



SPECIFICATION

MCLA SPECIFICATION

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1.0 PROJECT INTRODUCTION

Specification		Tender Purposes Only
At	Kilmacanogue N.S	
For	BOM Kilmacanogue National School	
Project Ref:	20 29	
Doc Ref:	Spec – T01	
Date:	June 2026	

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

To whom the copyright of this document belongs.

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

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

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

INTRODUCTION

Provision of a single storey extension to side (consisting of 2no. mainstream classrooms - proposed floor area = 169sqm) of existing single storey school building (existing floor area = 1,273sqm) together with new basketball court and all associated site works.

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 Engineer 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 Dooley Cummins and Galileo Energy Services M&E Engineer drawings & specifications. Mechanical, electrical and structural items mentioned in this document shall be superseded by structural engineers & M&E consultants' specification where available.

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

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

SITE VISITS

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

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

SITE ADDRESS

Kilmacanogue National School,
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Co. Wicklow. A98 D602

CLIENT

BOM Kilmacanogue National School,
Mark Sheeky - School Principal
Tel: 01 2861934
E: principal@kilmacns.ie

ARCHITECT, ER & PROJECT SUPERVISOR (DESIGN PROCESS)

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

QUANTITY SURVEYOR

Lambert Surveyors
Claregate Street,
Kildare Town,
Co. Kildare.
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E: mlambert@lambertsurveyors.com

MECHANICAL & ELECTRICAL (M&E) ENGINEER

Galileo Energy Services
Unit A6, M4 Business Park,
Celbridge, Co. Kildare
W23VK74
Tel: 01 6274103
E: office@galileoenergy.ie

CIVIL / STRUCTURAL ENGINEER

Dooley Cummins Architects + Engineers
Stanhope Street,
Athy, Co. Kildare
Tel: 059 8640013
E: info@dcae.ie

2.0 PRELIMINARIES AND CONDITIONS OF CONTRACT

SITE CONDITIONS / SITE SURVEY

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

PROJECT SUPERVISOR (CONSTRUCTION STAGE)

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

PROJECT PHASING

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

ACCESS & SECURITY

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

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

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.

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 Dry out and control the humidity of the works as may be necessary to facilitate the progress and satisfactory completion of the works including the works of nominated window-contractors.

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

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

PROVIDE EVERYTHING NECESSARY

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

TEMPORARY SUPPORTS

The contractor shall be solely responsible for designing and carrying out all necessary temporary works where and if required, including falsework, and for taking all necessary steps to ensure the continuous stability for the duration of the contract of the adjacent neighbouring structures, footpaths, roads and lands. A Chartered Engineer, or other suitably experienced and qualified person as approved by the Engineer, shall on behalf of the Contractor, carry out a detailed structural survey and appraisal of the buildings on adjoining sites as may be necessary, and shall design and prepare detailed drawings for the temporary works in accordance with the recommendations of the relevant British Standards. These proposals shall incorporate any and all amounts of temporary works indicated on the Architects or Engineer's

drawings but such temporary works shall not be assumed by the Contractor to be sufficient in themselves for any purpose. Work near adjacent buildings or pavements shall be executed in such a manner as will not endanger these existing buildings or pavements. Temporary works and falseworks shall be designed to comply with BS 5975:2019 - Code of practice for temporary works procedures and the permissible stress design of falsework and other National Standards as may be appropriate. No temporary supports shall be removed until the requisite strength of all members and connections of the permanent works has been achieved. The erection sequence for precast work shall be submitted to the Engineer for approval so that its effects on the permanent Works may be considered. The Contractor shall liaise with specialist suppliers and window contractors when designing the temporary works and shall take due regard of their requirements. Prior to any works commencing on site the Contractor shall submit his detailed proposals for temporary works to the Engineer; approval or acceptance wholly or in part by the Engineer of the proposals or failure on the part of the Engineer to observe any defects or deficiency in the proposals submitted shall not relieve the Contractor of any of his responsibility. The Contractor shall be responsible for obtaining all necessary approvals, clearances, permissions, wayleaves etc. to carry out the temporary works. The Contractor's attention is drawn to the fact that he must comply with all Factory Acts, Government Regulations, etc. in relation to temporary works, scaffolding etc.

QUALITY ASSURANCE

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

DAMP & ROT

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

TIMBER MATERIALS

TIMBER GENERALLY:

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

Timber used for joinery shall be as follows:

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

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

HARDWOOD:

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

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

SOFTWOOD:

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

The following defects will not be permitted:

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

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

- Minimum 15%
- Maximum 20%

PLYWOOD:

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

Fire-Proof Board:

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

Wood Veneers:

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

Plastic Laminate:

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

Doors generally:

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

Ancillary trims:

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

Glues:

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

Preservative treatment - organic:

All floor battens, concealed grounds, timber built into masonry, dry-lining etc. to be pressure impregnated against rot & insect attack. Any cut ends to receive two coats of approved wood preservative. Double vacuum organic solvent wood preservative treatment shall comply with BS 5707(1997): 1997 specification for preparations of wood preservatives in organic solvents. Treatment shall be in accordance with the following double vacuum schedules and treatment classes.

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

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

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

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

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

Re-Treatment of Cut Surfaces:

All known cutting, machining, profiling and notching must be complete prior to assembly. Any unforeseen cutting of treated surfaces must have the Architects approval. Where the Architect gives such approval notches shall be given two liberal brush or spray applications or, where end grain is exposed, timbers shall be steeped in a compatible organic solvent end grain

preservative for a period of not less than three minutes. Rip-sawing, planing and heavy sanding will not be permitted unless the timber is returned for re-treatment.

Screws and Nails:

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

Specialist Timber Floors:

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

Moisture Content of Timber:

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

Storage Generally:

Store timber and timber products protected from the weather, clear of the ground and supported to prevent distortion. If stored in the open or in damp air conditions enclose completely with a suitable covering to prevent deterioration and provide for air circulation and ventilation.

Certification:

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

Protection:

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

Finishing:

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

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

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

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

TIMBER WORKMANSHIP

Storage:

Timber shall be stored under cover clear of the ground and protected from dampness. Workmanship generally shall be in accordance with BS 1186-2(1988): 1988 - Timber for and workmanship in joinery - specification for workmanship. The whole of the carpentry and joinery

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

Fixing:

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

External Joinery:

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

Transport and Protection:

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

Make Good Defective Work:

Should any shrinkage and warping occur or any other defects appear in the joinery work before the end of the Defects Liability Period, such defective work is to be taken down and renewed

to the Architect's satisfaction and any work disturbed in consequence must be made good at the Contractor's expense.

Plugging:

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

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 of insulations.
- U-value and KM (effective thermal capacity) calculations in compliance with BRE 443:2019 and the relevant EN standard calculation for the relevant element.

Non default data for thermal bridging PSI values:

- As built Architectural drawings (plans, sections and elevations) identifying the location of the relevant details in compliance with Part L Acceptable Construction Details.
- Detail drawings identifying materials and thicknesses used in construction. Signed off copied from the ACDs indicating which key junctions they reference in the building.
- All to be signed and dated by the architect/assigned certifier to confirm compliance with limiting thermal bridging and air infiltration-Acceptable Construction Details.
- Written confirmation on headed paper from the builder stating he confirms the details are constructed as per the signed and dated drawings.
- Also acceptable from an accredited third body such as agreement or BRE Certified Thermal Details and products scheme or NSAI registered thermal bridge modeler. Also to be signed off as constructed by architect or assigned certifier.
- If the details are in compliance with TGD Part L data must be provided that demonstrates that 'Limiting Thermal Bridging and Air Infiltration-Acceptable Construction Details' as referenced in Building Regulations TGD L has been conformed to. This requires that the relevant drawings clearly show the relevant details and that these details are checked and signed off by the architect or assigned certifier.
- Where calculated psi values are used, documentary evidence in accordance with the methods described in IS EN ISO 10211:2017 with results that agree with the stated values of temperature and heat flow within the tolerance indicated in the standard for these examples. Several packages are available that meet this requirement.
- Detailed guidance on decisions regarding specific input to the modelling software and the determination of certain quantities from the output of the software contained in BRE Report BR 497 Conventions for calculating linear thermal transmittance and temperature factors. This guidance should be followed in carrying out modelling work so that different users of the same software package and users of different software packages can obtain correct and consistent results.
- Ψ values are calculated in accordance with I.S. EN 10211:2017. Certification of the detail by a member of NSAI Thermal modellers Certification Scheme is a means of meeting the requirements in TGD L and NEAP for calculation of Ψ values.

- We will require the architect to sign off on details, installations and specifications to ensure compliance with the specifications and drawings and also to account for the use of accredited Ψ values.

Non default data for Air Permeability:

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

O&M MANUAL REQUIREMENTS

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

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

- Current, as of date of issue, contact details of each company/contractor involved in the supply or manufacture of elements, materials and components.
- All project approved certification, documentation and trade literature in relation to elements, materials and components used in the works.
- Hardcopy O&M Manual Format - A4 lever arch files with rigid plastic coated covers shall be used which
- A full set – in A3 format – of approved as-built drawings with all approved changes incorporated and supplemented with a comprehensive text based technical description of each element and system type of the works.
- A Copy of all completed BCAR Ancillary certificates and Statutory documents.
- All Required Building service and Architectural Data Evidence as detailed above.

- Full set of structural calculations for reference.
- Records of any toughened glass, including heat soak testing records. Include any records of NiS breakages that occur on-site during construction.
- A full list of warranty statements clearly identifying any terms and conditions.
- The approved Maintenance & Access Strategy Report which shall include methodology covering the procedures for replacement components, elements and materials which have been identified as 'Replicable' items and therefore having a design life which is less than the design life of the works.
- The approved Maintenance & Access Strategy Report, which shall include methodology covering the procedures for replacement of damaged and/or defective components, elements and materials.
- Manufacturer's recommendations and methodology for all routine cleaning and maintenance including but not limited to appropriate cleaning products, repair products, lubrication of component parts etc.
- Record/ check sheets for routine cleaning and maintenance works.

Presentation

- Indexing System
 - Each volume shall be numbered and shall be divided into sections using an appropriate numbering system
- Paper Sizes
 - The manual will contain manufacturer's literature which will be different sizes. Large pages will be folded and small pages will be fitted in plastic pockets with a reinforced edge punched for filing in A4 lever arch files.
 - The page size shall be standardised for all volumes using A4 paper (210 x 297mm) with four holes punched centrally in the longer side 80mm apart. Diagrams shall be prepared on A4 or A3 (297 x 420mm) paper
- Section Dividers
 - Stiff cardboard section dividers with extended tabs shall be used; these shall be SUMMIT Ring Book Guides or equivalent.
- Files for Manual
 - A4 lever arch files with rigid plastic-coated covers shall be used which shall be EMGEE or equivalent.
 - Inlaid lettering on the front cover shall indicate the title, i.e. Operating and Maintenance Manual, the Name of the Project and Volume Number. A label shall be fitted in the window on the spine of the file listing its contents.
 - The Trade Contractor is advised that all Record Drawings and O & M Manuals in the form described herein must be handed over to the Architect prior to the issue of a Practical Completion Certificate for the Trade Contract Works. Failure to issue these Record Drawings and O & M Manuals will also defer the issue of the Practical Completion Certificate until such time as they are received.
 - If the Trade Contractor fails to issue such documentation on time, then the Architect will have the right to engage such other third parties to prepare these Record Drawings and O & M Manuals and any resultant cost incurred by him shall be borne and set against the Contractor.
 - As-built Drawings - The Contractor shall include for a complete set of as-built drawings which shall incorporate all works carried out and completed by the Contractor

- To facilitate submission of record drawings, the Contractor shall keep on site a complete set of all drawings used on the Contract Works, on which he shall mark alterations to the designs shown thereon as such alterations are carried out.

SUBMISSIONS

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

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

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.

ROOF SYSTEM TECHNICAL SUBMITTAL REQUIREMENT

- Where the contractor proposes an alternative roof system to that specified, the Contractor **shall submit a Full Technical Submittal** for the alternative roof system for approval prior to commencement of works. **The Flat Roof System Technical Submittal Form (Excel format)** included within the tender package **shall be fully completed and returned** to the Architect together with **all required supporting and evidence documentation requested**.
- The Employers Representative and Design Team reserve the right to reject any alternative roof system proposal that does not demonstrate full equivalence or superior performance to the specified system.

BUILDING ENERGY RATING

- The Main Contractor shall be responsible for providing a new Building Energy Rating, The 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:
 - **Ground Floors: 0.11 W/m²K**
 - **External Walls: 0.13 W/m²K**
 - **All roofs : 0.12 W/m²K**
 - **All glazing: 1.20 W/m²K**

VENTILATION VALIDATION REQUIREMENTS

- The Main Contractor shall be responsible for providing a Ventilation Validation Certificate 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.
- **Assessment:** The contractor should engage with a third party to get the ventilation validation certificate testing and provide the completed certificate.
- The contractor is to not use the same company who installed the mechanical ventilation units.
- **Submit:** The ventilation validation certification shall be provided prior to substantial completion and issued to the architect as part of the safety file.

SITE FOREMAN

- The Contractor shall keep a nominated competent foreman constantly on 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 nominated foreman is responsible for scheduling, co-ordinating and supervising the work of all site operatives, ensuring that all work is delivered safely on time along with managing equipment and materials required on behalf of the main contractor.
- The foreman shall be responsible for the supervision of provision of informed instruction to personnel for the duration of the works along with ensuring all Company and legal regulations are implemented, that all required documentation is completed as necessary and recording daily work on site.
- The foreman shall have good experience in carpentry, joinery & plastering and carry out the following key responsibilities :
 - Operate and promote safe working on site
 - Implement Company requirements and legal regulations, paying specific attention to HSE
 - Legislation and Quality
 - Carry out and record site inspections
 - Ensure all works are carried out in line with approved method statements
 - Conduct and amend risk assessments and deliver toolbox talks/briefings
 - Ensure site personnel have job relevant training requirements which is entered on site personnel training register
 - Lead by example to others on site
 - Ensure the completion of works on time
 - Schedule, co-ordinate and supervise the daily activities of site operatives
 - Share and pass on knowledge to teams
 - Ensure site operatives complete all required documentation
 - Ensure documentation is properly completed / provided to DT
 - Track and document daily work productions
 - Organise and monitor the work of subcontractors on site
 - Equipment and materials management
 - Co-ordinate delivery of materials on site

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.

3.1 - FACILITATING WORKS

1. SITE COMPOUND, FACILITIES & AREA OF WORKS

1.1 - SITE COMPOUND / SITE ACCESS

- Location of a site compound shall be agreed with architect / client prior to works commencing.
- Contractors Site compound area shall include adequate temporary hardstanding to provide contractors welfare facilities, meeting room, offices and contractor / sub-contractor staff parking together with any site materials.
- The Extent of contractors compound shall be altered / relocated as required to provide required phasing / completion of works.
- All surfacing in Site compound areas shall be reverted to the ground finish identified on the Architects proposed Site Plan upon completion.
- 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 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.
- 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.
- Any waste skips located within site compound / area of works must be min. 3m from all structures and boundaries in the event of arson.

1.2 - HOARDING AND SITE SEPERATION

- **Retention & extent:** Provide and maintain all segregation (hoarding, Heras-type fencing, partitions) for the full duration of the contract. Remove only when the Employer's Representative/Architect instructs and areas are made safe.
- **Types & heights:**
 - **Public/road-facing perimeter:** Solid hoarding, **min 2.4 m high**, continuous, with lockable gates.

- **Internal segregation within school grounds:** Anti-climb mesh fencing (Heras-type) **min 2.0 m high** with debris netting/privacy screening; upgrade to solid partitions where adjacent to pupil routes, doors or play areas.
- **Design & stability (Temporary Works):** Treat hoarding/fencing as **Temporary Works**. Provide design, fixings/kentledge and checks to ensure stability at all times (allow for wind loading). Gates shall not swing out over public footways. Provide vision panels to vehicle gates.
- **Finish & appearance:** Decorate/paint the **road/public side** to a reasonable standard. Keep surfaces clean, tidy and promptly remove/paint over graffiti.
- **Approvals & licences:** Obtain all necessary **hoarding licences/road-opening/traffic-management approvals** and any third-party consents **before** installation. Keep copies on site.
- **Use of existing boundaries:** Only use existing boundary structures **by prior written agreement** with the Architect/Client, following a recorded **condition survey** and confirmation that they are adequate and safe. Do **not** rely on or fix to third-party property without formal permission. Provide independent infill where height/continuity is insufficient.
- **Access control:** Enforce strict access control. Site entry **by invitation/booking only**; all visitors sign-in, complete induction, be escorted as required and wear full PPE. Maintain lockable gates and supervised access during deliveries.
- **Traffic & safeguarding:** Install segregation in accordance with the **Contractor's Traffic Management Plan**, maintaining safe pedestrian routes, clear wayfinding, and emergency egress for Duleek Boys' & Girls' National Schools at all times.
- **Fire safety:** Use materials and details appropriate to the fire risk; keep hoarding clear of hydrants/alarms, do not block exits, and maintain clear escape routes.
- **Inspection & maintenance:** Inspect **daily** and **after adverse weather**. Keep plumb, secure and in good repair; immediately make safe any damage or instability.
- **Architect's site board:** Securely erect the **Architect's site board** at the **agreed location** and maintain legible for the duration.
- **Removal & making good:** On completion, remove temporary works and **make good** all fixings, surfaces and landscaping to the Architect's satisfaction.

1.3 - SITE OFFICES / MEETING ROOM

1.3.1 - GENERAL REQUIREMENTS

The Main Contractor shall be responsible for the provision, setup, and maintenance of adequate and suitable site office accommodation in close proximity to the construction site. These facilities must remain operational, secure, and accessible for the full duration of the works.

1.3.2 - LOCATION & ACCESSIBILITY

- The site office / meeting room should be located as near as practicable to the main site operations to ensure ease of access for project personnel.
- Where feasible, these facilities should be co-located with or adjacent to welfare amenities such as toilets, showers, and washbasins, in compliance with relevant health and safety regulations.

1.3.3 - FACILITIES & SERVICES

All office/meeting room accommodation provided shall include, at a minimum:

- Adequate internal floor space to accommodate anticipated staff and functions comfortably.
- Sufficient heating and ventilation systems to ensure a safe and comfortable working environment across all seasons.

- Lighting that meets workplace regulations for reading and detailed work, including both natural and artificial sources.
- Power supply with sufficient outlets for equipment and charging needs.
- Reliable and secure Wi-Fi connectivity capable of supporting multiple users and basic project management tools (email, CAD viewers, video conferencing, etc.).
- Office furnishings, including desks & chairs.

1.3.5 - MAINTENANCE & CLEANLINESS

- The Main Contractor shall ensure that all office / meeting room facilities are kept clean, safe, and well-maintained throughout the contract period.
- Cleaning shall be carried out at least daily, with additional deep cleaning as needed, especially during periods of heavy use or inclement weather.

1.3.6 - SECURITY

- Site offices / meeting rooms shall be secured outside of working hours, with lockable doors and windows.
- Appropriate fire safety equipment (e.g. extinguishers, alarms) shall be installed and maintained.

1.4 – CONSTRUCTION SITE WELFARE FACILITIES

- The Main Contractor shall be responsible for providing Construction Site Welfare Facilities in accordance with Safety, Health and Welfare at Work (Construction) Regulations 2013 Part 14 *Construction Site Welfare Facilities*.

1.4.1 - SHELTER AND ACCOMMODATION

The Main contractor responsible for a construction site shall provide at or in the immediate vicinity of the site:

- Adequate and suitable enclosed accommodation for taking shelter during interruptions of work owing to bad weather and for storing clothing not worn during working hours to include:
- Where there are more than 5 persons at work on a site, adequate and suitable means for them to warm themselves and for drying wet clothing;
- Where there are 5 persons or less at work on a site such arrangements as are practicable for them to warm themselves and for drying wet clothing; and
- Adequate and suitable accommodation for the deposit of protective clothing used for work and kept, when not in use, at or in the immediate vicinity, with practical arrangements in place for drying the clothing if it becomes wet.
- Adequate and suitable accommodation with sufficient tables with impermeable surfaces and seats with backs, for taking meals in satisfactory conditions;
- Facilities for boiling water and, where appropriate, facilities for preparing their meals in satisfactory conditions. Where there are more than 5 persons at work on a site and heated food is not otherwise available, adequate facilities for heating food must be available. Ensure an adequate supply of drinkable water and, where appropriate, another suitable non-alcoholic beverage be provided (at a convenient location); and
- Shelter and accommodation provided shall be properly ventilated, adequately lighted, kept in a clean, hygienic and orderly condition and shall not be used for the deposit or storage of materials and plant.

1.4.2 - CHANGING ROOMS AND LOCKERS

- The Main contractor responsible for a construction site shall ensure that appropriate changing rooms are provided for persons at work if they have to wear special work clothes and if for health or other appropriate reasons they cannot be expected to change in another area.
- The changing rooms should be easily accessible, of sufficient capacity and provided with seating.
- If work clothes are likely to be contaminated by dangerous substances, atmospheric conditions or other conditions the relevant contractor shall provide facilities to enable working clothes are kept in a place separate from personal clothing and personal belongings and separate changing rooms are provided for both men and women.
- If changing rooms are not required the relevant contractor shall ensure that every person at work is provided with a place to lock away his or her own clothes and personal belongings.

1.4.3 - WASHING FACILITIES

- The Main contractor responsible for a construction site shall ensure that adequate and suitable facilities for washing appropriate to the number of persons at work and the duration of the work are provided.
- Where there are reasonable grounds for believing that the work will not be completed within 30 days the contractor responsible for the construction site shall ensure the following is provided:
 - Adequate troughs or basins which have smooth impermeable internal surfaces;
 - Adequate suitable means of cleaning and drying such as soap and cleans towels (the single towel for use by many should be discouraged) or other suitable means; and
 - A sufficient supply of running hot and cold or warm water, hot water temperatures must be controlled so as to prevent scalding.
- Where there are more than 100 persons at work and reasonable grounds to believe that the work will not be completed within 12 months washbasins shall be provided as follows:
- Six washbasins plus the addition of one for every 20 persons exceeding 100, or any fraction of a unit of 20 persons being treated as one
- A contractor responsible for a construction site on which persons are at work where a dangerous substance is used shall provide an adequate number of nail brushes and provide one trough, basin, or washbasin, as may be appropriate, for every 5 persons at work.
- The washing facilities provided have suitable accessibility from the accommodation provided for taking meals and ensure they have adequate lighting, proper ventilation and are kept clean and tidied;
- Separate washbasins are provided for men and women where appropriate;
- Where by the nature of the work or for health reasons suitable showers shall be provided and provision is made for separate shower rooms or separate use of shower rooms for both men and women;
- The shower rooms are sufficiently large enough, hygienic and equipped with hot and cold running water to allow each person to wash themselves effectively; and
- Where the rooms housing the showers or washbasins are separate from the changing rooms ensure there is easy communication between them.

1.4.4 – TOILETS

- The Main contractor responsible for a construction site should ensure:

- At least one suitable sanitary convenience is provided, not being a convenience suitable only as a urinal for every 20 persons at work on the site;
- Where practicable every sanitary convenience discharges into a main sewer, is kept clean, tidy and properly ventilated and does not communicate with any workroom except through the open air or through an intervening ventilated space;
- Every sanitary convenience shall be under cover and partitioned off to secure privacy;
- Other than a convenience suitable only as an urinal, has a proper door and fastening;
- Every sanitary convenience is easily accessible to persons at work at all times while they are at the site and where possible is convenient to the washing facilities; and
- Provision shall be made for separate use of sanitary convenience for men and women.

1.4.5 – MAINTENANCE AND USE OF WELFARE FACILITIES

- A core aspect of the provision of welfare facilities is an adequate maintenance plan;
- Persons using the facilities should do so in a clean and hygienic condition and must not damage the facilities provided
- Where facilities are provided in another premises adjacent to the site, the standards of use that apply to these facilities must be maintained by persons using the facilities
- Site Rules for monitoring the provision, upkeep and use of welfare facilities should be prepared.

1.5 – CONSTRUCTION ACCESS ALTERATIONS

- **Existing Site Access is restricted via a single access roadway from the Rockfield Park Entrance roadway, through the Kilmacanogue Saint Mochonog's Church carpark and Sugarloaf Peaks (access road)**
- **No construction machinery etc shall be stored, parked or unloaded without prior permission by the Kilmacanogue Saint Mochonog's Church as this area is outside the Kilmacanogue Site Boundary.**

Contractor's Responsibility

- Contractor is advised to carry out a photographic record of the existing conditions within the agreed access routes and works areas prior to commencement of works.
- All protection, temporary works, cleaning and making good are deemed included in the Contract Sum.
- No additional payment for reasonable protective measures or revisions to logistics.

Pre-Works Survey

- Carry out a condition survey of:
 - All site access routes (Including existing external access road, pedestrian pathways, kerbs, drainage channels, gullies, paved areas and all associated hardstanding surfaces)
- Record with dated photographs; issue to ER before works commence.

Existing External Access Road, Pathways and Associated Hardstanding Surfaces

- The Contractor shall carefully protect and maintain the existing external access road, pedestrian pathways, kerbs, drainage channels, gullies, paved areas and all associated hardstanding surfaces for the full duration of the Works.

- Prior to commencement on site, the Contractor shall record the existing condition of all road and pathway surfaces, including photographs, and agree the extent of any existing defects with the Architect / Employer's Representative.
- The existing access road and pathways shall remain suitable for safe use by the Client, staff, visitors, emergency services and authorised site traffic, unless otherwise agreed in advance. The Contractor shall ensure that all temporary traffic management, segregation, signage, barriers and pedestrian protection measures are provided as required.
- No storage of materials, skips, plant, scaffolding, temporary accommodation or site compounds shall be placed on existing road or pathway surfaces without prior agreement. Where such use is permitted, suitable protection shall be provided to prevent damage, staining, rutting, settlement or overloading.
- Any damage caused to existing roadways, pathways, kerbs, drainage goods, surfaces or finishes as a result of the Works shall be made good by the Contractor at their own expense, to match the existing construction, line, level, falls, finish and performance, unless otherwise instructed.
- On completion, all external access roads, pathways and associated hardstanding areas affected by the Works shall be cleaned down, cleared of debris, and left in a safe, sound and fully usable condition to the satisfaction of the Architect / Employer's Representative.

