Windows and doors - product standard, performance characteristics. Windows and external pedestrian door sets (+A2:2016) (Incorporating corrigendum November 2016)
 - U-value
 - Solar Transmittance
 - Light transmittance
 - To use non default U-Value,

Evidence Required for non-default Door data:

- As Built drawings/specifications detailing the Door make and model and copies of certified U-Values.
- Copies of invoices with technical characteristics of the door, clearly identifying that it relates to the building concerned.
- Copies of invoices from the site identifying the make and model (building address included).
- Documents should indicate building address, date and details of the door in question.
- 'CE marked' certificates referring to relevant standards. Certificate must refer to:
 - Specific make and model
 - U-Value and KM (effective thermal capacity) values.

Evidence Required for non-default Building Envelope:

- Substantial documentary evidence of what has been installed on site, particularly for insulation which is not visible on completion-i.e. floors, walls, roofs.
- 'As Built' drawings showing the makeup of the element including the insulation material used and thicknesses of all layers including the insulation layers. Invoices/statements/as built drawings, reports of works detailing all layers and thicknesses of layers.
- As built drawings signed off by the architect/assigned certifier confirming as constructed.
- Photographs during construction of the element concerned with clearly identifiable insulation layers.
- Copies of site-specific invoices for insulation etc (building address included) with a detailed description of the work concerned and must clearly identify the work with the building concerned. Documents should indicate address, date and insulation material and thickness used.
- Agrément cert or other certified data sheets with CE marked data for conductivities o insulations.
- U-value and KM (effective thermal capacity) calculations in compliance with BRE 443:2019 and the relevant EN standard calculation for the relevant element.

Non default data for thermal bridging PSI values:

- As built Architectural drawings (plans, sections and elevations) identifying the location of the relevant details in compliance with Part L Acceptable Construction Details.
- Detail drawings identifying materials and thicknesses used in construction. Signed off copied from the ACDs indicating which key junctions they reference in the building.
- All to be signed and dated by the architect/assigned certifier to confirm compliance with limiting thermal bridging and air infiltration-Acceptable Construction Details.
- Written confirmation on headed paper from the builder stating he confirms the details are constructed as per the signed and dated drawings.
- Also acceptable from an accredited third body such as agreement or BRE Certified Thermal Details and products scheme or NSAI registered thermal bridge modeler. Also to be signed off as constructed by architect or assigned certifier.
- If the details are in compliance with TGD Part L data must be provided that demonstrates that 'Limiting Thermal Bridging and Air Infiltration-Acceptable Construction Details' as referenced in Building Regulations TGD L has been conformed to. This requires that the relevant drawings clearly show the relevant details and that these details are checked and signed off by the architect or assigned certifier.
- Where calculated psi values are used, documentary evidence in accordance with the methods described in IS EN ISO 10211:2017 with results that agree with the stated values of temperature and heat flow within the tolerance indicated in the standard for these examples. Several packages are available that meet this requirement.

- Detailed guidance on decisions regarding specific input to the modelling software and the determination of certain quantities from the output of the software contained in BRE Report BR 497 Conventions for calculating linear thermal transmittance and temperature factors. This guidance should be followed in carrying out modelling work so that different users of the same software package and users of different software packages can obtain correct and consistent results.
- Ψ values are calculated in accordance with I.S. EN 10211:2017. Certification of the detail by a member of NSAI Thermal modellers Certification Scheme is a means of meeting the requirements in TGD L and NEAP for calculation of Ψ values.
- We will require the architect to sign off on details, installations and specifications to ensure compliance with the specifications and drawings and also to account for the use of accredited Ψ values.

Non default data for Air Permeability:

- Pressure test certificate by an NSAI register tester is required with test carried out to relevant standards at 50Pa.

O&M MANUAL REQUIREMENTS

- It is a contractual requirement that the main contractor shall produce an Operations and Maintenance manual for the works. The required format (physical O&M Manual) for submission is to be agreed with the Architect at tender stage however as a **minimum two** no. hard copies and digital versions of the final approved manual will be required. Draft digital copies of the O&M Manual shall be submitted for review to the Architect no less than three weeks in advance of the agreed date for Practical Completion.
- To facilitate submission of record drawings, the Contractor shall keep on site complete set of all drawings used on the Contract Works, on which he shall mark alterations to the designs shown thereon as such alterations are carried out. THIS PROCEDURE SHALL BE STRICTLY ADHERED TO.
- All operation and maintenance manuals along with their associated record drawings shall be prepared in accordance with the requirements of BSRIA document BG 79/2020 Handover Information and O&M manuals.
- The complete sets of Operating and Maintenance Manuals and record drawing shall be supplied to enable the Employer to operate and maintain the system correctly. The manuals must therefore contain all necessary technical information on each item of equipment and the associated components which have been used to assemble and construct the system(s).
- In addition, manuals for each system must contain information on the design intent of the system, commissioning and testing results and reports of how the components of the system are adjusted to achieve the design intent, line diagrams to show how the system is arranged in the building giving the location of all equipment and components, its control system, how the system must be set in the normal operating mode and in the event of any emergency, routine check that must be made and a list of spares which should be kept and a list of any special tools which may be required.
- The manuals must be prepared in such a way that an Architect / Engineer / Client without any previous knowledge of the Project may use them to operate and maintain the system.

The O&M Manual shall include, but not be limited to, the following:

- Current, as of date of issue, contact details of each company/contractor involved in the supply or manufacture of elements, materials and components.

- All project approved certification, documentation and trade literature in relation to elements, materials and components used in the works.
- Hardcopy O&M Manual Format - A4 lever arch files with rigid plastic coated covers shall be used which
- A full set – in A3 format – of approved as-built drawings with all approved changes incorporated and supplemented with a comprehensive text based technical description of each element and system type of the works.
- A Copy of all completed BCAR Ancillary certificates and Statutory documents.
- All Required Building service and Architectural Data Evidence as detailed above.
- Full set of structural calculations for reference.
- Records of any toughened glass, including heat soak testing records. Include any records of NiS breakages that occur on-site during construction.
- A full list of warranty statements clearly identifying any terms and conditions.
- The approved Maintenance & Access Strategy Report which shall include methodology covering the procedures for replacement components, elements and materials which have been identified as 'Replicable' items and therefore having a design life which is less than the design life of the works.
- The approved Maintenance & Access Strategy Report, which shall include methodology covering the procedures for replacement of damaged and/or defective components, elements and materials.
- Manufacturer's recommendations and methodology for all routine cleaning and maintenance including but not limited to appropriate cleaning products, repair products, lubrication of component parts etc.
- Record/ check sheets for routine cleaning and maintenance works.

Presentation

- Indexing System
 - Each volume shall be numbered and shall be divided into sections using an appropriate numbering system
- Paper Sizes
 - The manual will contain manufacturer's literature which will be different sizes. Large pages will be folded and small pages will be fitted in plastic pockets with a reinforced edge punched for filing in A4 lever arch files.
 - The page size shall be standardised for all volumes using A4 paper (210 x 297mm) with four holes punched centrally in the longer side 80mm apart Diagrams shall be prepared on A4 or A3 (297 x 420mm) paper
- Section Dividers
 - Stiff cardboard section dividers with extended tabs shall be used; these shall be SUMMIT Ring Book Guides or equivalent.
- Files for Manual
 - A4 lever arch files with rigid plastic-coated covers shall be used which shall be EMGEE or equivalent.
 - Inlaid lettering on the front cover shall indicate the title, i.e. Operating and Maintenance Manual, the Name of the Project and Volume Number. A label shall be fitted in the window on the spine of the file listing its contents.

- The Trade Contractor is advised that all Record Drawings and O & M Manuals in the form described herein must be handed over to the Architect prior to the issue of a Practical Completion Certificate for the Trade Contract Works. Failure to issue these Record Drawings and O & M Manuals will also defer the issue of the Practical Completion Certificate until such time as they are received.
- If the Trade Contractor fails to issue such documentation on time, then the Architect will have the right to engage such other third parties to prepare these Record Drawings and O & M Manuals and any resultant cost incurred by him shall be borne and set against the Contractor.
- As-built Drawings - The Contractor shall include for a complete set of as-built drawings which shall incorporate all works carried out and completed by the Contractor
- To facilitate submission of record drawings, the Contractor shall keep on site a complete set of all drawings used on the Contract Works, on which he shall mark alterations to the designs shown thereon as such alterations are carried out.

SUBMISSIONS

Four weeks after contract award, the successful tenderer is required to produce a coordinated schedule of Technical Submissions, including sample submissions where required. The schedule shall set out all of the documentation, test certificates, drawings, maintenance manuals, warranty certificates and samples referred to in the agreed Contract Specification. The schedule shall list dates when the submissions shall be produced. The schedule shall be reviewed with the architect and Main Contractor and adjusted to suit the needs of all parties. As part of the Works, the Main Contractor shall provide the submissions and organise the inspections given in the schedule of Technical Submissions extracted from the Tender Specification, at the times indicated.

- The submission schedule shall take account of the requirement for items to be submitted in good time for review, re-submission, reasonable further resubmissions as required, and acceptance. Failure to achieve acceptance of submitted documents shall not relieve the contractor's obligations to achieve the requirements of the Contract Documents and the Contract Specification or meet the requirements of the contract program.
- Provide a programme (over and above the protection and erection programme required by the Main contractor) which shows the proposed drawing list, date for issue and date for acceptance by the Main Contractor for the entire contract works. The Main Contractor retains the ability to amend Subcontractor's information programme by agreement with the Subcontractor, both parties acting reasonably, in order to ensure the satisfactory flow of information to other subcontractors or members of the project team irrespective of when information is needed by the Main Contractor for his own production programme.

3.0 SCOPE OF WORKS

To be read in conjunction with other related sections of the Specified Schedule of Works and drawings. The Specification and specified schedule will set out the nature and quality of finish required and provides for samples to be prepared to ensure the standard required is agreed and approved in advance. The contractor will be required to produce method statements, which shall address the relevant issues to work operations.

1. TEMPORARY SITE COMPOUND / AREA OF WORKS

- Location of a temporary site compound if required to be agreed with architect prior to works commencing.
- Proposed works are within active school property, measures to be put in place to ensure safety of all students, teachers & pedestrians at all times including strict traffic management, access to site compound and health / safety regimes.
- Contractor to separate and secure the works fully, it is the contractor's responsibility to erect Heras fencing along the boundary of the site / site compound and any area's where works take place as necessary to allow the safe construction of the works.
- It is the contractors responsibility to investigate the location of existing underground service pipes in the area of works and notify the architect of any discrepancies from drawings etc.
- The Heras fencing / separating partitions shall remain in place for the duration of the contract.
- The contractor may at his own discretion and risk, use existing boundary structures as hoarding to the site when appropriate should he consider the same to be appropriate and necessary and whereby suitable access can be formed.
- It is the responsibility of the contractor to obtain necessary approvals/consents/hoarding licenses etc. before commencing the relevant elements of the works. The Contractor shall securely erect the Architects site board to an agreed location.
- The importance of maintaining a tight control over unauthorised personnel entering / accessing the works area is to be enforced, a strict regime in this regard. Access onto the site / works area is strictly by invitation only by the Main Contractor and any persons authorised are to wear full PPE at all times.
- It is not recommended to store materials within site compound area, refer to section above.
- Any waste skips located within site compound must be min. 3m from all structures and boundaries in the event of arson.

2. SITE CLEARANCE, DEMOLITIONS & REMOVALS

- Where items are to be **demolished / removed**, contractor is to include for mentioned and associated items to be made good to match existing and for the responsible disposal of the mentioned item unless specified otherwise.
- The contractor is to liaise with the Engineers and Architect prior to demolitions
- All specified demolitions to be carefully removed and responsibly carted off site unless specified otherwise. Demolished conditions to be made good for the proposed works.
- Unless otherwise described all old materials arising from site clearance, demolitions & alterations are to become the property of the Contractor who is to allow any credit therefore. Clearing away of such old materials, including deleterious or hazardous materials, shall be deemed to be included within the site clearance & demolition items.

