



SPECIFICATION

MCLOUGHLIN ARCHITECTURE MCLA SPECIFICATION

Project Ref. /Name: B.O.M Kildangan National School

Doc Ref: 21 30

Stage: Tender

Project Details: Kildangan National School, Kildangan,
Monasterevin, Co. Kildare.

Completed by: David Farrell

Date: July 2026

Revision:

Contents

1.0 PROJECT INTRODUCTION.....	5
2.0 PRELIMINARIES AND CONDITIONS OF CONTRACT	9
SITE CONDITIONS / SITE SURVEY	9
PROJECT SUPERVISOR (CONSTRUCTION STAGE).....	9
PROJECT PHASING	9
TIMES WHERE CONSTRUCTION CAN TAKE PLACE	9
ACCESS & SECURITY	10
SITE CLEARANCE, DEMOLITIONS & ALTERATIONS TO EXISTING STRUCTURES	10
LOCATION OF SKIP / WASTE MATERIALS	10
INSTALLATION / ERECTION OF SCAFFOLDING.....	11
HOARDING AND SITE SEPERATION	11
HEALTH AND SAFETY.....	11
SAFETY OFFICER.....	11
TIME FOR COMPLETION	12
PRIME COST & PROVISIONAL SUMS	12
BUILDING REGULATIONS AND CONTROLS.....	12
EXTRA WORK	12
FOREMAN.....	13
RESPONSIBILITY	13
INSPECTION.....	13
INCLEMENT WEATHER.....	13
PROVISIONS FOR TEMPORARY SEALING THE BUILDING	13
CASE UP	13
CLEAR AWAY.....	13
CLEANING ON COMPLETION	14
ATTENDANCE	14
PRICE SCHEDULE OF RATES	14
INSURANCE	14
MASTER PROGRAMME	14
CO-ORDINATION OF SITE WORKS.....	15
NOMINATED SUPPLIERS AND WINDOW - CONTRACTORS.....	15
GENERAL ATTENDENCES	15
MAINTENANCE	15
DAYWORKS	16
TAX CLEARANCE AND VAT	16
COMPLIANCE & STANDARDS OF MATERIALS GENERALLY	16
PLANT, TOOLS, SCAFFOLDING ETC.....	16
HOLIDAYS WITH PAY ETC.	17
SAFEGUARDING THE WORKS.....	17
NOISE	17
WATER FOR THE WORKS	17
LIGHTING AND POWER FOR THE WORKS	17
STORAGE OF MATERIALS.....	18
NEIGHBOURING PROPERTY	18
PROTECTING, DRYING, CLEANING AND TESTING THE WORKS.....	18
PROVIDE EVERYTHING NECESSARY	18
TEMPORARY SUPPORTS	19
FOUNDATION EXCAVATION AND BACKFILL.....	19

FOUNDATION REINFORCEMENT	20
RADON SUMPS.....	20
BACKFILL.....	20
HARD-CORE.....	20
BLINDING	20
CONCRETE.....	20
BRICKS AND BLOCKS.....	23
RISING WALL MASONRY	25
POINTING	25
DAMP PROOF COURSES	25
RADON BARRIERS.....	26
DAMP & ROT	26
TIMBER MATERIALS.....	26
GLAZING.....	32
BUILDING SERVICES DATA EVIDENCE REQUIRED	32
ARCHITECTURAL DATA EVIDENCE REQUIRED	33
O&M MANUAL REQUIREMENTS.....	35
SUBMISSIONS.....	37
STANDARDS REFERENCED.....	38
FIRE TESTS - BRITISH STANDARD 476	39
SUBSTITUTION OF PRODUCTS.....	40
3.0 SCOPE OF WORKS	42
1. TEMPORARY SITE COMPOUND / AREA OF WORKS.....	42
2. SITE CLEARANCE, DEMOLITIONS & REMOVALS.....	42
3. INSTALLATION / ERECTION OF SCAFFOLDING	43
3.1 - SCAFFOLDING SIGNAGE	43
3.2 - ACCESS TO THE SCAFFOLD.....	44
3.3 - LADDER ACCESS	44
4. PHAZING WORK ZONES.....	44
5. REMOVAL OF EXISTING SURFACES & CONSTRUCTION.....	45
6. FIRE UPGRADE WORKS IN THE EXISTING BUILDING.....	46
7. FOUNDATION / FOOTING CONSTRUCTION.....	46
8. RISING WALLS & ASSOCIATED SERVICES ROUTES.....	46
9. GROUND FLOOR CONSTRUCTION & HARDCORE U-Value 0.11 W/m2K (nZEB Compliant)	47
10. PROPOSED EXTERNAL WALLS U-Value 0.13 W/m2K (nZEB Compliant)	49
11. PROPOSED THERMAL LINING TO EXISTING WALLS	51
12. PROPOSED DRYLINING OF EXISTING EXTERNAL WALLS	52
13. PROPOSED INTERNAL WALLS.....	53
14. INTERNAL PLASTER / FINISHES.....	54
15. EXTERNAL PLASTERING / RENDER FINISHES	55
16. PROPOSED EXTERNAL WALL INSULATION	56
17. PROPOSED STEELWORK	56
18. PROPOSED PITCHED ROOF.....	56
19. PROPOSED FLAT ROOF	57
20. PROPOSED VALLEYS AND FLASHINGS	65
21. ALUMINIUM FASCIA, SOFFIT & COOPING	65
22. PROPOSED RAINWATER GOODS.....	66
23. PROPOSED WINDOWS AND DOORS-U-Value 1.2W/m2K Minimum Required (nZEB Compliant)...67	
24. PROPOSED WINDOW HEADS.....	72

25. PROPOSED WINDOW CILLS	72
26. WINDOW BOARDS & LINERS	72
27. BLINDS.....	72
28. PROPOSED SUSPENDED CEILING	73
29. PAINTING / FINISHES.....	78
30. INTERNAL DOORS AND SCREENS	79
31. IRONMONGERY & ACCESS CONTROL	80
32. PROPOSED AIRTIGHTNESS REQUIREMENTS.....	87
33. ATTIC ACCESS HATCH	90
34. BUILDING ENERGY RATING & PART L COMPLIANCE.....	90
35. PROPOSED VENTILATION VALIDATION REQUIREMENTS	91
36. INTERNAL JOINERY	91
37. PROPOSED FLOOR FINISHES	93
38. MATT WELLS	98
39. PROPOSED FIRE STOPPING.....	98
40. PROPOSED SANITARY WARES (SONAS).....	101
41. TANKING AND WET ROOM SPECIFICATION	108
42. PROPOSED SPLASHBACKS	108
43. PROPOSED KITCHENETTE UNITS.....	109
44. SLUICE ROOM EQUIPMENT	112
45. INTERNAL SIGNAGE	115
46. EXTERNAL SIGNAGE	115
47. DOOR FINGER GUARD.....	115
48. FIRE EXTINGUISHERS & SIGNS	115
49. PROPOSED ELECTRICAL, MECHINICAL AND VENTILATION	117
50. MULTI ACTIVITY ROOM SWING.....	117
51. PLANNING CONDITIONS	118
52. SITE WORKS.....	118
53. PROPOSED TARMACADAM	119
55. PROPOSED PEDESTRAIN ACCESS GATE	120
56. PROPOSED SET DOWN AREAS	120
58. PROPOSED BOUNDARY WALL	122
59. PROPOSED TACTILE PAVING, KERBS & DROPPED KERBS.....	122
60. EXTERNAL SECURE SOFT PLAY AREA.....	123
61. ANTI - CLIMB FENCING TO EXTERNAL SECURE SOFT PLAY AREA	124
62. PROPOSED FIRE HYDRANTS AND SIGNAGE	124
63. ACO CHANNELS.....	125
64. SOLAR PANELS SIGNAGE	125
65. BIKE STANDS	125
66. BIKE SHELTER.....	126
67. PROPOSED GUARD RAILS BESIDE MAIN ENTRANCE DOOR	126
68. PROPOSED VISARAIL	127
69. EXTERNAL DRAINAGE	127
70. EXTERNAL SITE LIGHTING.....	127
71. EXTERNAL GAS TANKS	127
4.0 - APPENDIX A	128
MCLA SCHEDULE OF TENDER DOCUMENTS	128
4.1 - APPENDIX B	129
MCLA SCHEDULE OF TENDER DRAWINGS.....	129



4.2 - APPENDIX C.....130

MCLA– LIST OF APPENDIX DOCUMENTS.....130

1.0 PROJECT INTRODUCTION

Specification		Tender Purposes Only
At	Kildangan National School, Kildangan, Monasterevin, Co. Kildare.	
For	Board of Management Kildangan National School	
Project Ref:	21 30	
Doc Ref:	Spec – T01	
Date:	July 2026	

This document has been prepared by McLoughlin Architecture and under the supervision and to the satisfaction of:

Liam McLoughlin,
McLoughlin Architecture,
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 McLoughlin Architecture 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 McLoughlin Architecture 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

Permission for the provision of a single storey extension to the front and a separate single storey extension to the side of existing School Building (existing floor area = 1,048sqm) consisting of an extension to the existing Entrance Lobby, a 1no. Classroom Special Education Unit including ancillary spaces, 1no. Mainstream Classroom and an extension to existing Mainstream Classroom (floor area of proposed extension = 264sqm), together with a secure external soft play area, minor internal alterations and elevational amendments, realignment / setting back of part of the existing roadside boundary wall to provide a bus set down area, and all ancillary site development works at Kildangan National School, Kildangan, Monasterevin, Co. Kildare

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 with Dooley Cummins Engineers drawings & specifications. Structural items mentioned in this document shall be superseded by structural engineers' consultants' specification where available.

Below mentioned clauses to be read together with Dooley Cummins Engineers and 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:

McLoughlin Architecture
Unit 4B
Elm House
Millennium Park
Naas

Co. Kildare.
Tel: 045 854 900
E: info@mclarchitecture.ie

SITE ADDRESS
Kildangan National School,
Derry,
Co. Kildare

CLIENT
BOM Kildangan National School
Sheelagh Murphy - School Principal
Tel: [\(045\) 523 536](tel:045523536)
E: Kildanganns@hotmail.com

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

ARCHITECT
McLoughlin Architecture
Unit 48
Elm House
Millennium Park, Naas
Co. Kildare.
Tel: 045 854 900
E: info@mclarchitecture.ie

PROJECT SUPERVISOR (DESIGN PROCESS)
McLoughlin Architecture
Unit 48
Elm House
Millennium Park
Naas
Co. Kildare.
Tel: 045 854 900
E: info@mclarchitecture.ie

STRUCTURAL ENGINEER
Dooley Cummins Engineers LTD
Stanhope Street,
Athy,
Co. Kildare
Tel: 059 8640013
E: info@dcae.ie



M&E CONSULTANTS
Galileo Energy Services
Unit A6,
M4 Business Park,
Celbridge,
Co. Kildare
Tel: 01 627 4103
E: office@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

Project phasing strategy to be included for proposed works with programme phasing / timing which will include access/ segregation/ noise/ access and compound areas.

Proposed works are within active school property, Refer to Architects drawings for provisional phasing layout.

Access to existing school building & phasing of works to existing building(s) to be agreed with client and architect for signed off and agreed prior to commencement of works.

Measures to be put in place to ensure safety of all students, teachers & visitors at all times including strict traffic management, access to site compound and health / safety regimes.

Date particulars to be set out in Articles of Agreement Contract with all parties involved.

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 temporary vehicular entrance 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 Kildangan National 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 temperately 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 to the satisfaction of the Architect on completion.
- 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.

FOUNDATION EXCAVATION AND BACKFILL

Clause shall be superseded by Structural Engineer's Specification where available. Excavate to the dimensions lines and levels shown on the Drawings or as directed. Level and consolidate, if necessary, the bottoms of excavations in earth. Excavate the last 75mm of earth above foundation level immediately before overlaying construction is commenced. Step the surface of sloping ground as directed by the Structural Engineer. Trim the bottom of any excavations in rock. Support sides of excavations as necessary and in accordance with statutory requirements. The Contractor shall be responsible for the design of supports to excavations. Excavations below ground water level shall be kept free from water. BS 6031:2009 - Code of practice for access and working (incorporating corrigendum No.1) 300mm thickness. Details of foundations to be in accordance with Structural Engineers Details where available. In the absence of engineering information, foundations to be a mix with 40mm max. Aggregate in 1:3:6 - cement: fine aggregate: graded coarse aggregate - minimum strength 20N/mm².

FOUNDATION REINFORCEMENT

Reinforcement to structural engineer's details. In the absence of Engineering information, allow standard B142 mesh to foundations for tendering purposes.

RADON SUMPS

Provide Monarflex Radon sumps complete with associated underground pipework connected to ventilation access point external to perimeter of proposed extension in accordance with current Building Regulations.

BACKFILL

Foundation trenches and footings shall be backfilled with suitable approved filling and compact in 250mm layers. Compact each layer until the bulk density of the soil is not less than 95% Modified Proctor. Backfill excavations deeper than required with concrete Grade C20 at the Contractor's expense.

HARD-CORE

Hard-core shall mean clean graded crushed hard stone, or coarse gravel free from shale capable of passing through a 100mm diameter ring. Hard-core materials used in backfill, excavations, floor construction, and road bases etc. shall be certified by a competent laboratory and shall be of a suitable nature and quality in relation to the purpose & conditions of their use. They shall also be chemically analysed to check if such materials contain any chemicals, and shall also include the petrographic indicator of swelling potential. Demolition material, site rubbish or pit run gravel may not be used. Lay hard-core in maximum 150mm thick layers with a 50mm thick sand or gravel blinding layer on top. Consolidate to an even surface with a 3-tonne roller or a mechanical punner capable of equivalent compaction. Note that the appointed contractor shall satisfy himself of the suitability of the ground conditions for the purposes of supporting the proposed development by carrying out necessary site investigations including chemical analysis of soils to ensure that there are no harmful contaminants or hazards, which would cause deterioration of any element of the development. The total depth of hardcore should not exceed 900mm except where a suspended floor is being used. Where site conditions require a depth fill of hard-core in excess of 900mm, a suspended floor construction should be used. Suspended floors may be of in-situ reinforced concrete or precast concrete.

BLINDING

Compacted hard-core shall be blinded with a minimum thickness of 50mm of clean sand.

CONCRETE

Clause C5 shall be superseded by Structural Engineer's Specification where available. All concrete shall be in accordance with I.S. EN 1996-1-1:2005+NA:2010. Coarse and fine

aggregates for concrete shall comply with S.R. 16:2016 – Guidance on The Use of I.S. En 12620:2002 – Aggregates for Concrete

The maximum nominal aggregate size shall be 20 mm. Cement shall be Normal Portland cement (NPC) and shall comply with IS EN 197-1:2011 Cement - composition, specifications, and conformity criteria for common cement sand shall be stored in dry conditions. Water to be used in the mix shall be clean and free from harmful matter. Test to BS EN 1008: 2011 - Mixing Water for Concrete - Specification for Sampling, Testing and Assessing the Suitability of Water, Including Water Recovered from Processes in the Concrete Industry, as Mixing Water for Concrete. Admixtures shall not be used without the specific approval of the Engineer. Designed mixes shall be in accordance with the following schedule:

Mix Designation Type reference:	C10	C20	C35
Characteristic cube strength at 28 days. (MPa)	10	20	35
Cement Type:	NPC	NPC	NPC
Nominal Max Aggregate Size (mm)	20	20	20
Minimum Cement Content (kg/cu.m.)	180	180	180
Maximum Free Water/Cement Ratio	0.80	0.60	

Ready Mixed Concrete:

Approval for the supplier of ready mixed concrete must be obtained from the Engineer. Concrete Location of Mix Types: Use concrete mix types as follows:

Mix Designation	Location
C10	Blinding Layers
C20	Mass Fill
C35	General reinforced concrete
work.	

Records:

Record the time, date and location of all concrete cast and retain on site for inspection.

Concrete Tests:

Provide suitable equipment and competent personnel to take samples and prepare test specimens in accordance with 2015, BS 1881-124:2015 Testing concrete. Methods for analysis of hardened concrete (+A1:2021) for the following tests:

1. Workability
2. Compressive strength

Concrete Cubes:

Determine the strength at 28 days of two concrete specimens from each sample taken. At least one sample should be taken on each day that concrete of that grade is used.

Tolerances:

The permissible deviation for finished concrete work shall be as follows:

Foundations	Plan Dimensions	+75mm -25mm
	Vertical Dimensions	+15mm

Floor slab	Level	+/- 5mm from datum
	and	+/- 3mm in any 3m length
Superstructure	Level	+/- 10mm
Plan position	+/- 5mm	
Plumb and Bow	Not greater than 1:400 but no more than 20mm	
Cross Section Dims.	+10mm	
-5mm		

Formwork:

The design, erection and removal of temporary formwork shall be the responsibility of the contractor.

Construction Joints:

Approval for the design of construction or day joints shall be obtained from the Structural Engineer. In general, joints in the replaced sections of floor slab shall match up and align with existing joints.

Formwork Striking:

Strike all formwork, without disturbing, damaging or overloading the concrete structure. The minimum period before striking formwork shall be in accordance with BS EN 1992-1-1:2004 Eurocode 2: Design of concrete structures. General rules and rules for buildings (+A1:2014) (incorporating corrigenda January 2008, November 2010 and January 2014)

Release Agents:

Use release agents strictly in accordance with the manufacturer's written instructions.

Dovetail Slots:

Dovetail slots for the blockwork ties shall be stainless steel in 100mm. Lengths to suit tie spacing.

Reinforcing Bars:

Steel reinforcement shall be hot rolled high yield deformed bars, type 2, Grade 460, to BS 4449:2005+A3:2016 - Steel for the reinforcement of concrete. Weldable reinforcing steel. Bar, coil and decoiled product. Specification

Steel Fabric:

Steel fabric shall comply with 2005, BS 4483:2005 Steel fabric for the reinforcement of concrete - specification (AMD 17105)

Test Certificates:

Provide test certificates if required by the Engineer

Cutting and Bending:

Cut and bend reinforcement in accordance with BS 4466:1989 Shape Codes and the schedules provided.

Laps:

Do not, without approval, form laps in reinforcement other those shown on Engineer's drawings.

Tying Wire:

Fix reinforcement adequately with approved annealed iron tying wire.

Rebending;

Do not rebend or remove bends from bars without approval.

Spacers:

Use ordinary spacers, as necessary, to support reinforcement in the positions indicated on Engineer's drawings.

Ties

Provide stainless steel ties at 450mm vertical centres where blockwork abuts concrete column encasings.

BRICKS AND BLOCKS

All bricks and blocks to be hard, sound and clean. No damaged bricks to be used. Facing bricks to be solid, ordinary quality, to comply with BS EN 771-1:2011+A1:2015 - Specification for masonry units - Clay masonry units and to match existing in colour, quality and dimensions, unless otherwise described. All brickwork and blockwork shall comply with the requirements of this Specification, IS EN 1996-1-1:2005 Eurocode 6: Design of masonry structures Part 1 – 1. General rules for reinforced and unreinforced masonry structures (+A1:2012) (including Irish National Annex +A1:2014) and. Eurocode 6 Design for Masonry Structures - BS EN 1996-1-1:2005, BS EN 1996-2:2006 and BS EN 1996-3:2006. Recommendations in BS EN 1996: Part 1(2005), Part 2 (2006) and Part 3 (2006) are requirements of this Specification.

In cases of conflict, the requirements of this Specification take preference. Solid and hollow concrete blocks shall comply with I.S. EN 771-3:2011+A1:2015, having a minimum characteristic strength of 5 N per sq. mm. Lay solid blocks on a full bed of mortar and with bed and vertical joints fully filled to a consistent thickness.

Full Standard Titles:

BS EN 771-1:2011+A1:2015 - Specification for masonry units - Clay masonry units

IS EN 1996-1-1:2005 Eurocode 6 - Design of masonry structures Part 1 – 1. General rules for reinforced and unreinforced masonry structures (+A1:2012) (including Irish National Annex +A1:2014)

BS EN 1996 – 1- 1: 2005 Eurocode 6 - Design of masonry structures. General rules for reinforced and unreinforced masonry structures (+A1:2012) (incorporating corrigenda February 2006 and July 2009)

BS EN 1996 – 2: 2006 Eurocode 6 - Design of masonry structures. Design considerations, selection of materials and execution of masonry (incorporating corrigendum September 2009).

BS EN 1996 - 3: 2006 Eurocode 6 - Design of masonry structures. Simplified calculation methods for unreinforced masonry structures (incorporating corrigendum October 2009)

I.S. EN 771-3:2011+A1:2015 - Specification for masonry units -Part 3: Aggregate concrete masonry units (Dense and lightweight aggregates)

BLOCKWORK RISING WALLS

Concrete blocks to comply with I.S. EN 771-3:2011+A1:2015 Specification for masonry units -Part 3: Aggregate concrete masonry units (Dense and lightweight aggregates). 100mm solid blocks to be used with interlaced coursing providing solid blockwork up to proposed ground level to minimum overall thickness of walls to be constructed above ground level.

WALL TIES

Use stainless steel vertical twist type wall ties to BS EN 845-1.

QUALITY ASSURANCE

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

RISING WALL SERVICES

Services entering through rising wall shall have 50mm clearance all around pipe work to accommodate movement. Ducts shall be provided where necessary to facilitate the introduction of services. Where openings go through rising walls and exceed 300mm P.C lintels shall be provided and bedded in accordance with good building practice. All service openings to be packed after fitting to prevent risk of entry by fill or vermin.

LINTEL BEARING

As specified in IS EN 845-2:2013 Specification for ancillary components for masonry - lintels (+A1:2016) minimum 150 mm or span up to 1.5 m, and 200mm for spans of 1.5m to 3.0m subject to confirmation by structural engineer. Lintels shall be bedded in mortar at supports and masonry constructed so that lintels bear onto whole solid blocks wherever possible. Lintels shall be supported at maximum 1.2 m centres until masonry has matured.

MORTARS

Architects Mortar specifications shall be superseded by Structural Engineer's Specification where available.

GENERAL MASONRY

Cement is to comply with IS1 & BS 12 I.S. EN 197-1:2011 & BS EN 197-1 for ordinary Portland cement. Lime mortar is to be hydrated lime to comply with BS EN 459-1:2015 Building lime. Definitions, specifications and conformity criteria. Sand for mortar is to comply with 2002, BS

EN 13139:2002 Aggregates for mortar (AMD Corrigendum 15335) for washed sand. Fresh water for mortar, concrete and the like is to be fresh from the main and used only in sufficient quantity to obtain minimum workability.

RISING WALL MASONRY

Mortar: mortar shall be in compliance with IS IS EN 998-2:2016 Specification for mortar for masonry. Masonry mortar

- (ii) 1:0.5:4/4.5 cement: lime: sand. Earth retaining walls shall be type (i) nominal 1:0/0.25:3 Mortars are to be of the mixes, as described by volume:
 Cement lime mortars: (1:1:6) one-part cement, one-part hydrated lime, six parts sand,
 Cement mortar: (1:3) one-part cement, three parts sand.
 Gauged Mortar: 10 parts lime mixed with 1-part cement immediately prior to use.
 No mortar which has commenced to set shall be used.

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 PROOF COURSES

Damp proof courses are to comply with BS 8215:1991 Code of practice for design and installation of damp-proof courses in masonry construction for flexible D.P. C's lapped at least 100mm (4"); carried at least 100mm (4") into adjacent brickwork, and bedded in cement lime mortar (1:1:6).

D.P.C.s are to 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 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. At roof abutments and changes in roof level. Chimney penetrations at roof level. Under copings. And/or as indicated on the Detail Drawings. 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. 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. 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. Cavity trays to be built into block walls • in areas where there is exposure to high levels of wind driven rain. Provide for proprietary type DPC tray across chimney stacks where projecting through roof. Damp proof courses to be installed in accordance with good practice for detailing as set out in BS 5628-3:2005 Code of practice for the use of masonry. 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. Weep holes to be installed in the outer leaf above all D.P.C.s at 900 centres and to be formed using perpend stainless steel weep hole fittings or similar approved. Care must be taken to ensure that no damage is caused during cavity cleaning which must take place while mortar droppings are fresh. Cavity trays must be inspected as the work proceeds. Certified compliance with this specification may be requested. Vertical DPC's to be fitted at all cavity closers backed with 25mm phenolic type rigid insulation board or equal & approved by Architect. 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.

RADON BARRIERS

Only Radon damp proof membrane to be used, lapped & fully taped & sealed at joints for 150mm. Provide Monarflex RMB 400 Radon protection system to be sealed with Monobond double sided, self-adhesive butyl tape. Radon DPM to be lapped in under wall DPC and out for full external wall thickness and in accordance with good practice. Monarflex to be stepped through external cavity wall and stepped down to and through outer leaf where cavity wall and rain screen forms of construction are employed. Necoseal adhesive tape to be used where bonding of radon barrier is required against bitumastic type DPCs and coatings. All service pipes to be adequately sealed around upstands radon top hats. An alternative Radon protection system may be used subject to satisfaction of Irish Standards and prior agreement with the Architect.