Alteration of Kilmacanogue N.S – Site Boundary Gate

- Existing vehicular and pedestrian gates shall be carefully removed to facilitate the Works, including access by large vehicles where required.
- Gates shall be protected, securely stored for the duration of the Works, and re-installed upon completion.
- Following re-installation, the Contractor shall make good all fixings, supports, posts, ironmongery and associated surfaces disturbed by the temporary removal and re-installation.
- Existing paintwork damaged during the Works shall be prepared and redecorated to match the existing finish, unless otherwise agreed with the Architect.

Alteration of Existing Hedgerow

- The existing mature hedgerow shall be carefully removed and disposed of off site, including associated root systems, to facilitate a wider access route and new boundary fence installation. Refer to Architect's Drawing for the location and extent of the existing hedgerow and proposed fence line.
- A new Kinsale 868 or equivalent mesh fence system, shall be installed along the boundary from the neighbouring property wall to the first corner along the internal access road inside the site boundary.
- The Contractor shall allow for the planting of a new native hedgerow adjacent to the new fence line. Species, spacing and final planting arrangement shall be confirmed by the Architect prior to commencement of planting works
- Fence installation shall include all posts, foundations, fixings, clips, brackets, end posts, corner posts and associated accessories required to provide a complete, secure and durable installation.
- Fence system shall be as follows:
 - **Irfen® Kinsale 868 or equivalent Perimeter Mesh Fence System:**
 - Manufacturer: Irish Fencing Services or equivalent
 - Product Reference: Irfen Kinsale 868 Mesh System or equivalent
 - Drawing No: B0100
 - Height: 2430mm

- Mesh and Wire: Irfen® Kinsale 868 Sports Mesh Fence System or equivalent. Kinsale or equivalent mesh shall be 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: 60x60mm SHS connected hot dipped galvanised post to BS EN9 ISO 1461:2009 after fabrication 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 800mm or as recommended by supplier, set 100mm below ground level
- Accessories : Refer to gate spec below.
- Conformity: Submit manufacturers and installer certificates to BS 1722-14.

Alterations to Secondary Access Gates

- Existing vehicular and pedestrian electric gates shall be carefully removed to facilitate the Works, including access by large vehicles where required.
- Gates, motors, controls, cabling, sensors, safety devices and all associated electrical equipment shall be protected, labelled as required, and securely stored in a dry, weatherproof location for the duration of the Works.
- The Contractor shall allow for safe disconnection, protection, storage, re-installation, reconnection, testing and commissioning of the electric gates by competent persons.
- Existing electric gates shall be reinstated in full working order upon completion of the Works.
- Following re-installation, the Contractor shall make good all fixings, supports, posts, ironmongery, electrical connections and associated surfaces disturbed by the temporary removal and re-installation.
- Existing paintwork damaged during the Works shall be prepared and redecorated to match the existing finish, unless otherwise agreed with the Architect.
The Contractor shall ensure that all gate safety devices, automation equipment and controls are fully operational and compliant on completion.

2. SEQUENCING / PHASING OF WORK / PROTECTIONS- LIVE SCHOOL ENVIRONMENT

PHASING/ SEQUENCING OF WORK ZONES

- **Sequence of proposed works to be phased under a single-phase contract, access and works to the existing school building to be phased and agreed with architect and client prior to commencement on site.**
- The chosen Contractor shall 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 (Draft). All work zones and phasing TBC prior to commencement on site
- No works shall take place outside the agreed zones of works without prior agreement with Architect and Client.
- As mentioned above Heras fencing to be erected to separate active school areas from all work zones, temporary access roadway and site compound.

MAINTAIN FIRE TENDER ACCESS

Contractor shall keep clear access to the rear playground via the contractor's work area and compound for the full duration of works.

CONTROLS DURING WORKS

- Work only within agreed zones; any work outside requires prior written approval from the Architect/Client.
- Refer to Architect's drawings for draft phased work zones; confirm zones before site mobilisation.

PROGRAMMING

- Activities that cannot be safely undertaken in a live environment to be programmed out of hours / during school holidays, with prior agreement of the Architect/Client.

2.1 – DT PHASING / SEQUENCING PRINCIPLES

- The Design Team (DT) phasing is set up to ensure the school can safely remain operational throughout the proposed works.
- Contractor shall provide a Master Phase Plan for agreement, including segregation, safe routes, emergency egress, and delivery times (avoid pupil drop-off/collection).
- Maintain temporary weathering and building security at all times between phases.

2.1.1 - APPROVALS (APPLY TO ALL PHASES)

- Pre-start: Phase-specific RAMS, Traffic Management Plan, hoarding/segregation plan, decant plan (as applicable) shall be issued to ER for approval.
- Mid-phase reviews: Weekly coordination with ER to confirm routes, egress and programme impacts.
- Completion: Area clean, safe, services reconnected, certification/commissioning complete, defects list agreed; soft landscaping made good on handover subject to season/weather; documentation issued (as-builts, O&M updates).

2.2 - CO-ORDINATION OF SITE WORKS

- The Main Contractor shall be responsible for the co-ordination and proper execution and completion of the works and the protection of the site.
- The Main Contractor shall construct the works in accordance with their programme obtain and submit to the Architect / Engineer for approval for all builder's work details including shop drawings from sub-contractors and suppliers where required.
- The Contractor shall arrange and attend such meetings as necessary to ensure that the information requirements of all sub-contractors are met and to establish their works requirements before the work is put in hand, to avoid conflict with other work.
- The Contractor shall be responsible for carrying out of the works in accordance with the drawings and Architect's instructions and shall be responsible for rectifying errors at their own expense.

2.3 - 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 18.00 FROM MONDAY TO FRIDAY, SATURDAYS TO BE FROM 8.00 – 14.00 AND NOT AT ALL ON SUNDAYS & PUBLIC HOLIDAYS IN ACCORDANCE WITH PLANNING CONDITION NO. 3.

- 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.
- Restrict noisy/vibratory operations to **agreed area** only. No out-of-hours or weekend working without prior written approval.

2.4 - INCLEMENT WEATHER & TEMPORARY SEALING THE BUILDING

- All building areas handed over to the main contractor shall be protected as necessary during inclement weather throughout the full duration of works including the protection of ongoing works, contractor shall supply all necessary sheathing, screens and covers etc.
- The chosen contractor shall provide the provision of temporary sealing the building during works if the situation arises which causes works to temporarily stop on site as the building is currently fully operational.
- Any work damaged as a result of inclement weather shall be removed and re-instated by the Contractor as its own expense.

2.5 - 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.

2.6 - PROTECTION OF EXISTING FINISHES

- Contractor is advised to carry out a photographic record of the existing conditions within the agreed access routes and works areas prior to commencement of works.
- Protect the following in all affected and adjacent areas and along all access routes (internal and external):
- Existing floor finishes,
- Walls, ceilings, skirtings, architraves, doors, frames, glazing, balustrades, handrails.
- Fitted furniture/joinery, lockers, reception counters, noticeboards.
- Electrical, ICT, lift, mechanical and life-safety services and equipment.
- All school contents within or adjacent to the works and transit routes

Contractor's Responsibility

- The Contractor is fully responsible for preventing damage, water ingress, dust, debris, impact and contamination to all protected elements and access routes.
- All protection, temporary works, cleaning and making good are deemed included in the Contract Sum.
- No additional payment for reasonable protective measures or revisions to logistics.

Pre-Works Survey

- Carry out a condition survey of:
 - All rooms beneath roof works.
 - All areas affected by lift works (proposed lift shaft, pit, headroom, adjacent rooms).
 - All access routes to roof and lift works (corridors, stairs, lobbies, external paths).
- Record with dated photographs; issue to ER before works commence.

Existing Internal Protection

- Contractor shall provide protection to the existing fixed joinery; wall finishes and floor finishes for the full extent of the access route and adjoining works areas including all contractor's construction access routes (personnel and or materials) to the proposed works area.

Protection to Floors & Access Routes

- Provide continuous robust hard protection (e.g. hardboard/ply/composite protection boards over cushioning layer) to:
 - All circulation routes used for roof and lift works (corridors, stair cores, lobbies).
 - Areas adjacent to the lift shaft and delivery set-down points.
- Ensure protection is:
 - Non-slip, trip-safe, securely fixed.
 - Installed to avoid damage to finishes.
 - No wheeled plant, pallet trucks, trolleys or barrows on unprotected floors or stair treads.

Protection to Walls, Joinery

- Install corner guards, edge protection, padding or sacrificial board to:
 - Wall corners, reveals, door frames, handrails,
- Protect glazing and vision panels along routes and near workfaces with suitable film/boards.
- Do not adhere protection directly to delicate finishes without ER-approved low-tack systems.

Protection to Electrical, ICT & Life-Safety Services

- Identify all affected services on routes and at workfaces (including fire alarm devices, detectors, call points, PA, CCTV, ICT, emergency lighting).
- Provide coverings and shielding against dust, debris and water.
- Do not interfere with or isolate life-safety and critical systems without written approval, permits and agreed temporary measures.
- Maintain functionality and visibility of emergency signage and alarms.

Weather & Water Ingress Control (Roof Works Above Occupied Areas)

- Plan sequencing so that roof stripping and new works are limited to areas that can be made fully weather-tight the same day, or are protected with robust temporary coverings.
- Prevent any run-off entering the building fabric
- In the event of water ingress:
 - Immediately protect contents and finishes; mitigate electrical risks.

- Notify ER and School/Client.
- Dry, decontaminate and fully make good all affected finishes, services and equipment at Contractor's cost

Dust, Debris & Noise Management

- Provide sealed polythene screens, rigid hoardings or temporary ceilings beneath roof works and around lift works to contain dust.
- Use controlled removal methods; no free-fall debris onto unprotected surfaces.
- Keep noise, vibration and fumes within agreed limits for a live school; coordinate with class times and exams.

Inspection & Maintenance of Protection

- Inspect all protective measures daily and after heavy works or adverse weather.
- Repair, re-secure or replace damaged protection immediately.
- Keep access routes clean, free of trip hazards, debris and trailing cables.

Making Good & Handover

- On completion of roof and lift works, remove all protection carefully.
- Clean all affected spaces, including access routes, lift lobbies and adjacent rooms.
- Make good any damage:
 - Floors, walls, joinery and finishes to match existing in full panels/areas as necessary.
 - Electrical/ICT/life-safety components to be repaired or replaced and re-certified as required.
- Carry out final walk-through with ER and Client to confirm acceptance prior to demobilisation.

2.7 - INTERNAL CLEANING

- 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.
- 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.
- Contractor shall provide a phase by phase cleaning of all the internal areas occupied by the contractor together with the associated access route prior to the handover and occupation by the school at completion.

2.8 - EXISTING SCHOOL SUPPLIES (WORKS IN EXISTING BUILDING)

- The Contractor shall liaise with the Architect / BOM to arrange the removal of all existing school supplies, non-building related materials (excluding loose furniture, see below) personal belongings from the agreed works area by the BOM.
- The Contractors programme shall allow adequate notice and timing for the decamp of the existing spaces, exact dates and timing shall be agreed prior to commencement of works on site.
- The Contractor shall provide for the careful removal of the existing IT Equipment in the works areas, contractor shall liaise with the Architect / BOM to agree the timing of removal together with identification of items to be retained and safety stored in the school and items to be disposed.

2.9 - EXISTING LOOSE FURNITURE

- The Appointed contractor shall provide for moving of the existing loose furniture to an alternative location within the existing school building prior to commencement of proposed roof works **where required**. No works shall take place until the area is fully clear of existing loose furniture and non-building related materials (including personal belongings).

3. SITE CLEARANCE, REMOVALS & ALTERATIONS

3.0 – GENERAL

- Where items are to be 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.
- 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.
- Asbestos has been detected in existing building. Contractor to be aware of asbestos present on site and must engage with asbestos specialist to remove all asbestos material safely. Any such specialist works should be included in the contractor's costs/ charges as part of the tender/ construction works requirements (Refer to OHSS Report issued 12th June 2023).**

3.1 – SITE CLEARANCE / EXCAVATING

3.1.1 – SITE CLEARANCE

- Timing:** Prior to commencement of Removals , breaking out, excavation and formation works.
- General:** Clear site of rubbish, loose debris and vegetation within the works footprint. Maintain safe access/egress and segregate work areas.

- **Protection:** Protect existing buildings, services, drainage, kerbs, boundaries, trees to be retained and any finishes outside the works area from damage, tracking and contamination.
- **Treatment:** N/A (unless instructed otherwise).

3.1.2 – REMOVING SMALL TREES, SHRUBS, HEDGES AND ROOTS

- **Identification & Approval:** All vegetation designated for removal to be clearly identified and marked on site. Obtain Design Team (DT) instruction/approval prior to commencement.
- **Replanting / Disposal Confirmation:** DT to confirm which items are to be:
 - Replanted/relocated, or
 - Removed and disposed of off-site.
- **Replanting Procedure:** Vegetation approved for replanting to be carefully excavated/handled to minimise root damage and replanted to an agreed location, watered and stabilised.
- **Health & Safety:** Works to comply with latest relevant AFAG safety guidance and good practice.

3.1.3 – REMOVAL OF EXISTING HARD SURFACING / BREAKING OUT

- **General:** Carefully break out and remove existing hard surfacing within the works footprint to facilitate new extension foundations, level reductions and new parking/surfacing construction. Include (as applicable):
 - Asphalt/macadam, concrete slabs, kerbs, channels, setts/pavers, edgings, bedding and haunching,
 - Existing sub-base and/or capping where unsuitable for re-use,
 - Redundant ducts, chambers covers, bollards, fencing bases and minor obstructions affecting the works.
- **Extent:** As indicated on drawings and as required to achieve formation levels and new works build-up thicknesses.
- **Reinstatement:** Make good temporary edges; provide temporary ramps/plates where required for safe access until permanent works are complete.

3.1.4 – EXCAVATION / REDUCTION OF LEVELS (FORMATION FOR EXTENSION & PARKING)

- **General:** Excavate/reduce existing ground and formation to accommodate:
 - New extension substructure (foundations, ground beams, floor build-up),
 - New external works formation for parking area and associated pavements/footpaths,
 - Drainage runs, service trenches and ducts as required.
- **Depth:** To suit proposed construction build-ups and drawings; allow for proof-rolled formation and removal of unsuitable material.
- **Formation:** Trim, level and compact formation; protect from softening/wetting and trafficking.
- **Proof rolling:** Where specified/required, proof-roll formation and report soft spots; remove and replace unsuitable material.
- **Adjacent structures:** Support/protect existing foundations, slabs, services and boundaries; do not undermine.

3.1.5 – STRIPPING TOPSOIL

- **General:** Strip topsoil only from areas where it exists and where works require excavation/regrading, building footprint, paving/roads, drainage or service runs.
- **Depth:** To subsoil / as encountered (confirm on site).
- **Give notice:** Where depth or extent of topsoil is difficult to determine.

- **Around trees:** Do not remove topsoil within root protection areas of trees to be retained.
- **Site storage:** Location to be agreed with Architect/Client where retention is required; otherwise dispose off-site.

3.1.6 – TREATING TOPSOIL

- **Treatment:** Apply suitable translocated non-residual herbicide to stockpiled topsoil **only where reuse is proposed**.
- **Timing:** Not less than two weeks before excavating/topsoil reuse operations.

3.1.7 – HANDLING / STORAGE / DISPOSAL (TOPSOIL, SUBSOIL & BREAK-OUT ARISING)

- **Earthmoving equipment:** Select and use to minimise disturbance, trafficking and compaction.
- **Contamination:** Keep materials segregated. Do not mix topsoil with subsoil, hardcore, demolition arisings, oil/fuel/cement or other contaminants.
- **Multiple handling:** Keep to a minimum.
- **Wet conditions:** Do not handle cohesive soils when wetter than plastic limit.
- **Stockpiling:** Temporary stockpiles (topsoil and/or subsoil) only where instructed and in locations agreed with Architect/Client; protect stockpiles from contamination and tracking.
- **Removal from site:** Remove **surplus subsoil, topsoil (where not required), and all break-out arisings** off-site to a licensed facility/recycling centre in accordance with waste legislation. Provide waste dockets/records.

3.1.8 – SURPLUS SUBSOIL

- **Excavated material:** Stockpile temporarily where agreed.
- **Retained material:** Spread and level surplus subsoil only in **designated locations** confirmed by DT (if any).
- **Protected areas:** Do not raise soil levels within root spread of trees to be retained.
- **Remaining material:** Remove from site.

3.2 – SITE ALTERATIONS

- **ALL TENDERING CONTRACTORS TO ASSESS FULL SITE LAYOUT WITH EXISTING AND PROPOSED LAYOUTS DURING MANITORY SITE VISIT AT TENDER STAGE**
- Contractor shall provide all required cut and fill site works to architect/ engineers' drawings and specifications, all finish surfaces to architects proposed site layout drawings with careful attention to required levels.
- Existing parking area kerbing and tarmacadam surfacing shall be removed as part of the site clearance. Refer to Architects site plan for extent of new surfacing to be provided, to be read in conjunction with Engineers package.
- Refer to Engineers package for alterations to existing site services.
- Existing astro turf surfacing shall be removed and disposed including perimeter kerbing. Ground levels shall be reduced for provision of the tarmacadam basketball court, to be read in conjunction with Architects site layout and Engineers package.
- Existing external pathway and ramp shall be removed and disposed as part of the site removals / preparations for the proposed extension. A clean cut shall be provided where existing pathway shall remain.
- Existing external path / external ground slab shall be removed and disposed up to the external door to allow for the installation of a new insulated floor slab.

- Refer to Additional Site works specification clauses below in conjunction with Engineers specification and drawings
- Hardcore filling shall be mean clean graded crushed hard rock aggregate to N.S.A.I S.R.21 2004 + A1:2007 (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.
- 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.
- The contractor is also responsible for the disposal of all excess site materials 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.

3.3 - ALTERATIONS TO EXISTING BUILDING

- Existing external door shall be removed and disposed to facilitate the connection of the new extension.
- Existing external timber soffit to the rear door shall be removed and disposed to expose the existing roof structure, new ceiling shall be installed as indicated on architects drawings following the construction of the new flat roof.
- Existing roof finish and all associated under cloak and battens etc shall be removed and disposed to facilitate the connection of the new extension roof and construction of a new high level partition in Classroom 02. Existing Fascia, Soffit and gutters shall be removed and disposed to allow for the connection of the new extension roof. Existing rafter overhang shall be cut back where new extension joins existing building.
- Existing external wall cheeks shall be carefully removed for provision of new connecting corridor.
- 2no. W/C windows and associated internal joinery shall be removed and disposed, 1 no opening shall be prepared for new fire rated window system, 1 no. opening required the existing concrete cill to be removed and prepared to be blocked up as specified below.
- All electrical fittings and equipment on the end wall shall be removed / altered for construction of new extension.
- Refer to Galileo Energy Services M&E package for proposed alterations / modifications to existing M&E building services and connects back to existing service room.
- Existing Classroom W/C's off Rooms 25 & 26 shall be upgraded to architects specification and detailed in the Architects Room Data sheets attached in the complete package.

3.4 – REMOVAL OF ASBESTOS FROM EXISTING BUILDING

- **NOTE: Asbestos has been detected in existing building. The appointed contractor to be aware of asbestos present on site and must engage with asbestos specialist to remove all asbestos**

material safely. Any such specialist works should be included in the contractor's costs/ charges as part of the tender/ construction works requirements (Refer to OHSS Report issued 12th June 2023).

- No person is permitted to work with asbestos containing materials unless they have received training and have taken all reasonable steps to prevent exposure to asbestos. The requirement for training is detailed in Regulation 17 of the Safety Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006-2010.

• **The following areas were found to contain ACM's:**

1. **Live Plant & Electrical Equipment - Presumed ACM Present**

- The Contractor shall carry out a Refurbishment Asbestos survey prior to commencement of any works to existing live Plant & Electrical Equipment to confirm the presence of asbestos in conjunction with the requirements of the M&E contractors for alterations.
- Where present, the removal / alteration works shall be carried out by approved competent asbestos removal contractor with the Office of Public Works' Health and Safety Unit prior to the installation / alteration of new waterproofing.

2. **Flat Roofs - Presumed ACM Present**

- The Contractor shall carry out a Refurbishment Asbestos survey prior to commencement of any works to existing Flat roofs to confirm the presence of asbestos.
- Where present, the removal / alteration works shall be carried out by approved competent asbestos removal contractor with the Office of Public Works' Health and Safety Unit prior to the installation / alteration of new waterproofing.

3. **Floors - Beneath the fixed floor coverings - Presumed ACM Present**

- The Contractor shall carry out a Refurbishment Asbestos survey prior to commencement of any works to existing floors to confirm the presence of asbestos.
- Where present, the removal / alteration works shall be carried out by approved competent asbestos removal contractor with the Office of Public Works' Health and Safety Unit prior to the installation / alteration of new waterproofing.

4. **All Pitched Roofs - Cement soaker slates - Chrysotile Asbestos Cement**

- All roof slate removal works to existing roof shall be carried out by approved competent asbestos removal contractor with the Office of Public Works' Health and Safety Unit prior to the installation / alteration of new waterproofing.
- All installation / alterations in close proximity shall be detailed in the site-specific Work Plan in accordance with the Safety Health and Welfare at Work (Exposure to Asbestos) Regulations 2006.

5. **Classrooms, Under Sinks - Typical Sink Pad - Chrysotile Asbestos Bitumen Product**

- No works to existing classroom sinks proposed in existing building, The contractor shall be aware of presence asbestos and take the required precautions when working to adjacent materials.

Asbestos Removal

- The Successful contractor shall carry out the role of Project Supervisor Construction Process in accordance with the Safety Health and Welfare at Work Construction Regulations 2006.

- The contractor / sub-contractor appointed to carry out the asbestos removal works shall be an approved competent asbestos removal contractor with the Office of Public Works' Health and Safety Unit.
- The Successful contractor shall provide a site-specific Work Plan in accordance with the Safety Health and Welfare at Work (Exposure to Asbestos) Regulations 2006.
- The Successful contractor shall forward the required 14-day notification, including a copy of the Work Plan, to the Health and Safety Authority before commencing removal works
- The Successful contractor shall agree the sequence and duration of the works prior to works commencing on site with the project architect prior to works commencing.
- The Successful contractor shall communicate the degree, nature and duration of the works to all relevant School personnel and the occupiers of the building; liaise with the occupiers of the building should evacuation be necessary or where part of a building has to be sealed off.
- The Successful contractor shall co-ordinate all necessary pre-removal works including the provision of services to any sub-contractors as necessary.
- The Successful contractor shall appoint an Independent Accredited Laboratory for the purpose of undertaking air sampling, project monitoring and Clearance Certification in conformance with ISO 17025 General Requirements for the Competence of Testing and Calibration Laboratories.
- The Successful contractor shall validate in conjunction with the competent laboratory that C1 Consignment Note Certification of waste has been issued for the site.
- The Successful contractor shall notify relevant personnel that the works are completed and that the area is certified as safe for normal occupation to resume, or for other works to proceed.
- The Successful contractor shall ensure that copies of the following documents are retained for inclusion in the Safety File:
 - Bulk sample results as applicable.
 - Amended Asbestos Register.
 - Preliminary Safety & Health Plan and Specification.
 - Contractor Work Plan.
 - Notification to the Health and Safety Authority.
 - Air monitoring results prior to removal works commencing.
 - Air monitoring results during removal works.
 - Clearance certification.
 - Consignment Note for the disposal of contaminated waste.

Role of the Asbestos Removal Contractor.

- The asbestos removal contractor appointed by the Architect/Project Supervisor Design Process shall ensure that:
- Removal works comply with the safe working procedures outlined in his Work Plan and that any breach of safe working procedures is reported to the Architect/Project Supervisor Design.
- The Work Plan is validated against the specification and Preliminary Safety & Health Plan for the works.
- Enclosures are air tight and are smoke tested by the contractor prior to work commencing and at regular intervals thereafter.
- Decontamination facilities are maintained on an ongoing basis.
- Negative pressure units are inspected by the contractor daily.
- Transit procedures are fully implemented and supervised.
- General supervision of the works is carried out daily.
- Contaminated waste is stored in a secure and suitable facility prior to removal from site.
- Daily air monitoring is carried out, by an Independent Accredited Laboratory, in locations external to the removal zone.

- General site security is such as to prevent accidental incursions into the removal zone.
- The Independent Accredited Laboratory certifies clearance of the area on completion of the removal works.

Dealing with Emergency Situations

- Where construction works result in the accidental damage of asbestos materials the following procedures should be followed:
 1. The area shall be evacuated and cordoned off to prevent re-entry.
 2. Inform the Office of Public Works Health and Safety Unit of the nature of the emergency.
 3. Upon receipt of the notification the Health and Safety Unit will arrange for
 - an assessment of any contamination by a competent person.
 - Notification to the Health and Safety Authority of the nature of the emergency, if appropriate.
 - The selection of a competent contractor, where appropriate, to undertake all necessary removal and decontamination works.
 - Air monitoring and final clearance certification.

Post asbestos removal works

The Successful contractor shall provide **the following certification for inclusion in the Safety File:**

- Asbestos Clearance Certification.
- Air Monitoring Certification.
- Waste Disposal Certification.
- Updated Asbestos Register.

4. SITE PREPARATION WORKS

- **ALL TENDERING CONTRACTORS TO ASSESS FULL SITE LAYOUT WITH EXISTING AND PROPOSED LAYOUTS DURING MANITORY SITE VISIT AT TENDER STAGE**
- Contractor shall provide all required cut and fill site works to architect/ engineers' drawings and specifications, all finish surfaces to architects proposed site layout drawings with careful attention to required levels.
- Refer to Additional Site works specification clauses below in conjunction with Engineers specification and drawings
- Hardcore filling shall be mean clean graded crushed hard rock aggregate to N.S.A.I S.R.21 2004 + A1:2007 (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.
- 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.
- The contractor is also responsible for the disposal of all excess site materials 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.