- Proper and appropriate methods of disposal of deleterious & hazardous materials shall be the responsibility of the main contractor. Suitable material arising from demolition & site clearance may be selected for use as site fill subject to agreement with structural engineer.
- Dust shall be kept to a minimum. Demolition works shall be carried out in accordance with 'Code of Practice for demolition' B.S.6187.
- The use of explosives shall not be permitted. Burning of site materials arising shall not be permitted. The contractor shall be responsible for protecting remaining adjoining buildings or structures or party walls or public roads and paths and for providing adequate supports at all stages of demolition works. The contractor shall be held responsible for any damage to adjoining buildings or structures caused during the works or as a result of works. Temporary screens, coverings and protection materials shall be provided by the Contractor.
- NOTE: Contractor to be aware of potential for asbestos and must carry out an Asbestos survey. Any such specialist surveys should be included in the contractor's costs/ charges as part of the tender/ construction works requirements.
- Contractor to allow for the removal of all floor finishes, ceilings, electrical fixtures/ fittings/ cables, internal demolitions and any materials which arise from proposed works as specified by architect and M&E engineer.
- In the event a material can't be removed for structural or health and safety reasons the contractor is to notify the architect and an alternative solution will be considered.
- All existing walls to be stripped of all services etc. and made good prior to decoration works. Refer to M&E engineer drawings for extent of proposed decommissioning

3. REMOVAL OF EXISTING SURFACES & CONSTRUCTION

- Contractor to allow for the removal of existing floor finishes throughout the two science labs & prep room.
- Contractor is too careful remove the asbestos contained in the existing floor. Contractor is to allow for specialist asbestos removal company to remove the asbestos.
- Contractor is to remove the existing student benches, sinks & gas supply to each of the existing benches to allow for new layout as seen in the Proposed Floor Plan.
- Contractor to allow for the removal of stage area & teachers desk to allow for new layout as per proposed floor plan.
- Contractor to allow for the removal of existing fitted furniture & shelves in the science labs & prep room to allow for new fitted furniture & storage shelves.
- Contractor to allow for the removal of doors into the storeroom to allow for new FD30 door to be installed.
- Contractor to allow for the removal of existing section of internal walls & doors to allow for new locations of doors into the science labs. Refer to architects proposed floor plan for the location of the new doors.
- Contractor to allow for the removal of existing windows boards to allow for new windows boards to extend over the proposed drylining.
- Contractor to allow for the removal of existing ceiling in the prayer room at ground floor level to allow for new foul water pipes to be installed as per Galileo's drawings.

4. WORKS TO GROUND FLOOR LEVEL

- Contractor to allow for pop ups in the existing first floor slab to allow for new service connections as per Galileo's drawings & specifications.
- Contractor to allow for new lighting, fire alarms & Smoke detectors in the rooms affected at ground floor level as per Galileo's drawings & specifications.
- Contractor to allow for the painting of the existing ground floor ceilings affected by the works to the proposed science labs. Refer to specification below regarding paint finishes.
- In the existing prayer room at ground floor the contractor is to allow for the removal of existing ceiling to allow for the service connections to be installed as per galileo's drawings & specifications.
- The contractor is to allow for a new ceiling in the prayer room to match the existing ceiling. The new ceiling is to follow the below specifications.
- CasoLine or equivalent MF Suspended ceilings (Non Fire Rated) shall be installed in the area's with the white plasterboard on the ceiling.
- Note: Gyproc or equivalent Moisture board shall be installed to the following areas in lieu of the 12.5mm Gyproc WallBoard or equivalent : Staff W/C x 2, Accessible W/C, Ambulant W/C & Shower room.

Plasterboard Ceiling

- Proposed Standard Plaster finish suspended ceilings shall consist of the following:
- Metal Stud Partition system type – CasoLine MF or equivalent standard non-fire rated system to additional corridor area connecting to existing school building. Refer to architects' drawings for extents.
- Product Substantiation Report (PSR) reference – C100016 or equivalent.
- Performance characteristics
- Ceiling Fire Resistance (BS 476): n/a
- Airborne Laboratory Sound Resistance (BS EN 717): 56RwdB
- Impact Laboratory Sound Transfer (BS EN 717): 68LnwdB
- Framing components
- Gypframe Ceiling Sections: Gypframe or equivalent MF5
- Ceiling Section installed maximum centres: 450mm
- Gypframe or equivalent Primary Channels: Gypframe or equivalent MF7
- Primary Channel installed maximum centres: 1200mm
- Gypframe or equivalent Connecting Clips: Gypframe or equivalent MF9
- Connecting Clips used to connect MF5's to MF7's at every intersection.
- Gypframe or equivalent Hanging Angle: Gypframe or equivalent GA1 Steel Angle
- Hanging Angle installed maximum centres: 1200mm
- Acoustical sealant: Gyproc or equivalent Sealant
- applied around perimeter of ceiling.
- Plasterboard components
- Number of plasterboard layers: 1

- Gyproc or equivalent plasterboards: Layer 1 (Inner): 12.5mm Gyproc WallBoard or equivalent
- Screw fixings for boarding: Layer 1 (Inner): 25mm Gyproc or equivalent Drywall Screws
- Moisture board Ceilings to be provided in all wet room areas, to be installed as per manufactures installation and guidelines
- All board joints installed staggered in accordance with Gyproc's or equivalent current installation recommendations.
- Joints in face layer boards treated in accordance with Gyproc or equivalent Paper Joint Tape method.
- Gyproc or equivalent Drywall screws installed at 230mm centres within the field of the board and 150mm centres along board ends.
- Gyproc or equivalent Drywall screws must maintain a minimum 10mm penetration through metal framing components.
- Gyproc or equivalent Wafer Head Jack-Point Screws used to fix Gypframe or equivalent GA1 Angle to Gypframe or equivalent MF7 Primary Channels.
- Insulation components
- Insulation specification required above ceiling: 50mm Isover or equivalent Frame Batt 32 / 60mm Isover Comfort 32 or equivalent.
- Finishing
- 2mm Gyproc or equivalent Skim coat plaster (or Carlite Finish) applied in accordance with Gyproc's or equivalent current recommendation.

Wood Effect Ceiling

- Timber Panelling on the ceiling is to be real wood veneer (particle board) and solid wood.
- Ceiling is to be an Armstrong composite wood panel.
- Type: Channelled
- Grove size: 25mm profile with 3mm groove.
- Material Fire-retardant particle board with face-cut veneers; FSC®-certified fire-retardant particle board with face-cut veneers.
- Surface Finish Clear or tinted semigloss coating
- Fire Performance Class A: ASTM E84 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less. CAN/ULC S102 surface burning characteristics. Flame Spread Rating 25 or less. Smoke Developed Classification 50 or less.
- ASTM E1264 Classification Composite – Fire Class
- Contractor is to allow for repairing any parts of the timber wall panelling in the prayer room that get damaged during the construction phase.
- New downlights to be installed in the prayer room as per Galileo's drawings & specifications.



5. DRYLING EXISTING EXTERNAL WALL

- 10mm lime levelling plaster- Spread the levelling compound on the base either with a levelling spray or a steel trowel. You can recover and reuse any extra compound. When applying several layers of the levelling compound, allow the previous layer to harden completely before applying the next layer. Depending on the conditions, the hardening will take one to two days. If necessary, the dried surface is ground after the application of each layer of levelling compound.
- 75mm Gyproframe or equivalent 'C' studs @ 600mm fitted to the existing wall & floor per manufactures instructions. The studs are fixed with screws to the floors/ walls and ceilings on the building.
- 50mm Isover or equivalent Mineral Wool Thermal Conductivity 0.034 W/mK snugly fit between all studs.
- In-between the studs the Insulation is fitted by using polyamide brackets which are clipped onto the C studs that are fixed into the existing wall.
- ISOVfixed to C studs with Isover Varion DS- or equivalent Sealant.
- 12.5mm Gypsum Plasterboard Board with 3mm Gyproc Skim coat finish board joints to be fixed, taped at jointed manufacturers detail and specification. The board is to be fixed to C Channels to suitable British Gypsum wafer head screws. Products to be used in strict accordance with the manufacturer's instructions.

6. PROPOSED EXTERNAL WALLS U-Value 0.13 W/m²K (nZEB Compliant)

- **22mm External Sponge Finish Render** to be applied as indicated on architectural drawings, Refer to External Render and paint finishes Specification below.
- **100mm External Leaf Blockwork**, Refer to Engineers Block Specification.
- 150mm cavity with stainless steel vertical twist type wall ties to BS EN 845-1. Contractor to ensure all cavities are constructed to an acceptable standard free of any mortar snots, to be read in conjunction with Engineer's specification
- The built-in full fill cavity wall insulation shall be **Unilin Thin-R CavityTherm CT/PIR** or equivalent manufactured to EN 13165 by Unilin or equivalent, including corner boards and ancillary detail components, comprising a rigid Polyisocyanurate (PIR) core between low emissivity foil facings with engineered HIPS outer skin.
- **The 150mm CT/PIR or equivalent** with a Agrément declared Lambda value of 0.021 W/mK to achieve a U value of 0.13W/m²K for the wall element. To be installed in accordance with instructions issued by Unilin or equivalent.
- Contractor to include for proprietary accessories as required:
- Preformed panel of CavityTherm or equivalent that folds to provide a 90° corner either external or internal.
- Preformed panel that creates an insulated Service Void for Periscopic Floor Vents in suspended floor situations
- Joint Strips - When building from the inner leaf to the outer leaf, board joints can be protected and taped with the jointing strips.
- Refer to architects' details for riser panel detailing- A CavityTherm or equivalent half-board that is positioned below the DPC at floor levels and allows for the recommended overlap between wall and floor insulation boosting
- thermal bridging performance and cutting waste.

- Wall ties conforming to Eurocode 6 - BS EN 845-1:2013 should be used and placed at approx. 400mm centres, do not place directly on the DPC.
- Refer to Unilin Cavity Therm CT/PIR or equivalent Installation guide and procedure
- **215mm Internal Leaf Blockwork** as indicated on Architectural / Engineer's drawings Refer to Engineers Block Specification. with plaster as specified below...
- **11mm Gypsum Gyproc 'Hardcoat' or equivalent** (not plasterboard) to be applied to warm side of 100mm internal leaf, lightly scratched prior to 2mm Gyproc or equivalent Skim coat finish. Products to be used in strict accordance with the manufacturer's instructions.
- Refer to Section 8. Above - Proposed Alterations to existing building for proposed infill construction to existing walls
- **Mannok Aircrete Block or equivalent** (0.19 W/m. K) to be used to at ground floor level and all door, window reveals where indicated along with Insulated Cavity Closer to void as per manufactures detail and specification, 30 Minute Minimum fire resistance.
- Note contractor to ensure to leave adequate space at all openings, Full fill cavity wall cavity closer insulation to all window / door openings shall be 100mm depth Unilin Close-R (FR) or equivalent. The Fire Rated cavity closer insulation shall be Unilin Close-R (FR) or equivalent manufactured by Dacatie, comprising a Rigid PVC-U Outer Profile with encapsulated mineral wool. To be installed in accordance with instructions issued by Manufacturer.
- **Contractor to close all cavities at wall plate (eaves) and verge Safe-R Close-R or equivalent 150mm** (Product Code- XTCLSR1200150) rigid Phenolic core between low emissivity foil facings. To be installed in accordance with instructions issued by Manufacturer.
- **The Safe-R Cavity Closer or equivalent** shall comprise of a rigid Phenolic core between low emissivity foil facings manufactured to EN 13166 with a declared Lambda value as low as 0.020 W/mK and mineral wool manufactured to EN 13162, with a declared Lambda value as low as 0.037 W/mK wrapped in a protective red sleeve to achieve a minimum 1-hour fire resistance tested to EN 1366/4. To be installed in accordance with instructions issued by Manufacturer.
- Contractor to provide **ROCKWOOL SP® Firestop Slab system or equivalent** to be installed to all window / door heads which include an Ancon Optima 10 support system to close the cavity above, cavity below proposed fire proofing to be packaged with Rockwool or equivalent Cavity wall bat (fire resistant) prior to installation of window / door system Installation
- Cut the ROCKWOOL SP Firestop Slab or equivalent to suit the *cavity size ensuring a tight fit.
- After suitably re-profiling the SP Fixing Brackets, they can be built into the bed joints of the internal leaf at 500mm ±10mm centres. Alternatively, the SP Fixing Brackets may be re-profiled by hand into an 'L' shape and mechanically fixed to the face of the inner leaf.
- The ROCKWOOL SP Firestop Slab or equivalent is then impaled onto the SP Fixing Bracket after the next lift of inner leaf masonry.
- Work on both leaves can then be continued and must include either a vertical damp proof course (vertical installation) or a cavity tray (horizontal installation) installed over the SP Firestop Slab or equivalent
- DPC dressed onto specified Cill flush with external block face. Joint with DPC and proposed fitted window frame (external side) to be pointed with external grade mastic bead.
- Internal joint with fitted window to have Specified High-Grade Air- Tightness Tape, by Tescon pro Clima or equivalent Membrane Continuously Taped & Sealed, with Pro-Clima

tape or equivalent & Orcon Sealant or equivalent and caulk filler. Refer to Airtightness Specification below.