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.

Fibreboard:

Medium density fibreboard shall comply to BS 1142 (Amended).

Blockboard:

Blockboard shall comply with BS 3444 Grade II veneer or with facing veneer as described.

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 Teak, Pine, Iroko, Red Deal, White Deal, Ash, Oak	0.33 (0)	1.00 (40)	0.83 (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 Teak, Pine, Iroko, Red Deal, White Deal, Ash, Oak	0.33 (3)	0 (3)	0.67 (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 Grade	Use	Species	Stress
Roof	Roof rafters, ceiling joists, Struts, general carcassing	White wood	Grade GS

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

Sheet glass is to be "Ordinary Glazing Quality". 6.4mm laminated or 6mm toughened glass is to be used in the following locations: Full height in doors Full height in screen panel either side of doors Screen panes fully or partially within 800mm above floor level unless otherwise specified. All areas requiring such compliance with current Building Regulations. All glazing to windows and external doors to be Low E argon filled.

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 Therma 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.

STANDARDS REFERENCED

- BS 6187:2011 Code of practice for full and partial demolition
- S.I. No. 504/2006 - Safety, Health and Welfare At Work (Construction) Regulations 2006
- Noise - Control of Pollution Act 1974 (Sections 60 and 61 of this Act)
- BS 5975:2019 - Code of practice for temporary works procedures and the permissible stress design of falsework
- BS 6031:2009 Code of practice for earthworks (incorporating corrigendum No.1)
- BS EN 12811-1:2003 Temporary works equipment. Scaffolds - Performance requirements and general design.
- ISO 8044:2020 Corrosion of metals and alloys — Vocabulary.
- BS 5531: 2007 - Code of Practice for Safety in Erecting Structural Frames
- I.S. EN 1996-1-1:2005+NA:2010
- S.R. 16:2016 – Guidance on The Use of I.S. En 12620:2002 – Aggregates for Concrete
- IS EN 197-1:2011 Cement - composition, specifications, and conformity criteria for common cements
- BS EN 1008: 2011 - Mixing Water for Concrete - Specification for Sampling, Testing and Assessing the Suitability of Water, Including Water Recovered from Processes in the Concrete Industry, as Mixing Water for Concrete
- 2015, BS 1881-124:2015 Testing concrete. Methods for analysis of hardened concrete (+A1:2021)
- BS EN 1992-1-1:2004 Eurocode 2: Design of concrete structures. General rules and rules for buildings (+A1:2014) (incorporating corrigenda January 2008, November 2010 and January 2014)
- BS 4449:2005+A3:2016 - Steel for the reinforcement of concrete. Weldable reinforcing steel. Bar, coil and decoiled product. Specification
- 2005, BS 4483:2005 Steel fabric for the reinforcement of concrete - specification (AMD 17105)
- BS 4466:1989 Shape Codes
- BS EN 3291: 1994 - Bearings, Airframe Rolling - Single Row Self-Aligning Roller Bearings in Steel, Cadmium Plated - Diameter Series 3 and 4 - Dimensions and Loads
- IS EN 1996-1-1:2005 Eurocode 6: Design of masonry structures. General rules for reinforced and unreinforced masonry structures (+A1:2012) (including Irish National Annex +A1:2014)
- BS 5628-1:2005 Code of practice for the use of masonry. Structural use of unreinforced masonry
- BS 5628-2:2005 Code of practice for the use of masonry. Structural use of reinforced and prestressed masonry
- BS 5628-3:2005 Code of practice for the use of masonry. Materials and components, design and workmanship
- I.S. EN 771-3:2011+A1:2015
- I.S. EN 771-3:2011+A1:2015 Specification for masonry units -Part 3: Aggregate concrete masonry units (Dense and lightweight aggregates)

- Stainless steel vertical twist type wall ties to BS EN 845-1.
- IS EN 845-2:2013 Specification for ancillary components for masonry - lintels (+A1:2016)
- BS EN 197-1: 2011 - Cement Composition, specifications and conformity criteria for common cements
- BS EN 459-1:2015 Building lime. Definitions, specifications and conformity criteria
- BS EN 13139:2002 Aggregates for mortar (AMD Corrigendum 15335)
- IS EN 998-2:2016 Specification for mortar for masonry. Masonry mortar
- BS 5628-3:2005 Code of practice for the use of masonry. Materials and components, design and workmanship
- BS 8102:2022 Protection of below ground structures against water ingress - code of practice
- BRE Digest 380, Damp-proof courses
- BS EN 636:2012 Plywood - Specifications (+A1:2015)
- BS EN 301: 2017 Adhesives, phenolic and amino plastic, for load-bearing timber structures. Classification and performance requirements
- BS 5707(1997): 1997 specification for preparations of wood preservatives in organic solvents
- BS EN 942: 2007 - Timber in joinery - general requirements
- BS 1202-1(2002): 2002 - Specification for nails - part 1: steel nails
- BS 1186-2(1988): 1988 - Timber for and workmanship in joinery - specification for workmanship
- 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
- BS EN 565: 2017 Mountaineering equipment - Tape - Safety requirements and test methods
- BS EN 13556: 2003 - Round and sawn timber - Nomenclature of timbers used in Europe
- BS 4978:2007 Visual strength grading of softwood - specification (+A2:2017)
- 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
- EN 14511-4:2018
- EN 14825
- BS EN 15502-1:2021 Gas-fired heating boilers. General requirements and test
- BS EN 14351-1:2006 Windows and doors - product standard, performance characteristics. Windows and external pedestrian door sets (+A2:2016) (Incorporating corrigendum November 2016)
- BRE 443:2019
- EN ISO 10211:2017
- BSRIA document BG 79/2020 Handover Information and O&M manuals.
-

FIRE TESTS - BRITISH STANDARD 476

Fire resisting doors shall comply with BS 476. Part 22.

<https://www.architecturalarmour.com/tech-spec/security-glass/bs-476-part-22>

When designing a building a very important consideration is how it will behave in fire and ensure the elements of structure will not collapse but remain standing or hold back the fire for a prescribed time. The building regulations stipulates the rules and the degree of fire resistance of the elements of structure. However the British standard 476 dictates the appropriate fire tests

for these elements of structure/materials and grades the level of fire resistance. The following is a list of the current standards.

BS 476-3:2004. Fire tests on building materials and structures. Classification and method of test for external fire exposure to roofs

BS 476-4:1970. Fire tests on building materials and structures. Non-combustibility test for materials

BS 476-6:1989+A1:2009. Fire tests on building materials and structures. Method of test for fire propagation for products

BS 476-7:1997. Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products

[BS 476-10:2009](#). Fire tests on building materials and structures. Guide to the principles, selection, role and application of fire testing and their outputs

BS 476-11:1982. Fire tests on building materials and structures. Method for assessing the heat emission from building materials

BS 476-12:1991. Fire tests on building materials and structures. Method of test for ignitability of products by direct flame impingement

BS 476-13:1987, ISO 5657:1997. Fire tests on building materials and structures. Method of measuring the ignitability of products subjected to thermal irradiance

ISO 5660-1:2015. Reaction-to-fire-tests – Heat release, smoke production and mass loss rate

BS 476-20:1987. Fire tests on building materials and structures. Method for determination of the fire resistance of elements of construction (general principles)

BS 476-21:1987. Fire tests on building materials and structures. Methods for determination of the fire resistance of load bearing elements of construction

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

BS 476-23:1987. Fire tests on building materials and structures. Methods for determination of the contribution of components to the fire resistance of a structure

BS 476-24:1987, ISO 6944:1985. Fire tests on building materials and structures. Method for determination of the fire resistance of ventilation ducts

BS 476-31.1:1983. Fire tests on building materials and structures. Methods for measuring smoke penetration through door sets and shutter assemblies. Method of measurement under ambient temperature conditions

BS 476-32:1989. Fire tests on building materials and structures. Guide to full scale fire tests within buildings

BS 476-33:1993, ISO 9705:1993 Fire tests on building materials and structures. Full-scale room test for surface products

SUBSTITUTION OF PRODUCTS

- **All proprietary products and material references contained within this specification are done so to assist with quality bench marking and alternative products shall be required to be an equivalent.**
- Products: If an alternative product to that specified is proposed, Contractor must obtain approval from the DT before ordering the product.
- Reasons: Submit reasons for the proposed substitution.
- Documentation: Submit relevant information, including:

- Manufacturer and product reference;
- Cost;
- Availability;
- Relevant standards;
- Performance;
- Function;
- Compatibility of accessories;
- Proposed revisions to drawings and specification;
- Compatibility with adjacent work;
- Appearance;
- Copy of warranty/ guarantee.
- Compliance with Planning Permission Documentation.
- Compliance with Fire Safety Certificate and Disability Access Certificate
- Compliance with Department of Education and Skills Technical Guidance Documents
- Alterations to adjacent work: If needed, advise scope, nature and cost.
- Manufacturers' guarantees: If substitution is accepted, submit before ordering products.
- Alterations to adjacent work: If needed, advise scope, nature and cost.
- Manufacturers' guarantees: If substitution is accepted, submit before ordering products.

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. INSTALLATION / ERECTION OF SCAFFOLDING

- Contractor shall provide appropriate physical barriers/ scaffolding, safety rails, toe boards etc 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.

3.1 - SCAFFOLDING SIGNAGE

- Easily comprehensible signs showing the safe working load, for each working lift, should be placed on scaffolds and loading bays.
- Warning signs must also be erected on a scaffold that is not available for use, including during its assembly, dismantling or alteration and, where appropriate, the scaffolding should be protected, by barriers or other suitable means, from unauthorised access or use. Scaffold 'tag' systems are available that clearly indicate, usually at ladder access point, if the scaffold is in use or not.

3.2 - ACCESS TO THE SCAFFOLD

- A safe means of access and egress to all working platforms on the scaffold must be provided. This may include gangways, stairways, landings, ladders, ramps or hoists. Priority should be given to providing independent staircase access wherever practicable, particularly when there is high usage of the scaffolding or where materials will need to be carried between lifts by hand.
- Sufficient access points must be provided so that workers may easily gain access to their place of work. An inadequate number of access points may lead to unsafe practices such as workers climbing scaffold components to gain access to or egress from their place of work.

3.3 - LADDER ACCESS

- Scaffold access ladders should meet the following minimum standards:
 - Ladder access towers, fixed to the outside of the scaffold, should be erected, where practicable using single lift ladders and self-closing ladder gates to separate the access tower from the working platform;
 - The top of ladder stiles should be securely fixed to the scaffold by lashings;
 - The ladder should be set, where practicable, at an angle of not more than 4 verticals to 1 horizontal and allow sufficient room for workers access and egress through the ladder access opening;
 - Each stile should be equally supported on a firm and level footing;
 - The ladder should extend at least 1m above the landing point unless a suitable alternative handrail has been provided;
 - The maximum vertical distance between landings should be 9m;
 - Where the ladder is internal, guardrails or other protective measures should be in place around the opening to prevent someone stepping into the ladder access opening accidentally;
 - The clear dimensions of an access opening in a platform shall be at least 450mm wide, measured across the width of the platform, and 600mm long;
- Landings on ladder access towers should be provided with guard-rails and toe-boards and access openings protected with self-closing ladder gates or appropriate trap doors where deemed necessary. The provision of lifts, hoists, staircase towers or ramps should be considered where possible when justified by the frequency of passage, height to be negotiated, duration of use or evacuation requirements.

4. PHAZING WORK ZONES

- The chosen Contractor is to include for onsite phasing of works zones as proposed works will take place in active school property, All Tendering Contractor to include proposed phasing of works and methodology of construction program within the tender submissions and the chosen contractor will liaise and agree project masterplan and phasing with Architect prior to commencement of proposed works.
- Refer to architects' drawings for proposed extent of phased work zones (T005). All work zones and phasing TBC prior to commencement on site

- As mentioned above Heras fencing to be erected to separate active school areas from all work zones, temporary access roadway and site compound.
- The contractor is to lease with the principal of the school in relation to the works to the front boundary wall. Ideally these works will be carried out over the summer months.

5. REMOVAL OF EXISTING SURFACES & CONSTRUCTION

- The Contractor is to allow for the removal of existing trees, roots and stumps for the tress indicated on architects demo site plan.
- The contractor is to allow for the removal of existing section of boundary walls, capping and foundations to allow for recessed boundary wall for set down areas. Refer to architects proposed site plan.
- The contractor is to allow for removal of existing footpath in the area's indicated on architects demo site plan. New footpaths to be provided in location indicated on architects proposed site plan.
- The contractor is to refer to the engineer's drawings for the removal of existing drainage systems and area to be removed to install new soakaways.
- Contractor to allow for the removal of existing grass and hardstanding area to allow for new bicycle parking area. Refer to architects proposed site plan.
- Contractor to allow for removal of existing hardstanding area to allow for the footprint of the proposed soft play area. Refer to architects demo site plan and architects proposed site plan.
- Contractor to allow for the removal of existing hard standing area to allow for the footprint of the proposed extension. Refer to architects demo site plan and architects proposed site plan.
- Contractor to allow for the removal of existing front entrance door and section of wall indicated on architects demo floor plan. Refer to proposed ground floor plan for new layout of the school.
- Contractor to allow for the removal of windows indicate don architects demo floor plan. The contractor is to allow for blocking up these windows as indicated on architects proposed floor plan.
- Contractor to allow for removal of existing window and section of wall indicated on architects demo floor plan to allow for new internal door.
- Contractor to allow for removal of existing external door indicated on architects demo plan. Refer to architects proposed floor plan for new layout.
- Contractor to allow for removal of section of external wall to allow for new internal door. Refer to architects demo plan and proposed floor plan.
- Contractor to allow for the removal of existing internal walls, doors and sanitary ware indicated on architects demo plan to allow for new proposed layout indicated on architects proposed floor plan.
- Contractor to allow for the removal of existing section of wall and window indicated on architects demo plan to allow for new proposed external door. Refer to architects proposed floor plan for new layout.
- Contractor to allow for removal of section of existing wall and window to allow for opening and extending existing classroom. Refer to architects demo plan and proposed ground floor plan.
- The Contractor is to allow for the removal of existing flat roof indicated on architects demo roof plan. New flat roof is to be installed at new level refer to architects proposed roof plan.

- Contractor to allow for the removal of existing fascia, soffit & gutter to allow for the proposed roof. Refer to architect's demo roof plan and proposed roof plan.
- Contractor to allow for the removal of existing high-level windows in the existing building indicated on architect's demo plan and existing elevations.
- Existing Floor Finishes to be removed in area's indicated on architect's demo plan.
- Contractor to allow for the removal of two existing doors in WC lobbies to allow for new FD30S fire doors in accordance with the granted fire cert.
- Contractor to allow for the removal of existing joinery items in the two classrooms that the works are being carried out in. Refer to architects proposed floor plan for location of new joinery items.
- Contractor to allow for the removal of existing first floor walls as indicated on architect's demo plan. Refer to fire upgrading drawing for new walls to be installed at first floor level.
- Contractor to allow for the removal of section of existing floor slab to allow for the installation of foundations for the blockwork walls for the proposed Quiet space beside the SEN Classroom. Refer to Dooley Cummins foundation plan for size of the foundations to be installed.
- Contractor to allow for the removal of existing windows indicated on architects demo floor plans to allow for new triple glazed aluminium windows to be installed.

6. FIRE UPGRADE WORKS IN THE EXISTING BUILDING.

- The existing landing area above the main reception area is to be a 60-minute fire resistant area in accordance with the TGD B 2006. The existing stud walls are to be removed and replaced with new 60-minute stud partition walls.
- The two doors in this landing area are to be removed and replaced with FD30S fire doors.
- The walls of the staff room are to be 30-minute fire rated walls in accordance with the granted fire cert for the project. The existing walls are to be removed, and new 30-minute stud partition walls are to be built.
- The existing doors to the staff room are to be removed and replaced with new FD30S fire doors in accordance with TGDB 2006.
- Existing fire door in the classroom at ground floor level is to be changed to have a free swing closer. Please refer to proposed ground floor plan for location of this door.

7. FOUNDATION / FOOTING CONSTRUCTION

- To be constructed as indicated on engineers' drawings and specification. Refer Dooley Cummins Engineering Consultants complete package for proposed design to proposed extension.

8. RISING WALLS & ASSOCIATED SERVICES ROUTES

- Note: Engineer's drawings and specification to supersede architect's specification below.
- Concrete masonry: concrete blocks to comply with IS 20: 1987, 'concrete building blocks part 1', normal density blocks. 100mm solid blocks to be used with interlaced coursing providing solid blockwork to minimum overall thickness of walls to be constructed above ground level.

- Mortar: mortar shall comply with IS 406:1987 'masonry mortar type I:0.5:4/4.5 cement: lime: sand. earth retaining walls shall be type nominal 1:0/025:3
- Services: services entering through rising wall shall have 50mm clearance all around pipe work to accommodate movement. Ducts shall be provided where necessary to facilitate the introduction of services. Where openings go through rising walls and exceed 300mm precast lintels shall be provided and bedded in accordance with good building practice. All service openings to be packed after fitting to prevent risk of entry by fill or vermin.
- Lintel bearing: minimum 150mm for spans up to 1.5 m, and 200mm for spans from 1.5m to 3.0m subject to confirmation by structural engineer. Lintels shall be bedded in mortar at supports and masonry constructed so that lintels bear onto whole solid blocks wherever possible. Lintels shall be supported at maximum 1.2 m centres until masonry has matured.
- Mannok SEVEN Thermal Block or equivalent (0.19 W/m. K) to be installed as indicated on Architectural drawings, installed to manufacturers detail and specification.
- The declared mean compressive strength for solid & lightweight masonry units should be 7.5N/mm² (dry strength to I.S. EN 772-1); 7.5N/mm².
- Refer to attached data sheets in Architect's appendix.

9. **GROUND FLOOR CONSTRUCTION & HARDCORE U-Value 0.11 W/m²K (nZEB Compliant)**

- Refer to finishes section below for specific floor finishes throughout proposed works.
- Floor colour & products TBC by architect prior to installation, where Vinyl flooring is proposed an ARDEX NA or equivalent Liquid Levelling compound to be applied along with a suitable liquid DPM to floor surface before laying floor finish.
- Note: contractor to ensure proposed floors are correctly prepared and no loose materials remain as future movement will impact levelling compound and proposed floor finish.
- 75mm C35 Concrete powerfloated. Refer to structural engineers specification
- The floor insulation shall be Unilin Thin-R XT/HYF or equivalent manufactured to EN 13165 by Unilin or equivalent, comprising a rigid Polyisocyanurate (PIR) core between low emissivity foil facings.
- The Unilin Thin-R XT/HYF or equivalent manufactured to EN 13165 by Unilin or equivalent, comprising a rigid Polyisocyanurate (PIR) core between low emissivity gas tight facings.
- The 150mmmm XT/HYF or equivalent with a Lambda value of 0.021 W/mK to achieve a U-Value of 0.11 W/m²K for the floor element. To be installed in accordance with instructions issued by Unilin or equivalent.
- Lay the XT/HYF (T&G) or equivalent across the DPM. If two layers are required, lay the boards in a staggered jointed pattern. Closely butt all edges.
- Place 40mm Unilin Perimeter Strips (XT/STR) or equivalent around floor perimeter to provide robust detailing in order to reduce thermal bridging. Ensure top of perimeter strip is level with top of floor finish. Seal around any service penetrations.
- Lay a thin gauge polythene sheet, to act as a separating layer, over the insulation with 150mm lap joints. VCL should be taped at the joints to ensure a continuous separating layer, as per BRE GBG 45 "Insulating Ground Floors".
- 150mm Concrete floor slab as per structural engineers' specification with expansion joints to be provided in floor construction in accordance with structural engineer's detail & recommendation.
- All proposed finish concrete floor slabs to be power floated

- Monarflex RMB 400 or equivalent Gas and Moisture Barrier comprising a multifilament reinforcing grid with films of extruded low-density polyethylene (LDPE) laminated on both sides to form a monolithic membrane. The membrane is unrolled loose with an overlap of minimum 150 mm and is tape sealed with Monobond butyl sealant tape. Carry membrane up to the wall to meet and seal with the DPC course. Membranes should be installed in accordance with the manufacturer's guidelines.
- Where applicable 50mm sand blinding (T3 Blind) Fine aggregate (0/4 mm, GF80), for blinding the top surface of the supporting granular fill material (T1 or T2) immediately below the DPM/radon barrier.
- Note: Engineer's drawings and specification to supersede architect's specification below
- Hardcore in Maximum 150mm thick layers & Total depth of 300mm Minimum
- Hardcore shall be mean clean graded crushed hard rock aggregate to N.S.A.I S.R.21 2014 + A1:2016 (Annex E). Hardcore materials used in backfill, excavations, floor construction, road bases etc. shall be certified by a competent laboratory and shall be of a suitable nature and quality in relation to the purpose & conditions of their use. They shall also be chemically analysed to check if such materials contain any chemicals, and shall also include the petrographic indicator of swelling potential.
- (T2 Perm) Hardcore - Gas permeable material and must be used beneath the blinding layer and
- wherever a radon sump is present. The layer must not be less than 200mm in depth. For residential loading, 'T2 Perm' may be used as the sole fill material up to a maximum depth of 900mm or 'T1 Struc' may be used beneath it.
- (T1 Struc) Structural unbound granular fill (hardcore) material is an all-in graded aggregate (0-32 mm) or gravel (0/40 mm) to facilitate placing and compatibility.
- Demolition material, site rubbish or pit run gravel may not be used. Lay hardcore in maximum 150mm thick layers with a 50mm thick sand or gravel blinding layer on top. Consolidate to an even surface with a 3-tonne roller or a mechanical punner capable of equivalent compaction.
- Particular attention should be paid to compacting hardcore where depth increases locally, e.g. foundation trenches.
- Provide radon sumps located centrally below proposed floor slabs. Refer to ground floor construction section. After compacting, the hardcore should be blinded with a minimum thickness of 50mm of clean sand.
- Allow for 3 No. new 380 x 380 x 150mm Easi-Sump or equivalent Radon Sumps with connection to external easy sump or equivalent cap links. All to be installed as per manufacturers detail and specification. Radon sump located in hardcore layer below proposed floor slab. Sump to be connected to ventilation access point to external perimeter of proposed structure as indicated on the drawings. Where sump and pipework is placed within fill material, a minimum of 200mm of T2 material is required.
- Note: Pipe recesses of 150mm width and 38mm max. depth may only be formed in the perimeter of the slab for all heating pipes. Expansion joints to be provided in floor construction as necessary.
- Refer to Architects / engineers Details for ground floor build ups, Engineers Structural specification to supersede architect's specification.

STRUCTURAL INSULATION BLOCK TO THRESHOLDS

- FOAMGLAS® PERINSUL HL or equivalent to be provided to all proposed door thresholds to eliminate structural thermal bridging. Refer to Architects detail for proposed detailing, to be read in conjunction with manufactures installation guidance.
- The upper and the lower surface of the insulation are bitumen coated and laminated with a PE/Glass Fleece Composite, compatible with mortar. The upper side is green.
- Product characteristics conforming to EN 13167
- Density ($\pm 15\%$) (EN 1602): 200 kg/m³
- Thickness (EN 823) ± 2 mm: 65, 100, 140 mm
- Length (EN 822) ± 2 mm: 450 mm
- Width (EN 822) ± 2 mm: from 90 to 365 mm
- Thermal conductivity (EN ISO 10456): $\lambda_D \leq 0.058$ W/(m·K)
- Reaction to fire (EN 13501-1): Euro class E (Core material Euro class A1)
- Point load (EN 12430): $PL \leq 1.0$ mm
- Compressive strength (EN 826 annex A): $CS \geq 2.75$ MPa
- Installation instructions
- Apply a layer of cement mortar, thickness ~ 1 cm on the substrate.
- Install the FOAMGLAS® PERINSUL or Equivalent elements in a row, fully bonded to the bed of mortar, joined without mortar and tightly butted.
- Construct the blockwork according to the specifications of the supplier.

10. **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
- 100mm 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.

11. PROPOSED THERMAL LINING TO EXISTING WALLS

- Refer to Architect's drawings for alterations to existing building prior to application of proposed thermal lining system.
- All existing services to be removed prior to application of proposed dry lining system.
- Note: The existing walls are identified based on the age band of the construction and the thermal performance is calculated separately for each element.