5. 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.

5.1 - 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.

5.2 - 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.

5.3 - 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.

5.4 - LOADING BAYS (SCAFFOLD LOADING PLATFORMS)

- Provide proprietary loading bay gates and platforms sized for intended materials and plant interface. Treat as **Temporary Works**; design, erection, alteration and dismantling by a **competent scaffold designer/contractor**.
- Loading bays to be integrated into the scaffold design and tying pattern; no freestanding or inadequately tied bays.

Design & Capacity

- Designer to state **Safe Working Load (SWL)** per bay (kN and kg), number of pallets permitted per lift, and any point/line load limits.
- SWL to cover the **worst-case pallet**, impact from landing, and dynamic effects from gates.
- Provide drawings/calculations confirming: deck build-up, transom spacing, bracing, ties/kentledge, standards, ledgers, and gate loads.

Deck, Gates & Edge Protection

- Deck to be fully boarded/laminated panels with **no gaps**; secure boards to prevent uplift.
- Fit **self-closing proprietary loading bay gates** (chains alone not acceptable) with top/mid-rails and **toe-boards ≥ 150 mm** on all exposed edges.
- Provide **kick strips** to deck perimeter and **pallet restraint** (e.g., back-upstand or locating rails) to prevent materials rolling/sliding.
- Maintain a **level landing** with clear tolerance between deck and gate to avoid snags; no tripping lips.

Access, Use & Segregation

- Establish **exclusion zones** beneath and around loading bays during lifting/landing. **No persons under suspended loads**.
- Coordinate with the **Traffic Management Plan**: banksman control, timed deliveries (avoid school drop-off/pick-up), and defined set-down/queuing areas.
- Provide clear **SWL signage** at eye level at each bay and on each lift serving the bay; display "In use/Out of service" status and level identification.
- Keep access routes to loading bays **unobstructed**, lit where required, and slip-resistant.

Interface with Lifting Equipment

- Lifting operations to be planned by a **competent person** with a written **Lift Plan** (crane/telehandler/hoist), including communication and exclusion controls.
- Set and maintain **minimum clearances** between forks/jibs and gates; gates must not foul plant or swing into public/pupil routes.
- Where materials hoists are used, provide **dedicated landing gates** interlocked to the hoist where applicable.

Stability, Ties & Weather

- Provide ties/bracing/kentledge to resist vertical, horizontal and **wind loads**; check adjacent hoarding/scaffold does not reduce stability.
- Inspect and, if necessary, **close bays** in high winds or adverse weather per manufacturer's limits and the Temporary Works design.

Inspection & Maintenance

- Pre-use inspection after erection/alteration and **daily** thereafter by a competent person; re-inspect after adverse weather/impact.
- Record inspections in the scaffold register. Remove/downgrade **immediately** if defects are found.

Housekeeping & Fire Safety

- Keep decks clear of debris; **no hot-works waste** or flammables stored on bays.
- Do not stack above the posted **SWL**; use **even distribution** of loads and restrain tall/unstable items.

Removal

- Loading bays and gates to remain in service **only while required**. Remove/alter **by the scaffold contractor** on instruction, and make good adjacent edge protection.

3.2 - PROPOSED EXTENSIONS – SUB STRUCTURE

6. FOUNDATION EXCAVATION & BACKFILL

- Foundation Excavations and Backfill shall be carried out as per requirements Setout in the Civil / Structural engineers' drawings and specification. **Refer to Dooley Cummins Architects + Engineers Civil / Structural Engineering Consultant's complete package.**

6.1 - FOUNDATION EXCAVATION

- Contractor shall excavate to the dimensions lines and levels shown on the Engineers drawings or as directed.
- Contractor shall support sides of excavations as necessary and in accordance with statutory requirement. Groundworks shall be carried out in accordance with BS 6031:2009 - Code of practice for earthworks (incorporating corrigendum No.1).
- The Contractor shall be responsible for the design of supports to excavations.
- Excavations below ground water level shall be kept free from water.
- Detail of foundations to be in accordance with Structural Engineers Details.

6.2 - 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.
- Any new Hardcore materials used in backfill 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.

7. FOUNDATION / FOOTING CONSTRUCTION

- To be Constructed as indicated on engineers' drawings and specification. **Refer to Dooley Cummins Structural Engineering Consultants complete package** for proposed design to proposed extension.
- Excavate to the dimensions lines and levels shown on the Drawings or as directed by structural engineer.
- 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.

8. FOUNDATION REINFORCEMENT

- Foundation Reinforcement shall be provided as per requirements set out in the Civil / Structural engineers' drawings and specification. **Refer to Dooley Cummins Architects + Engineers Civil / Structural Engineering Consultant's complete package.**

9. RISING WALLS & ASSOCIATED SERVICES ROUTES

- Note: Engineer's drawings and specification to supersede architect's specification below, Refer to Dooley Cummins Structural Engineering Consultants complete package for proposed design**
- Concrete masonry: concrete blocks to comply with BS EN 771-1:2011+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 to minimum overall thickness of walls to be constructed above ground level.
- Mortar: mortar shall comply with I.S. EN 998-2:2016 - Specification for mortar for masonry - part 2: masonry mortar - 1:0.5:4/4.5 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 Aircrete High Ten Blocks or equivalent (0.19 W/m. K)** to be installed as indicated on Architectural drawings, installed to manufacturers detail and specification.
- Note: Please refer to the full "GUIDANCE NOTES BUILDING WITH MANNOK AIRCRETE AERATED THERMAL BLOCKS" or equivalent
- Blocks should be laid in a stretcher bond pattern. Full blocks should be placed under lintels or openings. Mannok Aircrete or equivalent coursing units of the same strength as the wall should be used for closing cavities, at window reveals and for building in over lintels. High walls or long stretches of wall should be temporarily propped in windy conditions as in accordance with guidance for concrete blocks.
- Site Mixed Mortar: Below DPC 4:½:1 sand: lime: cement (Designation ii, strength class M6)/ Above DPC 6:1:1 sand: lime: cement (Designation iii, strength class M4) Plasticiser may be used as an alternative to lime but as a general rule cement: lime: sand mortar gives a better bond than plasticised mortar of the same strength. Site mixed mortar must conform to the requirements of BS EN 1996 – 2, 2006 and BS 8000 – 3, 2020
- Ready To Use Mortar: Designation and strength class as above with the addition of a retarder. Must conform to BS EN 998 – 2, 2016.
- Note: DO NOT USE STRONGER MORTAR MIXES THAN THOSE SPECIFIED ABOVE
- Mannok Aircrete Blocks are suitable for a wide range of load bearing applications. Compressive strength requirements will vary in accordance with building regulations. The block strength is

identified by the colour of strapping used to package the blocks. Yellow band - 2.9N (Super), Blue band - 5.2N (Standard), Red band - 7.5N (Seven) and Green Band - 10.4N (High Strength Ten).

- The declared mean compressive strength for solid & lightweight masonry units shall be minimum 7.5N/mm² (dry strength to I.S. EN 772-1:2011+A1:2015) in below DPC construction.
- **Refer to attached data sheets in Architect's appendix.**

10. 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 12620:2002 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.

11. BLOCKS & BRICKS

- Blocks and Bricks shall be provided as per requirements set out in the Civil / Structural engineers' drawings and specification. **Refer to Dooley Cummins Architects + Engineers Civil / Structural Engineering Consultant's complete package.**
- All blocks and bricks shall 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.
- Blocks throughout shall match 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 5N/mm² & 7.5N/mm² below DPC.
- Lay solid blocks on a full bed of mortar and with bed and vertical joints fully filled to a consistent thickness.

12. BLOCKWORK RISING WALLS

- Blockwork Rising walls shall be constructed in accordance with the Civil / Structural engineers' drawings and specification. **Refer to Dooley Cummins Architects + Engineers Civil / Structural Engineering Consultant's complete package.**
- 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).
- 100 x 215 x 440mm 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.

12.1 - RISING WALL MORTAR

- Masonry Mortar shall be constructed in accordance with the Civil / Structural engineers' drawings and specification. **Refer to Dooley Cummins Architects + Engineers Civil / Structural Engineering Consultant's complete package.**
- Mortar: mortar shall be in compliance with IS EN 998-2:2016 Specification for mortar for masonry.
- Masonry mortar'-type (ii) I: 0.5: 4/4.5 cement: lime: sand.
- Earth retaining walls shall be type (i) nominal 1:0/025:3
- 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.

12.2 - 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.

13. DAMP PROOF COURSES

- Damp proof courses are to comply with BS.743 for flexible DPC's lapped at least 100mm (4"); carried at least 100mm (4") into adjacent blockwork, 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.
 - 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 Stainless steel 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.
- Damp proof courses to be installed in accordance with good practice for detailing as set out in B.S. 5628: Part 3: 1985 and must be in accordance with the relevant clauses of B.S. Code of Practice 102: 1973 (as amended) Code of Practice for protection against water from the ground, B.R.S. Digest 77 Dampproof Course and the manufacturer's instructions.
- 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.

3.3 - PROPOSED EXTENSIONS - SUPER STRUCTURE

14. GROUND FLOOR CONSTRUCTION – U Value 0.11W/m²K

- 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 Concrete Finish floor slab as per structural engineers' specification** with expansion joints to be provided in floor construction in accordance with structural engineer's detail & recommendation.
- 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 **150mm 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 **25mm 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".
- **Reinforced Concrete Floor as per structural engineers' specification** with floor spans, expansion joints to be provided in floor construction in accordance with structural engineer's detail & recommendation.
- **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.
 - All Membranes should be installed in accordance with the manufacturer's guidelines.
 - Radon DPM shall be lapped in under wall DPC and out for full external wall thickness and in accordance with good practice.
 - Monarflex **or equivalent** shall be stepped through external cavity wall and stepped down to and through outer leaf where cavity wall.
 - Necobond **or equivalent** 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 using **Monarflex or equivalent Top Hat unit** with adjustable steel clip for service penetrations through radon/air/moisture or DPM membranes
- An alternative Radon protection system may be used subject to satisfaction of Irish Standards and prior agreement with the Architect.
- **(T3 Blind)** Fine aggregate (0/4 mm, GF 80), for blinding the top surface of the supporting granular fill material (T1 or T2) immediately below the DPM/radon barrier, Used in all cases to blind off the top layer of the hardcore and so is used immediately below the radon barrier/ DPM, to mitigate the risk of puncture.
- **(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.
- No Demolition material, site rubbish or pit run gravel may not be used to backfill any underfloor or trenches. 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.
- 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 / floor construction 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.
- Contractor shall provide **1 No. new 380 x 380 x 150mm Easi-Sump or equivalent** Radon Sumps with connection to external easy sump **or equivalent** cap links.
- All Radon sumps and associated pipework and connections shall be installed as per manufacturers detail and specification.
- Radon sump located in hardcore layer below proposed floor slab as indicated on Architects floor plan drawings.
- All 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.
- Contractor to include for structural reinforcement / head where required, refer to section above.
- **Refer to Architects / engineers Details for ground floor build ups, Engineers Structural specification to supersede architect's specification.**

15. 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.

16. PROPOSED STEELWORK

- **Refer to structural engineers' detail and specification.** All structural steelwork is show for illustrative purposed on Architectural drawings, to be read in conjunction with engineers' specification and drawings which superseded the architectural.
- All Structural steelwork shall be fabricated to IS EN 190-1:2009+AC:2010+A1:2011
- All Structural steelwork shall be CE Marked
- Contractor shall provide factory production certificate welding certificate and project specific declaration of performance to the Architect / Engineer.
- **All structural steelwork shall be fire protected and certified to 60minutes fire resistance** as specified below.
- To be read in conjunction wite Specification clause 8 for details of the additional treatment of the proposed steel frame within the External Wall
- All exposed steelwork to be boxed out in plasterboard with skim finish
- **All steelwork shall include Intumescent Paint** to provide **60 min fire resistance** prior to installation, 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.

17. PROPOSED EXTERNAL WALL – U Value 0. 13 W/m²K

- **Wet Dash 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, 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.
- 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 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.
- 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 Membrane Continuously Taped & Sealed, with Pro-Clima tape & Orcon Sealant and caulk filler. Refer to Airtightness Specification below.
- Refer to engineers' drawings for lintel specification. All specified Steelite or equivalent 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, and associated structural elements, Structural Steel, Structural timber sizing etc .
- Ventilation openings to be cored into external walls where required, to be read in conjunction with M&E drawings for size & location.
- 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.

17.1 - STEEL FRAME

- Proposed External wall shall be constructed following the construction of the proposed steel frame.
- Structural Steel elements are indicated on architects' drawings schematically, Refer to Engineer's package for full detail and Specification which superseded Architectural layout and specification for structural items.
- All Blockwork shall be tied to steel columns using ancon SBD frame cramp to both sides of steel columns, installed to manufactures recommendations and provide a minimum embedment depth of 50mm.
- All Steel webs within the External wall construction shall be infilled consisting of Timber packers at 600mm centres together with Rigid PIR insulation with a Agrément declared Lambda value of 0.021 W/mK and reflective foil facing followed by a 12.7mm PermaBase or equivalent cement board aligned with the internal blockwork prior to the application of the internal finish plaster.
- All junction with cement board and blockwork shall be covered with stainless steel mesh prior to the application of the internal plaster finish as specified below.
- Treated Rough Sawn Timber construction timber is kiln dried and strength graded to a minimum grade of C 16 and complies with the requirements of IS-127 standard & I.S. EN 14081-1:2016+A1:2019.
- All Structural steelwork shall be fabricated to IS EN 190-1:2009+AC:2010+A1:2011
- All Structural steelwork shall be CE Marked
- Contractor shall provide factory production certificate welding certificate and project specific declaration of performance to the Architect / Engineer.
- All structural steelworks shall be fire protected and certified to 60minutes fire resistance as specified below.
- **Steel post at windows** - Proposed steel frame which adjoins the proposed window system shall be packed out as specified above, wrapped in 10mm Foiled Spaceloft® Aerogel strips or equivalent with self-adhesive tape followed by the aluminium flashing to match the proposed window system.

17.1 - EXTERNAL WALL VENTS

- Contractor to include for the inclusion of 4 no. 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.
- Existing wall vents which become enclosed between new extension shall be infilled with concrete and internal finish patched to match existing as required.
- 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 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.

17.3 - BRICKS AND BLOCKS

- All blocks to be hard, sound and clean, No damaged bricks to be used.
- 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) 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 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.
- **Engineers' Structural specification to supersede architect's specification.**

17.4 – THERMAL BLOCKS

- Contractor shall provide **Mannok Aircrete Block or equivalent (0.19 W/m. K)** at the following locations:
 - 2 No. courses at **ground floor level**, junction between external wall / internal walls and the floor slab to architects detail, refer to architects detail sheet T500.
 - To **all door / window** reveals, cill and heads to architects detail, refer to architects detail sheet T501.
 - To eaves to architects detail, refer to architects detail sheet T502.
- **All Mannok Aircrete Block or equivalent (0.19 W/m. K)** shall be installed to manufacturers detail and specification.

17.5 – CAVITY CLOSERS

- **Contractor shall install 30 Minute Minimum fire resistance cavity closers to all door, window reveals** to manufactures detail and specification,
 - 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 150mm depth **Unilin Close-R (FR) or equivalent**. The Fire Rated cavity closer insulation shall be Unilin Close-R (FR) or equivalent manufactured by Dacatie or equivalent, 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.

18. PROPOSED EXTERNAL WET DASH RENDER FINISH

- Proposed **wet dash render** shall be applied to the **full extents of Proposed extension** as indicated on architects' drawings with Decorative aggregate to match existing finish.
- Proposed extension walls shall be painted following application of wet dash render, refer to paint finishes section below for paint specification, colour to be confirmed by Architect prior to application.
- Contractor shall provide a **smooth floated** finish render to proposed **plinth and window / door reveals** as indicated on architects' drawings.
- 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.
- Where required Approved Stainless Steel 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 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 unplasticized PVC

Dimensions (mm)- 13mm exposed width and 25mm wings each side

Depth (mm) - 18-22mm render depth

Stock Colours- White

EXTERNAL WALL PAINT

- Contractor shall apply 3 No. coats of DULUX Trade Weather shield **or equivalent** to new External Render finish throughout proposed extensions.
- Alternative paint brands shall be proposed to Architect and pricing of same is to be outlined as such in Tender Return.
- Colours to be confirmed by Architect prior to application.

19. PROPOSED INTERNAL PLASTER FINISH

- 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 hydroscopic 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.
- Corner Plaster Stop: Expamet' or equivalent galvanised plaster corner beads to be included throughout.

20. P01 – NON-FIRE RATED PARTITION WALL

- 100mm solid blockwork internal wall to be constructed to underside of roof deck, acoustic mineral wool insulation shall be packed between blockwork and timber roof deck above.
- **11mm Gypsum Gyproc 'Hardcoat'** or equivalent (not plasterboard) to be applied to both sides of internal blockwork walls, lightly scratched prior to **2mm Gyproc** or equivalent **Skim coat finish**. Products to be used in strict accordance with the manufacturer's instructions.

21. P02 – NON-FIRE RATED PARTITION WALL

- 215mm solid blockwork internal wall to be constructed to underside of roof deck, acoustic mineral wool insulation shall be packed between blockwork and timber roof deck above.
- **11mm gypsum Gyproc 'Hardcoat'** or equivalent (not plasterboard) to be applied to both faces, lightly scratched prior to 2mm Gyproc or equivalent skim coat finish. products to be used in strict accordance with the manufacturer's instructions.

22. P03 – HIGH LEVEL PARTITION WALL

- Existing roof finish shall be stripped back to allow new pitched roof to be formed and connected into existing.
- Existing Roof overhang shall be cut back to all for the construction of a new 60minute fire Resisting partition between the existing building and proposed extension constating of a ShaftWall system constructed at high level off existing structure.
- Proposed partition shall be constructed to the underside of the proposed roof structure with required fire stopping at junction with roof tiles using mineral fibre quilt or equivalent fire stopping materials. See TGD Part B 2017 extract below indicating required detail for roof covering / treatment at tile battens.
- Metal Stud Partition system type - ShaftWall or equivalent partition wall system shall be installed following the removal of the existing eaves and roof covering to provide 60-minute fire resistance between existing building and proposed extension as indicated on architects' drawings. Product Substantiation Report (PSR) reference – A306002 (70mm 'I' Studs) or equivalent.

Performance characteristics

Partition Fire Resistance (BS 476):

From shaft (CoreBoard or equivalent) side:

90 minutes

From room (FireLine or equivalent) side:

60 minutes

Partition Laboratory Sound Resistance (BS EN 717):

40 RwdB

Partition Duty Rating (BS 5234):

Severe

Maximum Recommended Partition height:

4400mm

(Based on limiting deflection of L/240@200Pa)

Partition nominal thickness (excluding finishes):

97mm

Framing components

Gypframe or equivalent metal 'I' stud reference:

Stud centres:

Gypframe or equivalent metal starter stud reference:

Gypframe or equivalent head channel reference:

Gypframe or equivalent base channel reference:

Gypframe or equivalent retaining channel reference:

Acoustical sealant:

Deflection Head requirement:

Drawing references:

Gypframe or equivalent **70I70 'I' Studs**

600mm

Gypframe or equivalent **70SC70 Starter Studs**

Gypframe or equivalent **72EDC80 Extra Deep Channel**

Gypframe or equivalent **72C50 Floor & Ceiling Channel**

Gypframe or equivalent **G110 Retaining Channel**

Gyproc or equivalent **Sealant applied around perimeter to both sides of partition framework**

To all partitions

Refer to relevant Architects drawings

Plasterboard components

Retained between studs on shaft side:

Number of plasterboard layers room side:

Gyproc or equivalent plasterboards: Layer 1 (Inner):

Layer 2

Screw fixings for boarding:

Layer 1 (Inner):

Layer 2

19mm Gyproc CoreBoard or equivalent

2

12.5mm Gyproc FireLine or equivalent

12.5mm Gyproc FireLine or equivalent

25mm Gyproc or equivalent **Jack-Point Screws**

35mm Gyproc or equivalent **Jack-Point Screws**

- All room side board joints installed staggered in accordance with Gyproc's or equivalent current installation recommendations.
- Vertical Joints in room side face layer boards treated in accordance with **Gyproc** or equivalent **Paper Joint Tape** method.
- Horizontal joints in room side face layer boards to be backed by **Gypframe GFS1** Fixing Strap or equivalent and treated in accordance with **Gyproc** or equivalent **Paper Joint Tape** method.
- Horizontal joints in shaft side boards to be fitted with **Gypframe GA3 Steel Angle** or equivalent and backed with 122mm cut strips of **19mm Gyproc CoreBoard** or equivalent.
- Gyproc or equivalent Jack-Point screws installed to room side boards at 300mm centres (200mm at external corners)
- Gyproc or equivalent Jack-Point screws must maintain a minimum 10mm penetration through metal framing components.

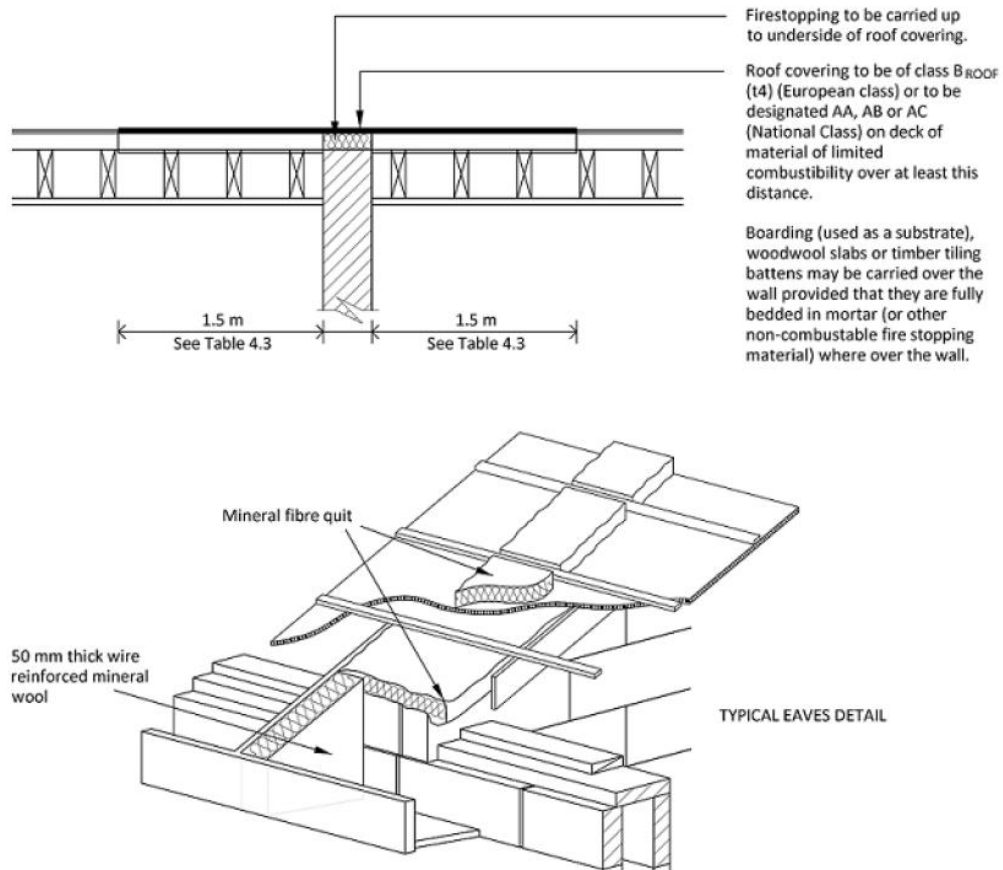
Insulation components

- Insulation specification if required in stud cavity: n/a

Finishing

- 2mm **Gyproc Skim coat** plaster applied in accordance with Gyproc's current recommendations.

Junction separating existing building & proposed extension.



23. P04 - PROPOSED INFILL CONSTRUCTION

- Refer to architect's proposed floor plan for location of existing openings to be enclosed.
- Following removal of existing external windows and associated cills, contractor shall infill existing structural openings with solid blockwork,
- Contractor shall ensure the complete void between the existing & proposed structure is filled and no air voids or gaps are between the infill construction and new construction.
- The proposed wall shall form part of the new Compartmentation achieving 60 minutes fire resistance for load-bearing, integrity and insulation when tested to BS 476: Part 21/22. Or 60 minutes fire resistance (REI) for load-bearing, integrity and insulation when tested in accordance with the relevant parts of IS EN 1365-2: 2014.
- All penetrations shall be fire stopped.
- New internal lining shall be applied to internal face of external wall following infill of structural opening, refer to architects' specification clause 13 below for specification of proposed internal lining.
- All existing sanitary ware, joinery and services on existing wall to be relocated on new wall lining.

24. PROPOSED DRY LINING OF EXISTING WALLS

- Contractor shall apply new drylining finish to existing external walls which become internal walls with 12.5mm Gypsum Habito Board with Gyproc or equivalent Skim coat finish. Products to be used in strict accordance with the manufacturer's instructions. **Refer to architect's floor plans for full extents of proposed drylining to be applied from floor to ceiling.**
- Note: contractor to provide new skirting to all areas with new drylining.
- 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:
 - a. Ensure the wall is dry and free from any protrusions/wall paper etc.
 - b. Mark the position of plasterboard on the wall. Setting out and planning board positioning is essential.
 - c. 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.
 - d. Lift the plasterboard into position using wedges on the floor.
 - e. 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.
 - f. When the adhesive has dried, 3 mechanical fixings (thermally broken) should be fixed through the centre of the board.
 - g. Seal and tape the joints of plasterboard to ensure the continuous vapour control layer is created.
 - h. Board joints to be staggered, taped and filled, in preparation for skim finish as specified above.
 - i. Skim finish to be allowed to dry as per manufactures guidance then prepared for selected painted finish, refer to paint specification below.