- Refer to engineers' drawings for lintel specification. All specified Steelite or equal approved insulated steel lintels to indicated windows and doors to be signed off by engineer prior to order
- Refer to Engineer's drawings for locations of Reinforced mortar joints, bearing pads, Movement joints, Wind posts and associated structural elements, Structural Steel, Structural timber sizing etc
- The floor insulation shall be Unilin Hyfloor Strip Foundation System or equivalent manufactured to EN 13165 by Unilin or equivalent, comprising a rigid T&G Jointed Polyisocyanurate (PIR) core between gas tight facings. The XT/HYF (T&G) or equivalent 150mm with Agrément certified Lambda value of 0.021 W/m K.
- The foundation strip insulation is to be Unilin Riser Panel or equivalent to suit 150mm cavity, 225mm laid below DPC level as the riser wall is constructed. To be installed in accordance with instructions issued by Unilin or equivalent.
- Mannok Aircrete Block or equivalent (0.19 W/m. K) to be installed as indicated on Architectural drawings, installed to manufacturers detail and specification.

EXTERNAL WALL VENTS

- Contractor to include for the inclusion of 100/150mm background natural ventilation vents as indicated on architects proposed floor plans. Final locations can be agreed on site with Architect prior to commencement of works. Where indicated in existing construction contractor to include for core in existing construction, installation of wall vent and making good to all finishes internally & externally.
- 100mm Vents to consist of ICON TL100DE or equivalent
- Diameter - 108mm
- Colour - White
- External grille - 150 x 150mm
- Internal grille - 160x160x42mm
- 150mm Vents to consist of ICON TL80DE dBR or equivalent
- Diameter - 150mm
- Colour - White
- External grille - 180 x 180mm
- Internal grille - 180x180x50mm
- Installation
- Place vent as high as possible at least 10cm below ceiling, preferably above radiator. Check for services before drilling. Use core drill with minimum dim Ø104mm / Ø150mm. Drill hole so pipe slopes slightly downwards. If wall thickness is less than 300mm pipe can be cut to required length, if over additional pipes may be required. Seal pipe both inside and outside with a suitable sealant agent. Mechanically fix external grille into place. Remove internal vent housing and fix with 4 screws. Attached front cover and check vent is fully operational.

DPC'S

- Damp proof courses shall comply with BS 8215:1991 Code of practice for design and installation of damp-proof courses in masonry construction.
 - Damp proof Courses lapped at least 100mm (4"); carried at least 100mm (4") into adjacent blockwork and bedded in cement lime mortar (1:1:6).
 - All Damp proof courses shall be laid continuous with 100 mm lapped joints solvent welded and pre-formed cloaks, cavity trays etc. with joints solvent welded so that

Damp proof courses stay in place by their natural shape and do not rely on following materials to restrain them.

- All mechanically fixed D.P.C.s shall extend adequately above the maximum dampness level to ensure that no damp penetration occurs at the fixings.
- Adhesive fixing to be used as well as mechanical fixing.
- Care must be taken to ensure that no damage is caused during cavity cleaning which must take place while mortar droppings are fresh.
- Bitumastic DPC coating to be used in reinforced concrete wall construction where normal DPC material may be impractical subject to Engineer's & Architect's details.
- Materials and components, design and workmanship and must be in accordance with the relevant clauses of BS 8102:2022 Protection of below ground structures against water ingress - code of practice, BRE Digest 380, Damp-proof courses and the manufacturer's instructions.
- Damp proof courses shall consist of high-performance pitch polymer with a nominal thickness 1.25 mm (nominal) weight 1.55 kg/m² minimum, proprietary pitch-polymer pre-formed cloaks and proprietary tanking.
 - All tanking membranes, Damp proof courses, cloaks and sealing adhesive must be supplied by the same manufacturer and shall be compatible. The adhesive used is to be a solvent weld type.
- Damp proof courses shall be installed in accordance with the detail drawings and generally as follows:
 - 150 mm above ground level generally or as indicated on the Detail Drawings.
 - At jambs, cills and heads to all openings.
 - Vertical DPC's shall be fitted between the external block leaf and proprietary cavity closers to manufacturer's detail.
 - At roof abutments and changes in roof level.
 - Under copings.
 - And/or as indicated on the Detail Drawings.
- Damp proof courses shall be dressed onto specified Cill flush with external block face. Joint with DPC and proposed fitted window frame (external side) to be pointed with external grade mastic bead, Refer to Architects detail drawing.

CAVITY TRAYS

- Contractor shall provide DPC Cavity trays in the following locations:
 - All new window cills, where noted on Architects detail
 - All new window / door heads in conjunction with weep holes.
 - All wall abutments, where an external wall becomes an internal wall at lower level.
- Proprietary cavity trays or preformed DPC's shall be glidevale or equivalent
- Where proprietary cavity trays are to be provided such as at changes in roof levels, great care shall be exercised when setting out and that manufacturer's instructions and recommendations are carefully followed.
- All cavity trays, head and jamb and relieving angle D.P.C.s and elsewhere where D.P.C.s have a free edge within a cavity, they are to be mechanically fixed to the inner leaf of the cavity using continuous 25 x 3 mm stainless steel strips fixed with 20 mm S.S. screws and plugs at maximum 300 mm centres.
- Cavity trays to be built into block walls in areas where there is exposure to high levels of wind driven rain.

- Proprietary cavity trays shall be appraised under BS EN 9001 which covers design and development as well as manufacture, giving an independently audited and monitored assurance that the products are designed to meet their intended purpose.
- Cavity trays must be inspected as the work proceeds.

7. PROPOSED EXTERNAL WINDOWS

- Style and break-ups to be signed off by Architect prior to order.
- Provide for Triple glazed polyester powder coated, commercial grade, thermally broken aluminium windows specified **exceeding D.O.E TGD 021-1. U-value to exceed the performance of 1.2 W/m²K** as per 2022 building regulations (nZEB).
- Contractor to include for the supply and fitting of all units and is responsible for accurately measuring structural openings prior to ordering. All windows to be foam filled to perimeter, mastic sealed to vertical DPC joint upon completion of external reveals. Internal reveals to be caulk filled upon completion of internal plaster reveal.
- Windows must have a design life span of 40 years.
- All windows to be polyester powder-coated aluminium systems. Extruded aluminium profiles shall be fabricated from designated treated alloy 6060 or 6063 in tempers T4, T5 or T6 conforming to bs EN 755-9:2001. The aluminium profiles used in the construction of the frames excluding glazing beads, nibs, interlocks and similar features shall be, at minimum tolerance, not less than 1.2 mm thick.
- All windows are to be double / Triple glazed and thermally broken. Windows shall be glazed in accordance with the recommendations given in BS 6262.
- Colour of window system to be confirmed.
- All high-level opening sections (1500mm above F.F.L) to have low level manual winders for opening, supplied by window contractor. Where opening window that are considered to be unreachable, they shall be fitted with manual winding window gearing. Each set of windows shall be controlled by 1 no. Operator; windows shall be opened using 380mm chain openers with conduit, winder cables and saddle fixings to wall. All components shall be finished in a selected polyester powder coated paint finish.
- **All opening sections to be fitted with restrictors preventing sections from opening beyond 100mm.** High level opening sections to be fitted with winders allowing windows to open 320mm.
- External windows to be thermally broken polyester powder-coated aluminium window system with a thermal performance to comply with building regulations. Glazing type and thickness shall be selected, using the recommendations given in bs 6262, to withstand the design wind pressure calculated in accordance with BS 6375-1 or bs 6399-2. The type and quality of glass shall conform to bs 952-1.
- All safety glazing to be toughened and laminated glass.
- All glazing to toilet and shower area to include opaque glazing, sample to be approved by architect.
- Powder coating to conform to BS EN 12206-1:2004: 'paints and varnishes - coating of aluminium and aluminium alloys for architectural purposes'
- Weather tightness to BS 6375 part 1. Weather strips and gaskets to bs 4255 part 1.
- Standard ironmongery to all doors and windows to be agreed with architect prior to Manufacture.
- All external windows to be submitted to architect as shop drawings with sample provided for written approval of architect prior to manufacture.

- The completed window shall conform to the performance requirements for operation and strength specified in BS 6375-2.
- Blinds to conform to D.o.E specification, See Below.
- No windows should be manufactured without written approval of window samples as set out in the works requirement. All of the above to be carried out by window sub-contractor.
- Contractor to include for manifestation and door clear opening widths in compliance with
- Refer to attached architects window specification for more detailed information on the windows.

8. PROPOSED WINDOW BOARDS & LINERS

- New window board to be provided throughout.
- Window boards to be 19mm Softwood, primed and painted with pencil rounded fixed to treated battens with insulation between where appropriate. Battens plugged & screwed to lean mix fill to rear of Cill.

9. PROPOSED WINDOW CILLS

- New cills to be provided throughout proposed construction and where alterations of existing windows take place within existing school structure.
- Provide for new precast concrete cills (100mm face depth to suit wall make-up, extends 100mm horizontally both sides of window jamb) to all proposed windows wrapped with DPC, have 25mm vertical insulation to rear and have concrete backfill/ soap bar or E.A. Unilin or equivalent insulation break fitted to rear of all cills
- The Full Fill cavity wall cavity closer to be fitted at base of cill, jamb and head of Window opening shall be Unilin Close-R (FR) Flanged Fit or equivalent with 100mm thickness to suit 150mm cavity (Refer to External wall section).

10.DAMP PROOF MEMBRANES

- Contractor shall provide new DPC's at window cills throughout and all new door openings.
- It is the contractor's responsibility to ensure all D.P.C are installed correctly.
- DPC's shall be high performance pitch polymer with a nominal thickness 1.25 mm (nominal) weight 1.55 kg/m2 minimum, proprietary pitch-polymer pre-formed cloaks and proprietary tanking. All tanking membranes, D.P.C. cloaks and sealing adhesive must be supplied by the same manufacturer and shall be compatible. The adhesive used is to be a solvent weld type.
- D.P.C.s are to be installed generally as follows:
- At jambs, cills and heads to all openings. All D.P.C.s shall be laid continuous with 100 mm lapped joints solvent welded and pre-formed cloaks, cavity trays etc. with joints solvent welded so that D.P.C. stay in place by their natural shape and do not rely on following materials to restrain them.

- New DPC's shall be provided vertically on along the external blockwork leave with between the cavity closer and dressed horizontally onto specified Cill flush with external block face.
- All cavity trays, head and jamb and relieving angle D.P.C.s and elsewhere where D.P.C.s have a free edge within a cavity, they are to be mechanically fixed to the inner leaf of the cavity using continuous 25 x 3 mm stainless steel strips fixed with 20 mm S.S. screws and plugs at maximum 300 mm centres.
- All mechanically fixed D.P.C.s shall extend adequately above the maximum dampness level to ensure that no damp penetration occurs at the fixings. Adhesive fixing to be used as well as mechanical fixing.
- Damp proof courses to be installed in accordance with good practice for detailing as set out in B.S. 5628: Part 3: 1985 and must be in accordance with the relevant clauses of B.S. Code of Practice 102: 1973 (as amended) Code of Practice for protection against water from the ground, B.R.S. Digest 77 Dampproof Course and the manufacturer's instructions.