- The required thermal lining to existing walls is detailed below, thermal performance calculation of proposed drylining systems is included in appendix documents.
- All surfaces to be made good and of new build quality within existing building.
- The insulated dry lining wall insulation shall be UnilinThin-R XT/TL (MF) or equivalent manufactured to EN 13165 by Unilin or equivalent, comprising a rigid Polyisocyanurate (PIR) core between low emissivity foil facings.
- The XT/TL MF) 100mm with a Agrément declared Lambda value of 0.022 W/mK (PIR only) bonded to 12.5mm plasterboard, to achieve a U value of 0.15W/m2K / 0.19W/m2K for the identified wall element.
- The insulated drylining plasterboard XT/ TL-MF shall be mechanically fixed to 25 x 50mm timber battens, or proprietary metal frame system in accordance with instructions issued by Unilin or equivalent
- All board joints to be staggered, taped and filled, skimmed and prepared for selected painted finish. Refer to paint specification below.
- The void created between the timber battens to be used for accommodating services
- Integral vapour control layer - The composite foil facing on XT/TL-MF or equivalent provides a gas and vapour tight barrier, reducing the condensation risk. A continuous vapour control layer is created when the XT/TL-MF or equivalent joints are sealed and taped in accordance with drylining good practice.
- Fire Stops – Timber Fire stops along the top and bottom of each board and around all openings (doors, windows, etc). These are provided by the battens and prevent fire penetrating behind the insulation layer.
- Installation Guidance as follows:
- Ensure the wall is dry, clean and free of protrusions. Any existing wallpaper should be removed.
- Fix metal frame system/timber battens to the wall in accordance with the manufacturer's instructions. Sections should be placed around all wall edges and around openings and services.
- Fix the metal frame system/vertical timber battens at a maximum of 600mm centres (incorporating a vertical DPC behind timber battens). Ensure framing system/battens are wide enough to offer 20mm support to all four edges of the plasterboard.
- Pack battens if necessary to level the wall. Extra noggins may be required when the XT/TL-MF or equivalent is unsupported by the battens.
- Lift the XT/TL-MF or equivalent into position using wedges on the floor. Insulation should be cut back to accommodate an adjoining panel at external corners. Joints should be tightly butted.
- Fix XT/TL-MF or equivalent to the frame at 300mm centres using appropriate fixings eg. drywall screws, at least 12mm in from the board edge.
- The fixings should penetrate at least 25mm into the timber batten. Fixings should be thermally broken where possible.
- Seal and tape the joints of XT/TL-MF or equivalent to ensure a continuous vapour control layer is created. Fill any gaps with foam filler.
- Plaster skim to finish to architect's specification

12. PROPOSED DRYLINING OF EXISTING EXTERNAL WALLS

- Contractor to include for existing external walls in Main Entrance corridor which become internal walls to be Dry Lined using 12.5mm Gypsum or equivalent Plasterboard Board with

Gyproc or equivalent Skim coat finish. Products to be used in strict accordance with the manufacturer's instructions.

- Contractor to make good and ensure proposed / existing surface finishes are to a high standard approved by architect.
- Drylining can be fixed using mechanically to 25 x 50mm Timber battens or alternatively Dot & Dab adhesive system, all board joints to be staggered, taped and filled, skimmed and prepared for selected painted finish. Refer to paint specification below.
- Contractor is to allow for removal of existing wet dash render prior to application of new internal lining.
- Dot & Dab Installation Guidance as Follows:
 - 1. Ensure the wall is dry and free from any protrusions/wall paper etc.
 - 2. Mark the position of plasterboard on the wall. Setting out and planning board positioning is essential.
 - 3. Apply adhesive dabs to the wall in accordance with BS8212, ensuring a 50mm continuous ribbon of adhesive is created at the top and bottom of each board and around all openings. Follow adhesive manufacturer's guidelines. General recommendation is to apply vertical dabs at 300mm centres, 25mm in from the edge. Dabs should be 50-75mm wide and approximately 25mm deep to allow for tamping. Total contact with board area should be minimum 20%. Maximum height installation for this system is 3m.
 - 4. Lift the plasterboard into position using wedges on the floor.
 - 5. Align plasterboard squarely on wall. Apply pressure to the board to level and embed it into the adhesive. Allow a 15mm expansion joint at the top and bottom of the panel, and fill with foam filler. Joints should be tightly butted.
 - 6. When the adhesive has dried, 3 mechanical fixings (thermally broken) should be fixed through the centre of the board.
 - 7. Seal and tape the joints of plasterboard to ensure the continuous vapour control layer is created.
 - 8. Board joints to be staggered, taped and filled, in preparation for skim finish as specified above.
 - 9. Skim finish to be allowed to dry as per manufactures guidance then prepared for selected painted finish, refer to paint specification below.

13. PROPOSED INTERNAL WALLS

BLOCKWORK WALLS

- 100mm / 215mm Solid Blockwork used where indicated as internal walls. Refer to engineers' drawings and specification.
- 11mm Gypsum Gyproc 'Hardcoat' or equivalent (not plasterboard) to be applied to both sides of internal walls, lightly scratched prior to 2mm Gyproc or equivalent Skim coat finish. Products to be used in strict accordance with the manufacturer's instructions.
- Contractor to allow for all internal walls to be constructed to underside of roof / floor slab and sealed with Rockwool linear fire stopping or equivalent / fireproofing sealant where fire rating is required, Refer to F.S.C drawings and report attached in architect's appendix documents.
- Note: Where radiator recesses are provided, contractor to provide 215mm structural support over 100mm backing blockwork to engineer's specification. Radiator recesses to be co-ordinated in conjunction with Galileo M&E drawings and specification with 150mm clear width provided to perimeter.

- Where the existing internal walls are lower than the required height new blockwork is to be placed on top of the existing blockwork walls to build up the walls to the required height.

60 MINUTE FIRE RATED STUD WALL

- Refer to architects' drawings for location of proposed internal partitions
- Contractor to provide a gypsum Metal Stud Partition system with Gypframe 70S60 'C' Studs & 600mm centres, Gypframe channel - Gypframe 72DC60 Deep Floor & Ceiling Channel and Acoustical sealant - Gyproc Sealant applied around perimeter to both sides of partition framework.
- All proposed metal partitions to be constructed to underside of existing ceiling, any penetrating services to be sealed.
- 1NO. Layer of 12.5mm gyproc Fireline followed by another 12.5mm Gyproc fireline board.
- Board joints to be staggered, taped and filled
- All board joints installed staggered in accordance with Gyproc's current installation recommendations.
- Gyproc DryWall screws installed at 300mm centres (200mm at external corners)
- Gyproc DryWall screws must maintain a minimum 10mm penetration through metal framing components. Insulation components
- 2mm Gyproc Skim coat plaster (or Carlite Finish) applied in accordance with Gyproc's current recommendations and prepared for selected painted finish.
- 67mm MOY ACOUSTIC INSULATION 48kg/m³ snugly fit between all studwork.
- Refer to Product data sheets attached in Architects appendix.

30 MINUTE FIRE RATED STUD WALL

- 100mm X 44mm Rough Timber C16 Treated En14081
- 1NO. Layer of 12.5mm gyproc fireline board followed by 12.5mm Gyproc Harito plasterboard. Board joints to be staggered, taped and filled
- All board joints installed staggered in accordance with Gyproc's current installation recommendations.
- Gyproc DryWall screws installed at 300mm centres (200mm at external corners)
- Gyproc DryWall screws must maintain a minimum 10mm penetration through metal framing components. Insulation components
- 2mm Gyproc Skim coat plaster (or Carlite Finish) applied in accordance with Gyproc's current recommendations and prepared for selected painted finish.
- 100mm MOY ACOUSTIC INSULATION 48kg/m³ snugly fit between all studwork.
- Refer to Product data sheets attached in Architects appendix.

14. INTERNAL PLASTER / FINISHES

- Gypsum plaster shall comply with IS 27, used in strict accordance with the manufacturer's instructions. All work to be finished true and leave all arises straight, plumb & level and all internal angles clean & true. All plasterwork to be carried out in accordance with the recommendation of BS 5492: 1990 (Code of Practice) internal plastering and Gypsum Industries plc. No Carlite or other hygroscopic plaster must be allowed to come into contact with external walls. This is particularly important in the case of Carlite Finish on expanded polystyrene. Plaster stops, galvanised, back - back to be provided at all junction of dissimilar material e.g. concrete and blockwork junctions to prevent cracking in the plaster. Finished surface of plaster to have smooth flush junction in the same plane off the wall.

- Concrete Blockwork Plasterwork:
- Plasterwork to concrete blockwork to comprise 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.
- Internal Plaster Beads, Accessories etc.:
- 'Expamet' or equivalent galvanised plaster stops and angle beads etc. to be used at all extremities to internal plasterwork. Expanded metal strips to be used when rendering across all joints / change in material etc. and when making good against existing materials.
- Note: Expanded metal strips to be used in all areas when plastering over joint between RC beam and blockwork in particular
- Corner Plaster Stop: Expamet' or equivalent galvanised plaster corner beads to be included throughout.

15.EXTERNAL PLASTERING / RENDER FINISHES

- Proposed extension walls to be painted, refer to paint finishes section below for paint specification, colour to be confirmed by Architect prior to application.
- Render to be applied to concrete blockwork and shall consist of sand/cement scud coat, sand/cement float coat with final sponge finish.
- Refer to Engineer's drawings for location of external expansion joints in proposed extension. Contractor to allow for vertical expansion strips as required with a maximum distance of 6m between strips.
- Overall thickness 22 mm. External rendering to comprise of 3-5mm thick 1:1.5-2 cement: sharp sand scud coat; 9mm 1:1:6 cement: lime: sharp sand scratch coat; 9mm 1:1:6 cement: lime: sharp sand float coat with textured finish to be agreed with the architect.
- 20mm Stainless steel Expamet' or equivalent plaster stop to be incorporated along the base of external plaster above D.P.C./cover flashing and corner bead at external arises at door / window openings etc. back - back stainless-steel plaster stops to be provided at expansion joints as indicated on the drawings
- External plaster stops: 'Expamet' or equivalent, stainless-steel plaster stops and external angle beads etc. to be used at all extremities to external rendering.
- 'Expamet' or equivalent, stainless steel expanded metal strips to be used when rendering across existing joints etc. and when making good.
- All 'Expamet' or equivalent plaster stops, angle beads and expansion joints to be installed to manufactures guides and detail.

PVC Movement Joint Beads

- 20mm PVC Movement Joint Beads (Expansion Joints)
- Composition - Exterior grade impact resistant UV stable unplasticised PVC
- Dimensions (mm)- 13mm exposed width and 25mm wings each side
- Depth (mm) - 18-22mm render depth
- Stock Colours- White

16. PROPOSED EXTERNAL WALL INSULATION

- External wall insulation to be used on blockwork walls as indicated on page 301 section FF.
- Refer to Kilsaran pdf in the appendix documents for the U-value calculation for this wall.
- Grey EPS 110mm mm thick insulation is to be fixed to proposed blockwork with ceresit Adhesive.
- TB Fixings to ETAG 014 No./m²: equivalent diameter: 0.0046 m / alpha: 0.800.
- 6mm ceresit Render base & Topcoat to be applied to the external side of the insulation.
- The paint colour for this render is to match the paint colour of the rest of the building. Please refer to section below spec on paint.

17. PROPOSED STEELWORK

- As per structural engineers' detail and specification.
- All proposed steelwork to include 60 min fire rated Intumescent protection coatings, coating to consist of the following:
 - Nullifire SC802 Intumescent basecoat or equivalent,
 - Nullifire PM015 Aluminium Epoxy primer or equivalent
 - Nullifire TS815 Solvent Based Acrylic Top Seal or equivalent
- All steel section to be prepared prior to application of proposed coating in accordance with agreed product information and application guidance.
- Alternative Intumescent coating may be put forward to the architect for consideration prior to works commencing on site.
- Contractor to put careful consideration to airtightness detailing. Queries to be put forward to Architect and detail signed off prior to application.
- Bearing pads to be provided to all structural steelwork sitting on masonry blockwork to Engineer's specification.

18. PROPOSED PITCHED ROOF

- 385 x 230mm centurion concrete roof tile or equivalent matching existing schools roof tiles to be laid with matching Ridge to all roof surfaces, Specific tile to be approved by Architect prior to Construction.
- Blue bangor sandfoft universal concrete ridge tile 450mm or equivalent to be used on the proposed pitched roof to match the existing tiled school roof.
- Treated battens at c/c's advised by tile supplier to comply with Slating and Tiling Code of Practice S.R. 82:2017.
- DU Pont Tyvek Supro Plus or equivalent breather membrane below Timber batten laid on roof rafters.
- Refer to Engineer's specification for Timber Roof Structure sizing, centre spacing's and additional ties / fixings.
- Proposed 200mm Mineralwool / Earthwool @ 0.044W/mK packed between ceiling joists with 200mm Mineralwool / Earthwool @ 0.044W/mK laid across perpendicular to joists.
- High grade air-tightness Intello Plus Pro Clima or equivalent membrane continuously taped and sealed with Tescon Pro Clima or equivalent tape and Orcon or equivalent sealant. Refer to airtightness requirements, membrane required directly below timber roof joists at ceiling level.

- Ensure ventilation channel is installed at insulation zone to provide minimum 50mm Air Ventilation gap between breather membrane & Insulation.
- 685mm service void provided between joist and suspended ceiling, refer to Architect's drawing (T300 Proposed Sections) suspended Ceiling to be provided throughout, refer to Architect's specification.
- Gutters / valleys at falls instructed by engineer in direction indicated on Engineer's / Architect's drawings. All to be fully formed using 18mm WBP plywood.
- Refer to Architect's drawings for roof fall directions indicated
- Refer to Engineers drawings & specification for wall plate sizes

COPPER NAILS / HOOKS

- To BS 1202, 40mm long x 3.35mm diameter. tiles laid in half bond placed centrally over the tile below with tails aligned and in courses of equal thickness, thickest at eaves and thinnest at ridge.
- Tile hook fixing offers greater resistance to wind uplift as the hook secures the lower edge of the tile locking them together securely whilst maintaining a 2-3mm gap between subsequent slates. To achieve a 100 mm head lap you would need 110mm stainless hook. The technique also allows for easier creation of roof features such as valleys, cones and domes, which rely on being able to use narrower slates. Replacing individual tiles fixed with nails can only be achieved using hooks.

RIDGE/ HIP TILES

- Ridge tiles to be Clay ridge tiles 450mm long firmly bedded onto a mortar mix 1:3 (cement/sand). Colour to be decided.

BEDDED CLAY RIDGE CAPPINGS:

- As the firing process can induce some variation in the size and shape of clay ridge capping, it is recommended that capping's should be laid out on a level surface and visually compared and matched prior to bedding.
- Neatly edge-bed all clay ridge capping's in mortar and solid-bed all joints using mortar. Bedding and pointing should not be carried out during frost or rain or when such conditions are imminent. Ridge-end capping should always be full-length. On severely exposed buildings, bedded capping's within 900mm of the end of a ridge should also be mechanically fixed

19. PROPOSED FLAT ROOF

- See attached in APPENDIX Bauder or equivalent –Warm Roof System including Insulation Specification.
- Proposed modified bitumen membrane roof finish. Refer to additional specification below, any alternative roof finish products to be approved by architect prior to installation.
- 18mm Plywood generally shall comply with BS 1455. 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
- Contractor to provide Flat roof falls at minimum 1:80 via furring pieces sized by structural engineer.

- Proposed 225 x 44mm Roof joists, Refer to Engineer's drawings for full details and specification.
- Refer to Airtightness Requirements, membrane required directly below timber roof joists at ceiling level.
- Refer to architects' drawings for location of selected ceiling systems, specification for proposed ceiling systems in following section above.
- Roofing membrane is to carry into gutter and wrap over perimeter upstand. Code 5 Lead flashing with min 150mm Insulated upstand to be provided where proposed warm roof adjoins an external wall.
- Contractor to include for DPC cavity trays where proposed link corridor roof abuts to adjacent external walls with insulated upstands and fillets to architects' detail.
- Refer to section below for proposed Alumasc or equivalent Aluminium rainwater goods.
- Refer to Architect's drawings for Roof fall directions indicated.
- Gutters at falls instructed by engineer in direction indicated on Engineers / Architects drawings. All to be fully formed using 18mm WBP Plywood.

• SCOPE OF WORKS

- This section includes:
- The Bauder waterproofing system.
- Related Bauder system accessories
- This section does not include:
- Construction of the structural deck.
- Proprietary rainwater drainage / plumbing – refer NBS section R10
- Lead sheet coverings / flashings – See NBS Section H71.

J41 REINFORCED BITUMEN MEMBRANE ROOF COVERINGS

- To be read with Preliminaries/ General Conditions.

• TYPES OF COVERING

- 110A BUILT-UP REINFORCED BITUMEN MEMBRANE WARM DECK ROOF COVERING
- Roof area: Main Roof R1 over SEN classroom
- Substrate: New Plywood deck (designed and constructed to provide a minimum finished slope of min 1°).
- Preparation: As clause 610A.
- Primer: Bauder Activator-Primer (Canister), APR01-Black, applied to the roof substrate and all upstands and skirtings. For application method and guidance information, refer clause 660B.
- Vapour control layer: BauderTEC KSD Mica, 2.5 mm thick aluminium lined, SBS elastomeric bitumen self-adhesive vapour barrier. Installation as clause 670B
- Insulation: Bauder Thermotech flat board, fire resistant, , zero ODP, highly efficient rigid urethane insulation 240mm thick (120+120) to achieve the required U value (refer Clause 230). Installation as clause 680A
- Insulation to upstands: Vertical upstands to roof light kerbs, access hatches i.e. builders kerbs (but excluding proprietary insulated integrated rooflight units) and changes of level, the Insulation is to be the same thickness and meet the same thermal value as used for the flat area. Installation as clause 681B.

- Vertical upstands to insulated cavity wall abutments only: 30 mm thick, Bauder Thermotech PIR flat board, fire resistant, aluminium foil faced, zero ODP, highly efficient rigid urethane insulation. In compliance with Part L of the current Building Regulations, the insulation to wall abutments should be 300 mm in height from the deck surface to the top of the upstand, with the vertical insulation being installed before the flat, so as to retain the insulation at the base. Installation as clause 681B.
- Waterproof covering: BAUDERFLEX ROOF SYSTEM
- System manufacturer: Bauder Limited, 70, Landseer Road, Ipswich, Suffolk, IP3 0DH.
- Tel: 01473 257 671. Fax: 01473 230 761.
- Email: technical@bauder.co.uk
- Web: www.bauder.co.uk
- Primer: Bauder Activator-Primer (Canister), APR01-Black, applied to the upper surface of the Bauder insulation. For application method and guidance information, refer clause 660B.
- Underlayer: BauderTEC Sprint- DUO, 2 mm thick, 120g/m² glass-fibre reinforced, SBS elastomeric self-adhesive bitumen underlayer.
- Attachment: As clauses 710, 747A
- Top layer / Cap sheet: Bauder K4E, 4.2 mm thick, 250g/m² polyester reinforced, SBS elastomeric bitumen torch applied capping sheet, Charcoal Grey slate finish. Attachment: As clauses 710, 750B.
- Flashings and detail work: Bauder K4E capping sheet. Install as clause 775A.
- Surface protection: N/A
- Accessories: -
 - Bauder Insulation upstand support brackets. Installation, as clause 775A.
 - Bauder 50 mm x 50 mm PIR angle fillets. Installation, as clause 775A.
- Supply and install new Bauder Bituminous Parapet Outlets, quantity as required. 100 mm nominal bore, complete with pre-attached bitumen connection flange and dome grating. These should be installed together with the associated Bauder stainless steel connection pipe and flexible vapour barrier sealing (where the latter item is required). Installation as clause 784D

• PERFORMANCE

• **210 ROOF PERFORMANCE**

- General: Secure, free draining and weather tight.

230 INSULATION

- Thermal transmittance (Average U-Value) of roof: 0.1W/m²K
- Finished Surface: Suitably even, stable and robust to receive roof covering.
- Insulation compliance: To relevant British Standard or Agrément certified.

• PRODUCTS

• EXECUTION GENERALLY

515 ADVERSE WEATHER

- General: Do not lay coverings in high winds, wet or damp conditions or in extremes of temperature unless effective temporary cover is provided over working area.
- Unfinished areas of roof: Keep dry, protect edges of laid membrane from wind action.

520 INCOMPLETE WORK

- End of working day: Provide temporary seal to prevent water infiltration.
- On resumption of work: Cut away tail of membrane from completed area and remove from roof.

530 APPLYING PRIMERS

- Coverage per coat (minimum): As per manufacturer's recommendations.
- Surface coverage: Even and full.
- Coats: Fully bond. Allow volatiles to dry off thoroughly between coats.

560 GENERAL WORKMANSHIP REQUIREMENTS

- Installation of the Bauder waterproofing system may only be carried out by trained and certified operatives approved by Bauder Ltd and who carry current ID badges. These should be available for inspection at all times.
- Workmanship must comply with Codes of Practice BS 8217:2005 (or alternatively Bauder Ltd.'s specification where otherwise stated). Non-compliant workmanship will not be permitted, even if the system is watertight. The client will be told that all such faults must be remedied, before the Guarantee is issued.
- All waterproofing materials and system components must be supplied by Bauder Ltd, unless otherwise stated. Any sub-standard materials or un-authorized alternatives will be rejected. Any building work which is the responsibility of the roofing contractor and has a bearing on the life of the Bauder System must be carried out by properly trained and qualified tradesmen.
- Any structural damage, peculiarities or details discovered that might affect the performance of the Bauder system, should be reported immediately to the client's representative and Bauder Limited in order that they may assist in overcoming the problem.
- The contractor is to ensure water tightness of the roof at all times. Proper day joints must be formed at the end of each working day to provide a temporary seal. No mopping or loose covers will be permitted.
- Where building works are to be carried out by other trades, following completion of the waterproofing, the contractor must make adequate provision for supplying protection to prevent damage to the new membranes. The final inspection will not be carried out by the Bauder Site Technician or the Bauder nominated Independent surveyor until all associated trades are complete and the roof areas are clear from all debris and protection layers.
- It is imperative that the Bauder Approved Contractor conforms to the workmanship criteria as listed above. Any deviation will result in the contract being considered unguaranteeable.
- All mechanical and electrical work to plant and equipment should be carried out by competent mechanical and electrical qualified tradesmen. All plant is to be reinstated and recommissioned on completion of the roofing works in accordance with the client's detailed specification.
- Where building works are to be carried out by other trades, following completion of the waterproofing, the contractor must make adequate provision for supplying protection to prevent damage to the new waterproofing.
- If any items of plant/equipment are to be situated on the finished roof, a sacrificial layer of Bauder capping sheet is to be loose laid beneath. This is to extend a minimum 25mm past the point of contact on all sides. In the case of heavy items it may be necessary to introduce a load-spreading slab, please contact Bauder for further advice.
- All lead work to be carried out by skilled tradesmen and in accordance with current codes of practice and the recommendations of the Lead Development Association.

561 SITE INSPECTIONS

- Bauder Site Technicians will carry out regular inspections of the project during the course of the works. The Approved Contractor must give reasonable notice to Bauder of their intention to commence laying capping sheet. This will allow a discretionary inspection of the underlayer to take place, so that any remedial treatment necessary can be carried out prior to installing the capping sheet. This is particularly important when tapered insulation has been used to ensure that any areas of standing water that may remain can be addressed.
- Bauder must be notified when the roof is ready for final inspection and all related works and snagging complete. See also clauses 910A or 910B (Landscaped roofs).

562 HEALTH & SAFETY INFORMATION – ROOFING WORK

- Suitable precautions must be taken to prevent accidents occurring when roofing systems are being installed.
- The contractor must ensure that adequate measures are taken to effectively prevent injury to members of the public and other persons using the premises.
- Whenever possible, access to the roof should be made via internal staircases rather than by temporary means. Where this is not available, it is the responsibility of the contractor to ensure a safe means of access and a safe working place is established through the risk assessment process.
- Where microwave equipment is installed at roof level, care must be taken to prevent persons working on the roof from being exposed to large doses of microwave radiation.
- Similarly, the contractor should liaise with the client to ensure that there are no extract outlets situated on the roof where noxious or harmful emissions could affect persons working. Suitable precautions will be necessary to prevent exposure where this situation arises.
- The contractor is responsible for providing adequate fire fighting equipment in the form of extinguishers during work on the roof. These should be kept in easily accessible locations and be suitably signed.
- The contractor must ensure that suitable written method statements and risk assessments are available for the work being undertaken. It is essential that working at height and manual handling methods be fully assessed as roofing materials are heavy and can cause serious injury.
- The contractor must ensure that suitable information about the roof covering is provided to the Client at the end of the work to ensure that work in future can be carried out safely. This information will form part of the Health and Safety File.
- All persons working on the roof should be provided with, and wear, suitable personal protective equipment and wet weather gear as identified in the risk assessment. Training must be provided to all contract staff on the safe use of the equipment.
- The installer must observe Product Safety Datasheets and complete COSHH assessments relevant to the materials being used.
- No work must be carried out on fragile roofs or where there are skylights unless a suitable risk assessment has been completed and precautions taken to prevent persons falling through fragile roofs and openings.
- HSE guidance must be followed when carrying out any work involving interference with asbestos.
- Current CDM Regulations must be observed.