25. PROPOSED EXTENSION PITCHED ROOF – U Value 0. 12 W/m²K

- Proposed Pitched Roof buildup as follows:
(External to internal) Refer to associated specification below for full details
 - Concrete roof tile finish, Refer to specification clause 25.1
 - Treated timber battens, Refer to specification clause 25.1
 - Breather membrane, Refer to specification clause 25.1
 - Roof Structure, Refer to specification clause 25.2
 - Insulation along raking ceiling – Rigid PIR between and below structure with 50mm ventilation channel along top of rafter, Refer to specification clause 25.3
 - Insulation horizontally – Mineral wool insulation between and over roof joists, Refer to specification clause 25.3
 - Airtightness Membrane, installed below ceiling joist / insulation layers, Refer to specification clause 36
 - Ceiling Finishes (Raking) – Plasterboard with skim coat to raked ceilings, Refer to 25.4

- Ceiling Finishes (Horizontal) – Suspended grid and tile, refer to specification clause 38.
- Aluminium Fascia, Soffit, Refer to specification clause 26
- Aluminium Rainwater goods, Refer to specification clause 27

25.1 - ROOF FINISH / WEATHERING LAYER

- Proposed concrete roof tiles to match existing with matching Ridge in colour to all roof surfaces, Specific tile to be approved by Architect prior to Construction. Roof tiles shall be installed to manufactures instruction.
- Minimum 35 x 50mm Treated battens at c/c's advised by tile supplier to comply with Slating and Tiling Code of Practice S.R. 82:2017.
- Pitched roof Valleys shall be constructed using Code 5 Lead, Refer to section below.
- DU Pont Tyvek Supro plus **or equivalent** breather membrane below Timber batten laid unsupported on roof rafters.

25.2 - ROOF STRUCTURE

- Refer to Engineer's drawings specification for details of proposed Timber Roof Structure sizing, centre spacings and additional ties / fixings.
- 100x100mm Treated timber wall plate mechanically fixed at 400 c/c to be included to top of internal leaf & load bearing internal walls.
- 22mm Treated timber fascia and soffit board to be installed to match fascia depth with 6mm plywood underlay to prevent ponding to be included throughout, to be read in conjunction with fascia and soffit section below for aluminium finish rainwater goods.

25.3 - ROOF INSULATION

25.3.1 - INSULATION HORIZONTALLY

- 200mm Mineral wool / Earthwool or equivalent @ 0.044W/mk packed between ceiling Joists &
- 200mm Mineral wool / Earthwool or equivalent @ 0.044W/mk laid across perpendicular to joists.
- Note: Insulation can alternatively, be installed in 4 x 100mm layers specified above or equally approved Insulation.
- Mineral wool / Earthwool or equivalent @ 0.044W/mk packed between rafter ends at eaves to architects detail and instruction. Refer to Eaves details in complete package

25.3.2 - INSULATION ALONG RAKING CEILING

- Contractor shall install 125mm Unilin XT/PR UF **or equivalent** packed between pitched roof rafters along the raking ceiling to Architects detail drawing, Refer to Sheet T502.
- The proposed pitch roof insulation shall be Unilin Insulation Thin-R XT/PR **or equivalent** manufactured to EN 13165 by Unilin Insulation **or equivalent**, comprising a rigid Polyisocyanurate (PIR) core between low emissivity foil facings.
- The Thin-R XT/PR **or equivalent** 125mm Insulation with an Agrément declared Lambda value of 0.022 W/mK to achieve a U-Value of 0.15W/m2K for the roof element. To be installed in accordance with instructions issued by Unilin Insulation.
- Contractor shall install 50mm Unilin Thin-R XT/TF **or equivalent** below the pitched roof rafters along the raking ceiling to Architects detail drawing, Refer to Sheet T502. Proposed insulation shall be mechanically fixed to the rafters.

- The proposed pitch roof insulation shall be Thin-R XT/TF **or equivalent** manufactured to EN 13165 by Unilin Insulation **or equivalent**, comprising a rigid Polyisocyanurate (PIR) core between low emissivity foil facings.
- The Thin-R XT/TF **or equivalent** 50mm Insulation with a Agrément declared Lambda value of 0.022 W/mK to achieve a U-Value of 0.15W/m2K for the timber frame wall element. To be installed in accordance with instructions issued by Unilin Insulation

25.4 - ROOF FINISH - PLASTERBOARD TO RAKING CEILING

- Refer to Architects Ceiling Plan sheet T402 for location of plasterboard raking ceilings, to be read in conjunction with architects detail sheet T502.
- 50 x 50mm Treated timber battens shall be installed at 450mm centres following the installation of the Airtightness membrane as specified in specification clause 36. Proposed battens shall be fixed through the 50mm XT/ TF **or equivalent** and into the roof rafters.
- Contractor shall install 1 No. layer of 12.5mm Gyproc WallBoard **or equivalent**, Boards shall be screw fixed to the 50x50mm battens using 40mm Gyproc Drywall or equivalent Timber Screws
- All board joints installed staggered in accordance with Gyproc's **or equivalent** current installation recommendation.
- Joints in face layer boards treated in accordance with Gyproc **or equivalent** Paper Joint Tape method.
- Gyproc DryWall **or equivalent** Timber screws installed at maximum 230mm centres.
- Gyproc DryWall **or equivalent** Timber screws must maintain a minimum 25mm penetration through into timber supports.
- 2mm Gyproc Skimcoat **or equivalent** plaster (or Carlite Finish) applied in accordance with Gyproc's **or equivalent** current recommendations.
- Refer to specification clause 39 for proposed paint finishes.

25.5 - ROOF VENTILATION

- Ensure **proprietary ventilation rafter roll channel** is installed at eaves insulation zone to provide Min. 50mm Air Ventilation gap between breather membrane & Insulation.
- Proposed soffit shall include ventilation channels in accordance with TGD Part F.
- **Proprietary Roof tile vents shall be installed over areas which abut the new warm flat roof system to provide the required ventilation in accordance with TGD Part F.**

25.6 - ROOF LIGHTNING PROTECTION

- Contractor shall provide the third-party design and installation of specialist lightning protection system to proposed extension
- The lightning protection system shall be designed by specialist with third party accreditation in ISEN 62305: 2011 Parts 1-4 by ATLAS (The Association of Technical Lightning & Access Specialists)
- Lightning Protection Installations comply with BSEN 62305: 2011 Protection Against Lightning and NF C 17 102
- All materials shall be tested and approved to Standard BS EN 50164-1:2000.

26. ALUMINIUM FASCIA & SOFFIT

- **Proposed Fascia / Soffit 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 extension eaves to match depth of existing fascia. Refer to Architect's appendix for product information.
- **Alumasc Skyline or equivalent Soffit – Profile S0F0** 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 – Profile SF4** to be fixed throughout all eave's perimeter, firmly fixed to softwood to manufactures recommendations
- RAL colour to be agreed with Architect before installing. All installed as per manufacturers recommendations.
- Ventilation strips to be incorporated onto aluminium soffit at 600c/c.
- Refer to architect's drawings for proposed roof locations

27. 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-exteriors.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** head shall be provided for rainwater collection at proposed flat roof together with all associated fittings etc.

28. PROPOSED LEAD FLASHINGS & VALLIES

- **Code 5 lead** shall be used for all abutment and Valleys. Lead should be treated with patination oil to prevent staining adjoining materials
- All lead to be fitted in accordance with good roofing practice. All lead work to be carried out in accordance with recommendations of lead sheet association.uk.
- Refer to architects' roof for location and extents of proposed roof works and abutments between roofs.
- Proposed new valleys shall be formed using 18mm WPB Plywood manufactured to BS EN 636:2012+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

29. PROPOSED FLAT ROOF - U Value 0.12 W/m²K

- Proposed modified bitumen membrane roof finish. Refer to additional specification below, any alternative roof finish products to be approved by architect prior to installation.
- Proposed roof deck shall consist of **18mm WPB Plywood** manufactured to BS EN 636:2012+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
- Contractor to provide Flat roof **falls at minimum 1:80 via firring 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 specification clause 28 below.
 - 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.
 - Refer to section above for proposed Alumasc **or equivalent** Aluminium rainwater goods.
 - Refer to Architect's drawings for Roof fall directions indicated.
 - Proposed new valleys adjoining existing roof shall be formed using 18mm WPB Plywood manufactured to BS EN 636:2012+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
 - Proposed External Wall capping shall be weathered using an **Alumasc Skyline or equivalent Aluminium Sloping Coping Profile**
SC18 - 242 mm Width (151-180 mm Overall Wall Thickness)
 - Roofing membrane shall wrap over perimeter upstand with Timber battens and 18mm plywood to form a sloped surface towards the roof along the top of the external wall prior to the installation of the finish coping profile.
 - RAL colour to be agreed with Architect before installing. All installed as per manufacturers recommendations.
 - Refer to architect's drawings for extent of proposed aluminium capping
 - All Joints may be made watertight using a low-modulus silicone sealant.
 - **Technical characteristics:**
Material: 3 mm-thick pressed aluminium.
Shape: Four bent (SL profile system).
Lengths: 3000mm
Height: 75mm
Gauge: 3 mm.
Method of jointing: Wall brackets acts as cross bonding union clips and seal.
Method of support/ fixing: Fix coping level as standard with wall brackets at maximum 1.5 m centres (or less depending on location and wall coping size).
Mechanically fixed - consult manufacturer's literature for substrate specific information.
Finish - Powder coated Plain mill, colour TBC by Architect prior to installation.
Factory finishes: Polyester powder coated to BS EN 12206-1: 2004 with a 30% gloss finish unless otherwise stated. Coating to have BBA certificate; plain mill finish
Accessories
 - 3 mm thick brackets.
 - With ethylene propylene diene monomer rubber (EPDM) seals.
 - Additional straps.
 - Angles.
 - Stop ends.
 - Fixing Strap with EPDM Seal.
 - Upstands.
 - Tee Junctions.
- JUNCTION WITH EXISTING ROOF**
- Proposed Flat roof system shall be dressed / weathered onto existing membrane and below existing tiling to provide a fully watertight junction between the existing and new roofs.

- Following the removal of the existing roof system, the successful contractor shall provide a new treated timber upstand / flat roof gable which to be finishes in a reinforced bitumen membrane.
- The proposed upstand / flat roof gable shall be constructed using 200mm X 44mm Treated Rough Sawn Timber construction timber is kiln dried and strength graded to a minimum grade of C 16 and complies with the requirements of IS-127 standard & I.S. EN 14081-1:2016+A1:2019.
- The upstand / flat roof gable shall be constructed of the primary structure
- Proposed upstand flat roof gable shall contain no air voids and all cavities shall be picked with Rigid PIR insulation to match the roof insulation and enclosed clad with 18mm WPB Plywood manufactured to BS EN 636:2012+A1:2015 prior to the application of a vapour control layer / breather membrane.
- New warm modified bitumen membrane roof finish and vapour control layer shall be applied and stitched down over existing valley.
- Note: Existing Rainwater outlet locations shall be retained and altered to accommodate new roof connection. Where existing outlet penetrates new roof system a new outlet shall be required.

NBS SECTION J41 - DESCRIPTION OF WORKS

- Section J41 deals with the installation of the Bauder **or equivalent** Waterproofing System, comprising coverings of multiple layers of reinforced bituminous membranes laid and jointed using self-adhesive and/or torch application as required. It includes where required, the vapor control layer, thermal insulation, underlayer and capping sheet membranes and presumes the deck substrate and roof falls as stated within the specification below. Accessories are included where relevant.

SCOPE OF WORKS

This section includes:

- The Bauder **or equivalent** waterproofing system.
- Related Bauder **or equivalent** system accessories

This section does not include:

- Construction of the structural deck.
- Proprietary rainwater drainage / plumbing
- Lead sheet coverings / flashings

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:** Refer to Architects drawings.
- **Substrate:** New Plywood deck (designed and constructed to provide a minimum finished slope of min 1°). See specification above
- **Preparation:** As clause 610A.
- **Primer type and application:** Bauder SA **or equivalent** Bonding Primer shall be applied to the roof substrate and all upstands and skirtings. For application method and guidance information, refer clause 660A.
- **Vapour control layer:** BauderTEC KSD Mica **or equivalent**, 2.5 mm thick aluminium lined, SBS elastomeric bitumen self-adhesive vapour barrier. Installation as clause 670B

- **Insulation:** Bauder Thermotech **or equivalent** flat board, fire resistant, zero ODP, highly efficient rigid urethane insulation 200mm thick to achieve the required U value (refer Clause 230). Installation as clause 680A
- **Vertical upstands to insulated cavity wall abutments only:** 30 mm thick, Bauder Thermotech **or equivalent** 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 **or equivalent**
Underlayer: BauderTEC Sprint - DUO **or equivalent**, 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 **or equivalent**, 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 **or equivalent** capping sheet. Install as clause 775A.
- **Surface protection:** N/A
- **Accessories:** -
 Bauder **or equivalent** Insulation upstand support brackets. Installation, as clause 775A.
 Bauder **or equivalent** 50 mm x 50 mm PIR angle fillets. Installation, as clause 775A.
 Supply and install new Parapet Chute, quantity as required. These should be installed together with the associated membranes. Installation as clause 784D.

PERFORMANCE

210 - ROOF PERFORMANCE

- **General:** Secure, free draining and weather tight.

230 - INSULATION

- **Thermal transmittance (U-Value) of roof:** 0.12W/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 WHEATHER

- **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 **or equivalent** waterproofing system may only be carried out by trained and certified operatives approved by Bauder Ltd **or equivalent** 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. 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 **or equivalent**, unless otherwise stated. Any sub-standard materials or un-authorised 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 **or equivalent** 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 **or equivalent**, should be reported immediately to the client's representative and Bauder Limited **or equivalent** 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 **or equivalent** Site Technician or the Bauder **or equivalent** 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 **or equivalent** 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 re-commissioned 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 **or equivalent** 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 **or equivalent** 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 **or equivalent** 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 **or equivalent** 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 or equivalent** 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

1. Suitable precautions must be taken to prevent accidents occurring when roofing systems are being installed.
2. The contractor must ensure that adequate measures are taken to effectively prevent injury to members of the public and other persons using the premises.
3. 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.
4. 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.
5. 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.
6. The contractor is responsible for providing adequate firefighting equipment in the form of extinguishers during work on the roof. These should be kept in easily accessible locations and be suitably signed.
7. 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.
8. 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.
9. 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.
10. The installer must observe Product Safety Datasheets and complete COSHH assessments relevant to the materials being used.
11. 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.
12. 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

660A - APPLYING PRIMER

- **Purpose:** Bauder **or equivalent** multi-Purpose Primer, substrate primer to seal and prepare dry surfaces of a variety of common substrate material prior to the application of Bauder **or equivalent** 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. 60 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 vapor from entering the buildings ventilation system.
- OR**
- **Purpose:** Special substrate primer to seal and prepare dry surfaces of a variety of common substrate material prior to the application of Bauder **or equivalent** self-adhesive bitumen membranes.
 - **Application method:** Apply by brush or roller to provide even and full coverage. Avoid pooling.
 - **Application rate:**
 - Timber/Metal: Approx. 200 g/m²
 - Concrete / brickwork: Approx. 200-300 g/m² depending upon roughness and porosity.
 - Two coats may be required for very porous substrates.
 - **Application temperature:** 5-25°C
 - **Drying time:** Approx. 30 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 vapor 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 **or equivalent** 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 **or equivalent** 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 **or equivalent** insulation support bracket.
- **Protective hard edges:** treated timber battens or Bauder **or equivalent** 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 **or equivalent** manner, using the Bauder **or equivalent** 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 **or equivalent** 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 **or equivalent** 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 **or equivalent** 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 **or equivalent** 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 **or equivalent** capping sheet pad, fully bonded to the main capping sheet at 1m centres by the approved Bauder **or equivalent** 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 **or equivalent** when the roof is ready for Final Inspection. The 'Final Inspection' of the waterproofing must be carried out and approved by Bauder **Ltd or equivalent** 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

- **J41/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 **or equivalent**. Life expectancy in excess of 30 years
- This system must be installed by a Bauder **or equivalent** Approved Contractor, to be eligible for guarantee.

30. PROPOSED EXTERNAL WINDOWS & DOORS – U Value 1.2W/m²K

- Proposed External Window & Doors shall be provided in accordance with "McLoughlin Architecture Specification of Windows & Doors – Specification for new windows / doors in Educational facilities" in conjunction with additional guidance below. To be read in conjunction with Architects Window / Door schedules, Floor plans and Elevation drawings.
- Style and break-ups to be signed off by Architect prior to order.
- Proposed windows / doors shall consist of 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**
- Contractor shall 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 with vertical DPC joint and mastic sealed externally upon completion of external reveals. Internal reveals to be flexible 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 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 6262-4:2018, to withstand the design wind pressure calculated in accordance with BS 6375-1:2015 or BS EN 1991-1-4:2005 (+A1:2010). The type and quality of glass shall conform to bs 952-1: 1995.
- 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 12206-1:2021: 'paints and varnishes - coating of aluminium and aluminium alloys for architectural purposes'
- Weather tightness to BS 6375:2015 part 1. Weather strips and gaskets to bs 4255 part 1.
- **Ironmongery to all doors and windows to be agreed with architect prior to Manufacture.**
- **All proposed External doors shall include a Hold open device / latch.**
- **All proposed External doors shall include a heavy duty soft door closer on each leaf.**
- 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 withs and directions which supersedes TGD part M 2010.

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



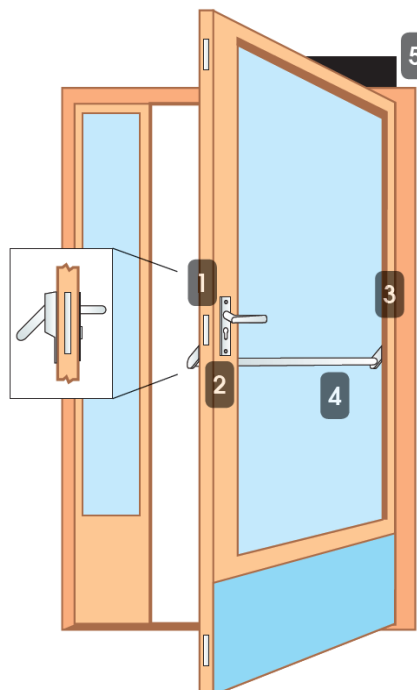
30.1 - EXTERNAL DOOR ACCESS CONTROL

- Contractor shall provide and install all access control systems in compliance with PSA 67- 2022
- Refer to M&E Drawings and Specification for electrical connections**
- Access control system to be provided as indicated on architects and detailed below. Refer to Architects Door Schedule. To be read in conjunction with M&E engineers' drawings and specification.
- The Contractor shall allow for the supply and installation of door access system for the doors as indicated to restrict access. The door access system shall be supplied with electromagnetic door lock and these door locks shall release the door once the reader has been successfully activated.
- To be read in conjunction with FSC report for required electromagnetic door locks and hold open device to fail upon activation of the alarm system.

- The Contractor shall liaise with the supplier to ensure all wiring requirements are included for. The door release facility for the system shall also be linked to the fire alarm system so that in the event of fire activation the respective door shall open. The Contractor shall check suitability of the door structure before placing order.
- All Access control door system to have a high-level switch control where the system can be deactivated.
- 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.
- Door 01 Hardware
Fire Exit: Yes
Access Type: Secondary Entrance / Fire Exit
Internal Master Ironmongery: panic bar and access control
External Ironmongery: Grab rail and access control
Access Control: 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.



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



EN 1125

31. PROPOSED FIRE RATED WINDOW - U Value 1.2W/m²K

- Existing non fire rated window to existing building shall be removed and disposed as indicated on Architects Drawings.
- Existing opening shall be prepared for new window system, existing linings, plaster and render shall be removed as required for the installation of new window system.
- Contractor shall provide and install 1 no. Prestige EI60 Fireguard or equivalent window system as detailed in architects drawings.
- Proposed fixed window shall provide 60 minute fire resistance as per the granted FSC attached in the completed package.

WINDOW SPECIFICATION

- **Sound Insulation:** $R_w = 40 \text{ dB} (-2;-6)$ - EI60 standard glazing
- **Frame Depth:** 132,5 mm with alucladding
- **Material of Sash and Frame:** Glue-lam pine; quality class A1-A3
- **Glazing:** 2-glazing with 1 LowE glass and internal fire rated glass
- **Hardware:** PN UNI hinges; ROTO hardware; Hoppe handle
- **Aluminium Cladding:** external alu cladding
- **Thermal transmittance:** $U_w = 1.2 \text{ W/m}^2\text{K}$
- **Number of sash gaskets:** 3 sash gaskets (plus additional fire gaskets)
- **Ventilation hatch:** Inward opening ventilation hatch
- **Colour of sash gaskets:** Grey
- **Internal & External colour / RAL:** TBC by Architect prior to Manufacture.

32. PROPOSED WINDOW BOARDS

- Contractor shall provide 25mm thick Softwood Window boards throughout, All primed and painted with square edging.
- Window board dept to reveal for each window installation.
- All window boards shall be fixed directly to the Fair faced U block filled with concrete to engineers deign and specification below all cills.
- All fixings shall be recessed with pre drilled, filled and sanded prior to decoration.
- All window cills shall be finished with Silicone based sealant to External window and adjoining liner, colour TBC by architect prior to commencement.

33. PROPOSED WINDOW LINERS

- Contractor shall provide 18mm moisture resistant painted MDF window liners to all new windows, all primed and painted with square edging.
- Window Liner dept to reveal for each window installation.
- All fixings shall be recessed with pre drilled, filled and sanded prior to decoration.
- All window liners shall be finished with Silicone based sealant to adjoining External window, adjoining window board and perimeter junction with fairfaced blockwork, colour TBC by architect prior to commencement.

34. PROPOSED WINDOW CILLS

- New cills to be provided throughout proposed construction.
- 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. **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**, 150mm width to suit proposed cavity. The Fire Rated cavity closer insulation shall be Unilin Close-R (FR) or equivalent manufactured by Dacatie or equivalent, comprising a Rigid PVC-U Outer Profile with encapsulated mineral wool. To be installed in accordance with instructions issued by Manufacturer.

35. 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.
- Note: All structural heads are show for illustrative purposed on Architectural drawings, to be read in conjunction with engineers' specification and drawings which superseded the architectural.

36. AIRTIGHTNESS REQUIREMENTS

- Contractor shall provide airtight structures in accordance with TGD-L 2022 and DoES TGD's. 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.
- **Please Note :** An airtight Building is not a building without ventilation, Proposed Extension shall be naturally ventilated via permanent wall ventilation to architects specification and extract / Heat recovery ventilation to M&E Engineer specification.

36.1 – AIRTIGHTNESS EXECUTION / 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 – Contractor shall carry out air pressure testing for inclusion in subsequent calculations** (e.g. NEAP)
- **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 equivalent 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.

36.2 – TESTING STANDARDS

- **Testing standards:** Air permeability shall be measures by means of pressure testing of a building prior to completion. The procedure for testing shall be as specified in IS EN 13829:2000 " Thermal performance of buildings: determination of air permeability of buildings: fan pressurised method". Additional guidance on testing procedures shall be as provided in CIBSE Technical manual TM 23 "Testing Buildings for Air Leakage". Permeability shall be calculated by dividing the air leakage rate in m³/hour by the envelope area in m². The performance shall be assessed at 50 Pascal's pressure difference.
- **Pressure standards:** Air pressure testing shall be deemed satisfactory subject to **achievement of an air permeability upper limit of 3m³/ (h.m²)**. 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.

36.3 – AIRTIGHTNESS PRODUCTS

36.3.1 - WINDOWS AND DOORS

- Contractor shall install Pro Clima CONTEGA SOLIDO SL **or equivalent** airtight sealing to window and door frames and also sealing membranes at masonry junctions together with the associated adhesives prior to the application of the final linings as follows:
 - Pro Clima CONTEGA SOLIDO SL **or equivalent** window/ Door sealing tape
 - Pro Clima TESCO SPRIMER **or equivalent** airtight tape surface primer

CONTEGA SOLIDO SL - INTERNAL MASTING TAPE

- Contractor shall provide and install **Pro Clima Contega Solido SL or equivalent** full-surface adhesive plaster and window / door sealing tape for interior use.



- Provided tape to have the following characteristics:
 - Backing: PP backing fleece, PP copolymer special membrane
 - Adhesive: Modified water-resistant SOLID adhesive
 - Release film: Single or double split silicone-coated PE sheet
 - Colour: White
 - Sd value: EN 1931, 2.8m
 - G value: 14 MN·s/g
 - Vapour permeance: ASTM E 96, 1.17 US perms
 - Outdoor exposure: 3 months
 - Airtightness: ift, MO-01/1:2007-01, Abs.5 up to 1000 PA,
 - Bonding requirement, DIN 4108-11 passed
 - non-aged/ aged
 - Can be plastered over: yes
 - Application temperature: above -10 °C; 14 °F
 - Temperature resistance: permanent -40°C to 90°C;
 - -40°F to 194°F
 - Storage: cool and dry
- **Areas of application:**
 - For interior airtight and vapour-checking joints between windows, doors or airtightness layers and adjacent building components made of wood or mineral subsurface such as concrete and masonry, with full-surface adhesion. The modified water-resistant SOLID adhesive ensures quick and permanent joints with the subsurface. The stuck joint is immediately airtight and can be subjected to loading. The fleece can simply be plastered over in accordance with the installation instructions.
- **Split of the release film:**
 - Tape width: 100mm
 - Split (Approx.): 20|40|40mm
- **Substrates**
 - Clean subsurface before sticking. Uneven mineral subsurface may need to be levelled with a smooth finish. Adhesion to frozen surfaces is not possible. There must be no water-repellent substances (e.g. grease or silicone) on materials to be bonded. The width of the adhesive tape that is to be plastered over should generally not exceed 60 mm (2 3/8") or 50% of the soffit area. Detailed recommendations can be obtained from the relevant plaster producer. Sub-surfaces must be sufficiently dry and stable.
 - Permanent adhesion is achieved on all pro clima interior membranes and on other vapour-check and airtight membranes (e.g. those made of PE, PA, PP and aluminium).
 - Adhesion can be carried out on planed and painted wood, hard plastics, hard wood-based panels (chipboard, OSB and plywood panels), metal (e.g. pipes, windows etc.), rigid foam insulation materials that can be plastered over, and on mineral subsurfaces such as concrete and masonry.
 - The best results in terms of structural stability are achieved on high-quality subsurfaces. It is your responsibility to check the suitability of the subsurface; adhesion tests are recommended in certain cases. Pre-treatment with TESCON PRIMER is recommended in the case of subsurfaces with insufficient stability.