11. PROPOSED AIRTIGHTNESS REQUIREMENTS

- Provide airtight structures in accordance with TGD-L. Care to be taken to avoid heat loss in the building envelope fabric through air leakage. In this context, envelope shall be the total area of floors, walls (including windows & doors), and ceilings bordering the building structure including elements adjoining other heated or unheated spaces.
- Note: Pro Clima Intello Plus or equivalent membrane, and associated airtightness tapes and accessories to be used at all roof levels, all floor & external wall junctions entirely in accordance with manufacturer's instructions & recommendations including pointing up around joists etc prior to application of sealing tapes/accessories etc. equal and approved alternatives must be submitted to the architect with the contractor's tender return.
- Building airtight envelope: Provide airtight structures in accordance with TGD-L. Care to be taken to avoid heat loss in the building envelope fabric through air leakage. In this context, envelope shall be the total area of floors, walls (including windows & doors), and ceilings bordering the building structure, including elements adjoining other heated or unheated spaces.
- The following represents a reasonable approach to the design of building envelopes to ensure acceptable levels of permeability:
- Approach: The following represents a reasonable approach to the design of building envelopes
- to ensure acceptable levels of permeability:
- Appointment of an air barrier manager to co-ordinate and inspect the overall formation of the air tightness barrier.
- Identify the primary air barrier elements (e.g. sheathing, plaster, vapour control layer, breather membrane) from the design stage.
- Development of appropriate details and specification at construction stage to ensure continuity of the air barrier.
- Provide an on-site inspection regime and related quality control procedures so as to ensure that the design intention is achieved in practice.
- Testing requirements: Carry out air pressure testing for inclusion in subsequent calculations (e.g. NEAP) on the following basis:

- Testing standards: Air permeability shall be measures by means of pressure testing of a building prior to completion. The procedure for testing shall be as specified in IS EN 13829:2000 " Thermal performance of buildings: determination of air permeability of buildings: fan pressurised method". Additional guidance on testing procedures shall be as provided in CIBSE Technical manual TM 23 "Testing Buildings for Air Leakage". Permeability shall be calculated by dividing the air leakage rate in m³/hour by the envelope area in m². The performance shall be assessed at 50 Pascal's pressure difference.
- Pressure standards: Air pressure testing shall be deemed satisfactory subject to achievement of an air permeability upper limit of 5m³/ (h.m²) or a lower air permeability upper limit as set out in any NEAP calculation carried out for the benefit of the development, to be read in conjunction with HHP M&E specification which takes precedence. Appropriate remedial measures shall be undertaken where the limit set is not achieved and a new test shall be carried out subsequently. Repeat testing shall be carried out until the envelope achieves a satisfactory level of air permeability. Building envelopes of a similar house type completed later than the most recent successful test shall have similar remedial work carried out and/or shall be subject to pressure testing. Note that the test report shall contain a minimum of the information specified in Section 7 of IS EN 13829.
- Test reports: Air pressurisation test reports shall be presented to the architect as proof of performance and copies shall be included in the User Information Folder to be provided at Practical Completion
- Approach: Infiltration of cold outside air shall be limited by the elimination of unintentional air paths. Measures to ensure this shall include:
- Sealing the void between dry-lining and masonry walls at perimeter edges of openings such as doors & windows, and at the junctions with walls, floors and ceilings using continuous bands of bonding plaster.
- Sealing vapour control membrane and associated necessary sealing accessories.
- Provision and correct fitting of draught-stripping in the frames of openable elements of windows, doors and Rooflights.
- Provision and correct fitting of draught-stripping in the frames of loft hatches etc.
- Sealing of concealed services groups and pipework etc. at wall, floor, ceiling etc. penetrations of the building envelope.
- System Sample: Carry out membrane & sealing detailing using Pro Clima intelligent airtightness system or equal & approved using appropriate vapour checks, adhesives, detailed solutions, methods, quality provisions, application requirements, accessories etc. all to be in accordance with manufacturer's instructions & recommendations. Pro Clima Intello Plus intelligent or equivalent seasonal breathable vapour check or equal & approved to be used generally in ceiling conditions on the warm side of insulation. Intello membranes shall be laid with the membrane coated side (writing visible) facing internally. Membranes shall be laid flat either horizontally or vertically on sub-structures (e.g. rafters) without sagging and entirely in accordance with manufacturer's instructions & recommendations.
- Adhesives & tapes for air tightness membranes & systems: Pro Clima Orcon F or equivalent airproofing adhesive or equal & approved for high strength non-ageing acrylate polymers without softeners or halogenated compounds and to be insusceptible to embrittlement to provide long life adhesion & elasticity and containing 15% denatured alcohol for deep penetration of building substrate masonry materials.
- Substrates: Airproofing adhesive shall be suitable for bonding to vapour check & air-proofing membranes, aluminium foils, other building materials regardless of whether they have a smooth, rough or Stoney surface. Unstable or crumbling surfaces shall either be removed and surfaces subsequently repaired or grounded & stabilised using BUDAX AC or

equivalent. Substrate surfaces shall be dry prior to application. Note: appropriate taped sealing products shall be used on unprotected metal surfaces.

- Application: All surfaces shall be clean & free of dust, grease & silicone. A continuous adhesive bead of at least 3mm in diameter (depending on substrate) shall be applied to the clean surface. Two application methods are possible: Wet bonding: direct application of the vapour check to the adhesive immediately after application and while still wet, without applying force. One of the substrate material surfaces needs to be permeable to ensure evaporation of the adhesive solvent. Dry bonding for impermeable surfaces: Allow adhesive bead to dry for a period of 1-3 days after application. The vapour check shall then be pressed onto the dry adhesive.
- Pro Clima Contega PV or equivalent: Pro Clima Contega PV or equal & approved shall be used to form a high-quality bond between vapour check, wood-based panels (e.g. OSB) and masonry. The airtight bond shall be completed on plastering in of the PET fleece. A reinforcing latex layer shall be present to increase the strength of the adjoining plasterwork.
- Adhesive tapes for airproofing: Use only airproofing adhesive tapes with very high initial tack adhesiveness to ensure a quick high final adhesion. Use only non-aging acrylate adhesive tapes free of solvents & softeners, waterproof and resistant to UV & temperature.
- Application & substrates: Adhesive tapes shall be applied to smooth, stable surfaces, free of dust, grease & silicone such as building paper, aluminium foil, planed timber, wood-based panels, plastic and metal surfaces. The tape shall be pressed firmly onto the surface during application and using an appropriate tape applicator. The strength of the bond will depend on the pressure exerted during application of the tape.
- Pro Clima Rapid Cell or equivalent: No release paper. Pro Clima Uni Tape or equivalent: Permeable & with release paper. Pro Clima Elasto or equal & approved: For sealing around rounded holes such as pipework, where I'm-permeability is required (e.g. aluminium foil), highly impermeable, reinforced, no release paper. Pro Clima Tescon Profil or equivalent: High elasticity, suitable for internal corners such as window frames, high protection against piercing, release paper. Use other suitable taping materials as appropriate and as recommended by manufacturer.
- Fixing on flat surfaces and overlapping of vapour check layers: Overlapping of humidity variable checks such as Pro Clima Intello Plus or equivalent & approved shall be sealed using seals in accordance with manufacturer's instructions & recommendations so that they become airtight. Adhesives & tapes etc. to be applied along the backing of structure where practical for a firm foundation and to ensure that firm pressure may be applied during application and to prevent forces from insulation.
- Where sheets are applied across timber structures (at right angles to the Sub-structure), a taught fixing shall be used to facilitate as much force as possible to be exerted when applying tapes. Ensure tape is applied centrally to prevent adverse effects of insulation weight. Timber laths to be subsequently fixed above & below joints when membrane is laid at right angles to the sub-structure or alternatively additional taping at right angles to the taped seam every 300mm centres. Fixing along timber structures shall be used when using blown insulation material.
- Fixing on flat surfaces at joints between wood-based panels: Ensure joints & abutments are properly sealed using an appropriate tape such as Pro Clima Rapid Cell or equivalent as described above, where composite wood-based panels such as OSB, plywood etc are used to form an airtight layer. Use Pro Clima Orcon F or equal & approved adhesive in association with Rapid Cell for seals between timber-based boarding & concrete slabs etc.
- Adhesion to adjacent rough building surfaces such as concrete, sawn timber, plaster: For adhesion of membranes to floorboards, eaves plates, tie beams, plastered end walls,

concrete use Pro Clima Orcon F adhesive or equivalent. Surfaces to be carefully dusted down for removal of dust & debris prior to application. Make good voids in excess of 20mm deep prior to application. Use dry bonding method described above for correct adhesion to impermeable surfaces. Use solvent-free BUDAX AC to remove fine dust if necessary, from Masonry/concrete surfaces. Install membranes with sufficient slack at perimeter to facilitate movement within the building structure. Adhesion to adjacent smooth surfaces such as fair-faced concrete, planed, sanded or painted timber, metal, smooth plastic: For adhesion of membranes between windows & door frames, rooflights, planed purlins, planed holes in boards use Pro Clima Tescon Profil adhesive tape or equivalent to create an airtight perimeter seal. Surfaces to be carefully dusted down for removal of dust & debris prior to application. Install membranes with sufficient slack at perimeter to facilitate movement within the building structure.

12. **BLINDS**

- Blinds to be included for all areas within the proposed works, Blinds are not required in circulation areas. All proposed blinds to be provided to the following specification:
- Blinds shall be manually operated heavy duty contract grade steel tube spring-less rollers, complete with side winder endless ball chain control units and child safety clips appropriately sized for each opening and shall be in compliance with Irish Standard ISEN 13120 – Internal Blinds.
- Contractor to allow for Blackout blinds throughout and SEN spaces to include patterns (animals, balloons, cars & trucks etc.), design TBC and approved by architect prior to order/manufacture confirmation.
- The blind material shall be light coloured dense basket weave sunscreen material.
- The blinds must perform such that they eliminate glare to the teaching walls and white/black boards, associated data projection screens and white interactive boards, reduce heat transfer to the room and still permit light transmission to the internal space.
- The daylight transmission, solar absorption, openness factor and shading co-efficiency must all be taken into account when selecting the appropriate sun screen shade cloth for the teaching spaces.
- In order to achieve the above requirements and ensure the blinds are fit for purpose as outlined consideration should be given to
 - Light transmission values in the 9% to 12% range
 - Solar absorption in the 17% to 20% range
 - Optimum shading coefficient
 - Openness factor in the 3% to 5% range (All blinds on East and South facing Classroom windows to have a 3% openness factor, subject to mock up on site).
- Both blinds to be light in colour and identical in colour.
- NOTE: These are guidance values and should not be taken as absolute selection criteria. Each case must be assessed on its own circumstances.
- A full-size mock-up for a south facing teaching space with interactive white board and data projector operational must be conducted prior to final selection of the blind material.
- Manufacture and installation of the blinds shall comply with the requirements of the Irish standards ISEN 13120 Internal blinds - performance including safety requirements.
- The blind material shall be in compliance with Clause 4: Blinds, TGD-030 and should meet the designation of 'flameproof' when assessed in accordance with BS 3120: 1959. A test

certificate as in Appendix C of "Fire safety of furnishings and fittings in places of assembly" should be supplied for each item specified.

13. PROPOSED INFILL WALLS

- Infill wall where the existing door opens into the science labs were are to consist of 215mm width collar jointed masonry comprising of Standard Roadstone or equivalent Masonry block together with a Roadstone Aristocrat or equivalent fair faced blockwork on internal face in compliance with the requirements of IS- EN 771-3: :2011+A1:2015 for facing quality blocks. To match the existing internal walls of the building.
- As this is a room of high fire risk all the infill walls are to give a fire resistance of 30 minutes.

14. PROPOSED PAINT FINISHES

- **Allow for complete internal painting and decoration throughout** to all areas where proposed works take place including all internal joinery, skirting etc.
- Paint colours to be approved prior to application, Architect / client to pick colours throughout.
- Any alternative paint brands are to be proposed to Architect and pricing of same is to be outlined as such in Tender Return.
- Prepare all surfaces for decoration including repair, drying, filling, sanding etc. prior to decoration. Best qualities of white & red lead putty, linseed oil, knotting & driers are to be used and only tradesmen shall be engaged for the application of paint. Plasterwork is to be allowed to dry a minimum of three weeks or to be reviewed for the use of de-humidifying plant, before painting and is to be sufficiently dried out to receive paint. All joinery work to be properly and neatly cleaned on surface and all tongues & grooves and all jointing to be primed before assembling. All joinery to be primed prior to fitting. All coats of paints are to be thoroughly dry before subsequent coats are applied and rubbed down with fine waterproof glass paper between coats. One coat of suitable metal primer prior to application of compliant water-based paint system, solvent based paint system or powder coating system in layers & thicknesses as recommended by manufacturer.