- SUBSTRATES / VAPOUR CONTROL LAYERS / WARM ROOF INSULATION

610A SUITABILITY OF SUBSTRATES (PLYWOOD)

- Substrates generally: Secure, clean, dry, smooth, and free from frost, contaminants, voids and protrusions. The new exterior grade plywood deck, minimum 18mm thickness as specified by client, conforming to BS EN 636-3 & CPD/CE compliance, fixed directly to either the joists or firings using non corroding ring shank nails or recommended screw fasteners.
- Falls: Where provided, the falls/cross-falls should be designed to 1:40 to achieve minimum finished falls of 1:80 to comply with drainage requirements of BS 6229:2018 and the SPRA design guide. No deflections or back-falls present if the deck is designed to achieve a 0° level finished surface (including when using tapered insulation to provide falls).
- Preliminary work: Complete including:
 - - Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
 - - Fixing of battens, fillets and anchoring plugs/strips.
- Moisture content and stability of substrate: Must not impair roof integrity.
- Preparation: All such items to be rectified as necessary to eliminate the possibility of puncturing the new waterproofing system.

640 FIXING TIMBER TRIMS

- Fasteners: type/length appropriate and suitable to particular deck substrate.
- Fixing centres (maximum): 500 mm.

- WATERPROOF COVERINGS/ ACCESSORIES

660B APPLYING PRIMER

- Primer: Bauder Activator-Primer (Canister), APR01-Black.
- Purpose: Substrate primer to seal and prepare dry surfaces of a variety of common substrate material prior to the application of Bauder self-adhesive bitumen membranes.
- Before application: All surfaces must be dry, clean and free from dust, dirt, oil, grease and loose material.
- Application method: Spray Applied to provide even and full coverage. Avoid pooling. Never attempt torching within 10 min of primer application, even if the surface appears dry.
- Application rate:
 - - 300mm wide spray
 - - Coverage: Approx. 96 g/m²
 - - Two coats may be required for very porous substrates.
- Application temperature: +5 - +30°C
- Drying time: Approx. 5 - 10 mins, dependent upon ambient temperature and material porosity.
- Coats: Fully bond. Allow volatiles to dry off thoroughly between coats.
- Re-application: Necessary after 4 hours exposure if waterproofing has not yet been applied, to maintain adhesion performance.
- Caution: Use only outdoors in well ventilated areas or with respiratory apparatus and keep away from all sources of ignition. Take necessary precautions to avoid the solvent vapour from entering the buildings ventilation system.

670A LAYING VAPOUR CONTROL LAYER

- Attachment: Cold applied and fully bonded to substrate in accordance with manufacturer's requirements.
- Side and end laps: minimum 100 mm, laid red over blue with all laps torch sealed to provide a 5-10 mm bitumen bead extrusion. Installation methods as recommended by manufacturer.
- Penetrations: Fully seal using bonding methods recommended by manufacturer.
- Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like: Enclose, with vapour control layer:
- Dressed up 150 mm above surface of insulation, thus providing 100 mm (minimum) seal when overlapped by the roof covering.
- Care should be taken to ensure adhesion when the temperature is below + 5° C.

680D LAYING WARM ROOF INSULATION

- Setting out:
- Long edges: Fully supported. (Where metal decking is specified, the long edges must be fully support and run at right angles to metal deck troughs).
- End edges: Fully supported.
- Joints: close butted together.
- End joints: Stagger.
- Bedding: Bonded to the upper surface of the Vapour barrier using Bauder Polyurethane Insulation Adhesive. The adhesive should be applied in strips following the direction of the board length giving 6 no. 8 mm wide continuous and equally spaced adhesive beads within each 600 mm board width.
- Multiple board layers: Where the total thickness of insulation required is greater than can be achieved by a single standard board, then additional boards of the same product can be adhered to make up the total thickness required. Additional boards should be bonded using Bauder Insulation Adhesive applied in strips following the direction of the board length giving 6 no. 8 mm wide continuous and equally spaced adhesive beads within each 600 mm board width. The second layer of boards should be laid off-set and staggered.
- Protection to exposed edges of insulation: Reduced thickness treated timber batten as clause 640 (or equivalent plywood construction), a minimum width of 150 mm and 10 mm less in thickness than the insulation to accommodate the build-up of the waterproofing layers – all securely fixed to the deck. Outer edges chamfered at changes in level.
- Completion: Boards must be in good condition, well-fitting and stable.

681B INSTALLING WARM ROOF INSULATION (INSULATED UPSTANDS)

- Bedding: Fully bonded to the vapour control layer by torch activating the membrane surface profiles. Board joints to be close butted. Upstand insulation boards should be installed before the insulation to the flat areas so that the vertical upstand insulation is retained both at the base and at the top. At vertical wall abutments that are cavity insulated, retention is obtained by mechanical fixing of the Bauder insulation support bracket.
- Protective hard edges: treated timber battens or Bauder Insulated upstand brackets (as appropriate to given detail situation) must be used at all right angled edges e.g. top edges of parapet walls or abutment upstands.
- Encapsulation seal: Provision must be allowed for forming a minimum 100 mm lap seal between the vapour control layer and underlayer, where the insulation finishes.

710 LAYING REINFORCED BITUMEN MEMBRANES GENERALLY

- Direction of laying: Unrolled up the slope.

- Where practicable, install so that water drains over and not into laps.
- Side and end laps (minimum): 100 mm, with the exception of mineral surfaced membranes, where side laps are 80 mm, but the head laps to remain 100 mm.
- Head and side laps: Offset.
- Intermediate and top layer/Capping sheet: Fully bond.
- Successive layers: Apply without delay. Do not trap moisture.
- Strips of bitumen membrane for 'linear' details: Cut from length of roll e.g. gutter sole pieces.
- Detail flashings: to be cut from width of roll.
- Completed coverings: Firmly attached, fully sealed, smooth, weather proof and free draining.

747A SELF-ADHESIVE BONDING OF REINFORCED BITUMEN UNDERLAYER

- Bond: Full over whole surface, with no air pockets.
- Underlayer: Cold applied and fully bonded by removing the release foil sheet and installing in the approved Bauder manner, using the Bauder long handled roller to extrude a 5-10 mm bead of bitumen. Head laps to be 100 mm side laps to be 80 mm, lapping red strip over blue and torch sealing. All laps to upstands, edge details, flashings, etc., to be 100 mm. The underlayer must be taken up all upstands, edge details, in accordance with current British Standards and the manufacturer's recommendations.
- Underlayer inspection: The Approved Contractor must give reasonable notice to the nominated Bauder Site Technician of their intention to commence laying capping sheet. This will allow a discretionary inspection of the underlayer to take place, so that any remedial treatment necessary can be carried out prior to installing the capping sheet.

750B LAYING REINFORCED BITUMEN TORCH-ON CAPPING SHEET

- Bond: Full over whole surface, with no air pockets.
- Excess compound at laps of top layer/ capping sheet: Leave as a 5 mm - 10 mm continuous bitumen bead extrusion.
- Laying top layer: Fully bonded to the underlayer by torching in the approved Bauder manner. Head laps to be 100 mm, side laps to be 80 mm. All laps to upstands, edge details, flashings, etc. to be 100 mm.
- Final Inspection: No landscaping is to be applied until the root resistant capping sheet has been thoroughly inspected by the Bauder Site Technician. This is to ensure that any remedial treatment that is necessary can be carried out prior to laying the landscaping elements. Failure to ensure the instigation of this inspection will result in the issuing of the Bauder guarantee being put in jeopardy.

786 LIGHTNING CONDUCTOR CLIPS

- The lightning conductor is to be fixed using the specified conductor clips, incorporating a colour matched Bauder capping sheet pad, fully bonded to the main capping sheet at 1m centres by the approved Bauder roofing contractor. Lightning conductor retention using bituminous membrane strips are not acceptable.
- Where lightning conductors are required to be fixed to brickwork, upstands, parapet walls etc., proprietary clips mechanically fixed should be utilised. Care should be taken to ensure that fixings do not penetrate the new waterproofing system.

- COMPLETION

910B INSPECTION

- Interim and final roof inspections: in accordance with the manufacturer's requirements for guarantee.
- Notification: It is the responsibility of the approved contractor to advise Bauder Ltd when the roof is ready for Final Inspection. The 'Final Inspection' of the waterproofing must be carried out and approved by Bauder Ltd prior to any landscaping products/materials being installed, otherwise a guarantee cannot be issued.
- Other requirements: Please also refer to preliminaries / general conditions.

940 COMPLETION

- Roof areas: Clean.
- Outlets: Clear.
- Work necessary to provide a weather tight finish: Complete.
- Storage of materials on finished surface: Not permitted.
- Completed membrane: Do not damage. Protect from chemicals, traffic and adjacent or high level working.

950B GUARANTEE

- A 20 year Product, Workmanship guarantee is to be provided upon completion following a Final Inspection by Bauder. Life expectancy in excess of 30 years
- This system must be installed by a Bauder Approved Contractor, to be eligible for guarantee

20.PROPOSED VALLEYS AND FLASHINGS

- Code 5 Lead flashing to be lapped over closure flashing and dressed in to blockwork, refer to architects' drawings for further detail.
- Tapcon fixing or equivalent with minimum 14mm diameter non ferrous EPDM backed washer fitted at maximum 450mm centres to be used to firmly fix verge flashing to the proposed blockwork wall.

21.ALUMINIUM FASCIA, SOFFIT & COOPING

- Proposed Soffit / Fascia / Coping to be Skyline product supplied by Alumasc or equivalent.
- Alumasc Skyline or equivalent – Power Coated Aluminium interlocking soffit & fascia systems to be included throughout proposed pitched roof at eaves, Refer to Architect's appendix for product information.
- Alumasc Skyline or equivalent Soffit Planks to be 400mm wide, firmly fixed to the back of softwood at eaves edge below the rafters. Refer to Architect's appendix for product information.
- Alumasc Skyline or equivalent Fascia to be fixed throughout all eave's perimeter, firmly fixed to softwood.
- Alumasc Skyline or equivalent – Power Coated Aluminium coping systems to be included throughout proposed parapets, Refer to Architect's appendix for product information.
- RAL colour to be agreed with Architect before installing. All installed as per manufacturers recommendations.
- Refer to architect's drawings for proposed roof locations.

22. PROPOSED RAINWATER GOODS

- External rainwater goods by Alumasc or equivalent. Contractor to supply and fit rainwater goods by Alumasc or equivalent throughout. Refer to Architect's drawings for proposed location of rainwater downpipes, to be read in conjunction with engineers' drawings for rainwater gullies.
- Alumasc Aqualine or equivalent – Powder Coated Extruded Aluminium gutter & downpipe system to be included throughout proposed extension, Refer to Architect's appendix for product information.
- Proposed Gutters to be Deep Run profile gutter form 110 x 85mm, fixed with Alumasc fixings or equal approved @ manufactures specified centres. Colour to be agreed with Architect. All installed as per manufacturers recommendations.
- Refer to architect's drawings for roof fall directions and locations of proposed gutters
- Refer to Architect /Engineers Drawings for downpipe and gully trap locations, connected to existing surface water drainage system.
- Rainwater Drainage Systems – GENERAL
- Gravity Rainwater Drainage System.
- Rainwater outlets, gutters, pipework and accessories as per detail sections below
- System Performance
- Design Standard: To BS EN 12056-3:2000, clauses 3-7 and National Annexes
- Collection and Distribution of Rainwater: Complete, and without leakage or noise nuisance
- Design Parameters: Design rate of rainfall as per BS EN 12056-3:2000, National Annex NB.2 - Category 1
- PRODUCTS
- Alumasc or equivalent Extruded Aluminium Deep Run gutter 110 x 85mm
- Gutters and fittings to: BS 8530 (formerly BS 2997)
- Manufacturer: Alumasc or equivalent Exterior Building Products Ltd White House Works, Bold Road, Sutton, St Helens, Merseyside WA9 4JG.
- Tel: 01744 648400, Fax: 01744 648401, Email: info@alumasc-exterior.co.uk
- Reference: Alumasc Aqualine or equivalent aluminium rainwater system
- Profile: Half Round deep run
- Size: 110 x 85mm
- Outlet Size: 100mm
- Type/grade: Made from LM2 and LM6 grades of Aluminium alloy to BSEN1559:1997, BSEN 1676:1997 and BSEN 1706:1998
- Finish: Polyester powder coated to BS EN 12206-1:2004
- Colour: To be advised
- Jointing: Gutter lengths or fittings are overlapped at the joint with a spigot and socket. Slots are provided for fixing using M6 mushroom head aluminium screws with nuts and washers. Seal evenly across the joints with Dow Corning 791.
- Fixing: Fascia bracket fixed at 915mm centres and at each fitting using number 12x38mm round head twin thread screws and washers bright zinc plated.
- Alumasc Aqualine or equivalent Extruded Aluminium Flush joint Aluminium downpipe (100mm diameter) Flush joint Aluminium pipework for external use:
- Pipes, fittings and accessories to: BS 2997
- Manufacturer: As above
- Reference: Flush joint aluminium downpipe system
- Size: 100mm diameter
- Type/grade: 6063 TF alloy

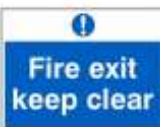
- Finish: Polyester powder coated to BS EN 12206-1:2004
- Colour: To be advised
- Fixing: Pipe clip fixed at maximum 2.0m centres. Plug and screw to wall with number 12 x 50mm round head twin thread screws and washers bright zinc plated to BS 1706:1960 Class ZN3. Seal internal spigot
- joints with Dow corning 791 silicone sealants allowing for a 3-4 mm vertical thermal movement gap.
- Accessories: Bends, Branches, Access Pipes, Offsets, Shoes, Rainwater Heads, Pipe Clips.
- Alumasc Aqualine or equivalent Extruded Aluminium Hopper heads to be included to valley adjoining existing building
- **FLOPLAST or equivalent GUTTER GUARDS BLACK 100-115mm to be installed on the new gutters**
- Soprema or equivalent parapet leaf guard to be installed on new flat roof. These leafs guards are to be stainless steel, to be strong and Corrosion resistant, tamper proof and to have clamped securely to the inside of the outlet stem

23.PROPOSED WINDOWS AND DOORS-U-Value 1.2W/m²K Minimum Required (nZEB Compliant)

- 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 and doors specified exceeding D.O.E TGD 021-1. U-value to exceed the performance of 1.2 W/m²K as per 2019 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.
- Doors to have a maximum threshold strip of 15mm for wheelchair access.
- Windows must have a design life span of 40 years.
- All windows and doors 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.
- Fire escape doors to have panic ironmongery where necessary (see FSC Report & drawings).
- Threshold piece to all external doors to be supplied and fitted by window contractor with 15mm max height.
- Master key to be provided for all internal and external doors
- All external windows and doors 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.
- ACO or equivalent drainage channels fitted to front of doors and sidelights and to connect to surface water drainage as indicated on drawings.
- Contractor to include for manifestation and door clear opening widths in compliance with TGD Part M 2010 Section 1.2.4 Accessible entrance doors
- Refer to F.S.C Drawings for minimum door opening clear widths and directions which supersedes TGD part M 2010.
- Refer to attached architects window specification for more detailed information on the windows.

Proposed External Door Signage				
Image	Catalogue No.	Description	Unit	Qty
	KA-9220SA/WHTGRN	PVC 'Push Bar To Open' Sign To BS5499 300mm x 40mm	Each	2
	KA-9221/BLU	PVC 'Fire Exit Keep Clear' Sign To BS5499. W200mm X H150mm	Each	2

Heavy Duty Door Stop With Shock Absorber & Retainer – Proline Hardware or Equivalent



Dorma TS93 Cam Action Door Closer or equivalent



D01, D02 – Proposed Extension Stairway

Abloy or equivalent Package 3ME

Narrow stile door Multipoint - Read in, free egress - complies with EN1125

D03, D04, – Proposed Extension Classroom & Central Activity Space Doors

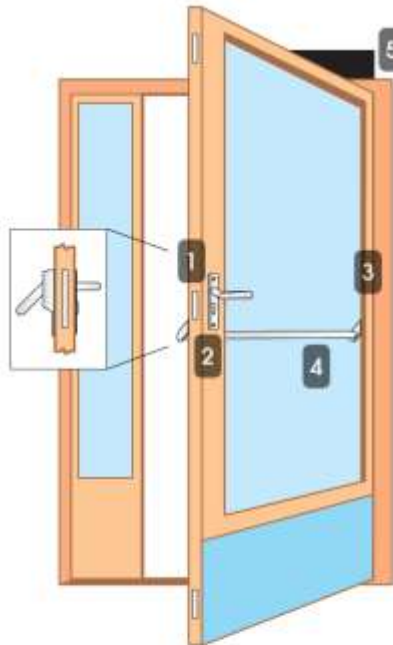
Abloy or equivalent Package 3MP

Narrow stile door Multipoint - Read in, free egress - complies with EN1125

- Refer below for details of proposed Abloy or equivalent Access Control Package hardware in compliance with EN1125 & EN179.



Package 3MP Escape (EN1125)



Narrow stile door

Multipoint - Read in, free egress - complies with EN1125

1. EL466 solenoid lock
2. CY326 single cylinder - DIN Europrofile
3. DL8 door loop
4. PBE011-EL460 ABLOY panic bar with 1/2 handle set
5. DC240 door closer (optional)

Narrow stile door applications with handle operation, inside panic bar always operates and the outside handle is controlled and activated on signal from access control system. Key override at all times from outside.

Technical Specification:

Operating voltage: 12V DC to 24V DC stabilised (+15%-10%).

Current draw: 12V DC 350 mA max 24V DC 250 mA max.

Backsets available: 30 mm, 35 mm, 40 mm, 45 mm.

Monitoring: RQE on panic bar, bolt position, door position, cylinder operation.

Standards:

EN1125 when used with correct furniture

EN1634-1

EN61000-6-1

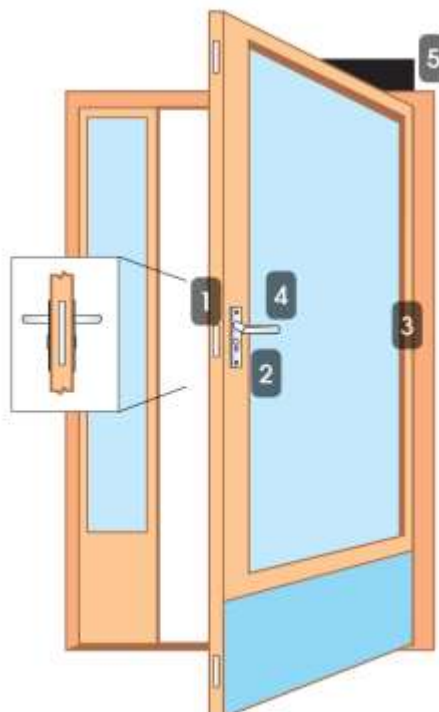
EN1303 (cylinder)

EN14846





Package 3ME Multipoint



EN 179

Narrow stile door

Multipoint - Read in, free egress - complies with EN179

1. EL466 solenoid lock
2. CY326 single cylinder - DIN Europrofile
3. DL8 door loop
4. 60-0819-SSS handle set (3-19/750 PZ+BL-SSS alternative)
5. DC240 door closer (optional)

Narrow stile door applications with handle operation, inside handle always operates and the outside handle is controlled and activated on signal from access control system. Key override at all times from outside.

Technical Specification:

Operating voltage: 12V DC to 24V DC stabilised (+15%-10%).

Current draw: 12V DC 350mA max 24V DC 250mA max.

Backsets available: 30 mm, 35 mm, 40 mm, 45 mm.

Monitoring: RQE on inside handle, bolt position, door position, cylinder operation.

Standards:

EN179 when used with correct furniture

EN1634-1

EN61000-6-1

EN1303 (cylinder)

EN14846



24. PROPOSED WINDOW HEADS

- Contractor to provide structural window heads and bearing pads to engineer's specification, All proposed heads to be approved by engineer prior to manufacture.
- Existing conditions to be assessed on site prior to final confirmation of required heads within existing buildings where alterations have taken place, engineer to be notified of structural alterations prior to commencement of works

25. 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).

26. 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.

27. BLINDS

- Blinds to be included for all areas to all class bases and staff areas within 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.

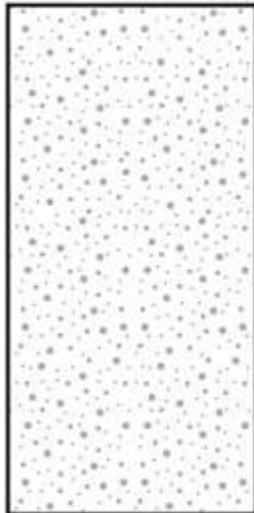
- In order to achieve the above requirements and ensure the blinds are fit for purpose as outlined consideration should be given to
- Light transmission values in the 9% to 12% range
- Solar absorption in the 17% to 20% range
- Optimum shading coefficient
- Openness factor in the 3% to 5% range (All 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.

28.PROPOSED SUSPENDED CEILING

Acoustic Ceiling

- Acoustic ceilings shall be installed to the, Classroom Base, Multi Activity Room, 2no SET rooms and the Quiet space to the specification below and indicated on Architects drawing No.T107
- Proposed SEN Acoustic ceilings shall consist of the following:
- Suspended ceiling system type – CasoLine MF **or equivalent**
- Product Substantiation Report (PSR) reference  C10A058 /  C10A059 /  C10A069
- **Performance characteristics**

8-15-20 SUPER



- Rigitone 8-15-20 SUPER (plenum depth 50mm)³
- Rigitone 8-15-20 SUPER (plenum depth 200mm)
- Rigitone 8-15-20 SUPER (plenum depth 200mm plus 50mm Isover Frame Batt 32)

Practical absorption coefficient α_p

	125	250	500	1k	2k	4k	α_w	AC ¹	NRC ¹
■	0.15	0.40	0.70	0.75	0.45	0.40	0.50(M)	D	0.55
■	0.35	0.75	0.75	0.55	0.40	0.30	0.45(LM)	D	0.60
■	0.60	0.85	0.80	0.65	0.45	0.30	0.45(LM)	D	0.70

-
-
- **Framing components**
- Gypframe **or equivalent** Ceiling Sections: **Gypframe or equivalent MF5**
- **Ceiling Section**
- Ceiling Section installed maximum centres: **326-327mm**
- Gypframe **or equivalent** Primary Channels: **Gypframe or equivalent MF7 Primary Channel**
- Primary Channel installed maximum centres: **1000mm**
- 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: **900mm**
- Acoustical sealant: **Gyproc or equivalent Sealant applied**
- **around perimeter of ceiling**
- Drawing references: **Refer to relevant Architect's drawings**
-
- **Plasterboard components**
- Number of plasterboard layers: **1**
- Gyproc **or equivalent** plasterboards: Layer 1 (Inner): **Rigitone 8-15-20 SUPER or equivalent**
- Layer 2: **n/a**
- Screw fixings for boarding: Layer 1 (Inner): **25mm Gyproc or equivalent Drywall Screws**
-
- Boards should be positioned with corresponding **Rigitone or equivalent Spacing Tool** with joints treated in line with the **Rigitone or equivalent Jointing Process**.
- Gyproc **or equivalent** DryWall screws installed at 170mm 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.
- **600 x600mm Rigitone or equivalent inspection hatches to be installed to manufactures guidance. Refer to Architects drawings for locations and quantity of inspection panels required.**
-
- **Insulation components**
- Insulation specification required above ceiling: 50mm Isover **or equivalent** Frame Batt 32 / 60mm Isover Comfort 32 **or equivalent**.
-
- **Finishing**
- 1 coat of **Gyproc or equivalent Drywall Primer** prior to direct decoration (applied as soon as possible after board fixing is completed).
-
- **Qualifications**
- All materials unless otherwise indicated shall be supplied by Gyproc **or equivalent**, and shall be installed in accordance with their current published instructions and generally in accordance with all relevant Standards. Systems installed in full accordance with Gyproc's **or equivalent** recommendations comprising of genuine Gyproc **or equivalent** and Isover branded components qualify for the Spec Sure lifetime system warranty.
-
- **Health & Safety**
- Ensure that suitable personal protection is worn when handling Gyproc **or equivalent** and Isover products/systems. All relevant Health and Safety Legislation and Guidelines must be followed. The relevant Material Safety Data Sheets must be referred to prior to specifying, handling or installing Gyproc **or equivalent** & Isover **or equivalent** products and systems.