• General conditions

- The bonds should not be subjected to tensile strain. Press the adhesive tapes firmly to secure them, taking care to ensure that there is sufficient resistance pressure behind them. Airtight seals can only be achieved if the sealing tape is installed free of folds and breaks. Ventilate regularly and systematically to prevent build-up of excessive humidity. Use a dryer if necessary.
- When plastering, please observe the recommendations of the plaster manufacturer for non-absorbent subsurface. A bonding course may be necessary.

TESCON SPRIMER - AIRTIGHT TAPE SURFACE PRIMER

- To ensure airtight tapes have a robust and permanent bond on almost any surface.



- Provided surface primer shall have the following characteristic:
 - Application temperature (range) -5 °C to 40 °C
 - Coverage (linear metres per can/tube) 38 m
 - Primer for use on Concrete beams/pillars, Cork panels, Plaster, Plasterboard, Precast concrete, Smooth cement, Stone, Wood
 - Size 750 ml
 - Temperature Resistance -25 °C to 90 °C
 - Warranty 10 years (when correctly installed with Pro Clima system products only), 6 years (when correctly installed with non-Pro Clima products)
 - Materials Synthetic Rubber
 - Storage requirements Cool and dry.

• Areas of application:

Pro Clima TESCON SPRIMER **or equivalent** airtight tape surface primer can be used on Brick, block, concrete, plaster, smooth timber and wood fibre insulation boards.

• Installation

- Prepare the surface by brushing off or wiping down if necessary, this will ensure any debris or contaminants present will not affect the performance of Tescon Sprimer **or equivalent**.
- Shake the can vigorously for 20 seconds then spray from a distance of 20cm ensuring an even coat is applied.
- The direction of the spray nozzle can be adjusted to spray horizontally or vertically for easier of application in difficult areas.
- Pro Clima **or equivalent** tapes can be applied immediately to the primed surface without waiting for the Sprimer to cure.
- Frozen or water-soaked surfaces are unsuitable. Ensure the surface is dry and unfrozen before applying the primer. Once fully dry, the primer and tape bond will be at maximum strength. Tescon Sprimer **or equivalent** will become transparent once it is dry.

36.3.2 - PROPOSED PITCHED AND FLAT ROOFS (TIMBER DECK CONSTRUCTION)

- Contractor shall install a **Pro Clima Intello Plus or equivalent** airtightness membrane directly to the underside of the proposed new roof joists together with the associated tapes and sealants as follows:
 - Pro Clima INTELLO PLUS **or equivalent** Airtightness Membrane
 - Pro Clima TESCON VANA **or equivalent** All-round adhesive tape for interior and exterior use
 - Pro Clima CONTEGA PV or equivalent** Vapour-checking plaster-sealing tape with reinforcement fabric
 - Pro Clima ORCON F **or equivalent** / Pro Clima ORCON MULTIBOND All-round joint adhesive for interior and exterior use.

INTELLO PLUS - AIRTIGHTNESS MEMBRANE

- Contractor shall provide and install **Pro Clima Intello Plus or equivalent** reinforced Hydrosafe® high-performance vapour check, suitable for all fibrous insulation materials.



- Provided tape to have the following characteristics:
 - Fleece: Polypropylene
 - Membrane: Polyethylene copolymer
 - Reinforcement: Polypropylene non-woven fabric
 - Colour: White-transparent
 - Surface weight: EN 1849-2 110 g/m² ; 0.36 oz/ft²
 - Thickness: EN 1849-2 0.4 mm ; 16 mils
 - Water vapour resistance EN 1931 35 000
 - factor μ
 - sd value: EN 1931 14 m
 - sd value, humidity variable: EN ISO 12572 0.25 - >25 m
 - g value: 70 MN·s/g
 - g value, humidity variable: 1.25 - >125 MN·s/g
 - Vapour permeance: ASTM E96-A 0.23 perms
 - Vapour permeance, EN ISO 12572 < 0.13 - 13 perms
 - humidity variable:
 - Hydrosafe value (sd): DIN 68800-2 2 m
 - Surface burning characteristics: ASTM E84 Class A (Flame Spread 0)
 - Fire rating: EN 13501-1 E
 - Airtightness: ASTM E2178 ≤ 0.004 cfm/ft²
 - Airtightness: EN 12114 tested
 - Tensile strength MD/CD: EN 13859-1 (A) 340 N/5 cm / 220 N/5 cm;
39 lb/in / 25 lb/in
 - Elongation MD/CD: EN 13859-1 (A) 15% / 15%
 - Nail tear resistance MD/CD: EN 13859-1 (B) 200 N / 200 N; 45 lb/ 45 lb
 - Durability after artificial ageing: ETA-18/1146 passed

- Temperature resistance: Permanent -40 °C to 80 °C; -40 °F to 176 °F
- Thermal conductivity: 0.04 W/(m·K); 0.3 BTU·in/(h·ft²·°F)
- CE labelling: ETA-18/1146 yes

- **Areas of application:**

For use on roofs, walls, ceilings and floors on structures that are open or closed to diffusion on the exterior, e.g. flat/steep roofs and green roofs, after appropriate design calculations have been carried out.

- **Supply forms:**

- Art. no. 10092
- GTIN 4026639011244
- Length: 50m
- Width: 1.5m
- Content: 75 m²
- Weight: 9 kg
- Container 20

- **General conditions**

- Where possible, INTELLO PLUS should be installed in such a way that adhesion can be carried out using single-sided adhesive tape on the smooth (printed) side of the sheeting. It should be installed taut and without slack either in parallel with or perpendicular to the supporting structure, e.g. the rafters. In the case of horizontal installation (perpendicular to the supporting structure), the separation distance of the supporting structure is limited to a maximum of 100 cm (3'). After installation, perpendicular battens on the inside at a separation distance of a maximum of 50 cm (1' 8") must be fitted to carry the weight of the insulation material.
- If regular tensile loads on adhesive tape bonds are to be expected – for example, due to the weight of the insulation material – when using mat or panel-shaped insulation materials, an additional supporting batten should be fitted over the overlap bonding. When attaching the membranes in the case of mat or panel-shaped insulation materials, a maximum separation distance of 10 to 15 cm (4" to 6") applies for the fastening staples, which must be at least 10 mm (3/8") wide by 8 mm (5/16") long. The overlaps between the membrane strips must be approx. 8 to 10 cm (3" to 4").
- Airtight seals can only be achieved on vapour control membranes that have been laid without folds or creases. Ventilate regularly to prevent excessive humidity (e.g. during the construction phase). Occasional, intermittent ventilation is not sufficient to remove large quantities of moisture due to construction work from a building; use a dryer if necessary.
- To prevent condensation formation, INTELLO PLUS should be sealed and taped in an airtight manner immediately after the installation of mat or panel-shaped thermal insulation materials. This particularly applies when working in winter.
- **Additional instructions for blown-in insulation materials**
- INTELLO PLUS can also be used as a boundary layer for blown-in insulation materials of all types. A reinforcement structure ensures that there is little expansion during the blowing-in process. Installation in parallel with the supporting structure has the advantage that the joint will be on a solid base and is protected by this base.
- The separation distance between the staples used to fasten the membrane strips must be a maximum of 5 to 10 cm (2" to 4"). Staples should be oriented parallel with construction timber so that membranes do not tear at the staples when insulation material is being blown in. If installation is carried out perpendicular to the supporting structure, a supporting batten should be fitted directly over the membrane strip overlap with its airtight bonding in order to avoid tensile loading on the adhesive bond.

- When working in cold outdoor climates, the blown-in insulation material should be inserted immediately after installation of INTELLO PLUS. This will protect the membrane against condensation formation.

TESCON VANA – AIRTIGHTNESS MEMBRANE TAPE

- Contractor to allow for **Pro Clima TESCO VANA or equivalent** all-round adhesive tape for interior and exterior use.



- Provided tape to have the following characteristics:
 - Backing: Special PP fleece
 - Adhesive: Water-resistant SOLID adhesive
 - Release film: Silicone-coated paper
 - Colour: Dark Blue
 - Outdoor exposure: 6 months
 - Airtightness: ift, MO-01/1:2007-01, Abs.5 up to 1000 PA,
 - Bonding requirement, DIN 4108-11 passed
 - non-aged/ aged
 - Can be plastered over: yes
 - Application temperature: above -10 °C; 14 °F
 - Temperature resistance: permanent -40°C to 90°C;
 - -40°F to 194°F
 - Storage: cool and dry
- **Areas of application:**
 - Interior: Airtight taping of vapour-check and airtight membranes and of airtight wood-based panels.
 - Exterior: Windproofing and rainproofing of roofing underlay and breather membranes (e.g. pro clima SOLITEX) and underlay panels. Airtight taping of on-roof and refurbishment vapour-check and airtight membranes.
 - All taped joints, indoor and outdoor, can be implemented between similar components or else with adjacent structural elements with a smooth, non-mineral surface (e.g. pipe penetrations, roof windows)
- **Split of the release film:**
 - Tape width: 150mm
 - Split (Approx.): 75|75mm
- **Substrates**
 - Clean sub-surfaces before applying tape. Adhesion is not possible on frozen surfaces. There must be no water-repellent substances (e.g. grease or silicone) on surfaces to be bonded. Sub-surfaces must be sufficiently dry and stable.

- Permanent adhesion is achieved on all pro clima interior and exterior membranes, on other vapour-check and airtight membranes (e.g. those made of PE, PA, PP and aluminium) and on other underlay and breather (WRB) membranes (e.g. those made of PP and PET).
- Adhesion and taped connections are possible with planed and painted wood, hard plastics and metal (e.g. pipes, windows etc.), rigid foam insulation materials that can be plastered over, and hard wood-based panels (chipboard, OSB, plywood, MDF and wood-fibre underlay panels). Pre-treatment with TESCON PRIMER is required in the case of adhesion to wood-fibre underlay panels or on smooth, mineral sub surfaces. Concrete or plaster sub Surfaces must not be sandy or crumbling.
- The best results in terms of reliability are achieved on high-quality subsurfaces. It is your responsibility to check the suitability of the subsurface; adhesion tests are recommended in certain cases. Pretreatment with TESCON PRIMER is recommended in the case of subsurfaces that have insufficient stability.

• General conditions

- Taped joints must not be subjected to tensile forces. Once membranes have been taped, the weight of the insulation material must be supported by laths. Taped joints should be supported by additional laths, if necessary. Press firmly to secure the adhesive tapes in place. Ensure that there is sufficient resistance pressure.
- Windproof, airtight or rainproof bonding can only be achieved on vapour-check or underlay/facade membranes that have been installed without folds or creases. Ventilate continuously and systematically to prevent build-up of excessive humidity; use a dryer if necessary. When plastering, please observe the recommendations of the plaster manufacturer for non-absorbent sub surfaces. A bonding course may be necessary.

CONTEGA PV - AIRTIGHTNESS TAPE

- Contractor shall provide and install **Pro Clima CONTEGA PV or equivalent** vapour-checking plaster sealing tape with reinforcement fabric.



- Provided tape to have the following characteristics:
- Backing: PET fleece with functional membrane
- and plaster reinforcement
- Adhesive: Special acrylate adhesive
- Release film: Silicone-coated PE film
- Colour: light blue / dark blue
- Thickness: 1.3 mm
- sd value: EN 1849-2 2.3 m
- g value: 11.5 MN·s/g

- Vapour permeance: ASTM E 96 1.43 US perms
- Bonding requirement, DIN 4108-11 passed
- non-aged/ aged
- Application temperature: above -10 °C; 14 °F
- Temperature resistance: permanent -40°C to 90°C;
- -40°F to 194°F
- Storage: cool and dry
- **Areas of application:**
- For well-defined, multifunctional joints between sheets of membrane or wood-based panels and surfaces that will be plastered (brick work or concrete).
- **Substrates**
- Clean sub surfaces before sticking. Adhesion to frozen surfaces is not possible. The substrate material must be free of water-repellent substances (e.g. grease or silicone). Remove flaking paintwork and the like. Sub surfaces must be sufficiently dry and stable.
- Permanent adhesion is achieved on all pro clima interior membranes and on other vapour-check and airtight membranes (e.g. those made of PE, PA, PP and aluminium). Adhesion can be carried out on planed and painted wood, hard plastics, hard wood-based panels (chipboard, OSB and plywood panels). The PET fleece can be embedded in the plaster layer in all substrates that can be plastered such as brick, lime sand brick, porous concrete, pumice stone, concrete etc. For bonding joints on masonry or concrete or on rough substrates, use ORCON F.
- The best results in terms of structural stability are achieved on high-quality subsurfaces. It is your responsibility to check the suitability of the subsurface; adhesion tests are recommended in certain cases. Pre-treatment with TESCON PRIMER is recommended in the case of subsurfaces with insufficient stability.
- **General conditions**
- The bonds should not be subjected to tensile strain. Press firmly to secure the adhesive tapes in place. Ensure that there is sufficient resistance pressure. Airtight seals can only be achieved if the sealing tape is installed free of folds and breaks. Ventilate continuously and systematically to prevent build-up of excessive humidity; use a dryer if necessary.
- When plastering, please observe the recommendations of the plaster manufacturer for non-absorbent subsurfaces. A bonding course may be necessary. If the airtight connection is created straight after plastering, moisture ingress may occur in the thermal insulation or to problems in the order of construction. CONTEGA PV alleviates this problem

ORCON F - AIRTIGHT BONDING

- Contractor shall provide and install **Pro Clima ORCON F or equivalent** All-round joint adhesive for interior and exterior use.



- Provided tape to have the following characteristics:
- Component: Dispersion based on acrylic acid copolymers and ethanol.

Free from plasticisers, halogens

- Cartridge: PCR (recycled)
- Colour: green
- Properties: Very tensile
- Bonding requirement, DIN 4108-11, passed
- o non-aged/ aged
- Application temperature: -10 °C to 50 °C; 14 °F to 122 °F
- Temperature resistance: Permanent -40 °C to 80 °C, -40 °F to 176 °F
- Storage: Up to -20 °C; -4 °F, cool and dry

- **Coverage guide:**

- Cartridge
- Content: 310 ml
- Bead Width: 5 mm
- Coverage: ~15 m
- Foil tube
- Content: 600 ml
- Bead Width: 5 mm
- Coverage: ~30 m

- **Areas of application:**

- Creation of airtight seals between adjacent surfaces and vapour-checking and airtight membranes of all kinds, including all pro clima vapour checks and airtightness membranes (e.g. pro clima INTELLO, INTELLO X, DB+, DASATOP and DA).
- Creation of windtight seals between adjacent surfaces and roofing underlay membranes of all kinds (PP, PET). Sealed joints between adjacent surfaces and the pro clima SOLITEX MENTO series, SOLITEX PLUS or SOLITEX UM connect, for example, meet the requirements specified by the German ZVDH product data sheets.
- Windtight adhesion between adjacent surfaces and breather membranes (e.g. pro clima SOLITEX FRONTA series).
- Bonding overlaps and joints for trickle protection membranes.

- **Substrates**

- Clean subsurface before applying adhesive. Mineral surfaces (plaster or concrete) may be slightly moist. Adhesion is not possible on frozen surfaces. There must be no water-repellent substances (e.g. grease or silicone) on surfaces to be sealed. Subsurface must have sufficient stability – if necessary, a mechanical support (pressure lath) must be used (e.g. on crumbling subsurface).
- Permanent adhesion is achieved on all pro clima interior and exterior membranes, on other vapour-check and airtight membranes (e.g. those made of PE, PA, PP and aluminium) and on other underlay and breather membranes (e.g. those made of PP or PET). Seals can be created on mineral subsurface (e.g. plaster or concrete), roughly sawn or planed wood, and hard wood-based panels (chipboard, OSB, plywood, MDF panels).
- The best results in terms of structural reliability are achieved on high-quality subsurfaces. It is your responsibility to check the suitability of the subsurface; adhesion tests are recommended in certain cases.

- **General conditions**

- The adhesive joints created must not be subjected to tensile forces.
- The product achieves its final level of strength only when it has dried. This should be taken into account if airtightness measurements are to be carried out or if blown-in insulation material is to be installed directly after application of this adhesive. It may be advisable to implement protective

measures such as mechanical reinforcements in the case of subsurfaces that have insufficient stability.

- Ventilate continuously and systematically to prevent build-up of excessive humidity; use a dryer if necessary.

37. PROPOSED FIRE STOPPING

- All service penetrations to Fire rated walls / compartment zones fire stopped (wires intumescent mastic, service pipes and ducts – sleeved.) To its indicated fire rating, **Refer to FSC drawings attached in appendix.**
- All fire rated construction, barriers & mastics etc shall be installed as per manufactures design, detailing and guidance documents.
- Refer to FSC and architects' drawings for location of fire resisting door sets and ratings.
- Refer to Appendix for Rockwool FirePro Data Sheets, note: Proprietary name included for clarity of requirements, equivalent product / systems can be submitted for assessment by Architect.
- Existing corridor area shall be fire topped to provide 60minute resistance above new internal door set D07, refer to architects' drawings for location.

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.



3.4 - PROPOSED EXTENSIONS – INTERNAL FINISHES

38. PROPOSED SUSPENDED CEILINGS SYSTEMS

38.1 - 600X600mm ACOUSTIC GRID CEILING

- Contractor shall provide Suspended ceiling Tile system as indicated on Architects ceiling finishes plan.
- New perimeter trim to be provided through, fixed directly to masonry wall.
- **Proposed Mainstream Tiles shall consist of Armstrong ULTIMA+ or equivalent:**
- **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
- **Proposed W/C and Shower room tiles shall consist of Hydroboard or or equivalent:**
- **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 = 82%, Measured in accordance with EN ISO 7724-2 & 3.
Thickness: 15mm
Board & Grid Size: 600 x 600mm modules.
Board Edge: Tegular Edge
Fire Rating: Euro class A1 EN13501-1
Dnfw: 22 dB in accordance with EN ISO 10848-2 & EN ISO 717-1
aW : 0.90(H) in accordance with EN ISO 354 & EN ISO 11654
- **Exposed Grid System shall consist of the following:**
Prelude 24 XL² / TLS **or equivalent** 24mm Exposed grid system to proposed Classbase, Prelude 24 Corrosive Resistant shall be installed to proposed W/C
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 Peak form **or equivalent**
Material: Steel
Dimension: 24mm x 43mm x 3600mm
Surface finish: Baked polyester paint
Colour: Global white (WG)

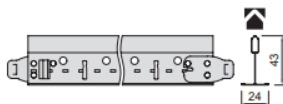
Cross tee unslotted: Prelude 24 XL² / TLS Peak form **or equivalent**

Dimension: 24mm x 38mm x 600mm

Material: Steel

Surface finish: Baked polyester paint

Colour: Global white (WG)



Item No.	Dimensions (mm)			
	Length	Width	Height	Slot Centres
31 40 32 A	3600	24	43	100

38.2 - STANDARD CASOLINE MF SUSPENDED CEILING SYSTEM

Metal Stud Partition system type – **CasoLine MF or equivalent** standard non-fire rated system to additional corridor area connecting to existing school building. Refer to architects' drawings for extents.

Product Substantiation Report (PSR) reference – **C100016 or equivalent**

Performance characteristics

Ceiling Fire Resistance (BS 476):

n/a

Airborne Laboratory Sound Resistance (BS EN 717):

56RwdB

Impact Laboratory Sound Transfer (BS EN 717):

68LnwdB

Framing components

Gypframe Ceiling Sections:

Gypframe or equivalent MF5 Ceiling

Section

Ceiling Section installed maximum centres:

450mm

Gypframe **or equivalent** Primary Channels:

**Gypframe or equivalent MF7
Primary Channel**

Primary Channel installed maximum centres:

1200mm

Gypframe or equivalent MF9 Connecting Clips used to connect MF5's to MF7's at every intersection.

Gypframe **or equivalent** Hanging Angle:

Gypframe or equivalent GA1 Steel

Angle

Hanging Angle installed maximum centres:

1200mm

Gyproc or equivalent Sealant applied around perimeter of ceiling

Plasterboard components

Number of plasterboard layers:

1

Gyproc **or equivalent** plasterboards: Layer 1 (Inner): **12.5mm Gyproc WallBoard or equivalent**

Screw fixings for boarding: Layer 1 (Inner): **25mm Gyproc or equivalent Drywall Screws**

Moisture board Ceilings to be provided in all wet room areas, to be installed as per manufactures installation and guidelines

- All board joints installed staggered in accordance with Gyproc's **or equivalent** current installation recommendations.
- Joints in face layer boards treated in accordance with Gyproc **or equivalent** Paper Joint Tape method.

- Gyproc **or equivalent** Drywall screws installed at 230mm centres within the field of the board and 150mm centres along board ends.
- Gyproc **or equivalent** Drywall screws must maintain a minimum 10mm penetration through metal framing components.
- Gyproc **or equivalent** Wafer Head Jack-Point Screws used to fix Gypframe **or equivalent** GA1 Angle to Gypframe **or equivalent** MF7 Primary Channels.

Insulation components

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

Finishing

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

39. PROPOSED PAINT FINISHES

- **Contractor shall provide complete internal and external painting (including plinths & reveals) throughout proposed extension and any affected adjoining areas (including internal joinery in existing building)**
- Paint colours to be approved prior to application, Architect 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. Paints to be selected for ferrous & non-ferrous substrates as appropriate.
- **WALL PAINT**
 Manufacturer: **Refer to Architects Finish document**
 Product reference: Fleetwood" Popular Colour" Collection **or equivalent**
 Initial / Undercoats: Fleetwood Primer Sealer Undercoat as recommended by manufacturer, 1no.Number of coats.
 Finishing coats: Fleetwood" Popular Colour" Collection **or equivalent**, all colours per room to be confirmed, 2no.Number of coats.
 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 **or equivalent** Water based Satinwood undercoat

Number of coats: 1 no. coats.

Finishing coats: Fleetwood **or equivalent** Water based Satinwood.

Number of coats: 2no. coats.

Total Number of coats: 3no. top coats.

- CEILING & BULKHEADS PAINT

Manufacturer: Fleetwood **or equivalent**

Product reference: Fleetwood Premium Acrylic Matt Emulsion Brilliant White **or equivalent**

Initial / Undercoats: Fleetwood **or equivalent** Primer Sealer Undercoat as recommended by manufacturer,

1no.Number of coats.

Finishing coats: Fleetwood Premium Acrylic Matt Emulsion Brilliant White **or equivalent**,

2no.Number of coats.

Total Number of coats: 3no. top coats.

40. PROPOSED INTERNAL DOORS AND SCREENS

- Refer to architects' drawings for location and associated tag for proposed new doors to be read in conjunction with specification below and Architects door schedule drawings.
- Contractor shall provide door swings of doors as indicated on architects' drawings
- Internal doors to be 44mm thick solid core doors with **Formica or equivalent laminate finish.**
- **Refer to Architect's door schedule.**
- Refer to Proposed Ironmongery schedule above to be read in conjunction with architects' drawings. Door furniture shall be easily gripped and operated, clearly visible and contrasted against its background.
- 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 (650kg/m³) 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:** 44mm x 10mm exposed hardwood ash lippings to all four edges of the door leaf.
- **Frame:** 44x 100mm hardwood 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.
- 'Classroom' type locks to be provided to all teaching spaces.
- The Successful contractor shall provide the proposed fire door **Global assessment report** together with the **shop drawings for approval by the architect prior to manufacture of the door sets.**
- All doors to be provided with stainless steel kickplates on both sides.
- Vision panels required to all new doors as indicated on door schedule, Refer to TGD part M 2010, Diagram 10 below for additional guidance location of vision panels.
- Note: Vision Panels are not required in the half leaf's as long as the leaf is 450mm or less in width.
- All glass for internal doors and screens to be Pyrostop or equally approved, Georgian wire glass is not permitted.

- Refer to TGD Part M 2010 Diagram 10 Effective clear width and visibility requirements of doors.
- 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
- All Fire doors to include signage as required
- Door closers shall be provided on all Fire resisting door sets.
- Internal door thresholds shall be flush and absolutely level to facilitate wheelchair movement.
- Gaps between door frames & the walls in which they are fixed should be less than or equal to 10mm. 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. **EXPANSION FOAM IS NOT PERMITTED IN THE INSTALLATION OF FIRE DOORS.**
- All fire door sets (door & frame) to comply with BS 476 & require certificates from manufacturer stating the name of the premises and the ID number of the relevant doors e.g. DT-01, the bs number and test type (fire resisting door sets achieving 30 minute & 30 -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 BS 476: section 31.1.
- All door identification tags shall be metal.
- **Refer to architects' floor plan drawings for l/h or r/h doors**
- 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 as indicated on architects drawings.
- Intumescent strips as required
- Perimeter seals as required to meet acoustic performance, Maximum 30RW (dB) for airborne sound insulation between circulation spaces and other spaces used by students
- 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.
- 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.

41. PROPOSED INTERNAL IRONMONGERY

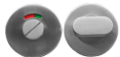
- Refer to proposed Ironmongery Schedules below, to be read in conjunction with architects' drawings, M&E & FSC application.
- Access control system to be provided to new entrance door. To be read in conjunction with M&E engineers' drawings and specification.
- Architects' drawings and specification shall be read in conjunction with FSC Application submitted to Wicklow County council.
- Proposed FD60s fire doors shall consist of 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.
- To be read in conjunction with FSC report for required electromagnetic door locks and hold open device to fail upon activation of the alarm system.

- The Contractor shall allow for the supply and installation of door access system for the doors as indicated to restrict access. The door access system shall be supplied with electromagnetic door lock and these door locks shall release the door once the reader has been successfully activated.
- The Contractor shall liaise with the supplier to ensure all wiring requirements are included for. The door release facility for the system shall also be linked to the fire alarm system so that in the event of fire activation the respective door shall open. The Contractor shall check suitability of the door structure before placing order.
- All Access control door system to have a high-level switch control where the system can be deactivated.
- Details and specification of all Ironmongery / Hardware to be approved by architect prior to manufacturing process.
- Full range of hardware, ironmongery, fittings, locking devices, handles, budget locks, restrictors, stays proposed for use on the operable windows and doors on the work.
- All ironmongery to comply with the requirements of standard BS EN 1670: 2007 Building Hardware Corrosion Resistance. Requirement and test method. Multipoint single lever locking system is to be incorporated in all opening sashes.