WALL PAINT

- Manufacturer: Refer to Architects Finish document
- Product reference: Fleetwood" Popular Colour" Collection or Equal and approved.
- Initial / Undercoats: Fleetwood Primer Sealer Undercoat as recommended by manufacturer,
- 1no. Number of coats.
- Finishing coats: Fleetwood" Popular Colour" Collection or Equal and approved, all colours per room to be confirmed, 2no. Number of coats.
- White matt emulsion to ceiling / bulkheads unless specified otherwise.
- Total Number of coats: 3no. top coats.

TIMBER & ALL INTERNAL WOODWORK PAINT:

- All internal exposed softwood skirtings, architraves, door frames & window boards
- Manufacturer: Refer to Architects Finish document
- Surfaces: Uncoated.
- Preparation: All joints, nail/screw heads to be filled, fully sanded and cleaned down.

- Initial / Undercoats: Fleetwood Water based Satinwood undercoat.
- Number of coats: 1 no. coats.
- Finishing coats: Fleetwood Water based Satinwood.
- Number of coats: 2no. coats.
- Total Number of coats: 3no. top coats.

CEILING PAINT

- Manufacturer: Refer to Architects Finish document
- Product reference: Fleetwood" Popular Colour" Collection or Equal and approved.
- Initial / Undercoats: Fleetwood Primer Sealer Undercoat as recommended by manufacturer,
- 1no.Number of coats.
- Finishing coats: Fleetwood" Popular Colour" Collection or Equal and approved, all colours per room to be confirmed, 2no.Number of coats.
- White matt emulsion to ceiling / bulkheads unless specified otherwise.
- Total Number of coats: 3no. top coats.

15.PROPOSED INTERNAL DOORS & SCREENS

- Internal doors to be 44mm thick solid core doors (54mm for 60min fire rated) with **Formica or equivalent laminate finish.**
- Internal doors shall be of a clear opening size to permit ease of access, egress and escape.
- Refer to Architect's door schedule.
- Refer to KCC Architectural Ironmongery schedule attached in appendix.
- Sample section of door core, sample of frame & test certification to be submitted to architect for approval prior to manufacture.
- Core: 50 x 36mm MDF internal stiles (720kg/m3) and rails framework with composite Flaxboard (650kgm3) core 36mm thick & 4mm MDF sheets bonded to both sides of framework & flaxboard
- Facings: 0.9mm high pressure Formica laminate – colour to be confirmed by architect from full range
- Lippings: 46mm x 10mm exposed hardwood ash lippings to all four edges of the door leaf.
- Frame: ash rebated frame. Finish as delivered: full factory finish
- Safety glazing as scheduled to be toughened glass to bs EN 12600.
- Fire rating of glazing to comply with Irish Building Regulations Technical Guidance Document
- Part B 2006
- Door furniture shall be easily gripped and operated, clearly visible and contrasted against its background.
- All glass for internal doors and screens to be Pyrostop or equally approved, Georgian wire glass is not permitted.
- All doors to be provided with stainless steel kickplates on both sides.
- All Fire doors to include signage as required
- Internal door thresholds shall be flush and absolutely level to facilitate wheelchair movement.
- Door closers shall only be provided on all Fire resisting door sets.

- Gaps between door frames & the walls in which they are fixed should be less than or equal to 3mm. These gaps to be filled to the full width of the frame with ram packed mineral wool & sealed on both sides of the frame with non-hardening sealant.
- All fire door sets (door & frame) to comply with bs 476 & require certificates from manufacturer stating the name of the school and the i.d. number of the relevant doors e.g. DT-01, the bs number and test type (fire resisting door sets achieving 30 minute & 60-minute fire resistance (integrity) in accordance with bs 476:pt 22. Doors fitted with smoke seals to achieve a leakage rate not exceeding 3m³/m/hour (head and jambs) when tested at 25pa to bs476: sect 31.1.
- Refer to architects' floor plan drawings for l/h or r/h doors
- Refer to DAC and FSC drawings
- Integrity and insulated glazing should be provided as follows: glazing contained within a compartment wall / access door shall achieve required 30/30- or 60/60-minute fire rating in terms of integrity and insulation.
- Perimeter seals as required to meet acoustic performance, Maximum 30RW (dB) for airborne sound insulation between circulation spaces and other spaces used by students
- Intumescent strips as required to comply with FSC
- Moisture content upon leaving workshop between 8% - 14 %
- Fixings to be fitted in accordance with bs 8214.
- Contractor to include for manifestation as identified in architect's door schedule in compliance with TGD Part M 2022 Section 1.2.4.

16. PROPOSED IRONMONGERY

IRONMONGERY

- Refer to Architects Ironmongery schedule below to be read in conjunction with architects' drawings M&E package & FSC application. Door furniture shall be easily gripped and operated, clearly visible and contrasted against its background.
- Architects' drawings and specification shall be read in conjunction with FSC Application submitted to Meath County council.
- Proposed FD30s / FD60s fire doors shall consist of 30-minute / 60-minute fire resisting door set when tested to BS 476: Part 22. Or E60s when tested to I.S. EN 13501-2:2013. 'S' Denotes smoke seals with a leakage rate of <3m³/hour at 25Pa.
- Details and specification of all Ironmongery / Hardware to be approved by architect prior to manufacturing process.
- Full range of hardware, ironmongery, fittings, locking devices, handles, budget locks, restrictors, stays proposed for use on the operable windows and doors on the work.
- All ironmongery to comply with the requirements of standard BS EN 1670: 2007 Building Hardware Corrosion Resistance. Requirement and test method. Multipoint single lever locking system is to be incorporated in all opening sashes.

Proposed Ironmongery Schedule – Single Door set - FD 30s			
Image	Description	Unit	Qty
	KCC or equivalent Grade 304 Stainless Steel 'Fire Door Keep Shut' Sign	Each	2
	KCC or equivalent Floor Mounted Door Stop	Each	1
	KCC or equivalent Stainless Steel 304 Square Corner Kicking Plate. H150mm x W900mm.	Each	2
	Fire Rated Interdens Based Intumescent KCC or equivalent Lock Protector, 1mm, White	Each	1
	Flexfire or equivalent Fire Rated Graphite Based Intumescent Hinge plate Protector, Radius, 1mm, Black, Self-Adhesive	Each	6
	Tigris ® Premium, or equivalent Patented Single & Turn Cylinder 3535 to BS EN1303:2015 grade ①⑥①B①C⑥C	Each	1
	KCC or equivalent Linear Boxed Power Supply Unit Certified to EN60950, 24VDC 1amp	Each	1
	Dormakaba Rack & Pinion Door Closer c/w Scissor Arm & Hold Open Unit. 53010001	Each	1
	KCC or equivalent Tubular Stainless Steel 304 19mm Unsprung Rose Lever Handle on Rose to BS EN1906:2012 grade ③⑦-B①③①B	Each	1 Set
	KCC or equivalent Stainless Steel 304 Euro Profile Escutcheon. 5mm	Each	2

	Frisco or equivalent Stainless-Steel Maintenance Free Self-Lubricating Thrust Bearing Hinge to hEN1935 grade ④⑦⑥①①④⑦⑭ and Certifire CF336	Each	3
	KCC or equivalent Heavy Duty Modular Mortice Sash lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade ③X⑤①⑦③BC②⑦ and Certifire CF5234	Each	1
	KCC or equivalent Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	1. Each	1 Set

17. PROPOSED INTERNAL JOINERY

- Joinery items etc. are not to be fixed until plastering is complete to ensure solid backing and care shall be taken to mark nailing positions of all prefixed grounds.
- Contractor to allow for new Architraves & skirting's in all areas where proposed works take place and floor finishes / door sets are proposed.
- All proposed architraves and skirting to be 19mm painted Red deal. Architraves 100mm wide, skirting's 150mm high, **Primed & Painted except W/C'S, Coving to be used.**
- All proposed water and heating services to be boxed out using 15mm moisture resistant MDF fixed to 50 x 50 timber battens frames. Battens screwed and filled.**

18. PROPOSED FLOOR FINISHES

- Proposed Floor finish in the science labs and the prep room is to be Altro suprema or equivalent safety floor. Refer to specification below for details of the floor.
- NBS M50 ALTRO SUPREMA SAFETY FLOORING COMBINED PARAGRAPHS**
- TYPE(S) OF COVERING**
 - 150 PLASTICS FLOORING:
 - Location:
 - Base:
 - Preparation: Clauses
 - Fabricated underlay: as clause ____
 - Flooring roll: Heterogeneous PVC to BS EN 13845.
 - Manufacturer and product reference:
 - Altro Suprema 2.0 mm thick Safety Floor by Altro Floors**, telephone 01462 480480.
 - Usage Classification: EN ISO 10874 class 34/43.
 - Slip potential: Pendulum test value (PTV) (minimum) to EN 16165 Annex C / BS 7976: ≥36 (wet) –

- slider 96).
- Surface roughness (Rz) (minimum) to BS 1134:≥20
- Recycled content: 10%
- Width: **2000 mm**
- Thickness: **2.0 mm**
- Colour: **TBC**
- Adhesive (and primer if recommended by manufacturer): _
- Seam welding: Hot-welding with matching Altro Welding Rod, as clause 680A.
- Accessories: Clauses
- Skirting: Clauses
- Maintenance and Finishing: Clauses
- Special requirements:
- Where the flooring is used to form the coved skirting, make certain that the wall background is smooth, clean and dry enough to allow full adhesion of the system.
- **This specification, in whatever format - electronic, is only valid if it is a true copy of the filed paper copy held at Altro. If you are in any doubt as to the authenticity of the copy, please ask for verification.**

• **GENERALLY**

- 210 WORKMANSHIP GENERALLY:
- All bases must be rigid, dry, sound, smooth and free from grease, dirt and other contaminants before coverings are applied.
- Finished coverings must be accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains.

• 220 SAMPLES:

- - Before placing orders, submit for approval a representative sample of each type of covering. Ensure that delivered materials match samples.

• 230 CONTROL SAMPLE(S):

- - Complete area(s) of the finished work in approved location(s) as follows, and obtain approval of appearance before proceeding:

• LAYOUT:

- Agree setting out of seams before ordering roll materials for sheeting type(s) M50/150.
- LAYOUT: Set out sheet coverings so that seams and cross seams are kept to a minimum. Cross seams will not be permitted.

• LAYOUT:

- Agree setting out of pattern before ordering materials for covering type(s) M50/150.

• 270 EXTRA MATERIAL:

- - Provide **5%** extra of each type of covering to be handed over to the Employer at completion.

• 310 MARKING:

- - Ensure that materials are delivered to site in original packing, clearly marked with batch number.

- 320 STORAGE:
 - Store materials in a clean, warm, dry, well ventilated place. Keep in original packing until conditioning commences.
- 330 COMMENCEMENT:
 - Do not lay materials until building is weathertight, wet trades have finished their work, the building is well dried out, all paintwork is finished and dry, conflicting overhead work completed, and floor service outlets, duct covers and other fixtures around which the materials are to be cut have been fixed. Inform CA not less than 48 hours before commencing laying.
- 340 CONDITIONING:
 - Before laying commences thoroughly condition materials by unpacking and separating in the spaces where they are to be laid. Maintain resilient flooring rolls in an upright position. Minimum conditioning time and temperature to be as recommended by manufacturer. Extend period by a factor of 2 for materials stored or transported at a temperature of less than 10°C immediately prior to laying.
- 350 ENVIRONMENT:
 - Before, during and after laying, provide adequate ventilation and maintain temperature and humidity approximately at levels which will prevail after the building is occupied.
- 360 UNDERFLOOR HEATING:
 - In accordance with BS 8203 Underfloor heating should be switched off 48 hours prior to laying the floorcovering. The heating should not be turned on until at least 48 hours after laying and peak temperature should be avoided for a further 7 days.