Standard CasoLine MF Suspended Ceiling

- Metal Stud Partition system type – CasoLine MF or equivalent standard non fire rated system to, Office & Store rooms.
- Product Substantiation Report (PSR) reference – C100016 (Attached in Appendix)
- 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 MF5 Ceiling Section
 - Ceiling Section installed maximum centres: 450mm
 - Gypframe Primary Channels: Gypframe MF7 Primary Channel
 - Primary Channel installed maximum centres: 1200mm

- Gypframe Connecting Clips: to connect MF5's to MF7's at every intersection. Gypframe MF9 Connecting Clips used
- Gypframe Hanging Angle: Gypframe GA1 Steel Angle
- Hanging Angle installed maximum centres: 1200mm
- Acoustical sealant: Gyproc Sealant applied around
- Plasterboard components
- Number of plasterboard layers: 1
- Gyproc plasterboards: Layer 1 (Inner): 12.5mm Gyproc WallBoard
- Screw fixings for boarding: Layer 1 (Inner): 25mm Gyproc Drywall Screws
- Moisture board Ceilings to be provided in the ambulant WC's, The Sluice room, the Staff WC's, The Accessible WC and the Shower room, to be installed as per manufactures installation and guidelines. Refer to architects ceiling plan.
- All board joints installed staggered in accordance with Gyproc's current installation recommendations.
- Joints in face layer boards treated in accordance with Gyproc Paper Joint Tape method.
- Gyproc Drywall screws installed at 230mm centres within the field of the board and 150mm centres along board ends.
- Gyproc Drywall screws must maintain a minimum 10mm penetration through metal framing components.
- Gyproc Wafer Head Jack-Point Screws used to fix Gypframe GA1 Angle to Gypframe MF7 Primary Channels.
-
- Insulation components
- Insulation specification required above ceiling: n/a
-
- Finishing
- 2mm Gyproc Skim coat plaster (or Carlite Finish) applied in accordance with Gyproc's current recommendation

30 MINUTE FIRE RATED CEILINGS

- Metal Stud Partition system type – CasoLine MF or equivalent standard 30 fire rated system to the class store rooms.
- GypCeiling MF suspended ceiling framework comprising Gypframe MF7 at 600mm centres and Gypframe MF5 at 400mm centres fixed to structure and lined with four layers of Gyproc FireLine 15mm with 150mm stone mineral wool roll (22kg/m3) laid over Gypframe MF5 Ceiling sections.

Performance characteristics

Ceiling Fire Resistance (BS 476):
 Airborne Laboratory Sound Resistance (BS EN 717):
 Impact Laboratory Sound Transfer (BS EN 717):

30 Minutes
56RwdB
68LnwdB

Framing components

Gypframe Ceiling Sections:
Ceiling Section installed maximum centres:
Gypframe Primary Channels:
Primary Channel installed maximum centres:
Gypframe Connecting Clips:
used to connect MF5's to MF7's at every intersection.
Gypframe Hanging Angle:
Hanging Angle installed maximum centres:
Acoustical sealant:

**Gypframe MF5 Ceiling Section
450mm**
**Gypframe MF7 Primary Channel
1200mm**
Gypframe MF9 Connecting Clips
**Gypframe GA1 Steel Angle
1200mm**
Gyproc Sealant applied around

perimeter of ceiling Plasterboard components

Number of plasterboard layers:
Gyproc plasterboards:
WallBoard
Screw fixings for boarding:

1
Layer 1 (Inner): **12.5mm Gyproc**
Layer 1 (Inner): **25mm Gyproc**

Drywall Screws

Moisture board Ceilings to be provided in the ambulant WC's, The Sluice room, the Staff WC's, The Accessible WC and the Shower room, to be installed as per manufactures installation and guidelines. Refer to architects ceiling plan.

- All board joints installed staggered in accordance with Gyproc's current installation recommendations.
- Joints in face layer boards treated in accordance with Gyproc Paper Joint Tape method.
- Gyproc Drywall screws installed at 230mm centres within the field of the board and 150mm centres along board ends.
- Gyproc Drywall screws must maintain a minimum 10mm penetration through metal framing components.
- Gyproc Wafer Head Jack-Point Screws used to fix Gypframe GA1 Angle to Gypframe MF7 Primary Channels.

Insulation components

Insulation specification required above ceiling: **n/a**

Finishing

2mm Gyproc Skim coat plaster (or Carlite Finish) applied in accordance with Gyproc's current recommendation.

600X600mm ACOUSTIC GRID CEILING

- Contractor to allow for an Armstrong ULTIMA+ or equivalent Suspended ceiling Tile system in the existing corridor and proposed mainstream classrooms
- New perimeter trim to be provided through, fixed directly to masonry wall.
- Ceiling Tile

- Surface finish: Lightly textured, unperforated, non-directional surface. Factory applied treatment for durability, impact, scratch, soil and humidity resistance. Durable edge treatment.
- Colour: Global White
- Light Reflectance = 87%, Measured in accordance with EN ISO 7724-2 & 3.
- Thickness: 19mm
- Board & Grid Size: 600 x 600mm modules.
- Board Edge: Tegular Edge
- Fire Rating: Euro class A2-s1, d0
- Dnfw: 36 dB in accordance with EN ISO 10848-2 & EN ISO 717-1
- Rw: 18 dB in accordance with EN ISO 140-3 & EN ISO 717-1
- aW : 0.70(H) in accordance with EN ISO 354 & EN ISO 11654
- Exposed Grid System
- Prelude 24 XL² / TLS or equivalent 24mm exposed grid system
- Colour: all products in Global White / RAL 9010
- Material: galvanised steel
- Surface finish: baked polyester paint
- Grid Size: 600 x 600mm modules.
- Fire Reaction: Euro class A1 EN 13501-1
- Suspension hangers: provided at 1200 x 1200mm centres
- Setting out: Centred in each room
- Perimeter Trims: galvanised steel 'L' perimeter trim fixings (1924 HD), baked polyester paint finish
- Main runner: Prelude 24 Peakform or equivalent
- Material: Steel
- Dimension: 24mm x 43mm x 3600mm
- Surface finish: Baked polyester paint
- Colour: Global white (WG)
- Cross tee unslotted: Prelude 24 XL² / TLS Peakform or equivalent
- Dimension: 24mm x 38mm x 600mm
- Material: Steel
- Surface finish: Baked polyester paint
- Colour: Global white (WG)

29. PAINTING / FINISHES

- Allow for complete internal and external 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.

EXTERNAL WALL PAINT

- Contractor to include for painting of all external walls of proposed extension and existing block where alterations are taking place.
- 3 x no coats DULUX or equivalent trade Weather shield finish externally, colour to be approved by architect prior to application.

30.INTERNAL DOORS AND 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 2010 Section 1.2.4.

31. IRONMONGERY & ACCESS CONTROL

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.

ACCESS CONTROL

- Note: Access Control required to doors indicated on architect's floor plan., Refer to Specification clause below for details of Access control requirements within SEN Reconfiguration.

IRONMONGERY SCHEDULES

Proposed Ironmongery Schedule – Single Dorset for Standard W/C - FD Nil			
Image	Description	Unit	Qty
	KCC or equivalent Grade 304 Stainless Steel Unisex Symbol	Each	1
	Hat & Coat Hook	Each	1
	KCC or equivalent Floor Mounted Door Stop	Each	1
	KCC or equivalent Stainless Steel 304 Square Corner Kicking Plate. H150mm x W900mm.	Each	2
	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 Standard Thumb turn & Release. 6mm	Each	1
	Frisco Stainless Steel Maintenance Free Self-Lubricating Thrust Bearing Hinge to hEN1935 grade ④⑦⑥①①④①④ and Certifire CF336	Each	3
	KCC or equivalent Heavy Duty Modular Bathroom Lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade ③X⑤①①①F-BG②① and Certifire CF5234	Each	1
	KCC or equivalent Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	Each	1 Set

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 ④⑦⑥①①④①④ and Certifire CF336	Each	3
	KCC or equivalent Heavy Duty Modular Mortice Sash lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade ③X⑤①①①F③BC②① and Certifire CF5234	Each	1
	KCC or equivalent Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	Each	1 Set

Proposed Ironmongery Schedule – Single Door set			
Image	Description	Unit	Qty
	KCC or equivalent Floor Mounted Door Stop	Each	1
	KCC or equivalent Stainless Steel 304 Square Corner Kicking Plate. H150mm x W900mm.	Each	2

	Interdens Based Intumescent KCC or equivalent Lock Protector, 1mm, White	Each	1
	Flexfire or equivalent 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 ④⑦⑥①①④①④ and Certifire CF336	Each	3
	KCC or equivalent Heavy Duty Modular Mortice Sash lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade ③X⑤①①①F③BC②① and Certifire CF5234	Each	1
	KCC or equivalent Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	Each	1 Set

Ironmongery Schedule – Single Corridor 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 Width of door leaf.	Each	2
	KCC Stainless Steel 304 Square Corner Finger Plate. 75mm x 650mm.	Each	1
	KCC or equivalent Round Bar Pull Handle. A25 x B600 x C575 x D75. BT Fixing	Each	1
	Flexfire or equivalent Fire Rated Graphite Based Intumescent Hinge plate Protector, Radius, 1mm, Black, Self-Adhesive	Each	6
	KCC or equivalent Linear Boxed Power Supply Unit Certified to EN60950, 24VDC 1amp	Each	1
	Dormakaba or equivalent Rack & Pinion Door Closer c/w Scissor Arm & Hold Open Unit. 53010001	Each	1
	Frisco or equivalent Stainless-Steel Maintenance Free Self-Lubricating Thrust Bearing Hinge to hEN1935 grade ④⑦⑥①①④①④ and Certifire CF336	Each	3
	KCC or equivalent Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	Each	1 Set

Ironmongery Schedule – Single Door set for Changing Place- FD Nil			
Image	Description	Unit	Qty
	Grade 304 Stainless Steel Changing Place Symbol	Each	1
	Hat & Coat Hook	Each	1
	KCC or equivalent Floor Mounted Door Stop	Each	1
	KCC or equivalent Stainless Steel 304 Square Corner Kicking Plate. H150mm x Width of door leaf.	Each	2
	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 Standard Thumb Turn & Release. 6mm	Each	1
	Frisco Stainless Steel Maintenance Free Self-Lubricating Thrust Bearing Hinge to hEN1935 grade ④⑦⑥①①④①④ and Certifire CF336	Each	3
	KCC or equivalent Heavy Duty Modular Bathroom Lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade ③X⑤①①F-BG②① and Certifire CF5234	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 Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	Each	1 Set

32. **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.
- Refer to HHP Service Engineers package for Ventilation.
- 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 measured 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.

33.ATTIC ACCESS HATCH

- Refer to Acoustic ceiling section below for specification of 3 No. proposed roof access hatches to pitched roof spaces in order to provide access to services for maintenance as indicated on architects' drawings.
- Airtight insulated attic hatch (with wooden stair ladder) and Safety handrailing to be included along stairs and around opening to be provided with access decking to water storage tank using flooring grade OSB board / plywood on loft risers not to compact insulation or relative systems.
- Airtight insulated attic hatch to be proposed at ceiling level, with airtight insulated attic shaft made out of softwood, fixed firmly to the ceiling joist. Attic shaft to have steps with safety handrailing. Refer to Dooley Cummins Engineering Consultants specification which supersedes the above.
- Contractor to provide proposed stairs at roof joist level with 100x 50mm timber stud shaft constructed with plaster finish to enclose adjacent ceiling void, proposed shaft to be insulated to architect's specification for rooflight shafts.
- Proposed 200mm Mineral wool / Earthwool @ 0.044W/mK packed between ceiling void shaft with 200mm Mineral wool / Earthwool @ 0.044W/mK laid around perpendicular to frame.
- High grade air-tightness Intello Plus Pro Clima or equivalent membrane continuously taped and sealed with Tescon Pro Clima or equivalent tape and Orcon or equivalent sealant. Refer to airtightness requirements, membrane required directly below timber roof joists at ceiling level

34.BUILDING ENERGY RATING & PART L COMPLAINE

BUILDING ENERGY RATING

- The Main Contractor shall be responsible for providing a new Building Energy Rating upon completion of proposed works, School buildings and extensions shall achieve a building energy rating of A3 as a minimum.
- **Assessment:** Undertaken by a person registered with the National Register of BER Assessors.

- Submit registration details and evidence of qualifications when requested.
- **Building Type:** Non Dwelling.
- **Certificate:** The Final BER Certificate, Associated BRIRL Report & Advisory Reports shall be lodged in O&M Manual.
- **Submit:** Before the date for completion stated in the contract.
- A framed copy of the BER certificate shall be provided and mounted in a location to be agreed within the building.

BUILDING THERMAL PERFORMANCE

- The building fabric will provide insulation that is lower than the U-values specified in the TGD Part L 2022 of the Building Regulations.
- The Preliminary Energy Information Form DoES TGD-007 shall be completed and complied with together with the element specifications below
- The heating load calculations shall take the building usage and orientation into account.
- The school buildings and extensions shall achieve a building energy rating of A3 as a minimum for primary and post primary schools.
- The following minimum elemental U values must be achieved:
 - **All Ground Floors must achieve - 0.11 W/m²K**
 - **All External Walls must achieve - 0.13 W/m²K**
 - **All Roofs must achieve - 0.12 W/m²K**
 - **All Window / Door must achieve and overall average - 1.20 W/m²K**

35. PROPOSED VENTILATION VALIDATION REQUIREMENTS

- In accordance with TGD F 2019 section 1.2.1.10 ventilation systems should be installed by competent designers with ventilation validation certs being produced for all the mechanical ventilation systems in the proposed building.
- The contractor should engage with a third party to get the ventilation validation certs complete. The contractor is to not use the same company who installed the mechanical ventilation units.
- These ventilation validation certs are to be produced when the building is complete and issued to the architect as part of the safety file.

36. 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 & skirtings 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, skirtings 150mm high, Primed & Painted except W/C'S, Tarkett 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.
- Refer to Section below for required Kitchenette units.
- Proposed storage shelving

- Contractor to provide Heavy duty commercial type shelving to proposed store room as indicated on proposed floor plan
- Size: 600mm depth, 1800mm height, refer to plan for extents
- Frame material: steel
- No. of shelves: 5 tier
- 12mm plywood shelves
- Shelving to be fixed to perimeter walls with mechanical fixings

SEN CLASS BASE FITTED FURNITURE

- Refer to Specification clause above for Classroom Craft Sink Unit to be read in conjunction with Architects joinery **drawing T403**
- The provision and installation of Proposed fixed furniture shall be provided as per requirements of the Department of Education & Science for a Primary School Special Educational Needs Accommodation Class base in accordance with SDG-02-04.
- Each proposed **SEN class base** shall **include the following:**
 1. Coat rail 3000mm minimum length suitable for 10 no. coats, fixed 1000-1200mm above F.F.L in each SEN class base.
 2. Classroom Craft Sink Unit - Refer to Specification clause above to be read in conjunction with Architects joinery **drawing T403**.
 3. Whiteboards and notice boards as follows:
 - Two whiteboards (2400 x 1200mm non-interactive) fixed between 800 – 900mm above FFL
 - One notice board (2400 x 1200mm) fixed between 800 – 900mm above FFL
 - Care should be taken when locating these on walls so as to facilitate and not to interfere with the provision of interactive whiteboards and/or data projectors by the school authority.
 - **NOTE** *The provision of non-interactive whiteboards and noticeboards is part of loose furniture and equipment, and shall be fixed in place by the main contractor. The school authority is responsible for the provision of data projectors and interactive whiteboards and this shall not form part of the building contract.*
 - Locations of all boards etc. must be agreed with the school beforehand
 4. Classroom Storage Unit - Refer to Specification clause 28.7 below together with Architects joinery **Drawing T404** for design of proposed storage units **to each SEN class base. All SEN class base storage unit doors shall be lockable**

SEN STORE ROOM SHELVING

- Contractor shall provide and install storage shelving to 3no. SEN Base Store Rooms
- Contractor to provide Heavy duty commercial type shelving to proposed store room as indicated on proposed floor plans T101 – Proposed Ground Floor.
- Size: 600mm depth, 2000mm height, refer to plan for length extents
- Frame material: steel
- No. of shelves: 5 tier, 12mm plywood shelves
- Shelving to be fixed to perimeter walls with mechanical fixings.

SEN CLASS STORAGE UNITS

- Contractor shall provide Shop drawings for approval prior to manufacture of proposed furniture prior to production.
- Refer to Architects drawings T404 for proposed Storage unit Design.

- Proposed storage unit to be constructed using 18mm FSC certified MDF with Formica facing to top, sides and back, colour tbc by architect prior to manufacture of storage unit. All frame fixings to be concealed throughout.
- Formica Carcass Colour – Polar White
- All Carcasses are to be elevated from the floor level with a 150mm Base constructed with Kick boarding with Formica finish.
- 2no. Shelves consisting of 18mm FSC certified MDF with Formica facing, supported off powder coated heavy-duty steel adjustable shelving racks fixed to storage unit frame.
- 1 no. Shelf consisting of 18mm FSC certified MDF with Formica facing shall be provided in base unit.
- Formica shelving Colour – Polar White
- 4 part sliding door system to consist of 18mm FSC certified MDF with Formica facing with 6mm bulletin board material fixed to external face of all doors. Proposed aluminium sliding rail system to include top and bottom aluminium rails. 4 no. Recessed brushed stainless steel handles
- The use of melamine faced chipboard will not be permitted in any circumstances. Units to comply with BS 6222 and BS EN 1153 & structural performance to BS 6222:part 2, grade H. Surface finishes performance to BS 6222:part 3 & worktop classification to BS 6222:part 3, type 2.
- Formaldehyde levels to conform to type class E1 of product standard EN622-1.
- All SEN class base storage unit doors shall be lockable.
- It's the contractor's responsibility to make good of any damage caused throughout proposed works to all new Joinery & Fitted Furniture at their own expense up until the point of handover.

OFFICE FITTED FURNITURE (STORAGE)

- Refer to Architects drawings T403 & 404 for location of proposed office Fitted furniture.
- Contractor shall provide Shop drawings for approval prior to manufacture of all proposed furniture.
- Proposed unit carcass to be 18mm FSC Certified moisture resistant MDF Faced with Formica Colour Core – Polar White
- All Carcasses are to be elevated from the floor level with a 150mm Base constructed with Kick boarding with Formica finish.
- All doors to consist of 18mm FSC Certified MDF Faced with Formica Colour Core – Polar White
- 170 x 35mm "D" handles 10mm diameter by Hafele or equivalent (Ref 117.40.640) brushed stainless steel.
- Heavy-duty stainless-steel hinges & Door soft closers to be included – BLUM or equivalent
- Proposed shelving to consist of 16mm FSC Certified MDF Faced with Formica Colour Core – Polar White
- It's the contractor's responsibility to make good of any damage caused throughout proposed works to all new Joinery & Fitted Furniture at their own expense up until the point of handover.

37. PROPOSED FLOOR FINISHES

- Refer to architects drawing for location of below specified floor finishes.
- Refer to architects APPENDIX for approved adhesive specification.
- **Liquid DPM to be applied to floor surface before laying floor finish.**

- Colours to be agreed with an architect before order.
- PVC sheet flooring forbo vinyl or equal approved.
- Selected colour by architect; welded joints; floor levelling compound; fixed with adhesive and primer if recommended by manufacturer; all in accordance with the manufacturer's instructions; to concrete base ensuring subfloor is sound, clean and permanently dry with moisture level not greater than 3.5% clean floor using manufacturer's recommended detergent or similar approved and apply two coats of recommended polish to flooring and buff to a matt finish; all in accordance with architects specification

Forbo Sphera Energetic Homogeneous Vinyl Flooring

- Manufacturer: Forbo Flooring Systems
- Product: Forbo Sphera Energetic
- Product Type: Homogeneous vinyl sheet flooring
- Classification: EN ISO 10581 Type 1 homogeneous vinyl flooring

M50/355 Resilient Sheet Flooring Flooring Type

- Provide homogeneous vinyl sheet flooring to the following specification:
- Product: Forbo Sphera Energetic
- Manufacturer: Forbo Flooring Systems
- Thickness: 2.0 mm
- Roll Width: 2.0 m
- Roll Length: Up to 27 m
- Total Weight: Approx. 2850 g/m²
- Surface Finish: SMART-top PUR finish
- Wear Group: Type 1 homogeneous vinyl
- Abrasion Group: Group T

Performance Requirements

- Use Classification:
- Domestic: Class 23
- Commercial: Class 34
- Light Industrial: Class 43
- Slip Resistance:
- DIN 51130: R9
- EN 13893: $\mu \geq 0.30$
- Fire Classification: Bfl-s1 to EN 13501-1
- Dimensional Stability: $\leq 0.4\%$ (typical 0.2%)
- Residual Indentation: ≤ 0.10 mm
- Castor Chair Resistance: Suitable for continuous use
- Chemical Resistance: Very good
- Wet Area Suitability: Suitable
- Thermal Conductivity: 0.25 W/mK
- Light Fastness: ≥ 7

Sustainability

- Phthalate-free construction
- Manufactured using 100% renewable electricity
- Low VOC emissions:
- TVOC after 28 days: $\leq 0.01 \text{ mg/m}^3$
- Recycled Content: Approx. 34%

Installation

- Install in accordance with manufacturer's written instructions.
- Subfloor preparation to comply with BS 8203.
- Heat welded joints using matching welding rods.
- Adhesive: Manufacturer-approved resilient flooring adhesive.

Cleaning & Maintenance

- Initial and ongoing maintenance strictly in accordance with manufacturer recommendations.
- Do not apply polish unless specified by manufacturer.
- Maintain SMART-top finish using neutral cleaning agents.
- Suggested Specification Notes
- Suitable for:
- Healthcare facilities
- Education buildings
- Laboratories
- Commercial interiors
- High traffic circulation areas
- Manufacturer Resources
- Forbo Sphera Energetic Product Page
- Technical Specification PDF
- NBS Source Integration

Forbo Surestep Product Specification

- M50 RUBBER/ PLASTICS/ CORK/ LINO/ CARPET TILING/ SHEETING
- A heterogeneous safety vinyl collection combining decorative coloured chips with coloured quartz particles and PUR pearl surface finish. Durable slip resistance guaranteed for the product lifetime and ease of maintenance required in general traffic areas where additional slip resistance properties are required.
- Complies with BS EN 13845 Class ESf
- wet pendulum values of >36
- surface roughness of ≥ 20 microns
- DIN51130 (Ramp test): R10.
- 33 colours available
- Can also be specified in clause 155 (modified).
- Roll width: 2000 mm. standard Thickness: 2.0 mm. Thickness of wear layer: 0.7 mm. . -
_ -> 17 db Acoustic available in selected colours: 3mm thickness, 0.7mm wear layer.
- Matching welding rods are available in all collection colours.
- Consult with manufacturer technical literature for details.
- 150 SHEETING: VINYL

- Optional: Fabricated underlay:
- Corkment Underlay. – Optional.
- QuickFit Subfloor System. – Optional.
- Sarlibase T.E. Underlay. – Optional
- Forbo Vinylbase acoustic underlay - Optional
- Flooring roll: Heterogeneous PVC to BS EN ISO 10582 and BS EN 13845
- Manufacturer:
- Suggested range for compliance: Forbo Surestep Original.
- BS EN13845 / BS ISO 10874 class: 34 / 43 (Acoustic Class 42).
- Colour/ pattern: As per finishes Schedule
- Adhesive (and primer if recommended by manufacturer):
- Eurocol 540 Eurosafe Special – A superior acrylic dispersion solvent-free floor covering adhesive with a high initial grab.
- Eurocol 640 Eurostar Special – A superior acrylic dispersion low VOC emission adhesive with a high initial grab.
- Eurocol 140 Euromix PU – A polyurethane resin and hardener, water-resistant 2-component PU-adhesive.
- Eurocol 233 Eurosol Contact – A synthetic rubber in solvent fast setting contact adhesive.
- Seam welding: Hot welding with matching coloured rod.
- Accessories:
- Edging and cover strips, as clause 740.
- Stair nosing, as clause 750.
- Skirtings, as clause 770.
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Seek advice from manufacturer for specific requirements for flooring.
- 770 Skirtings
- Type: Self coved skirting
- Cove former: Quantum Profile Systems reference QCF35 - 35mm radius tapered to architraves. Securely bond to base and background using contact adhesive. Accurately mitre at corners.
- Capping strip: Quantum Profile Systems UCS2 PVC capping strip. Where wall finish is ceramic tiles use Quantum Profiles QCT1.
- Securely bond to background using contact adhesive, with top edge straight and parallel with floor.
- Turn flooring material up wall, securely bond to cove former and background using adhesive specified for fixing to base, and ease top of material into edge trim. Accurately mitre at corners. All joints to be hot welded in accordance with the manufacturer's instructions.