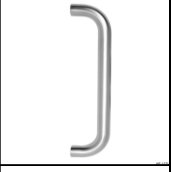
Proposed Ironmongery Schedule – D01 & D02 - FD NIL (2 Units)				
Image	Catalogue No.	Description	Unit	Qty
	KA-9501/SSS	Floor Mounted Door Stop	Each	1
	KA- 9710S/304/150X900/SSS	Stainless Steel 304 Square Corner Kicking Plate. H150mm x W900mm.	Each	2
	KA-FG3/1960/BWN	Finger shield Finger Guard - Push Side & Pull Side Set x 1,960mm	Set Each	1
	KC-9511/SNP	Tubular Stainless Steel 304 19mm Unsprung Rose Lever Handle on Rose to BS EN1906:2012 grade ③⑦-B①③①B	Each	1
	KF-2001/SSS	Tubular Stainless Steel 304 19mm Unsprung Rose Lever Handle on Rose to BS EN1906:2012 grade ③⑦-B①③①B	Set Each	1

	KF-2110/SSS	Stainless Steel 304 Standard Thumb turn & Release. 6mm	Each	2
	KH-14931R/SSS	Frisco Stainless Steel Maintenance Free Self-Lubricating ThrustBearing Hinge to hEN1935 grade ④⑦⑥①①④①④ and Certifire CF336	Each	3
	KL-1904RAR/SSS	Heavy Duty Modular Bathroom Lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade ③X⑤①①①F-BG②① and Certifire CF5234	Each	1
	KL-SPLIT-SPIND8/BZP	Split Spindle 8mm	Each	1

Proposed Ironmongery Schedule – D03, D04, D05 & D06 – FD NIL (4 Units)				
Image	Catalogue No.	Description	Unit	Qty
	KA-9103/304/SSS	Grade 304 Stainless Steel Unisex Symbol	Each	1
	KA-9400/SSS	Hat & Coat Hook	Each	1
	KA-9501/SSS	Floor Mounted Door Stop	Each	1
	KA- 9710S/304/150X900/SSS	Stainless Steel 304 Square Corner Kicking Plate. H150mm x W900mm.	Each	2

	KF-2001/SSS	Tubular Stainless Steel 304 19mm Unsprung Rose Lever Handle on Rose to BS EN1906:2012 grade 307-B030B	Set Each	1
	KF-2110/SSS	Stainless Steel 304 Standard Thumb turn & Release. 6mm	Each	1
	KH-14931R/SSS	Frisco Stainless Steel Maintenance Free Self-Lubricating Thrust Bearing Hinge to hEN1935 grade 476114014 and Certifire CF336	Each	3
	KL-1904RAR/SSS	Heavy Duty Modular Bathroom Lock c/w Anti-Rattle Adjustable Strike Plate to hEN12209 grade 3X510F-BG20 and Certifire CF5234	Each	1

Proposed Ironmongery Schedule – D07 – FD60s (1 Unit)				
Image	Catalogue No.	Description	Unit	Qty
	KA-9200/304/SSS	KCC Grade 304 Stainless Steel 'Fire Door Keep Shut' Sign	Each	4
	KA-9501/SSS	Floor Mounted Door Stop	Each	2
	KA- 9710S/304/150X900/SSS	Stainless Steel 304 Square Corner Kicking Plate. H150mm x W900mm.	Each	4
	A-9700S/304/75X650/SSS	Stainless Steel 304 Square Corner Finger Plate. H75 x W650	Each	2

	KA-FG3/1960/BWN	Fingershield Finger Guard - Push Side & Pull Side Set x 1,960mm	Set Each	2
	KA-FS500R/BLK	Flexfire Fire Rated Graphite Based Intumescent Hinge plate Protector, Radius, 1mm, Black, Self- Adhesive	Each	2
	KF-1378/12/304/SSS	Round Bar Pull Handle. Grade 304 Stainless Steel. A25 x B600 x C575 x D75. BT Fixing	Each	2
	KH-14931R/SSS	Frisco Stainless Steel Maintenance Free Self Lubricating Thrust Bearing Hinge to hEN1935 grade ④⑦⑥①①④①④ and Certifire CF336	Each	6
		Free Swing Door Closer – The system shall be provided with a power supply unit provided by the manufacturer and linked back to the fire alarm system. The free swing engages immediately the door is opened and is anti-slam and anti-creep. To be read in conjunction with M&E package.	Each	2

42. PROPOSED INTERNAL JOINERY

- Joinery items etc. are not to be fixed until plastering is complete to ensure solid backing and care shall be taken to mark nailing positions of all prefixed grounds.
- Contractor to allow for new Architraves & skirtings in all areas where proposed works take place and floor finishes / door sets are proposed, to be read in conjunction with Architects drawings and room data sheets for locations of works within the existing building.
- All proposed architraves to be 19 x 100mm primed and painted Hardwood.
- All proposed skirting to be 19 x 150mm primed and painted softwood throughout all areas except W/C's, where proprietary coving to be used.
- All Standard Service boxouts shall be provided to foul services as required** consisting of 15mm FSC Certified moisture resistant MDF fixed to 50 x 50 timber battens frames, fitted with cup screws to allow for removal / maintenance, etc. Proposed service boxing to be primed and painted throughout.
- Refer to Specification clause 47 below for required Kitchenette units and fitted furniture requirement.**

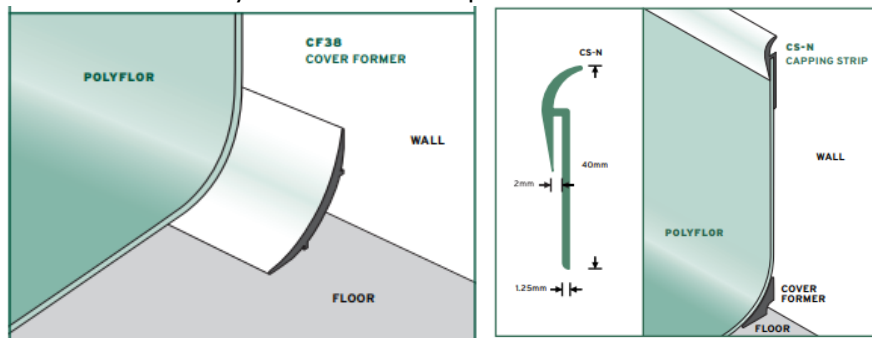
43. PROPOSED SERVICE BOXOUTS

- All Proposed foul services shall be boxed out consisting of 15mm FSC Certified moisture resistant MDF fixed to 50 x 50 timber battens frames.

- M&E services shall be boxout out as instructed by M&E Engineer / architect consisting of 15mm FSC Certified moisture resistant MDF fixed to 50 x 50 timber battens frames.
- Fitted with cup screws to allow for removal / maintenance, etc. Proposed service boxing to be primed and painted throughout.
- All Proposed internal SVP's shall also be packed with Acoustic Mineral wool
- All Roddy eyes shall be accessible through a 300mm x 300mm lockable access panel.
- All service boxouts shall be Painted & Primed, colour TBC by Architect prior to commencement of works on site.

44. PROPOSED FLOOR FINISHES

- Refer to architects drawing for location of below specified floor finishes, to be read in conjunction with specification below.
- **ARDEX NA or equivalent Liquid Levelling Screed** to be applied to floor surface before laying floor finish.
- **Liquid DPM to be applied to floor surface before laying floor finish.**
- Colours TBC by Architect prior to commencement of works
- PVC sheet flooring Polyflor vinyl **or equivalent**
 - Polyflor, Palettone PUR,
 - Polyflor, Verona PUR
- 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.
- Refer to **Architects Appendix** documents for **Polyflor product data sheets**, all products to be installed to manufactures instruction and guidance.
- Refer to Polyflor preparation of sub floors
- All floor surfaces shall be prepared for new floor finish, **Refer to Polyflor Preparation of subfloors attached in complete package** prior to commencement of works.
- Cove former and capping to be used in all wet areas to provide a 150mm upstand, skirting to be provided in all other areas.
- **Cover Former - Polyflor or equivalent** products to be used in conjunction with the Polyflor **or equivalent** CF38 cove former where required.
- **Capping Strip - CS-N or equivalent** Capping Strip used to where floor coverings rise up to the wall.
- **Corner Caps** shall consist of Polyflor EFA 75 or equivalent



- **Floor trims & transition strips** - Contractor to provide for all floor trims and transition strips between different flooring materials. All sections to be Part M compliant and not pose trip hazards.
- **Floor Movement Joints** - Contractor shall provide Gradus EJC 50 or equivalent specialist construction joint cover, to be read in conjunction with engineer's package for extents and location required. Proposed cover shall consist of the following:

Reference: EJC 50 or equivalent

Material: PVC

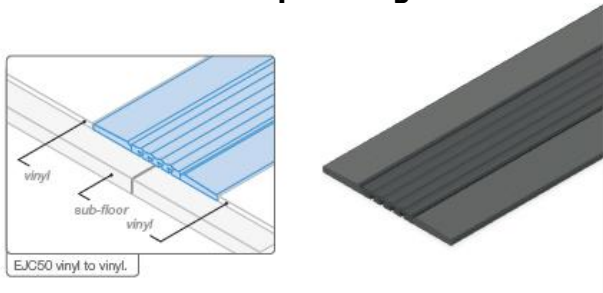
Gauge: 2mm

Width: 50mm

Colour: Available Black, Brown, Dove, Granite (TBC by Architect prior to commencement of works).

Fixing: Adhesive fix – as per manufacturer's instructions

Gradus EJC 50 Sample Image



44.1 - POLYFLOR, PALETTONE PUR - PRODUCT SPECIFICATION

- The flooring shall be Polyflor Palettone PUR, as manufactured by Polyflor Ltd. of Manchester, England.
- The flooring shall be flexible PVC sheet flooring in 2.0mm thickness.
- It shall be homogeneous and monolayer in construction, and shall be manufactured by calendaring and pressing, to ensure a dense, smooth surface and non-directional design.
- The flooring shall incorporate a specially formulated polyurethane reinforcement, to significantly reduce maintenance costs.
- The flooring shall conform fully with the requirements of EN 649/EN ISO 10581.
- The flooring must have a Use Area Classification of 23/34/43, as defined in EN 685/EN ISO 10874.
- In respect of flame spread, the flooring shall have been fully tested to EN 13501-1 and certified as having Class Bfl-S1.
- The flooring shall have been fully tested to ASTM E648 and certified as having passed with a Class 1 rating, making it suitable for use in institutional, commercial and public buildings. The flooring shall also have been tested to ASTM E662 and have a result of <450.
- With regard to EN 13893 for slip resistance, the flooring shall be classified DS, making it suitable for use in areas which are predominantly dry, but with occasional spillage.
- The product must have been fully tested for abrasion resistance to the Frick Taber test EN 660-2 and be in abrasion group T, as defined in EN 649.
- With regards to EN ISO 10581 the product shall be classified Type I.
- The flooring must possess a valid Agrément certificate when laid in accordance with the instructions of Polyflor, with coved skirtings and welded joints.

- This product does not accumulate static charges above 2kV and is classified as 'antistatic' when tested to EN 1815. For specialist applications where there is a requirement to dissipate the electrostatic charge, see the Polyflor ESD product ranges.
- The flooring must be available in 2.0 metre width, to minimise the number of joints.
- In respect of light fastness, the flooring shall have been fully tested to ISO 105-B02 Method 3 and obtain ≥ 6
- The flooring will achieve BRE Global Environment Generic A+ rating in the Green Guide to specification in major use areas such as education and healthcare.
- Generic EN 15804 Environmental Product Declaration (EPD) available on request.
- The manufacturer should provide a facility to take back and recycle waste vinyl flooring material through the Recofloor scheme.
- The flooring shall be tested to and pass key independent, international standards for low VOC emissions.
- The manufacturer of the floorcovering must be in possession of a valid quality systems certificate, showing compliance with BS EN ISO 9001.
- The manufacturer of the floorcovering must be in possession of a valid environmental certificate, showing compliance with ISO 14001.
- A moisture test must be carried out, to ensure that the subfloor has dried out to a level consistent with the application of vinyl flooring. The test should be carried out using a hygrometer, in accordance with the instructions in BS 8203. The result should not exceed 75%RH, once equilibrium has been achieved.
- The adhesive used must be approved by Polyflor, to ensure full product compatibility.
- Products must be fully conditioned to the environment in which they are to be installed, as outlined by Polyflor.
- Installation must be carried out in accordance with BS 8203 and the instructions of Polyflor.
- All joints must be welded to produce hygienic, continuous floors.
- Polyflor homogeneous PUR flooring ranges are compatible for use with the most commonly used alco-based hand gels and are suitable for steam cleaning on a periodic basis. For clarification and for information regarding handling and installation, adhesives, maintenance, applications, chemical resistance and product warranty consult Polyflor Customer Technical Services on +44 (0)161 767 1912, or email tech@polyflor.com.
- At the date of issue the data presented is correct. However, Polyflor Ltd. reserve the right to make changes which do not adversely affect performance or quality.

44.2 - POLYSAFE VERONA PUR PURE COLOUR'S PART 2 - PRODUCT SPECIFICATION

The flooring shall be Polysafe Verona PUR, as manufactured by Polyflor Ltd. of Manchester, England.

- The flooring shall be flexible PVC sheet flooring in 2.0mm thickness, and will contain coloured quartz and natural recycled aggregates to impart enhanced slip resistance.
- The flooring shall feature a high quality, cross-linked polyurethane reinforcement to provide superior cleaning benefits, life cycle maintenance savings and optimum appearance retention.
- The flooring shall be manufactured by spreading liquid PVC onto a random glass fibre carrier sheet in one operation. The glass fibre carrier sheet shall be fully encapsulated in PVC.
- The flooring material shall fully conform with the European Norm for safety flooring - EN 13845.
- In respect of flame spread, the flooring shall be certified as Class Bfl-S1 according to EN 13501-1. The flooring shall have been fully tested to ASTM E648 by an independent test house and have a Class 1 rating, making it suitable for use in institutional, commercial and public buildings.

- The flooring must have been fully tested by an independent test house to the RRL Pendulum Test (4S Rubber/Slider 96) and have typical results of ≥ 45 in the wet, with a surface roughness of $R_z \geq 20\mu\text{m}$, making it suitable for areas where enhanced slip resistance is required.
- The product must have been fully tested for abrasion resistance to EN 13845, passing the 50,000 cycles test and also meeting EN 660-2 Abrasion Group T.
- The flooring shall possess a valid Agrément certificate when laid in accordance with the instructions of Polyflor, with coved skirtings and welded joints.
- This product does not accumulate static charges above 2kV and is classified as 'antistatic' when tested to EN 1815. For specialist applications where there is a requirement to dissipate the electrostatic charge, see the Polyflor ESD product ranges.
- The flooring must be available in 2.0 metre width, to minimise the number of joints.
- The flooring must be suitable for Use Area Classification 23/34/43, as defined in EN ISO 10874 (EN 685).
- In respect of light fastness, the flooring shall have been fully tested to ISO 105-B02 Method 3 and obtain ≥ 6 .
- Generic EN 15804 Environmental Product Declaration (EPD) available on request.
- The manufacturer should provide a facility to take back and recycle waste vinyl flooring material through the Recofloor scheme.
- The flooring shall be tested to and pass key independent, international standards for low VOC emissions. The product will achieve BES 6001 certification for responsible sourcing, obtaining an Excellent rating.
- The manufacturer of the floorcovering must be in possession of a valid quality systems certificate, showing compliance with BS EN ISO 9001.
- The manufacturer of the floorcovering must be in possession of a valid environmental certificate, showing compliance with ISO 14001.
- A moisture test must be carried out, to ensure that the subfloor has dried out to a level consistent with the application of vinyl flooring. The test should be carried out using a hygrometer, in accordance with the instructions in BS 8203. The result should not exceed 75%RH, once equilibrium has been achieved.
- The adhesive used must be approved by Polyflor, to ensure full product compatibility.
- Products must be fully conditioned to the environment in which they are to be installed, as outlined by Polyflor.
- Installation must be carried out in accordance with BS 8203 and the instructions of Polyflor.
- All joints must be welded to produce hygienic, continuous floors.
- Polysafe Verona PUR is ideal for use in areas where contaminant spillages can occur, making slip resistance an important consideration. Typical areas include circulation areas and corridors, dining areas and cafes, classrooms, hospital wards, clinics, laundry and sluice rooms, nursing homes, washrooms, WCs, bar serveries, food preparation areas, kitchens, canteens and institutional applications. For continually wet areas please refer to our Polysafe Hydro, Hydro Evolve or Ultima ranges.
- The slip resistance across all Polysafe products is assured throughout the guaranteed life of the product, with strict adherence to HSE Guidelines. As with all Polysafe products, Polysafe Verona PUR should not have a polish applied.
- Polysafe safety flooring ranges are compatible for use with the most commonly used alco-based hand gels and are suitable for steam cleaning on a periodic basis. For clarification and for information regarding handling and installation, adhesives, maintenance, applications, chemical resistance and product warranty, consult Polyflor Customer Technical Services on +44 (0)161 767 1912, or email tech@polyflor.com.

- At the date of issue, the data presented is correct. However, Polyflor Ltd. reserves the right to make changes which do not adversely affect performance or quality.

45. RECESSED MATT WELL

- Contractor to include 1No. Esplanade 6000 **or equivalent** Matting - 12mm Closed Construction with Boulevard 6000 Wipers as indicated on architect's drawings
- Proposed Matt well shall be
- 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

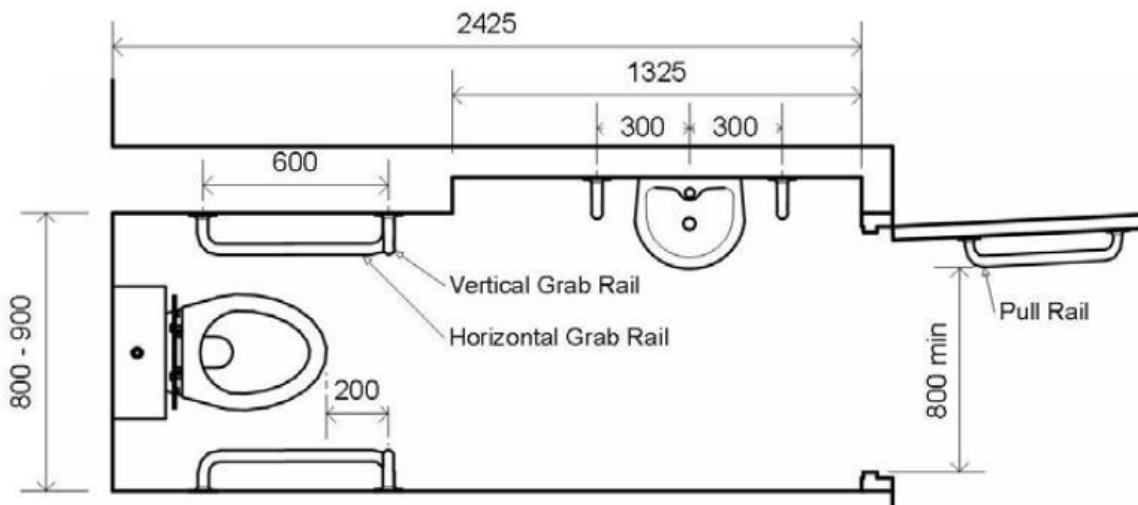
3.5 - PROPOSED EXTENSIONS – INTERNAL FITTINGS, FURNISHINGS AND EQUIPMENT (FF&E)

46. PROPOSED SANITARY WARE

- Contractor shall provide the 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.
- All proposed sanitaryware shall be full sealed to associated surfaces using flexible sealant, colours tbc by architect prior to commencement of works.
- Note all of the below specified are **SONAS** products **or equivalent** and should refer back to their specification
- Note: Contractor to Provide all accessible railings in Blue (LI) RAL.
- Allow for All Railings to Comply with TDG Part M in W/C's and shower room, Refer to Sonas Schedule **or equivalent**.
- Allow for mirrors (1000x400mm) to all WCs over proposed wash hand basins.
- 300mm high Splashbacks strips shall be installed behind all wash hand basins, Refer to splashback specification clause above.
- Contractor shall provide a soap dispenser to all WC's
- Contractor shall provide a paper Towel Dispensers to all WC's
- Contractor shall provide a Toilet Roll Holder to all WC's
- Contractor shall provide Coat hooks to all WC's
- Contractor shall provide a bin to all WC's

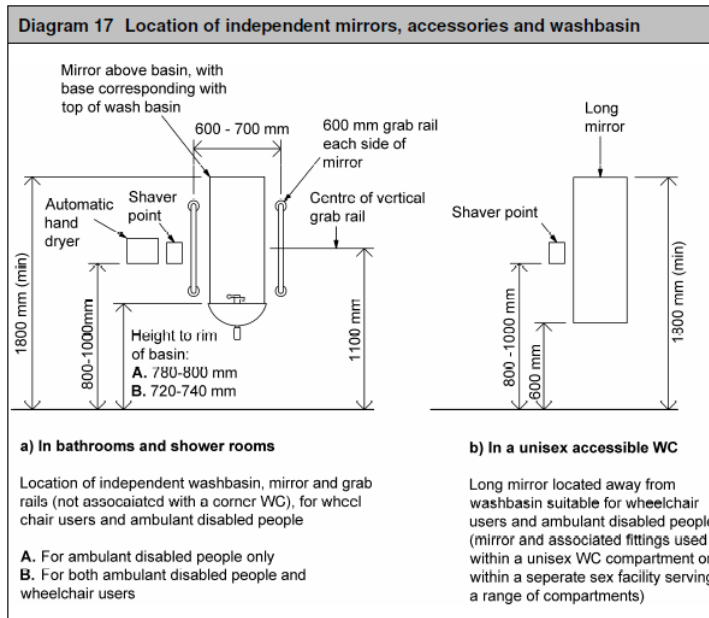
ACCESSIBLE ENSUITE CLASSROOM TOILETS (EACH)

- Accessible ensuite classroom toilets to comply with Guidelines and Standards for sanitary facilities in primary schools, Refer to section 5.1 Figure 8 for layout
- Contractor to Provide standard sanitaryware to each accessible ensuite classroom toilet with closed coupled WC and cistern, hand rinse basin with single lever mixer, 4 no. 600mm vertical grab rails, 2 no. 600mm horizontal rail, 1 No. 450mm horizontal rail & coat hook.



Sanitary Ware Schedule 4 No. Ambulant Accessible Toilets, 2 cubicles per Mainstream Classroom		
Product Code	Description - All Products below available through Sonas	Quantity
STWCS	Strata close coupled WC, cistern & fixings and soft close seat	4
PB021	Strata cloakroom basin, round fronted, 1 tap hole with overflow	4
OHXWFS03CP	1 1/4" slotted flush grated waste, no plug	4
TDBOD	1 1/4 White plastic bottle trap	4
INTC40015CP	Intamix Thermostatic Mixing Valve 15mm Refer to Product Data Sheet for additional Product Options	4
LO980CP	Sequential Lever Operated Basin Mixer Tap	4
WD08100	WD 8 x 110 Sanitary Fixing for Strata Basins	4
210160/DB (Dark Blue)	600mm Grab rails with concealed fixings (Blue) Note: Product code varies based on the railing colour for TGD Part M Visual contrast with the wall surfaces, Refer to Product Data Sheet for additional Product Options	24
210145/DB (Dark Blue)	450mm Grab rails with concealed fixings (Blue) Note: Product code varies based on the railing colour for TGD Part M Visual contrast with the wall surfaces, Refer to Product Data Sheet for additional Product Options	4
	Additional W/C Accessories Required 4 No. Soap Dispenser 4 No. Paper Towel Dispenser 4 No. Toilet Roll Holder	

Primary School Classroom En- Suite Toilets



PRODUCT DATA SHEET



STRATA CLOSE COUPLED WC



APPROVED



DOMESTIC



COMMERCIAL



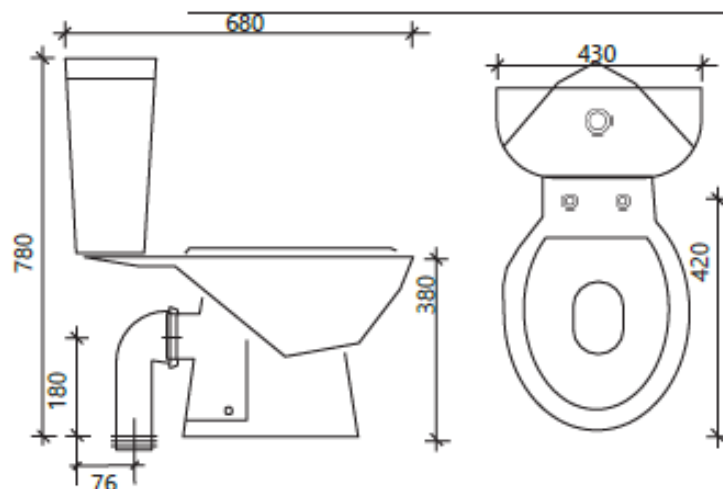
HOTEL & LEISURE

PRODUCT INFORMATION

STWCC	Strata close coupled wc, cistern & fixings and standard seat
STWCS	Strata close coupled wc, cistern & fixings and soft close seat

RELATED PRODUCTS

FLUSH VOLUME	6/4 Litres
MATERIAL	Vitreous China
COLOUR/FINISH	White
MANUFACTURER	SONAS Bathrooms or equivalent
FIXING	Screw pan to floor and cistern to wall (pan to floor fixings supplied)
STANDARDS	EN 997
APPROVALS	CE Approved
PRODUCT DIMENSIONS	W430 x H780 x D680mm
ADDITIONAL INFORMATION	Includes Siamp WRAS approved flushing mechanism.