PREPARING BASES

- 410 SUITABILITY OF NEW BASES AND CONDITIONS:
 - Laying of coverings will be taken as joint acceptance by the Main Contractor and Subcontractor of the suitability of the bases and conditions within any given area.
- 420 SUITABILITY OF EXISTING BASES AND CONDITIONS:
 - Before commencing work the subcontractor must confirm (through the Main Contractor) that existing bases will, after the specified preparation, be suitable to receive the specified coverings.
 - Laying of coverings will be taken as further acceptance of the suitability of the bases and also of the conditions within any given area.
- 430 DAMPNESS:
 - Where coverings are to be laid on new wet-laid bases:
 - Ensure that drying aids have been turned off for not less than 4 days, then
 - Test for moisture content using an accurately calibrated hygrometer in accordance with BS 5325, Annex A or BS 8203, Annex B.
 - Take readings in all corners, along edges, and at various points over the area being tested.
 - Do not lay coverings until all readings show 75% relative humidity or less.

- 440 SUBSTRATES:
 - The specifications for trowelled finishes to receive thin floor coverings require:
 - A uniform, smooth surface free from trowel marks and other blemishes, and suitable to receive the specified floor finish material.
 - Adequate protection from construction traffic.
 - Allowance for making good by application of a smoothing compound by and to the satisfaction of the flooring subcontractor in the event of the surface being unsuitable due to inadequate finishing or protection.
- 440A BLEACHER / RETRACTABLE SEATING:
 - Please contact Altro Technical Services for further information.
 - All relevant seating information will be required i.e., weight and dimensions.
 - Hard set adhesives, such as Altrofix A19 Plus or similar must always be used.
- 462A SMOOTHING UNDERLAYMENT COMPOUND:
 - Manufacturer and reference: Ardex UK Ltd, Arditect 'NA' smoothing
 - Apply to base at a minimum thickness of 3mm in accordance with manufacturer's product data
 - sheet incorporating aggregate for applications more than 12mm thick.
 - Allow to dry before laying floor tiling/sheeting.
- 462B SMOOTHING UNDERLAYMENT COMPOUND:
 - Manufacturer and reference: F Ball & Co Ltd STOPGAP 1200 smoothing compound
 - Apply to base at a minimum thickness of 3mm in accordance with manufacturer's product data
 - sheet incorporating aggregate for applications more than 12mm thick.
 - Allow to dry before laying floor tiling/sheeting.
- 470 EXISTING FLOOR COVERING TO BE REMOVED:
 - - Completely remove covering and as much adhesive as possible. Skim with smoothing underlayment compound to give a smooth, even surface.
- 480 EXISTING FLOOR COVERING TO BE OVERLAID:
 - Make good by local resticking and patching or filling with smoothing underlayment compound to give a smooth, even surface.
- 531A SURFACE DAMP PROOF MEMBRANE:
 - Manufacturer and reference: Altro Proof standard variant epoxy surface damp proof membrane by Altro Floors effective up to 97% R.H.
 - NB: Please note Altro Proof fast-track variant is also available where floor coverings are to be laid same day. Conditions apply.
 - In the event of underfloor heating please consult Altro Technical for conditions of use.
 - Apply in accordance with manufacturer's instructions.
- 541A SHEET UNDERLAY:
 - Manufacturer and reference: Altro Everlay A by Altro Floors.
 - Width: 2000 mm
 - Thickness: 1.2 mm

- Set out in same direction as that planned for the sheet floorcovering, with butt joints staggered to avoid seems in floorcovering. Lay loose and flat with no distorting bumps, and cut into perimeter.
- 541B SHEET UNDERLAY:
 - Manufacturer and reference: Altro Everlay B by Altro Floors.
 - Width: 2000 mm
 - Thickness: 4mm
 - Set out in same direction as planned for the sheet floorcovering, with butt joints staggered to avoid seems in floorcovering. Lay loose and flat with no distorting bumps and cut into perimeter.
- 541C SHEET UNDERLAY:
 - Manufacturer and reference: Altro Acoustic Underlay 1101 by Altro Floors.
 - Width: 1150 mm
 - Thickness: 3mm
 - The underlay can be laid in either the same direction or at 90 degrees to the surface material, but with joints not corresponding. Please adhere to manufacturer's instructions
- 560 PLYWOOD UNDERLAY:
 - To an approved national standard.
 - Bonding quality to BS EN 314: Part 2: Class 3
 - Finish:
 - Thickness: mm.
 - Sheet size: x mm.
 - Ensure that existing floor boards are securely fixed and acceptably level. Remove or fill any gross irregularities. Punch in any protruding fasteners.
 - Lay sheets with cross joints staggered such that no joint within the base and underlay is coincident and with a 0.5-1 mm gap between sheets.
 - Fix with 25 mm ring shanked or twisted shank nails or divergent staples, commencing at the centre of one side of each sheet, at 150 mm grid centres over the area of each sheet and at 100 mm centres along perimeter, set in 12 mm from edge.
 - Ensure that fasteners are driven well in, with heads set flush with surface, and do not project through underside of base. Remove and replace fasteners that deform while being driven.
- LAYING COVERINGS
- 610A SETTING OUT
 - Place the material in position on the floor, allowing at least 25 mm each end for trimming, and overlapping at least 15 mm at joints.
 - Cut-in material along joints.
- 620 COLOUR CONSISTENCY:
 - - In any one area/room use only coverings from the same production batch to prevent banding or patchiness resulting from colour/flash variation.
- 640 ADHESIVE FIXING GENERALLY:
 - Adhesive: when not specified otherwise, type to be as recommended by covering/underlay manufacturer as appropriate or, in the absence of such recommendation, type to be approved.

- Use a primer where recommended by adhesive manufacturer. Allow to dry thoroughly before applying adhesive.
- Spread adhesive evenly and lay covering, pressing down firmly and rolling laterally and transversely (if recommended) to ensure full contact and a good bond overall. Reroll (if recommended) within 30 minutes.
- Remove all surplus adhesive from exposed faces of coverings as the work proceeds.
- Trowel ridges and high spots caused by particles on the substrate will not be accepted.

- 641A ADHESIVE FIXING – ALTRO SHEET FLOORING:
 - Place the material in position on the floor, allowing at least 25 mm each end for trimming, and overlapping at least 15 mm at joints.
 - Cut-in material along joints.
 - Fold (do not roll) the material back along half its length. When adhesive is ready, refold material back onto adhesive. Repeat for second half of material.
 - Consult data sheet on rolling requirements.

- 670A BORDERS/FEATURE STRIPS of sheet material:
 - For traditional, non-vulnerable areas, cut strips along the length of the sheet to prevent curl.
 - Mitre joints at corners.
- 670B BORDERS/FEATURE STRIPS of sheet material:
 - For volatile areas or where mitres are exposed to a greater risk of impact, cut Altro butterfly mitres at internal and external corners.
 - See relevant Altro detail drawings.

- 680A SEAM WELDING:
 - Do not commence welding of coverings until a minimum of 24 hours after laying or until adhesive has completely set.
 - Cut groove, 3 mm wide by 2/3 the depth of material, evenly along each joint using:
 - Altro hand grooving tool or
 - Automatic grooving machine fitted with diamond blade.
 - Hot-weld using hot air welding gun (fitted with high speed welding nozzle) and Altro welding rod. Select colour of rod to match floor covering. Cut off surplus weld rod with spatula. Do not chemical weld.
 - Form a neat, smooth, strongly bonded joint, flush with finished surface.

- 720 DOORWAYS:
 - Make joint on centre line of door leaf unless specified otherwise.
- 731A SEALANT:
 - Manufacturer and reference: AltroMastic 100 by Altro Floors, colour to match floorcovering.
 - Location: To all exposed edges of flooring material around all protrusions through floor and pipework as necessary.

- 740 EDGINGS/COVER STRIPS:
 - Manufacturer and reference(s): Quantum__
 - Material/finish: Aluminium / PVC
 - Fix securely in accordance with manufacturers instructions.

- 741A EDGING TO ____
- Manufacturer and reference: Visedge VR Edge Strip by Howe Green Ltd.
- Size: 9 mm deep x 30 mm wide.
- Cut recess in base, bed edge strip level in epoxy mortar, and securely screw to base with neatly mitred joints.
- Make good base by filling with smoothing compound to give a smooth, even surface.
- Cut, groove and hot weld PVC insert to Altro safety flooring.
- See Altro detail drawing D12.

- 741B EDGING TO ____
- Use disc cutter to form 25 mm deep x 4 mm wide channel at junction with adjacent floor finish.
- Manufacturer and reference: Gully Angle GA25/35 by Altro Floors.
- Size: 25 x 25 mm.
- Colour:
- Orientate angle to suit thickness of flooring material. Fix securely and level with neatly mitred joints, bonding to base and to inside of chase using AltroFix 19 Plus.
- Cut, groove and hot weld angle to Altro safety flooring.
- See Altro detail drawing D10.

- 742 DRAIN OUTLETS:
- Drain outlet/channel to be clamping ring type gulley/type channel such as those supplied by Wade International, tel: 01787 475151. The Altro flooring should be dressed into the drain outlet/channel and be clamped by the clamping ring/clamping section.
- See detail drawing D13 (ring type gulley)
- Alternatively drawing reference D14 (channel type)

- 750A STAIR NOSINGS:
- Manufacturer and reference(s): Altro .
- Material/finish:
- Inserts: Altro safety flooring, colour
- Adhesive: Laybond Gripfill / Similar Approved.
- Lay under adjacent flooring to provide smooth joint with nosing.
- Adhesive:
- Fix securely and level with neatly mitred joints. Screw fixing with matching plugs required.

- 751A STAIR TRIM:
- Manufacturer and reference: Altro stairs trim with welded mitre angle by Altro Floors.
- Material:
- Length of each return leg: 360 mm.
- Outer angle between treads and risers:
- Fixing: Securely bond with top edge parallel with stair tread. Accurately mitre inner junction of each tread and riser.
- Adhesive: Laybond Gripfill / Similar Approved.

- 751B LANDING TRIM:
- Manufacturer and reference: Altro .
- Material:

- Fixing: Securely bond with top edge straight and aligned with floor. Accurately mitre at corners.
- Adhesive: Laybond Gripfill / Similar Approved.

- 760 STAIR COVERINGS:
- Neatly cut and tightly fit risers first, then treads.

- 761A STAIR COVERINGS:
- Fit tread and riser in one piece on stairs with coved tread/riser.
- Cove former: Altro Type 20R. Securely bond to base and background with adhesive.

- 770A SET-IN COVED SKIRTINGS:
- Manufacturer and reference(s): Altro PRCS100.
- Size: 100mm high x 25mm wide at base.
- Colour: Black 208 / Dove 001 / White WHT
- Securely bond with top edge straight and parallel with floor. Accurately mitre at corners.
- Adhesive:
- Hot weld to edge of floor with matching Altro Welding Rod. Do not chemical weld.
- Seal mitred corners using AltroMastic 100.
- See Altro detail drawing D3.
- 770B SIT-ON COVED SKIRTINGS:
- Manufacturer and reference(s): Quantum SO 100.
- Size: 100 mm high x 19 mm wide at base.
- Colour: TBA
- Seal between wall and floor perimeter with AltroMastic 100, prior to fixing skirting.
- Securely bond with top edge straight and parallel with floor. Accurately mitre at corners.
- Adhesive:
- See Altro detail drawing D2.

- 771A SELF-COVED SKIRTINGS - GENERAL:
- Cove former: Altro 38R.
- Securely bond to base and background.
- Turn flooring material up wall and securely bond to cove former and background, with top edge straight.
- Accurately mitre at corners.
- Height: Minimum 100mm
- Top edge: Altro: C7 Capping Seal / C8 Captile Strip / C11 Quarry Tile Seal
- Adhesive:
- Hot weld joints and mitred corners with matching Altro welding rod. Do not chemical weld.
- See Altro detail D4 (C7) / D5 (C8) D6 (C11)

- 771B SELF-COVED SKIRTINGS - WHITEROCK:
- Cove former: Altro 38R.
- Securely bond to base and background.
- Turn flooring material up wall and securely bond to cove former and background, with top edge straight.
- Accurately mitre at corners.
- Height: Minimum 150mm

- Top edge: Overlap by 50mm
- Adhesive:
- Hot weld joints and mitred corners with matching Altro welding rod. Do not chemical weld.
- Seal underside of Whiterock sheet using AltroMastic 100 clear.
- See Altro detail drawing WF8

- 773A JUNCTIONS BETWEEN SELF-COVERED SKIRTINGS AND DOOR FRAMES/ARCHITRAVES:
- Trim back of cove formers in proximity to door openings, and terminate self-coved skirtings against side of architraves.
- See Altro detail drawing D9.