Forbo Safe StepProduct Specification

- M50 RUBBER/ PLASTICS/ CORK/ LINO/ CARPET TILING/ SHEETING
- A heterogeneous safety vinyl collection combining decorative coloured chips with coloured quartz particles and PUR pearl surface finish. Durable slip resistance guaranteed for the

product lifetime and ease of maintenance required in general traffic areas where additional slip resistance properties are required.

- Complies with BS EN 13845 Class ESf
- wet pendulum values of >36
- surface roughness of ≥ 20 microns
- DIN51130 (Ramp test): R10.
- 33 colours available
- Can also be specified in clause 155 (modified).
- Roll width: 2000 mm. standard Thickness: 2.0 mm. Thickness of wear layer: 0.7 mm. . -
_ -> 17 db Acoustic available in selected colours: 3mm thickness, 0.7mm wear layer.
- Matching welding rods are available in all collection colours.
- Consult with manufacturer technical literature for details.
- 150 SHEETING: VINYL
- Optional: Fabricated underlay:
Corkment Underlay. – Optional.
- QuickFit Subfloor System. – Optional.
- Sarlibase T.E. Underlay. – Optional
- Forbo Vinylbase acoustic underlay - Optional
- Flooring roll: Heterogeneous PVC to BS EN ISO 10582 and BS EN 13845
- Manufacturer:
- Suggested range for compliance: Forbo Safe step Original.
- BS EN13845 / BS ISO 10874 class: 34 / 43 (Acoustic Class 42).
- Colour/ pattern: As per finishes Schedule
- Adhesive (and primer if recommended by manufacturer):
- Eurocol 540 Eurosafe Special – A superior acrylic dispersion solvent-free floor covering adhesive with a high initial grab.
- Eurocol 640 Eurostar Special – A superior acrylic dispersion low VOC emission adhesive with a high initial grab.
- Eurocol 140 Euromix PU – A polyurethane resin and hardener, water-resistant 2-component PU-adhesive.
- Eurocol 233 Eurosol Contact – A synthetic rubber in solvent fast setting contact adhesive.
- Seam welding: Hot welding with matching coloured rod.
- Accessories:
- Edging and cover strips, as clause 740.
- Stair nosing, as clause 750.
- Skirtings, as clause 770.
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Seek advice from manufacturer for specific requirements for flooring.
770 Skirtings
- Type: Self coved skirting
- Cove former: Quantum Profile Systems reference QCF35 - 35mm radius tapered to architraves. Securely bond to base and background using contact adhesive. Accurately mitre at corners.

- Capping strip: Quantum Profile Systems UCS2 PVC capping strip. Where wall finish is ceramic tiles use Quantum Profiles QCT1.
- Securely bond to background using contact adhesive, with top edge straight and parallel with floor.
- Turn flooring material up wall, securely bond to cove former and background using adhesive specified for fixing to base, and ease top of material into edge trim. Accurately mitre at corners. All joints to be hot welded in accordance with the manufacturer's instructions.
- Flooring to be slip resistant as required in proposed rooms

38.MATT WELLS

- Contractor to include 4No. Esplanade 6000 or equivalent Matting - 12mm Closed Construction with Boulevard 6000 Wipers as indicated on architect's drawings
- Gradus Esplanade 6000 or equivalent primary entrance barrier mat is constructed from wipers which are supported by an aluminium base with pvc bridging strips that provide additional strength and are combined with pvc linking strips.
- This option of Esplanade 6000 or equivalent primary barrier mat is 12mm thick and features a closed construction with Boulevard 6000 wipers. The ECONYL® regenerated solution dyed nylon wipers provide excellent soil and moisture retention and are available in a choice of 8 colours. The pvc linking strips are available in Black or Grey.
- Esplanade 6000 or equivalent has also been tested for flammability (BSEN 13501-1 Class Cfl-s1) and slip-resistance (HSL ramp test - low risk of slip).
- Esplanade 6000 can be manufactured to most shapes subject to approval of a template and has a 10-year warranty (subject to terms and conditions).
- Thickness: 12mm
- Construction: Closed
- Warranty: 10 Years
- Application: Interior Material
- Wipers: ECONYL® Regenerated Solution Dyed Nylon
- Base: Aluminium with PVC bridging strips
- Linking strips: Pvc - Black or Grey
- Accessories
- Divider Bar: ADB012
- Edging Strip: EPES4012
- Coordinates: Boulevard 6000

39.PROPOSED FIRE STOPPING

- All service penetrations to walls and ceilings to compartment zones fire stopped (wires intumescent mastic, service pipes and ducts – sleeved.) To its indicated fire rating, Refer to FSC drawings attached in appendix.
- Rockwool Fire mastic required to provide fire barrier with 30/ 60-minute Integrity and Insulation as indicated in architects and FSC drawings.
- All fire Barriers/ mastics to be installed as per manufactures design, detailing and guidance documents. Vertical joints staggered, stitched and clamped to head of wall.
- Refer to FSC and architects' drawings for location of fire resisting door sets and ratings.
- Refer to Appendix for Rockwool Fire Barrier & mastic system Data Sheets

FIREPRO® OR EQUIVALENT 50MM ABLATIVE COATED BATT

- The ROCKWOOL or equivalent Ablative Coated Batt to be installed where services penetrate fire rated walls, refer to architectural drawings for location of fire resisting walls to be read in conjunction with M&E & FSC drawings.
- The ROCKWOOL or equivalent Ablative Coated Batt comprises a high-density stone wool core, pre-coated on both sides with our high-performance ablative coating specifically for use in service penetrations, head of wall and other void seals.
- Fire performance - Tests have proved the capability of a single 50mm Batt to provide up to 2 hours fire resistance Integrity and Insulation ratings are dependent upon the service penetrations and void size.
- Acoustic performance - R_w = up to 37db (1 x Coated batts)
- Standard and approvals - BS EN 1366-3: 2009 and the dedicated fire resistance standard for linear joint seals, BS EN 1366-4:2006. Ablative Coated Batt has been classified in accordance with BS EN 13501-2. Third party accreditation through IFC and Certifire. CE marked to ETAG 26-02.
- Product information
- Length 1200mm, Width 600mm, Thickness 50mm, Fire resistance Up to 2 hours, Density 160kg/m³, Air leakage 0.8m³/h/m².
- Installation
 - 1. Make sure that the area within the aperture is clean of any debris and remove any dust from the edges.
 - 2. Cut ROCKWOOL or equivalent Ablative Coated Batt to the size and shape required to fit the aperture ensuring that batt will make a tight fit with all edges of the aperture.
 - 3. Cut rectangular holes from the coated batt to accommodate cable trays or ladders containing cables.
 - 4. Cut the Coated Batt across its width at the mid-point of each rectangular hole to enable the Batt to be fitted into the aperture.
 - 5. Apply ROCKWOOL or equivalent Acoustic Intumescent Sealant to all edges of the Batt ensuring that an even cover is achieved over the entire thickness of the Batt. This should include the outer edges of the Batt and the edges of the cuts made across the Batt to allow fitting into the aperture.
 - 6. Insert the Batt into the aperture.
 - 7. Apply a bead of ROCKWOOL or equivalent Acoustic Intumescent Sealant approximately 15mm wide around the perimeter of the Batt ensuring that all gaps between the Batt and surrounding edges are fully filled.
 - 8. Apply a bead of ROCKWOOL or equivalent Acoustic Intumescent Sealant approximately 15mm wide where cables pass through the Batt. Ensure that the sealant fully enclosed each cable within the tray or ladder and that all gaps are fully filled.
 - 9. Repeat step 7 and 8 on the other side of the Batt.
- Additional products to be used in conjunction with ablative coated batt fireproofing.



FIREPRO® OR EQUIVALENT FIRE STOP COMPOUND

- The ROCKWOOL Fire Stop or equivalent compound to be installed to service shaft and anywhere services penetrate first floor, refer to architectural drawings for location of fire resisting walls to be read in conjunction with M&E & FSC drawings.
- Firestop Compound or equivalent shall be specially formulated gypsum-based compound, which is mixed with water to be trowelled or poured around service penetrations.
- When un-reinforced, Firestop Compound or equivalent shall offer up to 240mins protection for both Integrity and Insulation in masonry/concrete walls or concrete floors.
- Plastic pipework must be protected with either ROCKWOOL Firestop or equivalent Pipe Collars or Intumescent Pipe Wraps.
- Standards and approvals - FIREPRO® Firestop Compound has been tested to BS 476 Part 20:1987 FIREPRO® Firestop Compound is third party accredited through IFC and Certifire.
- Installation - Floor installations In floors, a permanent shuttering made from 50mm ROCKWOOL slab or equivalent (minimum density 140kg/m³) is cut and friction fitted between services and the edges of the floor slab. Firestop Compound or equivalent is then trowelled over the shutter to a depth of 25mm thick. This is allowed to cure. Further Firestop Compound or equivalent is then mixed to a pouring grade and tops the seal up to the required depth.
- Firestop Compound sets in 30-45 minutes and is capable of accommodating light foot traffic in approximately 72 hours.
- Installation instructions – Floors
 1. Mix a bag of compound to 10 litres of water (3:1) by volume. Vary to suit site conditions.
 2. Set the shuttering into the opening ensuring a tight fit so that once the required depth of compound is installed it finishes flush with the floor slab/screed unless otherwise specified.
 3. Mix and pour compound until the required thickness is achieved.
- Additional products to be used in conjunction with ablative coated batt fireproofing.

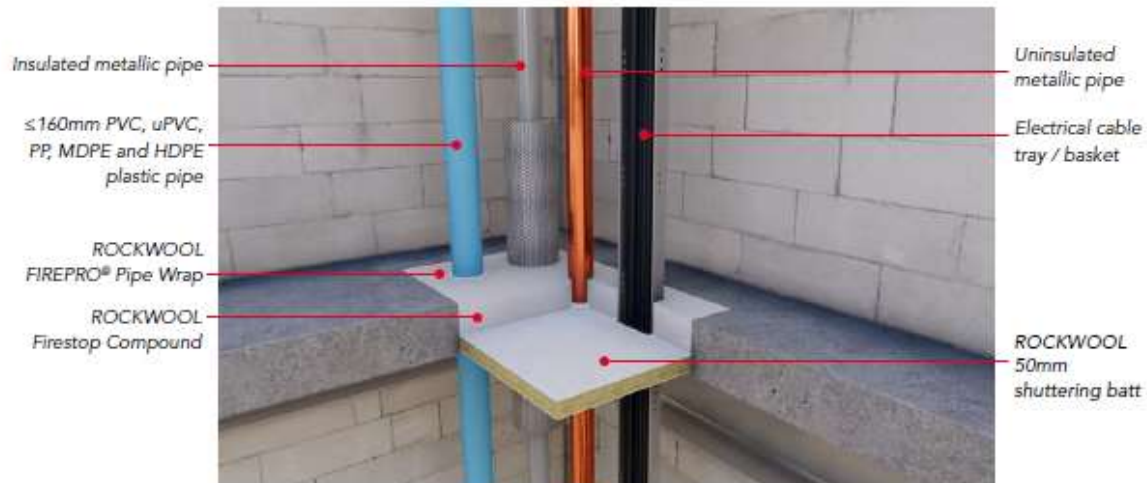


Figure 1

ROCKWOOL OR EQUIVALENT STONE WOOL LINEAR FIRESTOP SYSTEM

- Rockwool or Equivalent Linear Firestop to be installed to top of all fire rated walls, refer to architects drawings for location and extents to be read in conjunction with FSC drawings.
- Rockwool or Equivalent Linear Firestop consisting of dense, moisture resistant stone wool, allowing adequate compression yet retaining the necessary lateral stiffness for ease of installation.
- Linear Firestop 2A
 - Rectangular strips (installed under min. 5% compression)
 - Thicknesses: 50mm
 - Widths: 100, 150, 200, 300, 400mm
 - Fire resistance: Up to 4 hours
- Fire performance - All fire ratings apply to gaps over walls constructed of dense aggregate blocks, lightweight aggregate concrete, clay bricks or concrete blocks with a minimum density of 400kg/m³
- Product information - Length 1000mm, Width Up to 400mm, Thickness 50mm, Density 110kg/m³
- Handling / storage - Linear Firestop materials are light and easy to handle and should be cut using a sharp bladed knife. Store in dry conditions.
- Installation
 - The following installation requirements must be met in order to reliably achieve the stated fire resistances.
 - Linear Firestop 2A must be fitted as rectangular pieces, tightly butt jointed and compressed by at least 5% in thickness.

40. PROPOSED SANITARY WARES (SONAS)

- Allow for fitting of new sanitary ware to proposed works of the building unless stated otherwise.
- Contractor responsible for connections & plumbing. Waste pipes to wash hand basins and toilets to be routed to new waste pipes where necessary.

- Note all of the below specified are SONAS or equal approved products and should refer back to their specification (Refer to Appendix for sanitary schedule and data sheets)
- Note: Attached Ideal Standard Quotation prices are only valid for 3 months approx. and are subject to any future price increases.
- Note: Contractor to Provide all accessible railings in Blue (LI) RAL, contractor to liaise with SONAS as this may be an additional cost to proposal attached in appendix.
- Allow soap dispenser to all WC's and assisted shower room
- Allow for All Railings to Comply with TDG Part M in W/C's and shower room, Refer to SONAS Schedule or equal approved.
- Allow toilet paper dispenser to all WC's and assisted shower room
- Allow for bins to all WC's and assisted shower room
- Allow for Shower curtain & low-level adjustable screen to Shower room
- Allow for mirrors (1000x400mm) to all WC's as required.
- 300mm high Altro Satins or equal approved splashbacks strips behind all wash hand basins and shower areas for visual contrast, Refer to section below.
- All proposed level access shower floors to be laid to falls with flush floor drain including exclusion zone. Refer to architect's appendix for floor drainage traps and covers.
- Tanking required in shower area, Refer to Section additional tanking sections
- Coat hooks to be provided in each toilet / shower room
- All handrails in the WC'S are to be Stainless Steel.
- ACCESSIBLE W/C & STAFF W/C
- Accessible W/C's to be installed and set out in compliance with TGD Part M 2010 Section 1.4 Diagram 15a & Guidelines and Standards for sanitary facilities in primary schools.
- Refer to Appendix documents for proposed Doc M Pack sanitary ware and railing systems
-
- ASSISTED W/C AND CHNAGING PLACE WC
- Assisted W/C and Shower Room to comply with Guidelines and Standards for sanitary facilities in primary schools, Refer to section 5.1 Figure 5 for layout.
- Refer to Appendix for sanitary schedule and data sheets.
- The changing place WC require an adjustable wall mounted wash hand basin as per TGD M section 1.4.10.
- Adjustable sink spec:
- Height adjustable 580 mm – 1030 mm (450 mm)
- Handset operation
- Mains operated – battery backup
- Maximum load: 150 kg
- Anti-trap safety cut-out
- Corian style basin surround - 750 mm wide
- 150 mm single mixer lever tap
- Collison sensor
- Space under unit for wheelchair access
- Large mirror soap dispenser attached

Technical Drawings:

All dimensions in mm:

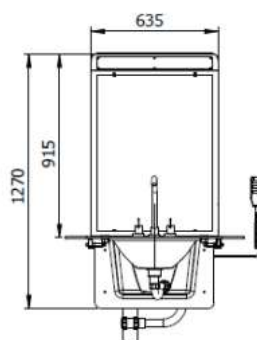
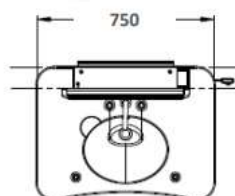
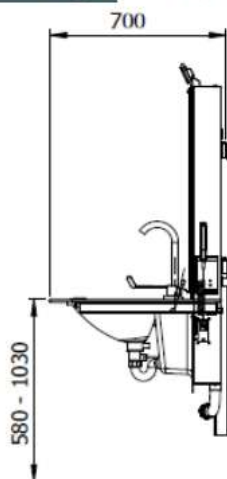
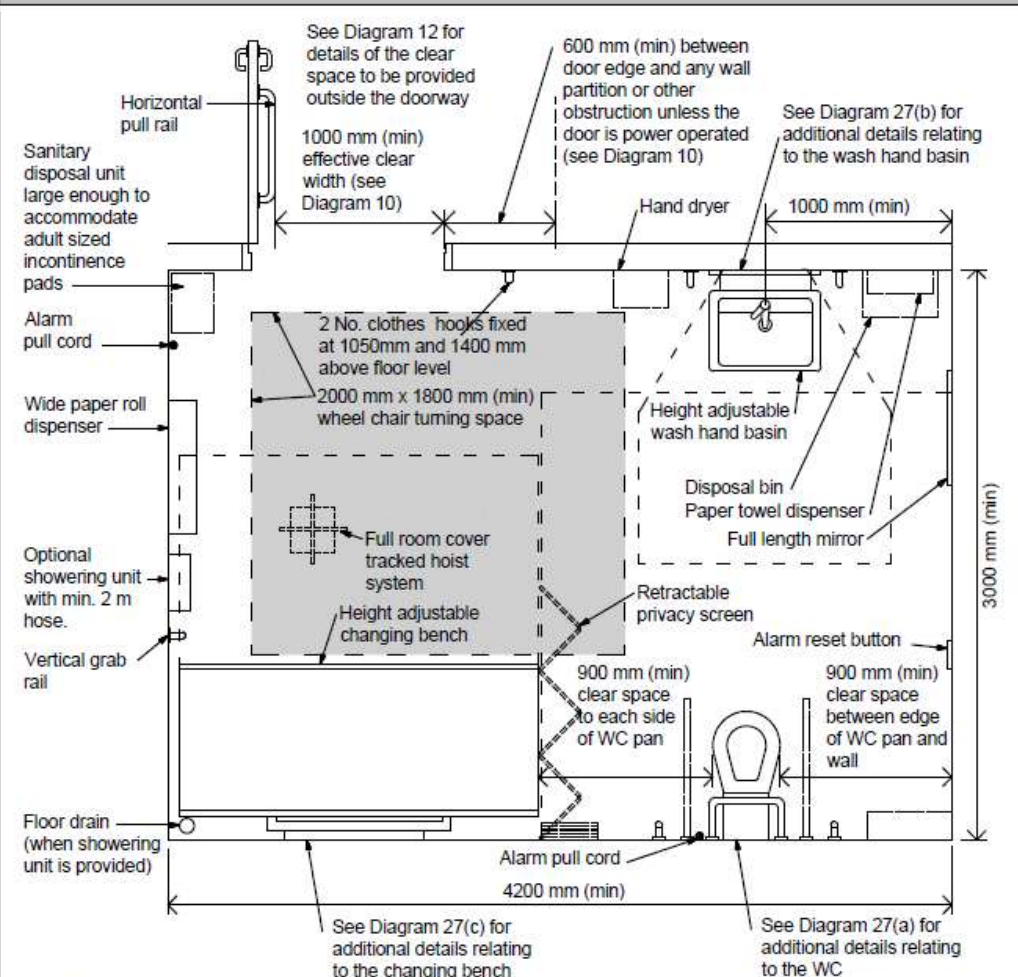


Diagram 26 Changing Places Toilet General Arrangement Layout



NOTE:

The overall dimensions should exclude such items as heat emitters, skirting boards, tiles and boxing in of pipework. Adjustments in room sizes will be needed to accommodate these items.

* Where high or low level cisterns are used, a rail with a padded back rest and a separate colostomy changing shelf 125 mm to 150 mm deep x 400 mm (min) wide with its surface 950 mm above floor level should be provided. Where a flat topped close-coupled cistern is used, the cistern should be adequate to also act as a back rest. If the top of the cistern is flat it should be adequate to facilitate a colostomy changing surface for standing users without the extra requirement for a separate shelf.

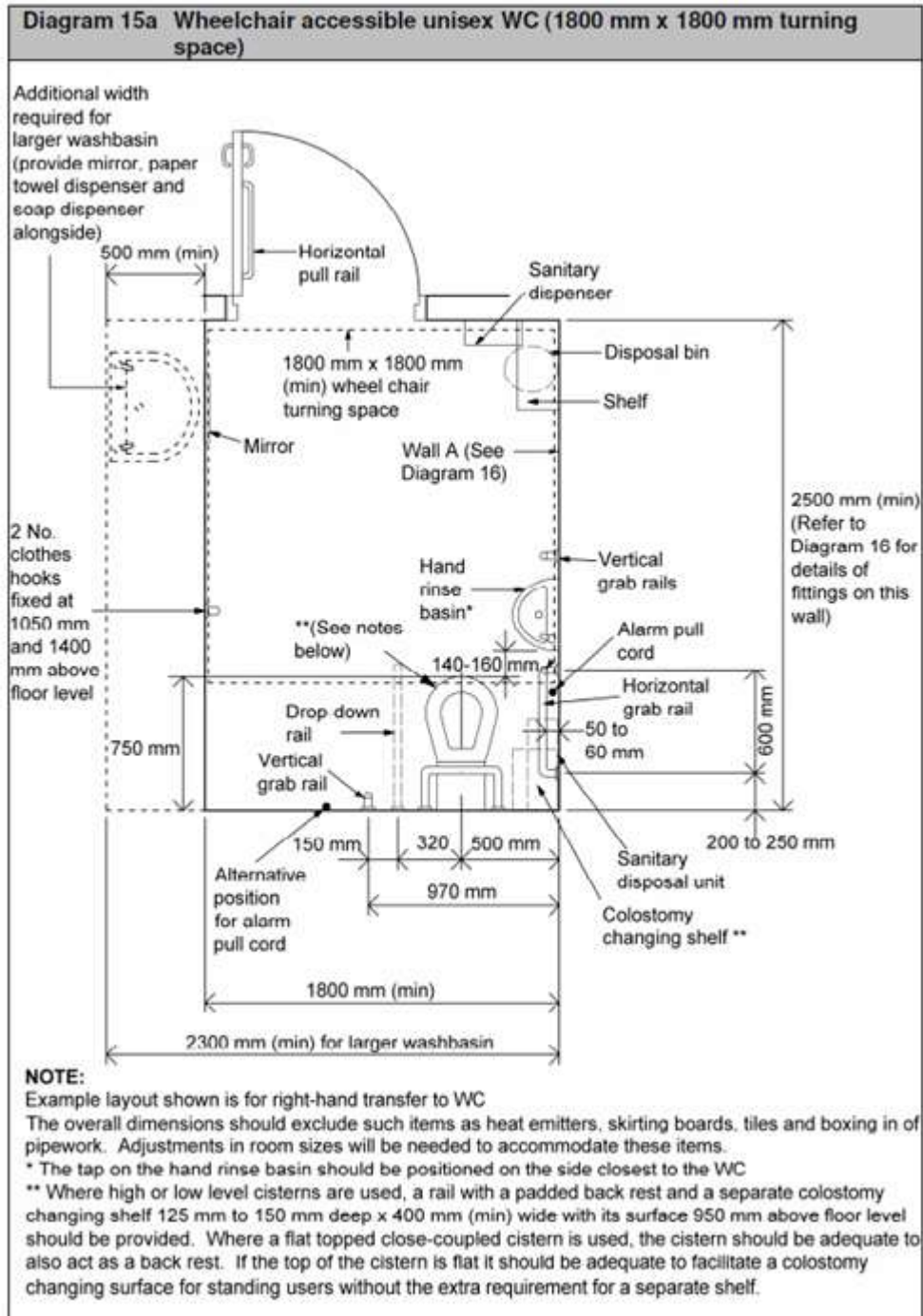
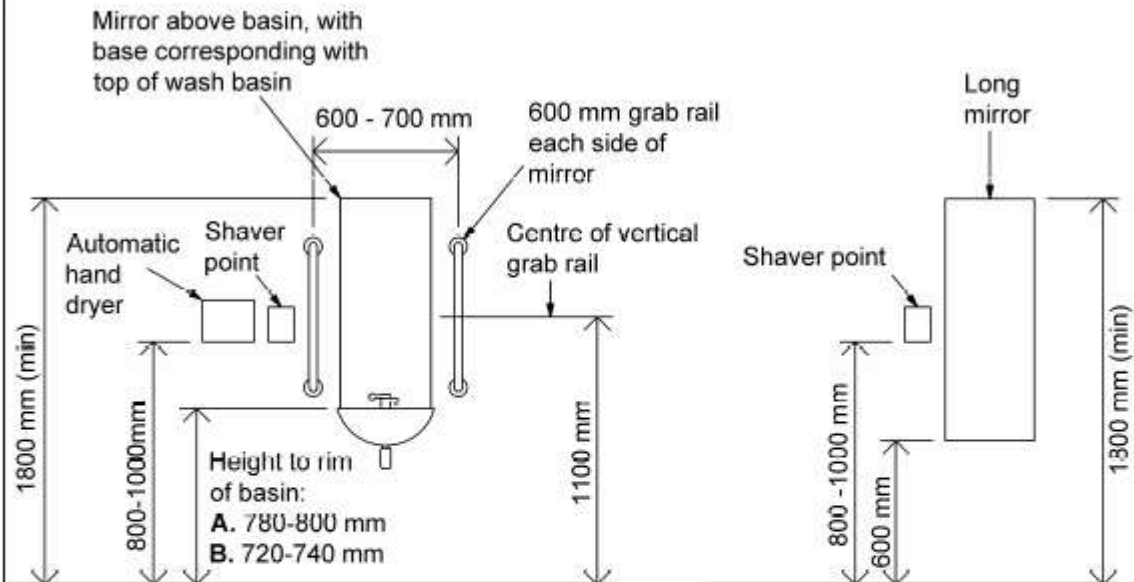