STRATA 450 CLOAKROOM BASIN ROUND FRONTED



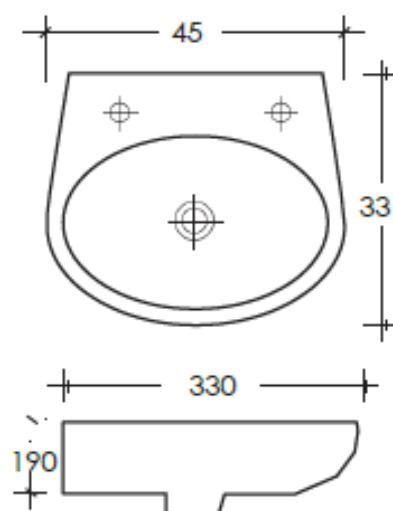
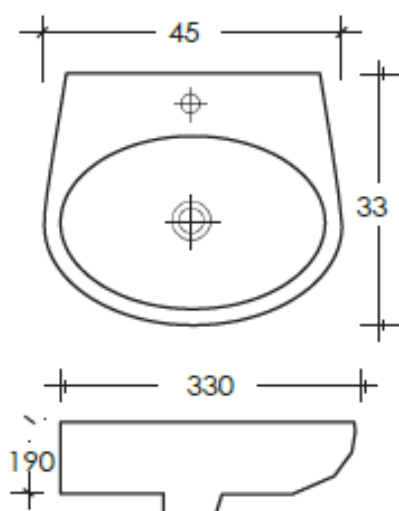
PRODUCT INFORMATION

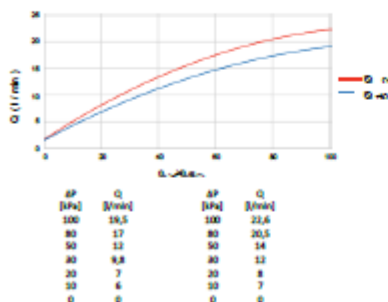
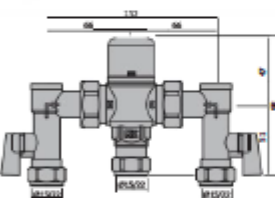
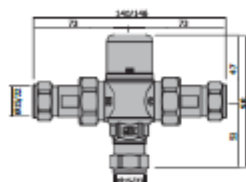
PB021	Strata cloakroom basin, round fronted, 1 tap hole with overflow
PB020	Strata cloakroom basin, round fronted, 2 tap hole with overflow

RELATED PRODUCTS

OHXWFS03CP	1 1/4" slotted flush grated waste, no plug
W207	1 1/4" slotted click clack basin waste, with plug
MBT400	Chrome bottle trap

MATERIAL	Vitreous China
COLOUR/FINISH	White
MANUFACTURER	SONAS Bathrooms or equivalent
FIXING	Metal wall hanging brackets included
STANDARDS	EN 14688
APPROVALS	CE Approved
PRODUCT DIMENSIONS	W450 x D330mm
ADDITIONAL INFORMATION	Wash basin not suitable for pedestal mounting.





INTAMIX TMV MIXING VALVES [ROI]



WRAS
APPROVED PRODUCT

PRODUCT INFORMATION

C40015CP	Intamix 15mm TMV3 Mixing Valve
400MX15CP	Intamix 15mm TMV3 Mixing Valve c/w Isolating Valves
C40022CP	Intamix 22mm TMV3 Mixing Valve
400MX22CP	Intamix 22mm TMV3 Mixing Valve c/w Isolating Valves

SPECIFICATIONS

Temperature adjustment range 30°C to 50°C
 Temperature stability +/- 2°C
 Max inlet temperature 85°C
 Max working pressure 10.0 bar: Static
 Min working pressure 0.2 bar: Dynamic
 Inlet temperature range, 52 - 85°C :
 Hot / 5 - 20 °C : Cold
 D08 working pressure ranges:
 0.1 - 1.0 bar LP / 1.0 - 5.0 bar HP
 Max temperature differential (mix to hot) for fail safe - 10°C
 Max inlet pressure differential 5:1
 Internal check valves and strainers
 Anti tamper proof head
 Highly resistant to scalding
 Robust and reliable
 Easy installation
 Building regulations Part G Compliant
 Available with isolation ball valves and test ports

STANDARDS

D08 & BS 7942: 2000 (TMV3), BS EN 1111: 1999 (TMV2)

APPROVALS

TMV2 & TMV3 Scheme Approval, D08, WRAS Approved

MANUFACTURER

Inta

PRODUCT DIMENSIONS

Please refer to technical drawing

ADDITIONAL INFORMATION

The intatec range of 15mm and 22mm thermostatic mixing valves is designed primarily for single use outlets. It delivers safe, blended hot water to taps, shower, bidets and other water outlets making it ideal for use in hospitals, schools and leisure centres. The intamix has been independently tested and approved by the TMV3 scheme as a type 3 valve under the requirements of the NHS MES - D08 and approved by Buildcert as meeting the requirements of the TMV2 scheme. The element that controls the temperature of the mixed water discharging from the valve works proportionally on both hot and cold water supplies in order to maintain the temperature of the mixed water discharged.

STAINLESS STEEL GRAB RAIL WITH CONCEALED FIXINGS



PRODUCT INFORMATION

210145/WH	Stainless steel grab rail with concealed fixings 450mm white
210145/DB	Stainless steel grab rail with concealed fixings 450mm dark blue
210145/DG	Stainless steel grab rail with concealed fixings 450mm dark grey
210145/GY	Stainless steel grab rail with concealed fixings 450mm grey
GR18/32C/SS	Stainless steel grab rail with concealed fixings 450mm satin 32mm
GR18/32C/SP	Stainless steel grab rail with concealed fixings 450mm polished 32mm
210160/WH	Stainless steel grab rail with concealed fixings 600mm white
210160/DB	Stainless steel grab rail with concealed fixings 600mm dark blue
210160/DG	Stainless steel grab rail with concealed fixings 600mm dark grey
210160/GY	Stainless steel grab rail with concealed fixings 600mm grey
GR24/32C/SS	Stainless steel grab rail with concealed fixings 600mm satin 32mm
GR24/32C/SS	Stainless steel grab rail with concealed fixings 600mm polished 32mm

Colour/Finish	RAL	LRV
White	9016	94
Dark Blue	5011	27
Grey	7005	51
Dark Grey	7016	09

SPECIFICATIONS

Concealed fixings
Suitable for wet areas and outdoor use
Doc M Compliant
Max rated load - 200Kg
Nylon flange to eliminate the need for earthing

MATERIAL COLOUR/FINISH

Stainless steel
Grab rails can be coated to any specified **RAL** colour.
For a list of available **RAL** colours, please consult
www.ralcolor.com

MANUFACTURER FIXING

Nymas
Screw to wall

STANDARDS

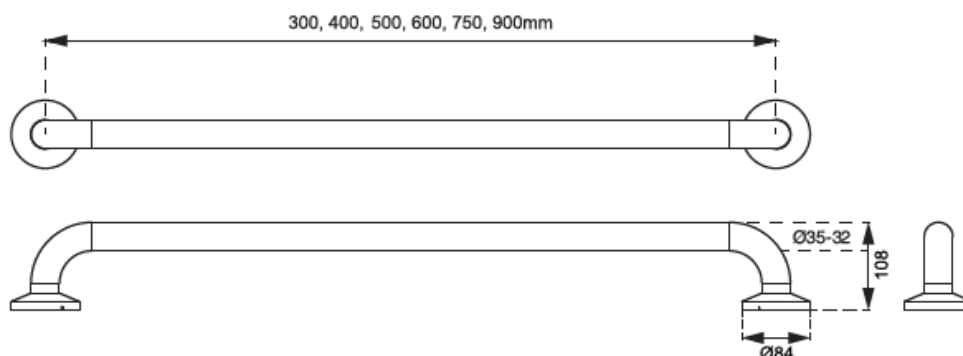
BS8300

APPROVALS

Doc M, HTM

PRODUCT DIMENSIONS

See technical drawing





MEDICLINICS VERTICLE SOAP DISPENSER



HEALTHCARE



COMMERCIAL



HOTELS & LEISURE

PRODUCT INFORMATION

DJ0111CS

Wall mounted liquid soap dispenser, one hand operation

SPECIFICATIONS

Push button operated
Capacity 1.2L
Quantity dispensed per pulsation 1.1ml
Operable force 23,5 N
Manual dispensing
Robust and vandal proof
Suitable for high traffic and public facilities

MATERIAL

Stainless steel AISI 304

COLOUR/FINISH

Satin finish

MANUFACTURER

Mediclinics

FIXING

Screw to wall

STANDARDS

ISO 9001:2008

PRODUCT DIMENSIONS

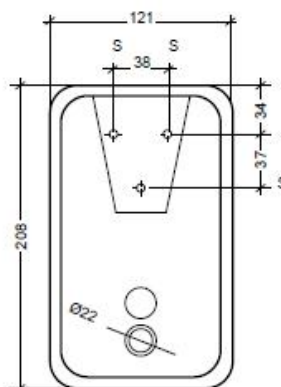
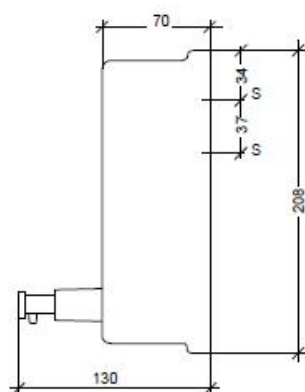
W121 x H208 x D70mm

WEIGHT

0.7KG

ADDITIONAL INFORMATION

Recommended installation height from shelf to the bottom 15-20cm





MEDICLINICS TOILET PAPER DISPENSER

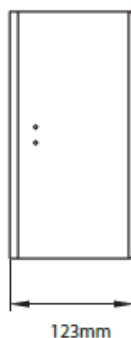
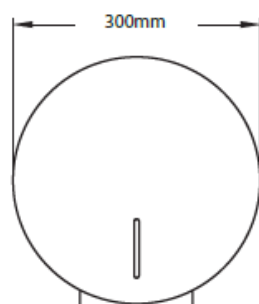


PRODUCT INFORMATION

PRO787	Surface mounted steel toilet paper towel dispenser white epoxy
PRO787C	Surface mounted stainless steel toilet paper towel dispenser polished finish
PRO787CS	Surface mounted stainless steel toilet paper towel dispenser satin finish

SPECIFICATIONS

Toilet paper roll capacity 275mm max
 Paper roll tube diameter 45mm min
 Toilet paper roll width 115mm max
 Back plate with anti-moisture support
 Manual dispensing
 Robust and vandal proof
 Suitable for high traffic and public facilities



MATERIAL	Steel Epoxy or Stainless steel AISI 304
COLOUR/FINISH	White, Polished or Satin finish
MANUFACTURER	Mediclinics
FIXING	Screw to wall
STANDARDS	ISO 9001:2008
PRODUCT DIMENSIONS	W300 x D123mm
WEIGHT	1,75KG
ADDITIONAL INFORMATION	Recommended installation height from floor to the bottom 65-75cm. One piece body. One piece lid which can be swung down for replenishment



MEDICLINICS PAPER TOWEL DISPENSER



HEALTHCARE



COMMERCIAL



EDUCATION



HOTEL & LEISURE

PRODUCT INFORMATION

DT0106CS

Surface mounted stainless steel paper towel dispenser

SPECIFICATIONS

Manual dispenser

Robust and vandal resistant

Suitable for high traffic public areas

Towels - 100 x 260mm maximum

C-fold towel capacity 400 u

Multifold (Z fold) towels capacity 600 u

MATERIAL

Stainless steel AISI 304

COLOUR/FINISH

Satin finish

MANUFACTURER

Mediclinics

FIXING

Screw to wall

STANDARDS

ISO 9001:2008

PRODUCT DIMENSIONS

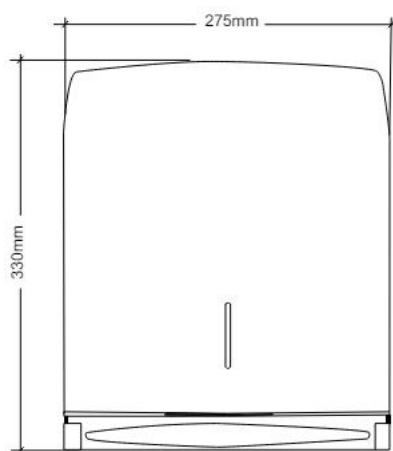
W275 x H330 x D133mm

WEIGHT

1.8KG

ADDITIONAL INFORMATION

To operate pull the towel until it detaches from the appliance



47. PROPOSED KITCHEN UNITS

47.1 – GENERAL:

- 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

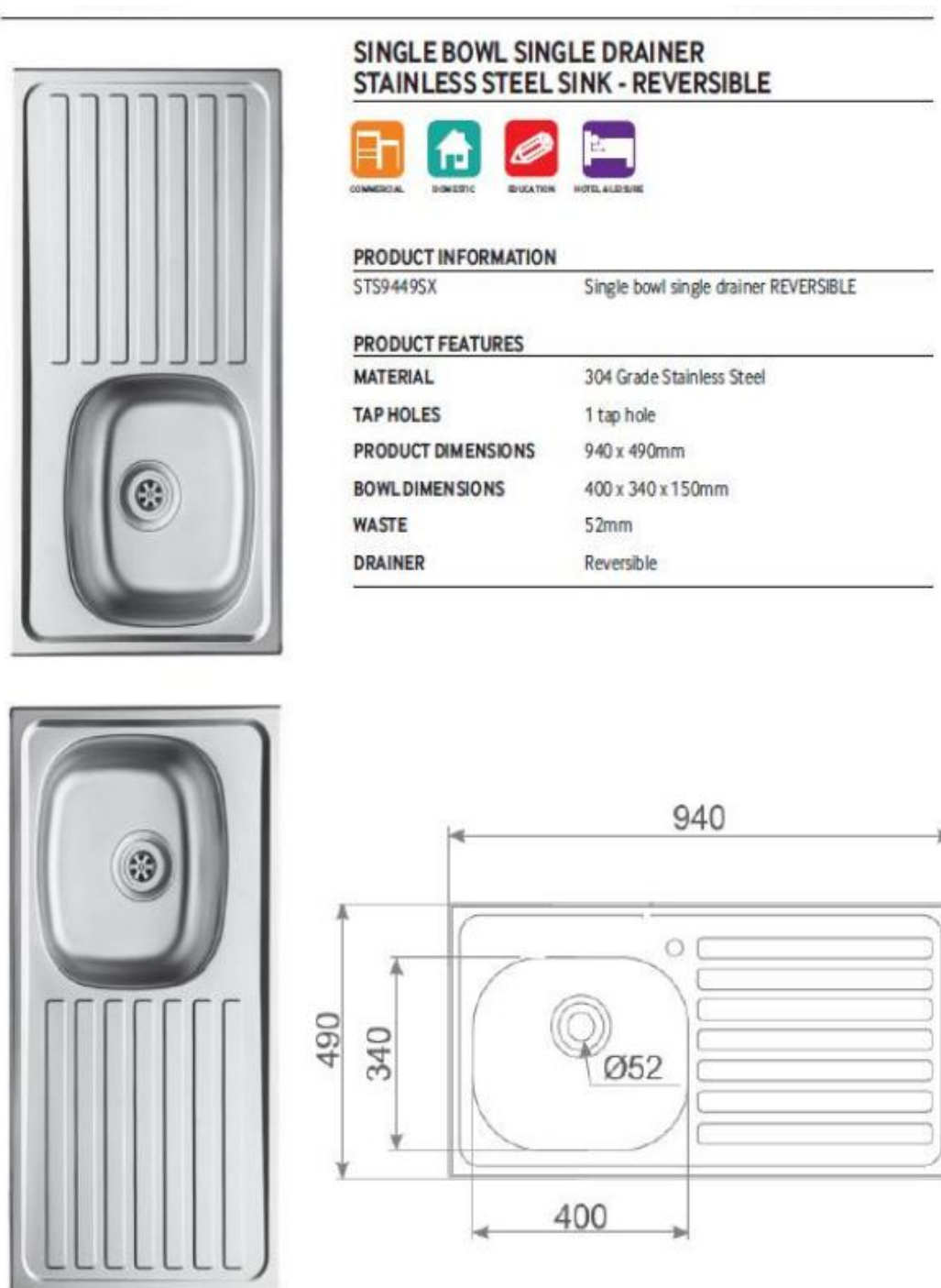
- 38mm x 600mm Omega White Quartz Hi-gloss Ice white Laminate with rounded EDGE profile.
- Anti-fungal mastic joint between splashback and worktop.

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.



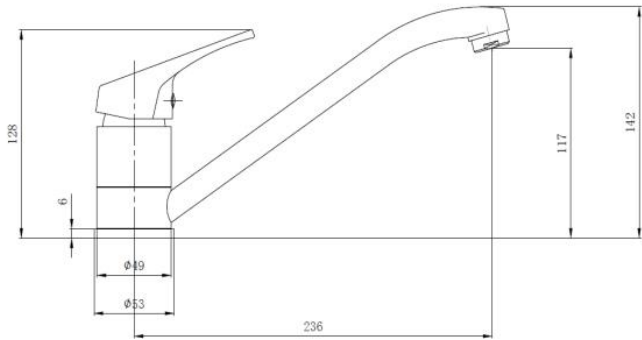


BRASSWARE

KITCHEN SINK LEVER MIXER CHROME

Product Code: **SLSM**

APPLICATIONS COMMERCIAL/DOMESTIC



PRODUCT DATA SHEET



WATER DRINKING TAP



PRODUCT INFORMATION

FLR-01 Water drinking tap

SPECIFICATIONS

COLOUR/FINISH
FIXINGS

STANDARDS

The FLR-01 single black lever Water Filter Tap can connect to any water filtration and water purification drinking water system via a quarter inch or three eighth inch tubing adapter.

Brass stainless steel coated tap
Includes tap and mounting hardware. As standard, a 1/4" fittings comes with this single filter tap for easy home and office installation by mounting tap onto kitchen counter top or kitchen sink, mounts to kitchen worktop - 1/4" tubing connection. Diameter of hole to be drilled into counter top is approx. 5mm

Complies with technical guidance document TGD-030.1
NFS / ANSI 61 -2012, the maximum allowed level for Lead. Taps selected should be of Low Lead make up, with no more than 0.25% Lead.

48. 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 x width of the basin),
- Contractor to supply & fit Altro Whiterock™ Satins **or equivalent** Hygienic Wall Cladding splashback above all kitchenette units where base unit only is provided a 300mm high splashback to be included for the full length including associated product trims.
- Contractor shall provide white anti-fungal silicone to all splashback / counter / sink joints.
- 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:
 - o BS 476 Part 7 surface spread of flame - Class 1
 - o BS 476 Part 6 fire propagation - Class 0*
 - o 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.

49. PROPOSED FIXED FURNITURE

- Refer to Architect's drawings for proposed Kitchenette, to be read in conjunction with specification above for Kitchen units
- The provision and installation of Proposed fixed furniture to be provided for 2 no. proposed mainstream class base as follows:

Refer to Specification clause 47 above for 2no. proposed Kitchenette units

1. 2 No. Coat rails 3000mm minimum length suitable for 30 no. coats, fixed 1000-1200mm above F.F.L in each mainstream class base.
2. 2 No. Open shelving units consisting of 4000mm of shelving, fixed 1200-1300mm above F.F.L in each mainstream class base in proposed rear extension. Refer to Architects joinery drawings.
3. 2 No. Storage units consisting of sliding door system with 6mm bulletin board material fixed to doors and 11000mm of 600mm deep plus 11000mm of 300mm deep heavy-duty adjustable shelving, no part of shelving should be greater than 2200mm above F.F.L in each mainstream class base in proposed rear extension.
4. 4no. 2400 x 1200mm magnetic white board, fixed 800-900mm above F.F.L, where an interactive board is being supplied (by others) the white board should be reduced to 1200 x 1200mm in each mainstream class base in proposed rear extension.
5. 2No. 2400 x 1200mm notice board in each mainstream class base

6. 2 no. 3000 x 600 x 38mm Laminate workstation with rounded EDGE profile to be provided in **mainstream classroom** as indicated on Architects proposed floor plans. Proposed IT workstations to be fitted at 670mm above F.F.L. Workstations to be mechanically fixed to side and rear walls with heavy duty L brackets below countertop at 800mm centres.
7. Service cabinet with full height doors shall be constructed around existing services. Proposed cabinet shall be constructed with a high-pressure laminate, Formica or equivalent in accordance with DoES TGD's for Joinery items. Ventilation grills shall be provided at high and low level to provide air flow, a new smoke detector and Emergency lighting internally shall be provided within the cabinet.
Facings: 0.9mm high pressure Formica laminate – colour to be confirmed by architect from full range

49.1 - PROPOSED STORAGE UNITS

- 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.
- 3no. Shelves to consist of 18mm FSC certified MDF with Formica facing, supported off powder coated heavy-duty steel adjustable shelving racks fixed to storage unit frame.
- 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.

49.2 - PROPOSED OPEN SHELVING UNITS

- Proposed open storage unit frame to be constructed using 50mm FSC certified MDF with Formica facing to top, sides and 18mm FSC certified MDF with Formica facing backing, colour tbc by architect prior to manufacture of storage unit. All frame fixings to be concealed throughout.
- All Shelves shall consist of 18mm FSC certified MDF with Formica facing with concealed fixings.
- 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.

50. BLINDS

- Blinds shall be included to teaching spaces within proposed Extension to the following specification:
- Blinds to windows in teaching spaces 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.

- 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).
- All 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.

51. PROPOSED INTERNAL SIGNAGE

51.1 - WAY FINDING SIGNAGE

- Contractor to include for 2no. 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.

51.2 - FIRE EXTINGUISHER SIGNAGE

- 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 signage below shall be provided above each of the fire extinguisher
- The signage for each fire extinguisher shall consist of the following :
 - Size: 90 x 280mm
 - Self-Adhesive: Yes
 - Thickness: 1.2mm
 - Material: Environmentally Friendly and durable Polypropylene
- The Identifier signage below shall be fitted above the fire extinguishers. It shall be fixed be 1300mm above the finished floor level.

- All signs are to be compliant with internal standard ISO 7010.
- The signage for each shall consist of the following :
 - Size: 200 x200 mm
 - Material: Aluminium
 - Weight 0.04 kg
 - Thickness: 0.5mm

Extinguisher Label Signage



Extinguisher Location signage



3.6 - PROPOSED EXTENSIONS – BUILDING SERVICES

52. 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, Mechanical Ventilation, Soil and waste, Boiler alterations / upgrades
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.
- Refer to Architects specification clause 43 below for specification of proposed services boxouts.
- Refer to Architects specification clause 49 below for Full height service cabinet around distribution board and PV converter

53. FIRE EXTINGUISHERS

- Contractor shall Supply and fit the fire extinguishers and firefighting equipment for the building. Exact locations to be decided on site in conjunction with the Employer's Representative. All fire extinguishers shall conform to the relevant standards.
- Portable fire extinguishers shall be installed and maintained in accordance with IS 291: 2015. The equipment will be manufactured in accordance with IS EN 3-7: 2004 +A1:2007.
- All equipment should be located so as to be readily available in all areas and strategically located in areas not likely to be involved in the early stages of a fire (adjacent to storey exits or by fire alarm points).
- Extinguishers shall be mounted so that the carrying handle of larger heavier extinguishers is about 1 m from the floor but smaller extinguishers shall be mounted so that the handle is about 1.5 m from the floor.
- Contractor shall supply the suitable and relevant wall signage for each fire extinguisher which indicates what type of extinguisher it is.
- Types and quantities of fire extinguishers are as follows:
 - Type A: 2 x 6litre Foam,
 - Type B: 2 x 6kg Dry Powder,
 - Type C: 2 x 2kg CO2,
 - Fire Blanket: 0 x Fire Blanket to BS 6575.

54. EQUIPMENT

- Note: Additional non-building related equipment is excluded from contract and will be provided by client. **Refer to Galileo Energy Services Complete M&E package for all building service equipment.**
- It's the responsibility of the BOM to arrange the provision and installation of specialist IT equipment such as projectors and interactive whiteboards etc.

3.7 - EXTERNAL SITE WORKS

55. SITE WORKS – GENERAL

- 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 and M&E Service drawings and Specification. Contactor to make good to any damages which may arise from works to existing surfaces which are to remain.
- **Contractor to allow for all required resurfacings works including new proposed drainage and resurfacing as detailed on architectural / Engineer's drawings.**

55.1 – SITE CUT & FILL

- Contractor shall provide all required cut and fill site works to architect/ engineers' drawings and specifications, all finish surfaces to architects proposed site layout drawings with careful attention to required levels, to be read in conjunction with associated facilitating works and site preparation clauses above.
- Clauses below shall be read in conjunction with DCAE Engineers specification and drawings for the required surface buildups
- **Note: All tendering contractors to assess full site layout with existing and proposed layouts during mandatory site visit at tender Stage.**
- Demolition material, site rubbish or pit run gravel may not be used to build levels.
- The contractor is also responsible for the disposal of all excess site materials 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.

56. SITE LANDSCAPING

- 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 mulch areas. 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 MCL Architecture. 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 MCL Architecture, areas of necessary rectification will be classified as replacement or remediation.

57. CIVIL WORKS & SITE SERVICE ALTERATIONS

- **Note: Engineer's drawings and specification to supersede architect's specification below**
- Refer to DCAE Civil Structural Engineering package for additional drawings and specification to be read in conjunction with the Architectural Layouts and detail. Architect to be notified of any discrepancies in architectural and Civil / Structural drawings and spec prior to commencement of works.
- **Contractor shall provide all required resurfacings works including new proposed drainage and resurfacing as detailed on architectural / Engineer's drawings.**
- Contactor to make good to any damages which may arise from works to existing surfaces which are to remain.
- **Refer to DCAE Engineers package for full detail and specification of the following :**
 - Civil Works**
 - Alterations of existing site levels
 - Formation of foundations and reduced levels for proposed extensions
 - Alteration of existing parking area surfacing
 - New concrete footpaths, ramps, surfacing and associated kerbs
 - New parking area tarmacadam
 - Proposed porous tarmacadam
 - Site Services**
 - External foul water drainage alterations / new installations connecting back to existing mains connections on site together with associated branch drainage connecting new M&E pop up's indicated in the architectural and M&E drawings.
 - External foul surface water drainage alterations / new installations for proposed new rainwater gully connections to proposed extensions and parking area.