- 775A STAIR STRINGER:
- Manufacturer and reference: Altro safety floor by Altro Floors.
- Thickness: mm
- Colour:
- Accurately cut to profile of tread and riser. Securely bond to background with top edge straight and parallel to pitch of stairs.
- Height: mm, measured normal to stair pitch, from inner junction between tread and riser.
- Top edge:
- Adhesive:
- Seam welding to treads/risers: Hot-welding with matching Altro welding rod.

- 780A TRAFFIC:
- After laying, keep floor covering free from traffic until adhesive is set.
- COMPLETION

- 810 CLEANING GENERALLY:
- Remove all scrap, dust and dirt. Carefully remove adhesive and other marks from coverings and adjacent surfaces, using approved cleaning agents and methods.

- 821A FINISHING PLASTICS FLOORING: GENERAL
- Wash floor with water containing AltroClean 44 or equivalent alkaline cleaner.
- Thoroughly rinse with clean water to remove detergent, and allow floor to dry.
- SMALL / LIGHTLY SOILED AREAS
- Scrub with a deck scrubber or Altro Unipad, 14" x 4" rectangular cleaning pad ref: AHCP 14/4/10
- attached to a Multimop MM30 multi mop handle as instructed above.

- LARGE / HEAVILY SOILED AREAS
- Mechanically scrub using a rotary cleaning machine fitted with an Altro Unipad cleaning pad (or similar of the correct size) reference:
- - AMCP 13/5 13"
- - AMCP 15/5 15"
- - AMCP 16/5 16"
- AMCP 17/5 17"

- All of the above cleaning pads/Multimop and AltroClean 44 floor cleaner can be obtained from: All Purpose Cleaning Supplies Ltd, 6 North Street, Melton Mowbray, Leicestershire, LE13 1NL, Tel: 01664 566599
- Contact Altro for detailed cleaning instructions:
- Telephone: +44(0)1462 707600
- email : enquiries@altro.com
- website : www.altro.com
- 861 SLIP RESISTANCE TESTING
- Testing authority: An approved laboratory
- Floor covering(s) to be tested: M50/150
- Test: EN 16165 Annex C / BS 7976 slider 96
- Floor covering condition: WET
- Witnessing/ Certification: Arrange for tests to be witnessed/ certified by: _____.
- Report: Submit.
- 861A SLIP RESISTANCE TESTING
- Testing authority: Altro
- Floor covering(s) to be tested: M50/150
- Test: EN 16165 Annex C / BS 7976 slider 96
- Floor covering condition: WET
- Altro will supply on request an inspection certificate stating slip resistance of floor covering tested to EN 16165 Annex C / BS 7976.
- 870 PROTECTION:
- - Cover flooring with clean dust sheets, or other nonstaining suitable material to prevent damage from dirt and traffic prior to Practical Completion. Ensure any material with printed information on one face is laid with printed face uppermost.
- 880 WASTE / RECYCLING: ALTRO RECOFLOOR™
- Clean, adhesive-free off-cuts to be removed from site and taken to an Altro Recofloor collection points for recycling.
- Contact Altro for further details of this scheme and the Recowall recycling scheme.
- Telephone: +44(0)1462 707600
- email : enquiries@altro.com
- website : www.altro.com

19. FIXED FURNITURE

F.3 STORAGE UNIT WITH SLIDING DOORS

- 2no F3 Storage units to be installed as part of the works. 1no in each science lab.
- Units are to 3500mm wide, 2350mm height & 600mm deep.
- Unit to have partition in location indicated on sheet T402. Partition to consist of 74x38mm studs faced on both sides with 15mm MDF. Colour of MDF board to be confirmed by architect before ordering.
- Rudder doors stop to protect fingers to be include in locations indicated on architect's drawings.
- Frame of Storage unit to be constructed with 100 x 38 softwood timber studs.

- 20mm MDF top panel with laminated faces & edges. Colour of laminate to be confirmed by architect prior to ordering.
- 150 x 25mm softwood rails with heavy-duty high-quality coat hooks for lab coats to be installed in location shown on architects' sheet T402.
- 20mm MDK shelves with laminated faces and edges to be installed. Colour of laminate to be confirmed by architect prior to ordering.
- 200 x 15mm MDF facing plate with laminated faces & Edges to be installed at the top of the unit. Colour of laminate to be confirmed by architect prior to ordering.
- Robust aluminium sliding door with Notice board material face. Colour of Notice board face to be confirmed by architect.
- Heavy-duty high-quality adjustable shelving system to be installed in location indicated on architect's sheet T402.
- 50 x 50mm softwood supporting frame to be installed in location indicated on architect's sheet T402.

F.4 HIGH LEVEL WALL STORAGE

- 4no F4 units to be installed as part of the works. 2no in each science lab.
- Units to be 785mm wide, 720mm height & 300mm deep.
- Units to be installed 1280mm above the finished floor level.
- 50x35mm softwood bearer to be installed at the back of the proposed unit.
- 20mm mdf doors with laminated faces & edges. Colour of laminate to be confirmed by architect prior to ordering.
- High quality steel hinges with high quality cylinder lock on master key system.
- 18mm mdf shelf with laminated faces & edges to be installed in the proposed unit on adjustable studs. Colour of laminate to be confirmed by architect prior to ordering.
- 200mm high-quality stainless-steel D door handle to be installed in location indicated on architects proposed drawings.
- Note: All laminated pieces to be formaldehyde free MDF with high pressure laminate grade HGS (EN 483)

F.5 ISLAND WITH TRAY STORAGE SYSTEM

- 1no F5 unit to be installed as part of the works. Unit to be installed in the prep room.
- Units to be 1480mm wide, 865mm height & 900mm deep.
- 40mm bull – nosed worktop with laminated face & edges. Laminate to be high pressure and grade HGS (EN438).
- Balancing laminate to be in accordance with BS 4965.
- Core material to be high density chipboard to IS EN 312 type p3, class E1 formaldehyde content.
- 20mm laminate mdf frame supporting storage tray system. Colour of laminate to be confirmed by architect prior to ordering.
- Plastic storage trays to be installed.

F.6 WORK-TOP WITH BASE UNITS

- 2no F6 unit to be installed as part of the works. 1no in each science lab.
- Units to be 2165mm wide, 900mm height & 600mm deep.
- Tilled splashback to be installed above the unit. Refer to section below for specs on the proposed splashback.
- 40mm bull-nosed worktop faced and edged in high pressure laminate grade HGS(EN438).
- Balancing laminate to be provided in accordance with BS4965. Laminate colour to be confirmed by architect prior to ordering.
- 170x35mm D handles 10mm diameter, high quality brushed stainless steel to be installed in the proposed storage units.
- 20mm MDF shelf with laminated faces & edges. Laminate colour to be confirmed by architect prior to ordering.
- 20mm mdf door with laminated faces & edges. High quality steel hinges with high quality cylinder lock & master key. Laminate colour to be confirmed by architect prior to ordering.
- Hardwood plinth size to coordinate with skirting height. Colour of plinth to be confirmed by architect.
- 50 x 50mm softwood bearer to be installed between the unit and the existing wall.
- 18mm mdf backing panel with laminated finish to be installed. Colour of laminate to be confirmed by architect prior to ordering.
- Standard high quality adjustable cabinet legs to be installed in locations indicated on architects drawings.

F.6.1 WORK TOP WITH BASE UNITS

- 2no F6.1 unit to be installed as part of the works. 1no in each science lab.
- Units to be 4200mm wide, 900mm height & 600mm deep.
- Tilled splashback to be installed above the unit. Refer to section below for specs on the proposed splashback.
- 40mm bull-nosed worktop faced and edged in high pressure laminate grade HGS(EN438).
- Balancing laminate to be provided in accordance with BS4965. Laminate colour to be confirmed by architect prior to ordering.
- 170x35mm D handles 10mm diameter, high quality brushed stainless steel to be installed in the proposed storage units.
- 20mm MDF shelf with laminated faces & edges. Laminate colour to be confirmed by architect prior to ordering.
- 20mm mdf door with laminated faces & edges. High quality steel hinges with high quality cylinder lock & master key. Laminate colour to be confirmed by architect prior to ordering.
- Hardwood plinth size to coordinate with skirting height. Colour of plinth to be confirmed by architect.
- 50 x 50mm softwood bearer to be installed between the unit and the existing wall.
- 18mm mdf backing panel with laminated finish to be installed. Colour of laminate to be confirmed by architect prior to ordering.
- Standard high quality adjustable cabinet legs to be installed in locations indicated on architect's drawings.

F.7 WORK TOP WITH BASE UNITS AND SCIENCE SINK

- 1no F7unit to be installed as part of the works. 1no in the prep room.

- Units to be 2420mm wide, 900mm height & 600mm deep.
- Tilled splashback to be installed above the unit. Refer to section below for specs on the proposed splashback.
- Laboratory tap. 600mm high, twin side outlet and single top outlet bib tap, brass body with anti-corrosive plastic coating to EN 13792, serrated nozzle outlets. Cold water supply to be included for. Refer to Galileo Energy consultants' drawings & specs for the cold-water feed to this unit.
- Laboratory sink, heavy duty fireclay. Acid resistant wate pipes to be included.
- 40mm bull-nosed worktop faced and edged in high pressure laminate grade HGS(EN438).
- Balancing laminate to be provided in accordance with BS4965. Laminate colour to be confirmed by architect prior to ordering.
- 170x35mm D handles 10mm diameter, high quality brushed stainless steel to be installed in the proposed storage units.
- 20mm MDF shelf with laminated faces & edges. Laminate colour to be confirmed by architect prior to ordering.
- 20mm mdf door with laminated faces & edges. High quality steel hinges with high quality cylinder lock & master key. Laminate colour to be confirmed by architect prior to ordering.
- Hardwood plinth size to coordinate with skirting height. Colour of plinth to be confirmed by architect.
- 50 x 50mm softwood bearer to be installed between the unit and the existing wall.
- 18mm mdf backing panel with laminated finish to be installed. Colour of laminate to be confirmed by architect prior to ordering.
- Standard high quality adjustable cabinet legs to be installed in locations indicated on architect's drawings.

F.8 BELFAST SINK

- 3no F.8 Belfast sinks to be included for in the project. 1no in each science lab & 1no in the prep rom.
- Overall size of the unit is to be 900 high, 900 wide & 630mm deep.
- Tilled splashback to be installed above the unit. Refer to section below for specs on the proposed splashback.
- Laboratory tap. 600mm high, twin side outlet and single top outlet bib tap, brass body with anti-corrosive plastic coating to EN 13792, serrated nozzle outlets. Cold water supply to be included for. Refer to Galileo Energy consultants' drawings & specs for the cold-water feed to this unit.
- Laboratory sink, heavy duty fireclay. Acid resistant wate pipes to be included.
- 40mm bull-nosed worktop faced and edged in high pressure laminate grade HGS(EN438).
- Balancing laminate to be provided in accordance with BS4965. Laminate colour to be confirmed by architect prior to ordering.
- 170x35mm D handles 10mm diameter, high quality brushed stainless steel to be installed in the proposed storage units.
- 20mm MDF shelf with laminated faces & edges. Laminate colour to be confirmed by architect prior to ordering.
- 20mm mdf door with laminated faces & edges. High quality steel hinges with high quality cylinder lock & master key. Laminate colour to be confirmed by architect prior to ordering.
- Hardwood plinth size to coordinate with skirting height. Colour of plinth to be confirmed by architect.

- 50 x 50mm softwood bearer to be installed between the unit and the existing wall.
- 18mm mdf backing panel with laminated finish to be installed. Colour of laminate to be confirmed by architect prior to ordering.
- Standard high quality adjustable cabinet legs to be installed in locations indicated on architect's drawings.