Diagram 17 Location of independent mirrors, accessories and washbasin



a) In bathrooms and shower rooms

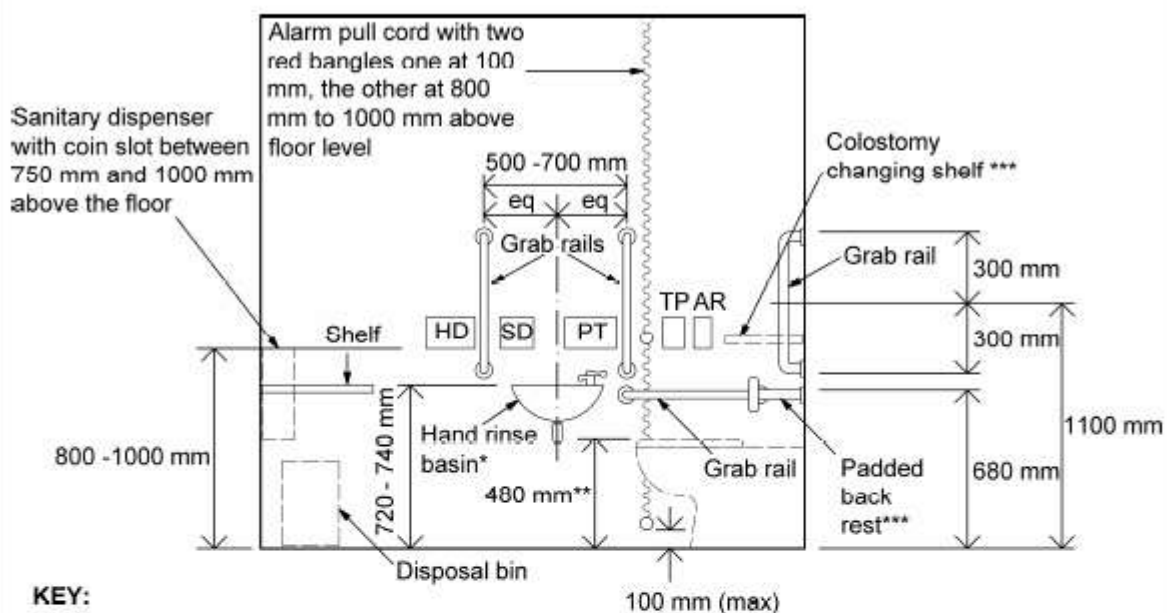
Location of independent washbasin, mirror and grab rails (not associated with a corner WC), for wheelchair users and ambulant disabled people

- A.** For ambulant disabled people only
- B.** For both ambulant disabled people and wheelchair users

b) In a unisex accessible WC

Long mirror located away from washbasin suitable for wheelchair users and ambulant disabled people (mirror and associated fittings used within a unisex WC compartment or within a separate sex facility serving a range of compartments)

Diagram 16 Heights of various fittings on Wall A of a wheelchair accessible unisex WC (refer to Diagram 15a or 15b)



KEY:

HD = Possible position for automatic hand dryer
SD = Soap dispenser
PT = Paper towel dispenser
TP = Toilet paper dispenser
AR = Alarm reset button

NOTE:

Height of drop-down rails to be the same as the other horizontal grab rails

*The tap on the hand rinse basin should be positioned on the side closest to the WC

**Height subject to manufacturing tolerance of WC pan

*** Where high or low level cisterns are used, a rail with a padded back rest and a separate colostomy changing shelf 125 mm to 150 mm deep x 400 mm (min) wide with its surface 950 mm above floor level should be provided. Where a flat topped close-coupled cistern is used, the cistern should be adequate to also act as a back rest. If the top of the cistern is flat it should be adequate to facilitate a colostomy changing surface for standing users without the extra requirement for a separate shelf.

41. TANKING AND WET ROOM SPECIFICATION

- Contractor to allow for Architect approved IAB & BBA certified tanking system to be applied to floor & wall surfaces prior to Altro Satins splashback in proposed shower room wet room. Walls to be tanked to a height of 100mm up-stand provided generally. Shower wet areas to be tanked to full height and to a width of minimum 300mm beyond enclosure - all to be constructed entirely in accordance with manufacturer's instructions & recommendations and to be carried out by an approved contractor. Allow for appropriate system trims in all showers.
- Refer to architect's appendix documents for Wet room materials data sheets and products.

LIP VS30 TANKING / WATERPROOFING

- Primer to bind dust and close pours before applying a specialist liquid membrane which is approved to work on Metal flange, plastic board, wood and Cementous surfaces. It must be EC1 Plus and ETAG approved liquid applied tanking / waterproofing membrane
- 25m Reinforcement tape to reinforce major movement joints that allows for up to 4mm of movement.

PM001 HORIZONTAL DRAIN

- This specification provides for a horizontal floor gully which has been tested to and has full certification for BS/EN 1253 parts 1 & 2 for floor gullies. It must have a full BBA Certificate.
- It should have a maximum overall depth of 76mm including the incline of the outlet. It should have a minimum flow rate of 48 litres per minute. It should be adaptable for both ceramic tiles and vinyl flooring grates. It should be constructed of Polypropylene (PP) plastic so it can be steam cleaned.
- The water trap should be a combined water trap (minimum 25mm) and mechanical seal to prevent foul odours if the trap becomes dry. The trap should also act as a non-return valve and return to its original position naturally. It should be supplied with a 50mm outlet and an adapter for 1½ inch solvent weld. It should provide for a spring load clamping ring which can clamp, with 50lbs of pressure, both vinyl flooring up to 2mm thick and tanking membranes for ceramic tiles.

INSTALLATION SERVICE

- WET ROOM MATERIALS can offer an installation service whereby by we create the slopes and tank out/ waterproof the room and give a 10 year no leak guarantee.
- Drain must be plumbed in by the Builder

42. PROPOSED SPLASHBACKS

Altro Whiterock™ Satins or equivalent Hygienic Wall Cladding

- Contractor to supply & fit Altro Whiterock™ Satins or equivalent Hygienic Wall Cladding splashback above all proposed wash hand basins (300mm High) kitchenettes where base unit only is provided a 300mm splashback to be included, including associated product trims, Product Colour TBC by Architect Prior to Installation. To be installed as per manufactures instructions.
- Refer to Architects Appendix documents for Altro Product data sheets and installation guides
- Manufacturer and product reference:

- Altro Whiterock Satins W136/W137 hygienic wall cladding by Altro Limited
- Extruded semi-rigid PVCu sheet, EU Grade
- Width: 1220 mm
- Length: 2500 (W136) or 3000mm (W137)
- Thickness: 2.5 mm
- Surface finish: Satin
- Colour: TBA
- Guarantee – 20 years
- Adhesive: AltroFix™ W157 / W139 depending on substrate and application
- Fire rating:
- BS 476 Part 7 surface spread of flame - Class 1
- BS 476 Part 6 fire propagation - Class 0*
- EN 13501 B-s3, d0
- Maximum service temperature: 60°C
- The Altro quality and environmental management systems are certified in accordance with ISO 9001 and ISO 14001

43.PROPOSED KITCHENETTE UNITS

PROPOSED SINK WITH KNEE SPACE BELOW – SEN CLASSROOM

- Refer to M&E Drawings and Specification - Galileo Energy Services for electrical and mechanical connection requirements and associated works.
- Contractor to include for 2 x Granberg 6300-ES11 or equivalent Wall Mounted Sink with knee space below Counters located in proposed SEN Classrooms.
- Wall mounted, Sink Module 6300-ES11 or equivalent to contain one shallow sink bowl with overflow.
- The module to be complete unit and available in left, centre or right version.
- The modules to have a 10 mm shorter width to automatically give 5 mm gap on either side of the unit for the up and down movement. They to have 15 mm shallower in depth to make room for splash protection/tiles.
- The anti-pinch strip is placed under the front edge of the worktop. If anything touches the strip, the lift unit stops.
- Contractor to allow for worktop lifts, fitting kit for cover panels, control button for worktop lift - ALU-design, cover panels, built-under stainless steel sink.
- Proposed top counter to be 1590 x 600 x 30 mm.
- Proposed unit to have minimum 2-year warranty.

Installation	Wall
Front height	103mm
Counter width	1590mm
Speed level	30mm / sec.
Operation	Control button, ALU-design
Safety	The safety strip is placed under the front edge of the worktop. If anything touches the safety strip, the lifting unit stops.
Frame depth	576 - 606 mm from wall (Incl. front)

Material	Frame: Aluminium Cover panels for covering installations under the worktop: 12mm,white,melamine,Colour.TBC. Fronts: White,lacquered,aluminium.ColourTBC. Top board: 30 mm worktop in high pressure laminate. Post-shaped front edge. Several colours can be offered upon request.
Sink location	Center
Sink dimensions	Bowl: 500 x 400 x 120 mm Outer: 540 x 440 mm Steel gauge: 0.8 mm
Plumbing connections	Connection is made with flexible hoses
Space to wall / adjoining cabinet	5 mm
Space to wall (for tiles)	15 mm
Tiling	From 700 mm above floor (alternatively all the way down to the floor)



- **KITCHEN UNIT CARCASSES:**
- All Kitchen units are to be 19.4mm SWISSCDF or equivalent Woodfibre boards with all edges sealed with Rubio Clear Dry Oil PURE or equivalent - this must be applied to all edges.
- All Kitchen Unit Carcass shelving to consist of White Melamine Birch Ply at 18mm thickness.

- All Carcasses are to be elevated from the floor level with a 150mm Base constructed beneath units to accommodate any services, faced with SWISSCDF or equivalent 19.4mm as per units. Colour of which to be confirmed.

KITCHEN UNIT DOORS

- All doors to consist of 18mm Birch Plywood with high pressure POLYREY DURION CLASSIQUE HPL or equivalent facing with Birch Edges exposed sealed and finished with a suitable lacquer/ seal to prevent moisture damage and any other damage.
- Facings: All SWISSCDF or equivalent 19.4mm with all edges sealed with Rubio Clear Dry Oil PURE or equivalent

KITCHEN UNIT IRONMONGERY

- 170 x 35mm "D" handles 10mm diameter by Hafele or equivalent (Ref 117.40.640) brushed stainless steel.
- Heavy-duty stainless-steel hinges & Door soft closers to be included – BLUM or equivalent.

COUNTERTOP SPECIFICATION – EQA ALTERNATIVES CAN BE INCLUDED.

- 38mm x 600mm Omega White Quartz Hi-gloss Ice white Laminate with rounded EDGE profile.
- Anti-fungal mastic joint between splashback and worktop.

KITCHEN SINKS

- Provide 1No. 1000mm Stainless Steel Kitchen Sink Packs with drainer section with suitable 2 x Single lever Mixer Tap as indicated at all sink stations/ locations on the architects' drawings. All sinks to include sealed plastic bottle traps.

KITCHEN APPLIANCES

- Note: White good appliances are excluded from contract and will be provided by client where required.

KITCHEN SINKS

- Provide 1No. 1000mm Stainless Steel Kitchen Sink Packs with drainer section with suitable 1 x Single lever Mixer Tap as indicated at all sink stations/ locations on the architects' drawings. All sinks to include sealed plastic bottle traps.

PROPOSED KITCHENETTE UNIT – MAINSTREAM CLASSROOMS

- Contractor to supply & fit kitchen unit to architect's design drawings in accordance with Department of Education Design Guidelines. Contractor to allow for service connections and finishing around this upon completion of fitting.
- Refer to Architect's drawings for location of all kitchen units. Contractor to allow for ALL fitted joinery as shown in plan and elevation.
- It's the contractor's responsibility to make good of any damage caused throughout proposed works to ANY NEW Kitchen Joinery & Fitted Furniture at their own expense up until the point of handover.
- Refer to section above for proposed splashbacks

47.2 - KITCHEN UNIT CARCASSES:

- All Kitchen units are to be 19.4mm SWISSCDF or equivalent Woodfibre boards with all edges sealed with Rubio Clear Dry Oil PURE or equivalent - this must be applied to all edges.
- All Kitchen Unit Carcass shelving to consist of White Melamine Birch Ply at 18mm thickness.
- All Carcasses are to be elevated from the floor level with a 150mm Base constructed beneath units to accommodate any services, faced with SWISSCDF or equivalent 19.4mm as per units. Colour of which to be confirmed.

47.3 - KITCHEN UNIT DOORS

- All doors to consist of 18mm Birch Plywood with high pressure POLYREY DURION CLASSIQUE HPL or equivalent facing with Birch Edges exposed sealed and finished with a suitable lacquer/ seal to prevent moisture damage and any other damage.
- Facings: All SWISSCDF or equivalent 19.4mm with all edges sealed with Rubio Clear Dry Oil PURE or equivalent

47.4 - KITCHEN UNIT IRONMONGERY

- 170 x 35mm "D" handles 10mm diameter by Hafele or equivalent (Ref 117.40.640) brushed stainless steel.
- Heavy-duty stainless-steel hinges & Door soft closers to be included – BLUM or equivalent.

47.5 - COUNTERTOP SPECIFICATION

- 38mm x 600mm Omega White Quartz Hi-gloss Ice white Laminate with rounded EDGE profile.
- Anti-fungal mastic joint between splashback and worktop.

47.6 - KITCHEN SINKS

- Provide 2No. 1000mm Stainless Steel Kitchen Sink Packs with drainer section with suitable 2 x Single lever Mixer Taps as indicated at all sink stations/ locations on the architects' drawings. All sinks to include sealed plastic bottle traps.
- See Data sheets below.

47.7 - KITCHEN APPLIANCES

- Note: White good appliances are excluded from contract and will be provided by client where required.

44.SLUICE ROOM EQUIPMENT

SLUICE JOINERY UNIT

- Refer to Architects drawings for extent location and design of proposed Sluice room sink unit. Colours as per Architects presentation drawings.
- Contractor to supply & fit Sluice room sink unit to architect's design drawings in accordance with Department of Education Design Guidelines. Contractor to allow for service connections and finishing around this upon completion of fitting.
- Refer to Architect's drawings for location of all craft sink units. Contractor to allow for ALL fitted joinery as shown in plan and elevation.
- It's the contractor's responsibility to make good of any damage caused throughout proposed works to all new Joinery & Fitted Furniture at their own expense up until the point of handover.

- Refer to section above for proposed splashbacks, to be read in conjunction with architect's finish document.

SLUICE JOINERY UNIT- CARCASSES:

- Sluice sink units shall consist of 18mm FSC Certified MDF Woodfibre boards with all edges sealed with Rubio Clear Dry Oil PURE or equivalent - this must be applied to all edges.
- Sluice sink unit Carcass shelving to consist of White Melamine Birch Ply at 18mm thickness.
- All Carcasses are to be elevated from the floor level with a 150mm Base constructed beneath units to accommodate any services, faced with SWISSCDF or equivalent 19.4mm as per units. Colour of which to be confirmed.

SLUICE JOINERY UNIT- DOORS

- All doors to consist of 18mm Birch Plywood with high pressure POLYREY DURION CLASSIQUE HPL or equivalent facing with Birch Edges exposed sealed and finished with a suitable lacquer/ seal to prevent moisture damage and any other damage.
- All SEN class base craft sink unit doors shall be lockable.
- Facings: All SWISSCDF or equivalent 19.4mm with all edges sealed with Rubio Clear Dry Oil PURE or equivalent

SLUICE JOINERY UNIT- IRONMONGERY

- 170 x 35mm "D" handles 10mm diameter by Hafele or equivalent (Ref 117.40.640) brushed stainless steel.
- Heavy-duty stainless-steel hinges & Door soft closers to be included – BLUM or EQA.

COUNTERTOP SPECIFICATION – EQA ALTERNATIVES CAN BE INCLUDED.

- 38mm x 600mm Omega White Quartz Hi-gloss Ice white Laminate with rounded EDGE profile.
- Anti-fungal mastic joint between splashback and worktop.

SLUICE JOINERY UNIT- SINK

- Provide 1No. 1000mm Stainless Steel Sink Packs with drainer section with suitable 1 x Single lever Mixer Tap as indicated at all sink stations/ locations on the architects' drawings. All sinks to include sealed plastic bottle traps.
- All sinks shall have a second Drinking water tap included.

SLUICE ROOM STORAGE SHELVING

- Contractor shall provide and install storage shelving to proposed Girls N.S cleaners store.
- Contractor to provide Heavy duty commercial type shelving as indicated on proposed floor plan T101 - Proposed Floor Plan.
- Size: 350mm depth, 2000mm height, refer to plan for length
- Frame material: steel
- No. of shelves: 5 tier, 12mm plywood shelves
- Shelving to be fixed to perimeter walls with mechanical fixings

SLUICE ROOM - SLUICE SINK

- Contractor shall provide 1 no. High back cleaners sink to proposed sluice room.
- Contractor shall provide all associated service connections in conjunction with M&E service package.

Product Specification

- Product Description: H/BACK SINK PACK High back cleaners sink complete pack with 310mm high splash back. Includes legs & bearers, cantilever brackets, bucket grating, 1 ½" unslotted grid waste CP, ½" lever action* bib taps and 150mm extension tubes and wall plates (*cross head bib taps available)
- Material : Enamelled Fireclay
- Colour : White
- Manufacture: Twyford Bathrooms or equivalent.
- Fixing: Legs and bearers with sink screwed to wall – included
- Product Dimensions: H525 x W470 x D400
- Standards : EN 13310
- Additional Information: Screw to wall brackets are not suitable to support this fixture. Build in brackets can be used when fixing to masonry walls. Overall height including legs 830mm.



SLUICE ROOM - APPLIANCES

- Contractor shall provide and install 1no. freestanding type washing machine and 1 no. freestanding type Drier to proposed sluice room, installed in a stacked arrangement within proposed joiner unit.
- Proposed Appliances shall be Energy efficiency Class A.
- Proposed appliances shall include a minimum 9kg drum.
- All Equipment shall be Durable and Safe for School Use.
- Equipment wholly or partly funded from public funds is subject to Inspection by Officers from the Department of Education & Skills, It is essential that tenders for equipment for School Use shall:
- Comply fully with the specifications and be durable and safe for School Use.
- Comply fully with the standards as detailed and shall comply fully with European (EN) standards, both established and developing.
- Comply with European electrical standards and CE marking as appropriate.
- Be accompanied by documentation of sufficient detail for full evaluation.
- Contractor shall provide a Technical Submittal with proposed appliances for approval prior to order in conjunction with Kitchen joinery shop drawings and appliances.

45. INTERNAL SIGNAGE

- Contractor to include for 29no. 125mm x 300mm & 4 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 KCC schedule for the signage on the WC's and refer to section below for the signage accompanying the Fire Extinguishers.

46. EXTERNAL SIGNAGE

- Contractor to include for new signage with Stainless steel individual lettering with trim cap, sides & back painted acrylic with vinyl on surface.
- The individual letters are approximately 220mm.
- RAL colours TBC by Architect prior to manufacture.
- Contractor to provide drawings for approval prior to manufacture.
- No lighting to be included.
- Refer to Architect drawings for location of proposed school signage.

47. DOOR FINGER GUARD

- FD60 Swing Door Guard to be installed at the edge of each door. Refer to architects floor plan sheet T102 for the location of these door guards. They are indicated with a light blue circle.
- FINGER SAFETY: Specially designed roller type blind ensures constant tension as the door moves, preventing fingers from inadvertently getting crushed in closing swing doors.
- MOUNT & ADJUST IN MINUTES: Oblong mounting holes along with an easily removable/mountable fabric cover facilitates mounting to the door and frame in a matter of minutes.
- STYLISH AND EASY TO MAINTAIN Available in silver, black and white, installs without any screw heads visible. Our removable/mountable fabric cover allows for easy door maintenance and FP60 fabric cleaning.
- DURABLE & FIRE RESISTANT: Durability tested up to 1,000,000 test cycles and B1 rated fire resistant
- SIZE: Available in 1,925mm and 2,015mm lengths for full compliance to EN16005.
- Refer to attached PDF in the appendix documents for the fixings of these finger guards

48. 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 from 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

49. PROPOSED ELECTRICAL, MECHANICAL AND VENTILATION

- 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, Boiler house layout
- 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
- Note: radiator recessed indicated on proposed floor plan to be read in conjunction with M&E radiator sizing to allow for 150mm space to perimeter of proposed radiator as details on M&E engineers drawings
- Refer to Galileo energy services drawings for the mechanical ventilation in the existing toilet cubicles that have had the windows into them blocked up.

50. MULTI ACTIVITY ROOM SWING

- An I beam is required in the Multi Activity room, the location of is to be carefully chosen to allow for easy fixing of equipment.
- The I beam is to also be fixed below the finished level of the ceiling to allow the school to maintain the fixing of bolts and carry out regular visual inspections.
- A minimum of two fixing points should be provided in the 'I' beam to allow for the fixing and support of suspension equipment. These are to be bored by the company supplying

the equipment to ensure loadings and fixings are calculated based on typical user requirements and optimum location.

I' beam is shown on architects' drawings for diagrammatic purposes only, the exact location to be constructed to engineer's layout, and as per engineer's specification. Refer to Torgue Engineering Consultants complete package attached in appendix

51.PLANNING CONDITIONS

- In accordance with planning condition 3(a) an accessible set down area is provided in an area that means the kids don't have to cross the road. Refer to Sheet T002 & T003.
- In accordance with planning condition 3(b) all the dish kerbs and accessible routes have been identified. Refer to architects proposed site plan.
- In accordance with planning condition 3 (c) Staff cycle spaces have been provided on the site with shelter and passive surveillance. Refer to sheets T002 & T004.
- Refer to architects sheets T002 & T003 for the location if the accessible EV charge point. In accordance with planning condition 3(d).
- The existing pedestrian barriers with visrail panels will be replaced as in accordance with planning condition 3 (e).
- The Contractor and the school shall lease and prepare a mobility management plan that shall address all the points raised in planning condition number 4.
- Prior to the commence of the development .The contractor shall keep a copy of the RWMP on site at all times for inspection purposes. This is in accordance with planning condition number 5.
- The contractor shall lease with the Kildare/ Newbridge Municipal District office prior to commencement to finalize details such as kerbs, footpaths, carriageways, Drainage and line markings. This is in relation to planning condition number 8.
- New pedestrian safety barriers are provided at the front of the school entrance for safety measure and in accordance with planning condition number 9.
- All footpaths at the setback boundary walls are to be 2metres wide in accordance with planning condition number 13.
- The contractor shall ensure that all damage to the public road network associated with the construction phase of this development shall be repaired to the satisfaction of Kildare Newbridge Municipal District office. Particular attention shall be focused on the site access point. In accordance with planning condition number 15.
- The proposed surface water drainage system shall be designed and constructed in compliance with the requirements of the Kildare County Development Plan 2023-2029, Local Area Plan, Circa SuDS document and Greater Dublin Strategic Drainage Study in terms of incorporating appropriate Sustainable Drainage Systems (SuDS) to restrict-attenuate surface water discharge flows from the proposed development, prevent pollution to and maintain the quality of adjacent ground waters and watercourses

52.SITE WORKS

- Note: Engineer's drawings and specification to supersede architect's specification below
- Refer to the below sections for works to be include for external site works, to be read in conjunction with Architects Proposed site plan / Structural Engineer & Service drawings and

Specification, contractor to make good to any damages which may arise from works to existing surfaces which are to remain.