58. HARDSURFACING & CONCRETE KERBS

- Refer to DCAE Engineers package for full detail and specification of proposed Hard surfacing to be read in conjunction with below and Architects drawings.
- Please note the Engineer's drawings and specification to supersede architect's in terms of structural specification.
- Contractor to excavate and remove all existing surfacing where proposed works are to be carried out, allow for the removal of existing tarmac, concrete paving, soil, subbase materials and prepare ground to reduced level in order to provide new surface at levels as per Engineer's drawings and Instruction.
- No sub-base excavated material to be reused with exception to carefully removed Topsoil.

58.1 - PARKING AREA – BITUMEN MACADAM

- **Refer to Architects proposed site layout plan for extent of proposed Tarmac.**
- **Note: Engineers drawings and specification to supersede architect's specification below**
- Proposed new parking area shall be constructed with a Bitumen Macadam finish to Engineers specification and buildup, Refer to Architects drawings for proposed detailed setting out.
- Contractor shall provide a kerb edging to the full perimeter of new Bitumen Macadam surfacing where adjoining grass along with all transitions between a path and roadway.
- Transitions with an adjoining Bitumen Macadam / concrete pathways and play areas shall be level.
- 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 Engineer / 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.
- Proposed kerbing shall consist of 250x125mm precast concrete kerbing to I.S 146 laid on 100mm thickness concrete bed and haunch. Kerbs to be dished at crossing points / gates with a max 10mm upstand over the adjacent ground surface.

58.2 - BASKETBALL COURT SURFACING – DURAFLOW

- **Note: Engineers drawings and specification to supersede architect's specification below**
- Proposed new basketball court area shall be constructed with a Duraflo or equivalent finish to Engineers specification and buildup, Refer to Architects drawings for proposed detailed setting out.
- Contractor shall provide a kerb edging to the full basketball perimeter consisting of 250x125mm precast concrete kerbing to I.S 146 laid on 100mm thickness concrete bed and haunch. Kerbs to be dished at crossing points / gates with a max 10mm upstand over the adjacent ground surface.

58.3 – CONCRETE FOOTPATHS & SURFACING

- Refer to Architects drawing for extent of proposed concrete pathways.
- **Note: Engineer's specification to supersede architect's specification**
- Contractor to excavate and remove existing concrete, grass landscaping, subbase and prepare ground to reduced levels in order to provide new surface to tie into adjacent levels with falls to proposed new drainage. No excavated material to be reused.
- Proposed new pathway shall consist of 100mm thickness Air Entrained paving quality concrete footpath at 1:40 grade increased to 150mm thickness at entrances on 150 thickness clause 804 sub base well compacted on capping layer as required. Joint at 3m centres place separate membrane between footpath and sub base.
- Path edges to be bullnosed with float finish including working around AJ covers, manhole covers, gully traps etc
- Footpaths build up footpaths and joints to be in accordance with CL 2.19 and 2.25 of the site developments works manual.
- Joint to be formed at 3m spacing with double layer roofing felt, complying with I.S. 36 for full depth of joint.
- Contractor shall provide a kerb edging to the full perimeter of new concrete surfacing where adjoining grass along with all transitions between a path and roadway.
- Transitions with an adjoining Bitumen Macadam / concrete pathways and play areas shall be level.
- Level access is to be provided at all building entrance point with new concrete ground surface to gently slope away from door thresholds with Aco drainage channels to stop wind driven rain.
- Contractor shall ensure joints between existing and new concrete consist of clean cuts and contractor shall make good to all damages to existing concrete pathways which are to remain upon completion of works.
- Proposed kerbing shall consist of 250x125mm precast concrete kerbing to I.S 146 laid on 100mm thickness concrete bed and haunch. Kerbs to be dished at crossing points / gates with a max 10mm upstand over the adjacent ground surface.

59. TACTILE PAVING AND 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 dished 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, DDCEMS15209:2008
 - 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.

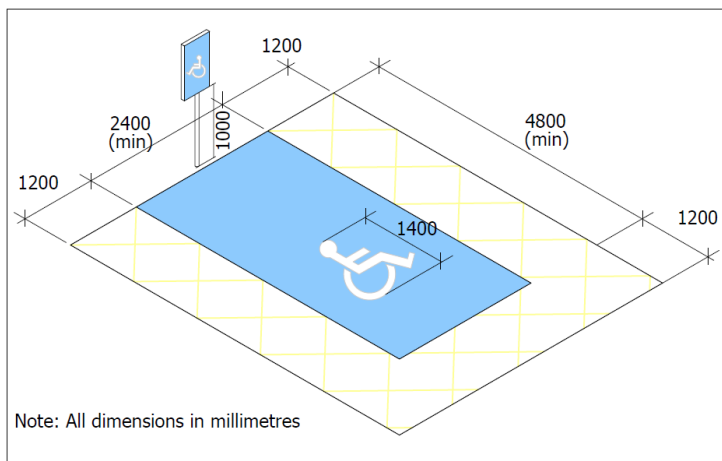
60. ACO CHANNELS

- Raindrain ACO drains **or equivalent** to be installed to manufacturers detail and specification to Proposed level access threshold and connected to proposed surface drainage,
- Refer to DCAE 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.
- All covers to consist of galvanised metal.

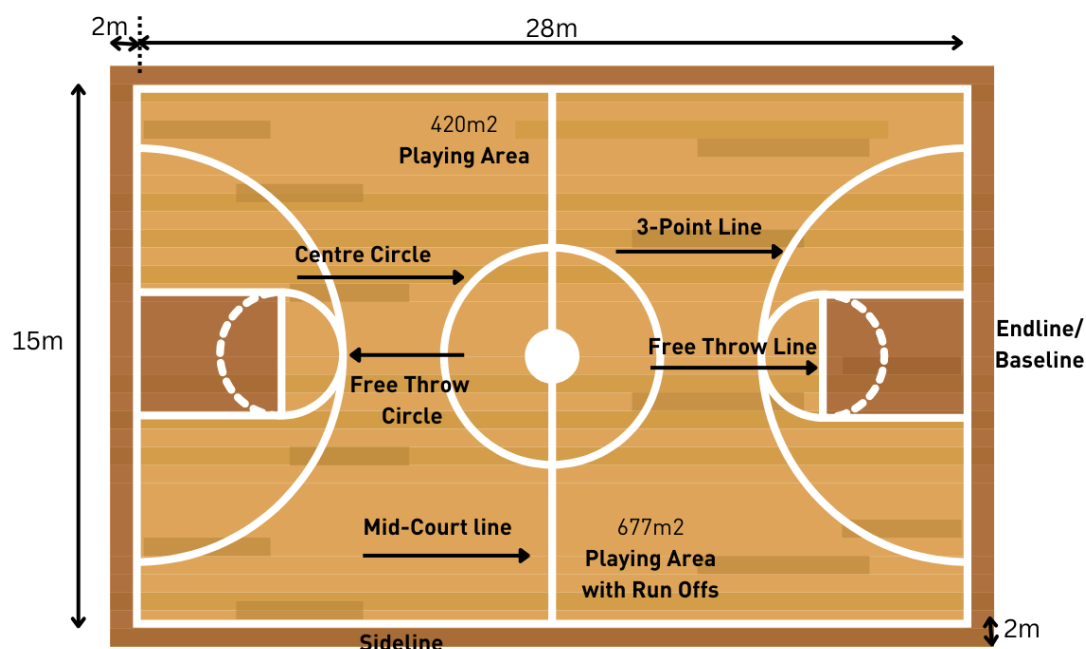
61. EXTERNAL GROUND MARKINGS

- Contractor shall provide new ground markings to all proposed new ground surfaces.
- Ground Markings shall be provided using Thermoplastic road marking paint
- All new parking area ground markings shall be 100mm width, Double yellow lines where parking is not permitted and directional arrows.
- All ground marking colours TBC by architect prior to application.
- Standard parking spaces to be 2500 x 4800mm
- Standard basketball court marking to be provided.
- Painted roadway symbols should be at least 1400mm in plan height.
- Dedicated accessible parking spaces to be 2500 x 4800mm with Access zone to side and rear of dedicated accessible parking spaces to be 1200mm. Access zone and Symbol to be including in contrasting colour.
- Contractor to submit proposed product to architect for approval before application of road markings.

Figure 1.1 Example of perpendicular parking.



Basketball Court Marking Diagram



62. PROPOSED FENCING & GATES

62.1 - BASKETBALL COURT FENCING

- Contractor to provide and install a 2430mm height Kinsale 868 **or equivalent** mesh fence system to the full perimeter of the new relocated basketball court as indicated on architects drawings.
- **Irfen® Kinsale 868 or equivalent Perimeter Mesh Fence System:**
 - Manufacturer: Irish Fencing Services or equivalent
 - Product Reference: Irfen Kinsale 868 Mesh System or equivalent
 - Drawing No: B0100
 - Height: 2430mm
 - Mesh and Wire: Irfen® Kinsale 868 Sports Mesh Fence System or equivalent. Kinsale or equivalent mesh shall be 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: 60x60mm SHS connected hot dipped galvanised post to BS EN9 ISO 1461:2009 after fabrication 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 800mm or as recommended by supplier, set 100mm below ground level
 - Accessories : Refer to gate spec below.
 - Conformity: Submit manufacturers and installer certificates to BS 1722-14.

62.2 - BASKETBALL COURT GATE

- Contractor shall provide **1 no. pedestrian gate** to proposed basketball court as indicated on architects drawings.
- **Irfen® Single leaf(pedestrian) gate or equivalent:**
 - Manufacturer: Irish Fencing Services or equivalent
 - Product Reference: Irfen® Single leaf(pedestrian) gate or equivalent:
 - Drawing No: G-0101
 - Height & Width: 1200 x 2430mm
 - Mesh and Wire: Shall match fencing panel above.
 - Frame: 60 x 60mm SHS Mitred corners with fully welded joints Infill to be affixed to frame by full welds or by clips specified by Irfen® or equivalent, to be supplied with Irfen® or equivalent drop bolts and receivers, adjustable Irfen® or equivalent hangers, and locking system to take clients padlock or alternative device as specified.
 - Installed to Gate Posts of 80 x 80mm or Pier.
 - Finish: Galvanised & Powder coated (Plasgalv).

63. PROPOSED PEDESTRIAN BARRIERS

- Contractor to provide 975mm Height pedestrian fence system to perimeter of car park as indicated on architects' drawings to the specification below:
- **Refer to architects' attached appendix for data sheets**
- Manufacturer: Irish Fencing Services **or equivalent**
- Product Reference: Irfen PG2 Pedestrian Guardrail **or equivalent**
- Drawing No : F0200
- Panel Height: 900mm
- Width: 2000mm
- Standard: To BS 7818
- Infill: 12mm Roundbar, 110mm Centres
- Frame: 50 x 30 RHS SHS hot dipped galvanised to BS EN ISO 1461:2009 after fabrication and subsequently electrostatically powder coated in a plant complying to EN 1722 Part 16.
- Colour: TBC By Architect
- Rail: 50 x 30 RHS
- Fixings: Irfen® **or equivalent** M10 x 70 Bolts
- Method of setting posts: Erect posts plumb and level in 25n concrete bases minimum size 350 x 350 x 500mm or as recommended by supplier, set 100mm below ground level or with Irfen Guardrail Baseplate.
- Accessories : None
- Conformity: Submit manufacturers and installer certificates to BS 7818

64. PROPOSED RETAINING WALL / RAISED LANDING

- Contractor shall provide new raised landing area with retaining wall as indicated on architects' drawings.
- Proposed retaining walls to new raised landing and ramped access shall consist of a reinforced cast in situ concrete retaining wall shall be constructed to engineers' specification
- 100mm upstand shall be required above the new landing level and along new ramp.
- New concrete landing surfacing as per specification clause 59 above, to be read in conjunction with Engineers specification.

- All Existing AJ covers, manhole covers, gully traps etc shall be altered in the area of new raised landing to new levels.

65. EXTERNAL RAMPS, STEPS AND RAILINGS

65.1 - EXTERNAL RAMP & STEPS

- Proposed New Ramps shall be constructed using concrete to engineers' specification in conjunction with architectural layout.
- Refer to Architect drawings for location of proposed ramps, steps and railings.
- All ramps, steps and railings to be constructed in compliance with the Current Irish Building Regulations, contractor to notify architect of any discrepancies between onsite dimensions and architects' drawings prior to construction where architect will provide updated dimensions, any changes to be approved by architect prior to construction.
- Proposed New ramp consists of two no runs , 1:15 gradient with a level landing at the top, mid and bottom @ 1:50 gradient. Total rise of proposed new ramp shall be 900mm, refer to architects' drawings for setting out.
- Proposed new steps shall consist of 6no. 150mm steps to provide a total rise of 900mm with tactile paving to top and bottom. Refer to architects' drawings for setting out.
- Contractor shall provide a Gradus TEX 51 (yellow) external step noising to each external steps, top and bottom noising's to be contrast in colour.

65.2 - HANDRAILS & GAURDRAIL

- All proposed handrails and guardrails shall consist of Stainless Steel.
- Handrails to be provided 900mm both sides of all external ramps and steps as indicated on proposed ground floor plan (Sheet T100) along with a 2nd lower handrail mounted at 600mm over ramp/landing levels). Handrails to extend 300mm past the top and bottom edges of ramps.
- 1100mm Guardrail shall be provided to edge of new landing area (connected to new access railing). Refer to architects' drawings for design drawings and setting out.
- Shop drawings to be submitted to architect before manufacture for approval, any external ramps and railing systems which are not in compliance with the Current Irish Building Regulations will not be approved by the architect and will need to be regularized at the contractor's expense.
- Refer to Architect's drawings for setting out of proposed handrail from 100mm concrete upstand consisting of 100 x 215mm (HxW) raised concrete formed kerb of outer edge
- Stainless Steel handrail/guardrails built with 50mm diameter steel (900 high measured off ramp and landing levels).

Diagram 6 External steps and stairs – Key dimensions

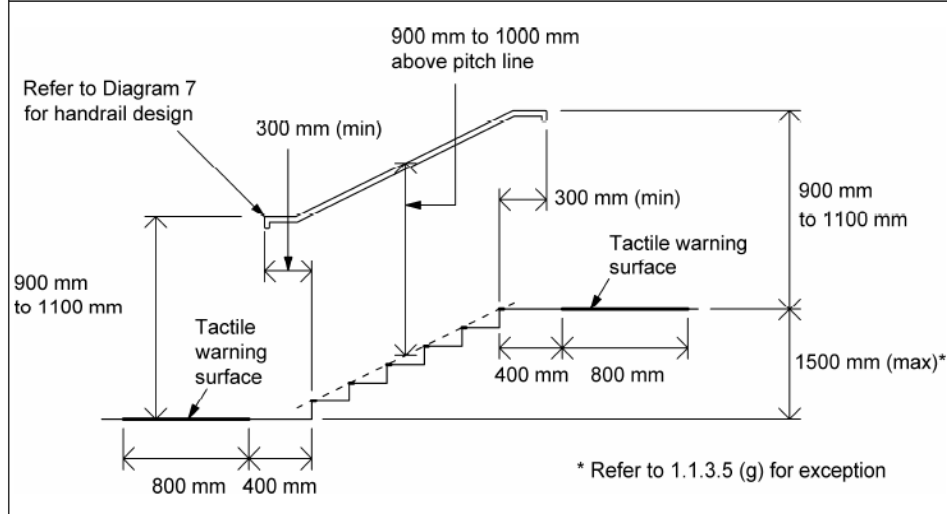
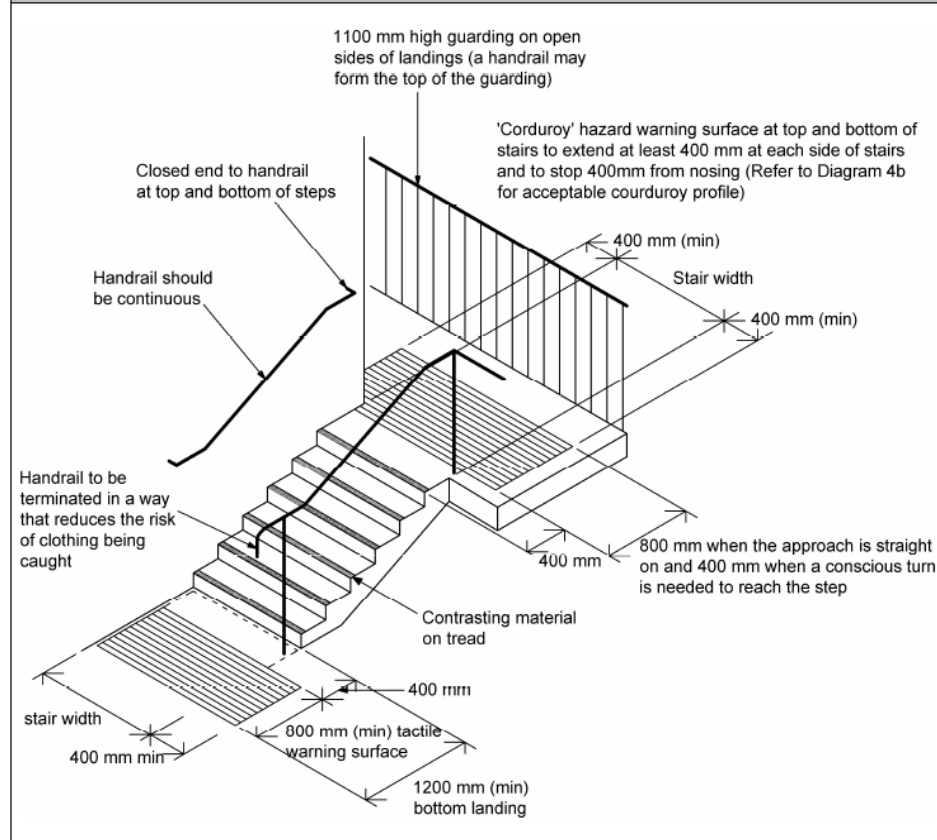


Diagram 4a Stepped Access – Key dimensions and use of hazard warning surface



66. PROPOSED EXTERNAL SIGNAGE

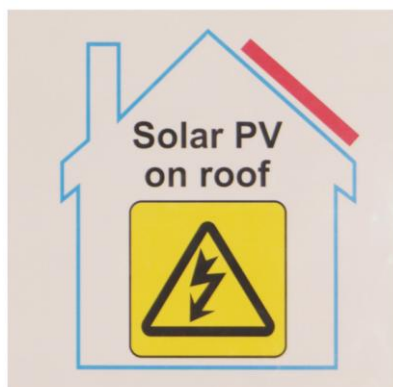
66.1 - ACCESSIBLE PARKING SIGNAGE

- Contractor shall provide 1 No. Accessible parking signage mounted to a mounted to a 76mm diameter Galvanized Steel Sign Post.
- Proposed post shall be set in concrete in the grass area in front of the new accessible parking bay.
- 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

66.2 - PV SIGNAGE

- The Contractor is to refer to Galileo Energy Services drawings 66(E001) for the location of the solar panels and Galileo Energy Services specification for the information regarding the installation of the solar panels.
- Proposed Signage shall be installed at 2No. locations - The main vehicular entrance & the wall below the PV panels in the roof
- 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.
- 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.
- The PV signage shall 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

Signage Samples



67. PROPOSED BASKETBALL HOOPS

- The Appointed contractor shall provide 4No. New basketball to the following specification:
 - All board and hoops shall be regulation size,
 - 4m long x 90mm Outer diameter galvanised post 4mm thick, capped with plug,
 - 180mm long clamp for backboard with adjustable heights,
 - 900mm long 90mm diameter extension arm,
 - 1200x900mm backboard with 50x50mm galvanised RHS supporting structure comprising of 19mm marine plywood with hardwood trim, sealed and approved preservative applied, followed by 2 coats of undercoat and 2 coats of exterior quality gloss paint,
 - 16mm solid ring with 12no. nethooks fixed to underside of ring and steel backplate,
 - All metalwork to be galvanised;
 - Post in 900mm long socket to receive 90mm dia post; with hinged socket cover with keyed opening;
 - Proposed posts shall be set in concrete footings including all associated groundwork's;
 - Location TBC with architect on site.

68. PROPOSED EXTERNAL LADDER ACCESS POINTS

- Contractor shall provide a secure ladder access point to the rear wall of the proposed extension for maintenance and cleaning of the proposed PV panels consisting of 2 No. Galvanised Ladder eyes with mechanical fixing into external wall and 2 No. tensioning straps.
- The proposed fixing eyes shall consist of a treaded anchor chemically set into the external wall together with a treaded eye hook which can be removed to prevent a projecting hazard.
- The two Ladder eyes shall be fixed 1m above the ground level and 2m apart, Refer to proposed Skyway or equivalent system attached in the information folder of the complete tender package.

69. PLANNING CONDITIONS

- The Proposed Development shall be carried out in accordance with the Granted Permission by Wicklow County Council under Planning Register Reference : 22/1147 in accordance with the architects drawings and specifications.
- The Appointed contractor shall carry out the works in accordance with the attached conditions.

PLANNING & DEVELOPMENT ACT 2000 (as amended)

Reference Number in Register: 22/1147

SCHEDULE

Pursuant to the Planning & Development Act 2000 (as amended), permission is hereby granted, Having regard to the zoning of the site and existing school use on site, it is considered that the proposed development would not impinge on the amenities of the area. Subject to the compliance with the attached conditions the proposed development could be assimilated into the landscape and would be in accordance with the proper planning and sustainable development.

1. This permission refers to the development as described in the documents lodged, save as the conditions hereunder require.

REASON: For clarification.

2. The external finishes shall match those of the existing school building in all respects.

REASON: In the interests of visual amenity and integrating the development into the landscape.

3. Site development and building works shall be carried out only between the hours of 0800 to 1800 Monday to Fridays inclusive, between 0800 to 1400 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the Planning Authority.

REASON: In the interest of residential amenity, traffic/pedestrian safety and proper planning and sustainable development.

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	
2029-Spec- T01	MCL Architectural Specification Document
	Mcl Room Data Sheets
	Mcl Windows Specification
	Mcl Architectural Finishes Presentation
	Purge Ventilation Compliance
MCL Health & Safety Documents	
20 29 - DRA	Design Risk Assessment
20 29 - PS&HP	Preliminary Safety and Health Plan
20 29 - AF1	Completed AF1 Form
-	Welfare_Facilities_CSP1
-	CoP for_Access_and_Working_Scaffolds
-	Code_of_Practice_for_Safety_in_Roofwork
-	CIF-Construction-Sector-C-19-Pandemic-SOP_V11
-	PWCF6 Covid 19 Measures
Planning, FSC, DAC, Surveys & Provisional BER	
Refer to complete package	
Structural Engineers Information	
Refer to complete package	
M&E Service Information	
Refer to complete package	
BCAR Requirements	
Refer to complete package	
Mcl Safety File with O&M Manual Template	
Refer to complete package	
Appendix Documents – Additional Information	
Manufactures Specification / Product Data	

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		
SV 001	A0 – L	Survey of Existing Site Plan
SV 100	A1 – L	Survey of Existing Floor Plan
SV 200	A1 – L	Survey of Existing Elevations
T 001	A0 – L	Proposed Site Plan
T 002	A1 – L	Proposed Demolition Plan
T 100	A1 – L	Proposed Floor Plan
T 101	A1 – L	Proposed Roof Plan
T 200	A1 – L	Proposed Elevations (Sheet 1 of 2)
T 201	A1 – L	Proposed Elevations (Sheet 2 of 2)
T 300	A2 – L	Proposed Sections
T 400	A2 – L	Proposed External Windows and Doors
T 401	A2 – L	Proposed Joinery
T 402	A1 – L	Proposed Ceilings, Floor finishes and Joinery
T 500	A1 – L	Architectural Construction Details 01
T 501	A1 – L	Architectural Construction Details 02
T 502	A1 – L	Architectural Construction Details 03
T 503	A1 – L	Architectural Construction Details 04
Additional Consultants		
Refer to Complete Package		

4.2 - APPENDIX C

MCLA- LIST OF APPENDIX DOCUMENTS

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

- | | |
|---------------------------------------|------------------------------------|
| 1. ANNEX E | 27. Alumasc Alu Fascia & Soffit |
| 2. Mannok | 28. Alumasc Alu Sloping Capping |
| 3. Ardex NA | 29. Bauderflex Warm Roof |
| 4. UNILIN Floor Insulation | 30. Heavy Duty Door Stop |
| 5. Monarflex | 32. ABLOY Access Control |
| 6. Radon Sump | 33. Airtighness- Contegs Solido SL |
| 7. Foamglass Perinsul HL | 34. Airtighness - Tescon Primer |
| 8. Intumescent Paint (Nullifire) | 35. Airtighness - Intello Plus |
| 9. UNILIN CT-PIR - Wall Insulation | 36. Airtighness - Tescon Vana Tape |
| 10. Gyproc Hardcoat | 37. Airtighness - Contega PV |
| 11. Gyproc Skimcoat | 38. Airtighness - Orcon F |
| 12. UNILINI Close R (FR) | 39. Fire Stopping |
| 13. UNILIN Safe-R Close-R | 40. Suspended Ceilings |
| 14. Expamet Trims | 41. Ironmongery |
| 15. ANCON Restraint Fixings | 42. Floor Finishes |
| 16. PermaBase Board | 43. Recessed Matt Well |
| 17. Spaceloft Thermal Wrap Insulation | 44. Splashback |
| 18. Background Wall Vents | 45. Blinds |
| 19. Shaftwall Partition | 46. Duraflow |
| 20. Wall Board | 47. Tactile Paving |
| 21. Habito Board | 48. Aco Drains |
| 22. Gyproc Joint Filler | 49. Fencing & Gates |
| 23. Gyproc paper Joint tape | 50. Ladder Eye |
| 24. DuPoint Tyvec-Supro | 51. U-Value Calculations |
| 25. Lead | |
| 26. Alumasc Alu Rainwater Goods | |

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