F.9 STUDENT SCIENCE PEDESTAL WITH SCIENCE SINK

- 10no F9 units to be installed as part of the works. 5no in each of the science labs.
- Units to be 700mm wide, 700mm in length & 1020mm in height.
- Laboratory tap, 600mm high, twin side outlet and single top outlet bib tap, brass body with anti-corrosive plastic coating to EN 13792, serrated nozzle outlets. Cold water supply.
- 32mm Worktop, solid iroko glulam or solid core laminate that is chemical and heat resistant.
- 250x250x250mm Laboratory sink, heavy duty fireclay or cast epoxy resin. Waste to be acid resistant.
- 20mm Moisture resistant MDF with high pressure laminate grade HGS (EN 438), with 2mm laminate / PVC / hardwood to all edges.
- Polypropylene dilution recovery trap 2.3 litres, anti-siphon, emptied by unscrewing the base from trap, certified resistance to chemicals.
- 20mm Moisture resistant MDF with high pressure laminate grade HGS (EN 438), with high quality steel hinges, with high quality cylinder lock.
- 20mm Hardwood plinth finished with lacquer. Colour of hardwood plinth to be confirmed by architect.
- 20mm Moisture resistant MDF with high pressure laminate grade. HGS (EN 438), with 2mm laminate / PVC / hardwood to all edges.
- 2no Twin gas outlet with lever control and serrated nozzle outlet with anti-rotation pin. Brass body with anti-corrosive plastic coating to EN 13792. To be installed in locations indicated on architects drawings
- 256x108x150mm Laboratory sink, drop-into cast epoxy resin. Waste to be acid resistant.

F.10 STUDENT PEDESTAL ACCESSIBLE WITH SCIENCE SINK

- 2no F10 units to be installed as part of the works. 1no in each of the science labs.
- Units to be 800mm wide, 800mm in length & 1020mm in height.
- 2no Twin gas outlet with lever control and serrated nozzle outlet with anti-rotation pin. Brass body with anti-corrosive plastic coating to EN 13792. To be installed in locations indicated on architects' drawings
- 256x108x150mm Laboratory sink, drop-into cast epoxy resin. Waste to be acid resistant.
- Height adjustable frame with manual winder. 220mm up and down movement. 60x60mm SHS posts, with 60x30mm RHS main horizontals and 30x30mm SHS frame. Welded lugs to fix worktop. Sliding over 50x50mm SHS posts welded to base plates bolted to floor. Contractor to ensure stability of pedestal unit in compliance with BS 5873. Detailed shop drawings together with sample of manual winder to be submitted for approval prior to manufacture.

- Laboratory tap, 600mm high, twin side outlet and single top outlet bib tap, brass body with anti-corrosive plastic coating to EN 13792, serrated nozzle outlets. Cold water supply.
- 32mm Worktop, solid iroko glulam or solid core laminate that is chemical and heat resistant.
- 20mm Moisture resistant MDF with high pressure laminate grade HGS (EN 438), with 2mm laminate / PVC / hardwood to all edges.
- Polypropylene dilution recovery trap 2.3 litres, anti-siphon, emptied by unscrewing the base from trap, certified resistance to chemicals.
- 100x38mm Softwood timber stud to form the frame of the unit.

F.11 FUME CUPBOARD

- 1no F11 units to be installed as part of the works. 2no in the prep room.
- Units to be 1200mm wide, 800mm deep & 2340mm in height.
- Supply, install and commission 1200mm wide fume cupboard to BS EN 14175.
- Outer shell made from 6mm solid grade PVC
- Trespa worktop, metal apron & finger rail
- Plastic Liners
- Light switch and 2 twin sockets
- Airflow controller with audible alarm
- CAV airflow included
- Water supply & drip cup.
- External Carcass – 1.5mm mild steel epoxy coated
- Internal Carcass – 6mm trespa base
- Apron – 316 Stainless Steel
- Support Frame – 2mm Mild Steel Epoxy coated finger rail & grip
- Lighting – 2ft LED
- Electrical – Hager range prewired to subboard with RCBO and MCB.
- Mechanical – Broken ranged colour coded, pre plumbed with 10mm tails for connection by others.
- Warranty to be included for up to 2 years for the unit. Warranty & Operation manual to be included in the safety file.

F.12 TEACHING WALL UNIT

- 2no F12 units to be installed as part of the works. 1no in each science lab
- Overall dimensions of the Units to be 5382mm wide, 435mm deep & 2450mm in height.
- 20mm MDF top panel, painted or laminated (faces and edges).
- Softwood framing rail.
- 20mm MDF door, painted or laminated (faces and edges), on high quality steel hinges. finger pull slot profile to the bottom edge.
- Softwood bearer.
- 15mm MDF backing panel, painted.
- 20mm MDF bottom panel, painted or laminated (faces and edges).
- Interactive T.V. or projector. The surface of the screen must be flush with front face of unit.
- T.V. metal bracket, fixed to wall.

- 20mm MDF top panel, painted or laminated (faces and edges).11. 15mm MDF facing panel, painted or laminated (faces and edges).12. 210mm long, 20mm Dia. stainless steel pull handle.
- Softwood supporting bearers.
- 20mm MDF door, painted or laminated (faces and edges), on high quality steel hinges, with high quality cylinder lock on master key system.
- 20mm MDF shelf, painted or laminated (faces and edges), on adjustable studs.
- Gap at back of unit to allow for service drops.
- 15mm hardwood plinth, 120mm high (should match height of skirting).18. Softwood bearer.
- 15mm MDF facing panel, painted or laminated (faces and edges).20. Aluminium sliding door faced with white-board or notice board material (selected in consultation with the school) on heavy-duty high-quality sliding rail system, fitted with locking device, and rubber finger protectors.
- Heavy duty, high quality adjustable shelving system.
- 20mm MDF shelf, painted or laminated (faces and edges).

F13. TALL STORAGE / CHEMICAL STORE 1800 X 900 X 460

- 1no F13 units to be installed as part of the works. Refer to architect's floor plan for location.
- Units to be 900mm wide, 1800mm height & 460mm deep.
- Construction: Heavy-duty steel cabinet
- Finish: Powder-coated red
- Coating: Germ Guard Active Technology
- Door Configuration: Double hinged doors
- Locking System: 2-point locking mechanism with "No Snag" handles
- Shelves: 3 adjustable spill-retaining shelves
- Shelf Load Capacity: 50 kg UDL per shelf
- Spill Containment: Integral liquid-tight sump
- Fire Classification:EN 13501-1 Reaction to Fire Classification
- Delivery: Fully assembled
- Colour: Red
- Intended Use: Storage of flammable liquids and chemicals

20.SPECIALITY EQUIPMENT

- As labelled SE.4 on the attached floor plan 1 No. Integrated Whirlpool or equivalent Dishwasher to have an A+ energy Rating is to be incorporated into the prep room.
- As labelled SE.5 on the attached floor plan 1 No. 600 x 600 x 1800 (h) Whirlpool or equivalent Fridge Freezer to have an A+ energy Rating is to be incorporated into the prep room.

21. SPLASHBACKS

- Splashbacks to be installed in area's indicated on architect's floor plans & Internal elevations.

- Splashbacks are to be Primus Ceramics, Technical Plain, Matte, 10x30cm wall tiles. Splashbacks are to be 300mm high.
- Finish: Matt
- Colour: To be confirmed by school before ordering.
- Thickness 6.8mm
- Reaction to Fire: A1
- Water absorption 10-20%
- Breaking Strength: < 7,5mm: > 200N
- Resistance to Thermal Shock – Required
- Resistance to low concentrations of acids and alkalis – Min Class B
- Resistance to household chemicals and swimming pools water additives – Min Class B
- Resistance to Staining – Min Class B

22.INTERNAL SIGNAGE

- Contractor to include for 24 no. 200mm x 300mm room signs consisting of 0.03" Aluminium laminate sign face applied to 1/8" thick black acrylic. Sign face includes raised text and silver metal braille beads. Available Finishes: Brushed Aluminium / Satin Aluminium. (
- Proposed signage to be bonded directly to wall / door with adhesive, location TBC by architect.
- Colours & text design TBC by Architect prior to manufacture.
- Contractor to provide drawings for approval prior to manufacture.
- No lighting to be included.
- Refer to section below for the signage accompanying the Fire Extinguishers.

23.FIRE EXTINGUISHERS & SIGNS

- Refer to architects floor plan for location and type of fire extinguisher.
- Travel distance to fire extinguishers should not exceed 25m from any point in the building.
- The school are to Train all employees in the proper use of fire extinguishers. Many service companies and some fire brigades will provide such training. (e) On a monthly basis have a responsible person inspect extinguishers to ensure that they are:
 - Properly mounted and visible.
 - Free from obvious damage.
 - Properly charged, and that
 - Inspection and service tags are current
- At least annually have a fire extinguisher service company inspect and service all portable fire extinguishers.
- Each fire extinguisher is to have the correct signage above it. The sign is to indicate what type of extinguisher it is and what type of fire it can be used on.
- The fire extinguishers are to have a clear space of 1000mm in front of them for ease of access in case of a fire.
- Powder and CO2 fire extinguishers to be provided in the locations indicated on architect's signage plan.
- The below signs are to be provided above each of the fire extinguisher.



- The above sign is to be:
- Size: 90 x 280mm
- Self-Adhesive: Yes
- Thickness: 1.2mm
- Material: Environmentally Friendly and durable Polypropylene
- The below sign is to be fitted above the fire extinguishers. It is to be 1300mm above the finished floor level.



- All signs are to be compliant with internal standard ISO 7010.
- The above sign is to be
- Size: 200 x200 mm
- Material: Aluminium
- Weight 0.04 kg
- Thickness: 0.5mm
- The signage indicated below shall also be provided (1300mm above Finish Floor Level) above each of the Fire Blankets consisting of :

- Material: Aluminium
- All signs are to be compliant with internal standard ISO 7010.
- Size: 200 x200 mm
- Weight 0.04 kg
- Thickness: 0.5mm



24.MECHINACIAL & ELECTRICAL WORKS

- **Refer to GALILEO ENERGY SERVICES Drawings and Specifications** attached in completed package, to be read in conjunction with architects' drawings, Architect to be notified of any discrepancies in architectural / M&E drawings and spec prior to commencement of works.
- Mechanical - Space heating, zone layouts, Control schematics, Water services, Ventilation, Soil and waste.
- Electrical - schematics, Lighting / wiring layouts, General services, Fire alarm system, Electrical zone and routes, Phasing of main distribution, Security and PA system layout, PV panel array, Lighting protection, Trunking services

4.0 - APPENDIX A

MCLA SCHEDULE OF TENDER DOCUMENTS

MCLA Documents are subject to copyright. Any variation in documents to be reported to Architect. Contractors Must Verify specifications prior to Starting Work. The following documents have been provided for tender stage:

DOC REF.	DOCUMENT TITLE
MCLA Specification Documents	
26 08 – Spec- T01	Architectural Specification (This Document)
MCLA Health & Safety Documents	
26 08 - RA	Risk Assessment
26 08 - PS&HP	Preliminary Safety and Health Plan
26 08 - AF1	Completed AF1 Form
Appendix – Additional Information	
Manufactures Specification / Product Data	
Planning Permission & Conditions	

4.1 - APPENDIX B

MCLA SCHEDULE OF TENDER DRAWINGS

MCLA Drawings are subject to copyright. Use Dimensions Only. Do Not Scale. Any variation in drawings to be reported to Architect. Contractors Must Verify Dimensions on Site prior to Starting Work. The following drawings have been provided for tender stage:

DWG NO.	SIZE	DRAWING TITLE
MCLA Architectural Drawings		
SV001	A1	Existing Site Layout
SV100	A0	Existing Ground Floor Plan
SV101	A0	Existing First Floor Plan
SV102	A1	Existing Science Labs
SV200	A0	Existing Elevations
T001	A1	Proposed Site Layout
T100	A1	Demolition Floor Plan
T101	A1	Works to Ground Floor Ceilings
T102	A1	Overall First Floor Plan
T103	A1	Proposed Science Labs
T104	A1	Proposed Floor & Ceiling Finishes
T105	A1	Proposed Signage Plan
T200	A1	Proposed Internal Elevations Science Labs
T201	A1	Proposed Internal Elevations Prep Room
T400	A2	Proposed Internal Door Schedule
T401	A2	Proposed Window Schedule
T402	A1	Proposed Joinery 1 of 3
T403	A1	Proposed Joinery 2 of 3
T404	A1	Proposed Joinery 3 of 3
Additional Consultants		
N/A		

N.B - Any variation to the pricing of this Tender Package is to be highlighted by the tendering contractor as an appendix to their tender return.

End of Document.

MCLA