- Contractor to allow for all required resurfacing works including new proposed drainage and resurfacing as detailed on architectural / Engineer's drawings.
- The Main Contractor is to engage a specialist soft and hard landscaping contractor to carry out the external works to the site. Lawn to be taken back and reinstated/ reseeded with defined edges to planted areas. All feature planting to be retained for reuse where at all possible. After seeded areas are well established ensure edges are clean and straight, or cut to smooth curves. Where they border ornamental plantings an edge, approximately 100mm-125mm deep should be created to permit edging with shears, with the mulch and soil drawn back approximately 100mm above the lawn level. Ensure all arisings (soil, turf, stones or other debris) are removed from site. Leave the works in a clean tidy safe condition.
- Following rolling any variations in levels (hollows and high spots) will be apparent and addressed by adding top soil or spreading the surface layer. Finished layers to meet the falls and levels of the surrounding grassed areas (acceptable variation +25mm to -10mm). Finished level to adjacent hard surfaces, such as drains, kerbs and paving, +25mm above hard surface. The surface should be lightly and uniformly raked to produce a friable tilth. All surface stones 10mm+ (in any dimension) should be removed from site. The area to have a suitable, pre-approved, base fertilizer (6:9:6) applied at the manufacturer's recommended rates. In calm conditions apply pre-approved seed at a rate of 35-50g per m². The calculated seed quantity should be split in two and applied at right angles to each other to ensure an even coverage. Lightly rake in to cover the seed and leave a final level surface. Larger areas can be sown using a suitable seed drill, if conditions allow following consultation with the mcl arch. Lightly consolidate with a light "Cambridge" (ribbed) type roller, or for smaller areas by walking, with the operatives putting their weight onto their heels and walking systematically over the site in two directions. Following rolling, any variations in levels should be addressed by adding top soil or spreading the surface layer. Finished layers to meet the falls and levels of the surrounding grassed areas (acceptable variation +5mm to -10mm). Finished levels with existing hard surfaces such as drains, kerbs and paving level to be 25mm above hard surface.
- Initial cut of new and replenished turf areas; the contractor will carry out the first cut when the grass is established to 75mm high before presenting for hand over. Before cutting, all stones above 25mm in any dimension to be handpicked and the area crossed with a light weight roller to firm the grass and consolidate the surface. The area will be topped with a rotary mower so as to leave 40mm of growth. The grass cutting machinery should be sharp and in good condition to avoid pulling out young seedlings. All arisings should be collected and disposed of off-site or within an area agreed by MCLA. At handover seeded and turfed areas will form a close knit, continuous ground cover of even density, height and colour, with vigorous and healthy growth out competing weed growth. After assessment from MCLA, areas of necessary rectification will be classified as replacement or remediation

53. PROPOSED TARMACADAM

- Note: Engineer's drawings and specification to supersede architect's specification below
- Refer to Architects proposed site layout plan for extent of proposed Tarmacadam.
- Refer to proposed site plan for location of proposed tarmacadam.

- Proposed ground surface to gently slope away from door thresholds / fixed screens with Aco drainage channels to stop wind driven rain.
- Contractor to tie in and make good to any damage arising from works.
- Contractor to finish to existing tarmac border edge to be made good. Final finished ground levels to be agreed with architect.
- Provide 150mm thick granular sub-base material to Clause 804 of the NRA Specification for Roadworks which shall be spread and compacted to the required thickness. Compaction shall be carried out in accordance with Clause 802 of the NRA Specification and in accordance with Table 8.1 of the engineer's specification.
- A two-course bituminous macadam surfacing shall be laid over the sub-base where specified. It shall consist of a macadam base course in accordance with BS 4987 rolled with a power roller to a consolidated thickness of 63mm. A second course of bituminous macadam in accordance with BS 4987 is to be laid over and rolled with a power roller to a consolidated thickness of 25mm giving 88mm consolidated for the two layers.

54.PROPOSED CONCRETE FOOTPATHS

- Refer to architects site plan for the location of the concrete footpath.
- Proposed Concrete footpaths to be provided in the locations indicated on architects site plan..
- Provide reinforced In-situ concrete; grade c40n20. Path edges to be bullnosed with float finish including working around AJ covers, manhole covers, gully traps etc...refer to plan to see extent of new pathways.
- 100mm exposed aggregate in-situ concrete increasing to 150mm in areas with vehicular access, 150mm sub-base layer compacted hardcore to clause 804 on 350mm 6f2 capping stone where required to make up levels. On Thrace 40/40 geogrid or equivalent joint to be formed at 3m spacing with double layer roofing felt, complying with I.S. 36 for full depth of joint.
- Note: Engineer's specification to supersede architect's specification

55.PROPOSED PEDESTRAIN ACCESS GATE

- 1 no pedestrian entrance 1050mm height & 2000mm Width
- With Hydraulic self-closing mechanism
- Anti-finger trap mechanism built within unit
- Easily adjustable & Controlled gate flow
- Stainless Steel finish to proposed gate to standard ISO 15510:2010
- Polyester powder coated option available
- Gate is to be fixed to new proposed pillar

56.PROPOSED SET DOWN AREAS

BUS SET DOWN AREA.

- Existing section of boundary wall to be removed to allow for bus set down area. Refer to section below for spec for new boundary wall.

- The set down area is to be the following size. Road side is to be 25600mm in length and the side of the set down area closest to the school is to be 20500mm in length.
- The set down area is to 3000mm in width.
- A 100mm Concrete kerb is to be place between the concrete footpath and the set down area refer to spec below for the concrete kerb.
- Road markings are to 100mm wide and the contractor is to submit proposed product to architect for approval.
- Proposed dropped kerb to be provided in location indicated on architects proposed site plan. Please refer to spec below for more details.

COLLECTION BAYS/ ACCESSIBLE SET DOWN AREA.

- In accordance with planning condition 3(a) an accessible set down area and collection bays were to be provided to avoid kids from crossing the road. Please refer to architects proposed site plan for location of accessible set down area/ collection bays.
- Existing section of boundary wall to be removed to allow for bus set down area. Refer to section below for spec for new boundary wall.
- The set down area is to be the following size. Road side is to be 37800mm in length and the side of the set down area closest to the school is to be 31000mm in length.
- The set down area is to 3600mm in width.
- 1 no accessible set down area is provided measuring 3600mm x 7000mm.
- 4no collection bays have been provided with each collection bay measuring 3600mm x 6000mm.
- A 100mm Concrete kerb is to be place between the concrete footpath and the set down area refer to spec below for the concrete kerb.
- Road markings are to 100mm wide and the contractor is to submit proposed product to architect for approval.
- Proposed dropped kerb to be provided in location indicated on architects proposed site plan. Please refer to spec below for more details.

57.SET DOWN AREA SIGNAGE

- Contractor shall provide 1 No. Set Down area sign mounted to a 76mm diameter Galvanized Steel Sign Post.
- Proposed Post-mounted signs should be at least 450mm wide x 450mm high and positioned 1500 to 2500mm to the centreline from ground level.
- Material - The material for external signage shall be tough, durable, non-brittle, non-corrosive, vandal resistant, cast aluminium alloy, complying with LM4 (EN 1706 AC-45200) - Aluminium Casting Alloy cast. Where signs are to be free standing, the frame shall be made up to 3mm gauge.
- Refer to signage example

**Set down
area only**



58. PROPOSED BOUNDARY WALL

- Contractor to provide new 215mm hollow blockwork boundary walls with painted wet dash to match the existing front boundary walls as indicated on architect's site plan drawing.
- The piers in the proposed Wall are to be 440 x 400mm hollow block piers with painted wet dash finish to match the exiting piers. Height of the proposed piers are to match the existing piers.
- The existing & proposed boundary walls are to be **re painted with a colour TBC by the school.**
- Proposed boundary walls are to be the same height as the existing boundary.
- Proposed capping on proposed boundary walls and pillars to match the existing capping on the existing boundary walls.
- Contractor to measure height of existing front boundary walls and pillars on site

59. PROPOSED TACTILE PAVING, KERBS & DROPPED KERBS

- Refer to architects proposed site plan drawings to be read in conjunction with DAC application drawings for location of proposed tactile paving and dropped kerbs.
- All proposed tactile paving and drop kerbs shall be installed in accordance with TGD Part M 2022 - Access and Use.
- Proposed kerbing shall consist of 250x125mm precast concrete kerbing to I.S 146 laid on 100mm thickness concrete bed and haunch. Kerbs to be dishd at crossing points / gates with a max 10mm upstand over the adjacent ground surface.
- Proposed kerbing between the bike lane & Pedestrian footpath shall consist of 250x50mm precast concrete kerbing to I.S 146 laid on 100mm thickness concrete bed and haunch. Kerbs to be dishd at crossing points / gates with a max 10mm upstand over the adjacent ground surface
- Footpath to grade to crossing point level at grade of 1:20.
- Proposed Tactile paving shall consist of buff coloured Kilsaran Corduroy or equivalent tactile paving. Footpath to grade to crossing point level at grade of 1:20.
- Kilsaran Corduroy or equivalent Tactile Paving :
- Profiled finish comprising of rows of flat top rods on the surface
- The flat top rods are laid parallel to the edge of the hazard at a distance of 400mm away
- Product Standard - BS EN 1339:2003, BS7997 BS:2003, DDCENTS15209:2008
- Manufacturing Method - Hydraulically pressed semi dry concrete
- Finish - Corduroy or equivalent Pattern
- Slip/Skid (Potential for Slip) - Low - USRV/PTV 40-74, as per EN 1339:2003 Table NA.4. Test values typically >60
- Strength - Compliant to BS EN 1339:2003
- Application & Trafficking - Product suitable for both pedestrian & vehicular traffic when designed and installed in conjunction with the correct, site specific sub-base design as per the relevant BS7533 standard.
- Joint - Corduroy or equivalent Tactile Paving has a narrow-finished joint of 1mm approx. This product has no integral spacer nib and no chamfer. Great care and attention must be paid when handling and installing to avoid chipping and damage to edges. Joints should be filled with Kiln dried jointing sand or if laid on a motor bedding then a mortar joint should be used.

60.EXTERNAL SECURE SOFT PLAY AREA

- Proposed secure soft play surface to be provided a 1:50 gently slope away from door thresholds / fixed screens as indicated on architects' drawings with Aco drainage channels to stop wind driven rain.
- Wearing course / layer is constructed from a 1-4mm EPDM (ethylene propylene diene monomer) rubber course – 20mm.
- Base layer or shock pad layer (30mm) is constructed from 2-6mm SBR (styrene butadiene rubber) rubber crumb, which is screeded to the appropriate depth and allowed to cure on: 300mm depth of mot type 1 stone, pneumatically compacted, levelled & blinded.
- Level access is to be provided at all gate along the perimeter of wet pour area.
- Contractor to include for Aco channel strip along external perimeter of external play area as indicated in architects' drawings connected to proposed drainage system.
- Contractor to make good to all ground surfaces in preparation for wet pour system which may arise from proposed drainage and additional foul water works.
- Hardcore formed to give a 1: 50 falls from the centre of the play area to the outside edges.
- 225mm min. Sub-base layer compacted hardcore to clause 804 on 400mm min. 6F2 capping layer. (Terram to be provided where construction trafficked) on Thrace 40/40 geogrid or equivalent
- Anti-Climb fence with gates as indicated on Proposed Site Layout Plan, fencing system data sheets attached in Architect's appendix.
- All proposed drainage covers where applicable to be finished with Wet Pour system, to sit flush with new ground surface. Contractor is to ensure there is no dishing or ponding of water on proposed wet pour surface.

FIRE ESCAPE INDICATION SECURE SOFT PLAY AREA

- Contractor to provide fire escape signages and markings to external secure soft play area as indicated on architects proposed site & below specification.
- The proposed signages and markings to indicate clear indication of fire escape route passing through soft play area as indicated and lead escape into open safe space.
- All signages and markings to be clear of any obstructions.
- External soft play area surface to be painted in white paint lines as indicated in architects drawings to provide markings of a path to nearest escape.
- New pathway to be minimum clear width of 1800mm.
- Adjacent to final exist of soft play area gate, an exit signage to be provided on high paladin fence with illuminating lighting system. The new lighting system to be connected to school fire alarm to provide power and light up during emergency evacuation.
- Sample signs to be presented for approval to architects prior to order is made.
-



61.ANTI - CLIMB FENCING TO EXTERNAL SECURE SOFT PLAY AREA

- Contractor to provide 2400mm Height Kinsale 868 or equivalent Perimeter mesh fence system to proposed secure play area, proposed sensory garden area, new south west boundary and perimeter of rear playing pitch as indicated on architects proposed site & below specification:
- Existing masonry block walls to rear (north) and Side (East) to be retained.
- It's the responsibility of the contractor to reinstate wall and capping to match existing in material, height, width and coursing where damages or temporary openings are formed and make good upon completion.
- Supply and install 2400mm High Irfen® Kinsale 868 or equivalent Perimeter Mesh Fence System. 200 x 50mm mesh with 6mm vertical wire and twin 8mm horizontal wires back and front. 60x 60 SHS posts at 2530mm post centres. Finish: Galvanised & Powder coated (Plasgalv)
- 1 No. 1200 x 2400mm pedestrian single leaf gate to be included to Kinsale or equivalent fencing system spec to proposed playing pitch, enclosed play area, proposed sensory garden and new south west boundary as indicated on architects site plan drawings.
- Refer to architects' attached appendix for data sheets
- Manufacturer: Irish Fencing Services or equivalent
- Product Reference: Irfen Kinsale 868 Mesh System or equivalent
- Drawing No: A0300`
- Height: 2400mm
- Mesh and Wire: Irfen® Kinsale 868 or equivalent Perimeter Mesh Fence System
- Kinsale or equivalent mesh is constructed using with 1no 6mm vertical wire and 2no 8mm horizontal wires back and front to construct a 200 x 50 aperture.
- Finished in Polyester Powder Coating to BS 6497.
- Posts: 60 x 60 x 2mm galvanised post and subsequently electrostatically powder coated in a plant complying to EN 1722Part 16
- Post Centres: Maximum 2530mm
- Fixings: Irfen® or equivalent Steel Clips with 8mm Anti Vandal Bolts.
- Method of setting posts: Erect posts plumb and level in 25n concrete bases minimum size 350 x 350 x 600mm or as recommended by supplier, set 100mm below ground level
- Accessories: None
- Conformity: Submit manufacturers and installer certificates to BS 1722- 14

62.PROPOSED FIRE HYDRANTS AND SIGNAGE

- The contractor is to refer to the engineers and architects site plan for the location of the new fire hydrant.
- The contractor is to refer to the engineer's documents and drawings for tying the new hydrant into the existing mains water supply.
- All fire Hydrants must be clearly identified with a H plate with the diameter of the main and distance from the hydrant displayed on the H plate. Hydrants must be within 300mm of surface. Hydrant lids must be painted yellow for easy identification.
- H Plate size is to be 200mm Length by 1200mm width. The H plate has a weight of 0.3kg.



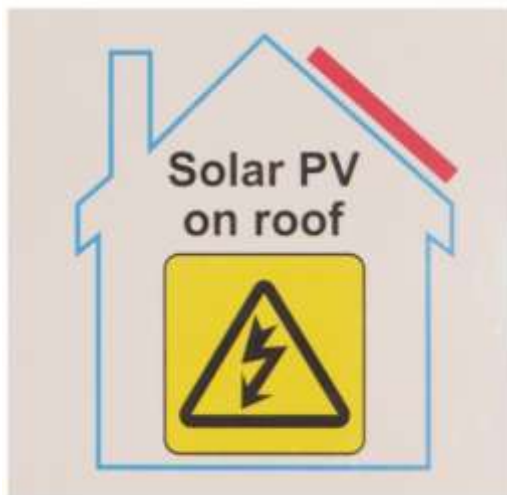
- The hydrant indicator plate to BS 3251: 1976 shall be fitted on a boundary wall or on a marker post provided at a preferably height of 600mm with a minimum height of 450mm over the footpath surface level

63.ACO CHANNELS

- Note: Engineer's specification to supersede architect's specification
- Raindrain ACO drains or equivalent to be installed to manufacturers detail and specification to all level access thresholds.
- All proposed Aco or equivalent channels to connect to proposed surface drainage, Refer to HHP Engineers Drawings for proposed surface water layout.
- Where Aco or equivalent channels are proposed at door threshold they must include cover which does not impede the movement of wheelchairs, any roadway / parking area Aco channels must be heavy duty to withstand traffic as heavy as bin refuge / fire truck.
- All covers to consist of galvanised metal.

64.SOLAR PANELS SIGNAGE

- The Contractor is to refer M&E drawings and documents for the location and installation of the solar panels.
- At the two entrances into the school site two new signs are to be provided. These signs are intended warn the fire brigade entering the site in the event of a fire that there is PV Panels on the roof of the buildings.



- The signs are to be provided with a white background, minimum size is to be A3 size.
- The sign is also to be UV Solar Proof, Waterproof and fixed in a firm and well visible location.

65.BIKE STANDS

- Proposed 4 no Sheffield Bike Stand to be hot-dip galvanised and bolted down to surface.
- Proposed Bike stands to be 800mm height X 650mm wide X 750mm c/c apart.

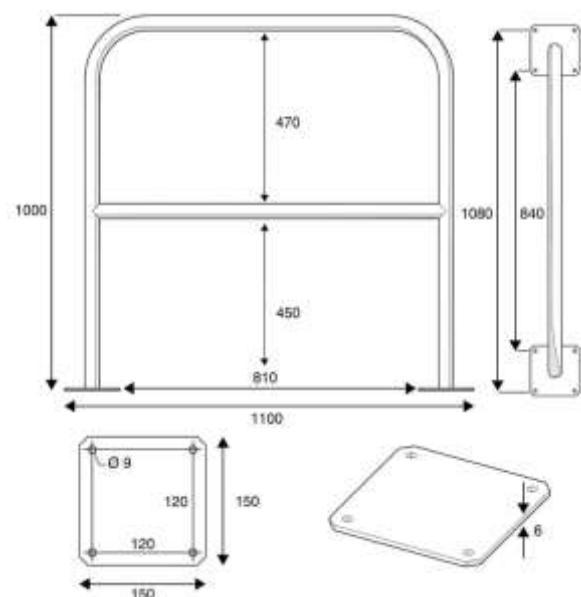
- Refer to Pittman Traffic & Safety Equipment detail and specification for proposed bicycle parking, canopies and associated works.
- Proposed bike stands are to be placed 1000mm between each other and the lanes between the rows of the bike lanes are to 2500mm wide.

66. BIKE SHELTER

- New Sheffield Bike Stands to be covered by new Malford Cycle Shelter provided by Langley Design or equivalent.
- Proposed 2no Malford Cycle Shelter to be galvanised steel frame unit with powder coated finish. RAL colour finish TBC by architect prior to purchase.
- Proposed Malford Cycle Shelter to be made of 6no. bays, each bay to be size of 4300mm (L) x 2400mm (H) x 3300mm (W).
- Civil Engineer to determine suitable fixing method.
- The Shelter to be surface fixed or bolted down below finished grade.
- Fixing bolts by others - 14 mm dia. holes (use M12 bolts).
- Size of concrete foundation and concrete mix to be determined on site taking ground conditions into account and any risk of wind exposure.
- Number of bays can be matched to cycle parking requirements, specify in coding method.
- Roof covering in 10 mm Twinwall opaque polycarbonate.
- Cycle rack shown is the Sheffield Toast Rack (MCR201) to BREEAM 2006 (20 cycles per bay) also available to BREEAM 2008 on request (16 cycles per bay)
- Refer to Langley Design detail and specification for Proposed bicycle parking, Shelters and associated works.
- Proposed layout is to be approved and signed off by architect before installation

67. PROPOSED GUARD RAILS BESIDE MAIN ENTRANCE DOOR

- In accordance with TGD M Guard rails are required either side of a door that opens out into a pedestrian walkway. Refer to Architects DAC drawings and document.
- Guard rails are to be Stainless Steel and colour of guard rail is to be confirmed with the architect before ordering.
- Product specifications
- Length: 1000 mm
- Height: 1000 mm
- Profile dimensions: 40 mm
- Colour: TBC
- Material: Stainless Steel
- Weight: 18.4 kg
- Assembly: Assembled



68. PROPOSED VISARAIL

- In compliance with planning condition 3 (e) a visarail barrier is to replace the existing pedestrian railing at the front entrance to the site. Exact location is indicated on architects proposed site plan.
- The visarail is to be 1000mm in height above the ground level. Vertical bar infill is to be 900mm high with a gap of 100mm between the bar infill and the ground.
- The Frame of the visarail is to be 50 x30xm R.H.S Frame.
- The bar infill is to be 12mm in diameter.
- The railing is design and constructed to BS 7818:1995.
- The finish for the railing is to be stainless steel.

69. EXTERNAL DRAINAGE

- External drainage is shown on architects' drawings for diagrammatic purposes only, all external drainage to be constructed to engineer's layout, and laid to falls as per engineer's specification, Refer to Dooley Cummins Consulting Engineers package.
- To be read in conjunction with architects' drawings for proposed locations of RWP, RWG & Aco Channels

70. EXTERNAL SITE LIGHTING

- Refer to Galileo Energy Services detail and specification for external lighting and associated works.

71. EXTERNAL GAS TANKS

- Refer to Mcloughlin Architecture and Galileo Energy Site Drawings for the location of the proposed external gas tanks.
- Refer to Galileo Energy Services drawings and specification for all the information regarding the gas tanks.

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
MCL Specification Documents	
21 30 – Spec- T01	Architectural Spec (This Document)
MCL Health & Safety Documents	
21 30- RA	Risk Assessment
21 30- PS&HP	Preliminary Safety and Health Plan
21 30- 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
MCL Architectural Drawings		
SV001	A1	Existing Site Plan & Site Location Map
SV100	A1	Existing Floor Plans
SV200	A1	Existing Elevations & Sections
T001	A1	Demolition Site Plan
T002	A1	Proposed Site Plan
T003	A1	Proposed Works to Front Boundary
T004	A1	Proposed Bicycle Parking
T005	A1	Construction Phasing Site Plan
T100	A1	Demolition Ground Floor Plan
T101	A1	Demolition First Floor Plan
T102	A0	Proposed Ground Floor Plan
T103	A1	Proposed Fire Upgrade works to Existing First Floor
T104	A1	Proposed Floor Finishes
T105	A1	Proposed Ceiling Finishes
T106	A1	Proposed Signage Plan
T107	A0	Demo Roof Plan
T108	A0	Proposed Roof Plan
T109	A1	Construction Phasing Plan
T200	A1	Proposed Elevations 1 of 2
T201	A1	Proposed Elevations 2 of 2
T300	A0	Proposed Sections 1 of 2
T301	A1	Proposed Sections 2 of 2
T400	A1	Proposed Window Schedule
T401	A1	Proposed External Door Schedule
T402	A1	Proposed Internal Door Schedule
T403	A1	Proposed Joinery 1 of 2
T404	A1	Proposed Joinery 2 of 2
T500	A1	Proposed Construction Details 1 of 4
T501	A1	Proposed Construction Details 2 of 4
T502	A1	Proposed Construction Details 3 of 4
T503	A1	Proposed Construction Details 4 of 4
Additional Consultants		
N/A		



4.2 - APPENDIX C

MCLA- LIST OF APPENDIX DOCUMENTS

The following
Manufactures Specification / Product Data documents have been provided for tender stage:

ITEM NO.	ITEM DESCRIPTION	DATE	STATUS
1. ACO Drain	30/10/2024 14:56	File folder	
2. Alumasc	30/10/2024 14:55	File folder	
3. Blinds	30/10/2024 14:55	File folder	
5. Fire Proofing	30/10/2024 14:55	File folder	
6. Formica	30/10/2024 14:55	File folder	
7. Glide Vale Protect	30/10/2024 14:55	File folder	
8. Gyproc	30/10/2024 14:53	File folder	
9. Insulation Materials	30/10/2024 14:53	File folder	
10. Mannok	30/10/2024 14:55	File folder	
11. Pro Clima	30/10/2024 14:55	File folder	
12. Radon	30/10/2024 14:55	File folder	
13. Roofing	30/10/2024 14:56	File folder	
14. Suspended Ceiling Systems	30/10/2024 14:56	File folder	
15. Wet Rooms	30/10/2024 14:56	File folder	
16. Window Cills	30/10/2024 14:56	File folder	
17. Sanitary Ware	30/10/2024 14:56	File folder	
18. Dry Lining System	30/10/2024 14:56	File folder	
19. ESB	30/10/2024 14:56	File folder	
20. Fencing	30/10/2024 14:56	File folder	
21. Kingspan	30/10/2024 14:56	File folder	
22. KCC Ironmongery	30/10/2024 14:57	File folder	
23. Polyflor	30/10/2024 14:56	File folder	
24. Wall Cladding & Splashbacks	30/10/2024 14:56	File folder	
25. Ceiling Hatch	30/10/2024 14:56	File folder	
26. Wall Vents	30/10/2024 14:56	File folder	
27. Door Finger Guard	30/10/2024 14:56	File folder	
28. Abloy Locks	30/10/2024 14:56	File folder	
29. Shieffield Stand Bike stands & Bike SH...	30/10/2024 14:56	File folder	
30. Viserail	30/10/2024 15:04	File folder	
31. DoES - Typical Room Layouts	30/10/2024 14:56	File folder	
32. Kitchen & Appliances	30/10/2024 14:56	File folder	
33. Guard Rails Beside Door	30/10/2024 14:56	File folder	

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