A2 Architects Ltd.

20 Ormond Quay Upper, Dublin 7

www.a2.ie

Architectural Tender Specifications

for

Refurbishment works to Café and Ticket Office Building in Garinish Island, Co. Cork

Tender Issue | December 25

N O T E T O F O R M P A R T O F T H E S P E C I F I C A T I O N

This is a high quality job for the proposed works to Café and Ticket Office Building in Garinish Island.

Any item of materials or workmanship, or any element of work,

not fully described, is to be executed to the Architects' complete

satisfaction. AND: The overriding intention is that all work be done to a

good solid, sound, durable standard.

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GENERAL

STATUTORY REQUIREMENTS

The contractor must provide for paying all contributions required under the Social Welfare Acts and other statues for the protection of workmen as part of the contract figure. The contractor must also comply with the Construction Health & Safety Regulations. All necessary notifications / submissions related to the works must be made by the Contractor to the relevant authority.

The contractor must construct the building in accordance with all statutory requirements including compliance with the current Irish Building Regulations, and **prior to practical completion**, certify this in writing to A2 Architects.

APPROVED MATERIALS

For the purpose of this specification, the term "approved materials" shall mean approved as suitable by NSAI through CE certificates and DoP's (Declaration of Performance) and accepted by the architect.

PROVIDING EVERYTHING

The contractor shall be responsible for providing all materials, fixings, plant, scaffolding etc., temporary access roads and fencing necessary for the proper execution of the work. The contract sum is deemed to include all works described or reasonable intimated by the drawings. If any items are not specifically noted the it is the reasonability of the contractor to notify the Architect and cost these works in his tender.

WATER

The contractor shall provide clean fresh water for use on the Works, and pay all costs and charges in connection therewith, provide all temporary storage and plumbing services and clear away and make good on completion.

NOTIFICATION

The contractor shall notify the architect at the appropriate stages of the work and arrange for all inspections.

EXAMINE SITE

A site visit is mandatory and a condition of the tender. The signed record of site visit must be returned for a valid tender.

The contractor tendering will be deemed to have made a thorough examination of the site and all things, which will affect the proposed works. No charge for any extra material or labour will be allowed in consequence of the failure of the contractor to visit the site.

SUB-CONTRACTORS

All sub-contractors for this contract will be specialist firms engaged by the Main Contractor and as such shall be contracts between the main contractor and such sub-contractors or specialists. Details of proposed Sub-Contractors to be submitted to the architect for approval. Allow for all builders work & attendances in connection with sub-contractors including nominated sub-contractors.

SETTING OUT

The contractor shall be responsible for the correct setting out of the works. Errors in setting out shall be put right at the contractor's expense. Work shall be set for Architect approval prior to putting work in hand.

WORKMANSHIP & MATERIALS

Workmanship shall be of good quality to produce a finished product of high standard using materials, which are the best of their respective kinds.

REMOVING RUBBISH, PROTECTIVE CASINGS AND COVERINGS AND CLEANING THE WORKS ON COMPLETION

The Contractor shall from time to time as it accumulates remove any rubbish, protective casings and coverings and the like, and on completion of the works remove all plant, surplus materials and rubbish from the premises and shall leave the premises in a clean and proper state throughout with floors and windows clean and with eaves, gutters and downpipes clear. Skips shall be properly protected against wind dispersal of materials and be clearly marked to avoid creation of a hazard either by day or night. They shall be removed and replaced whenever filled.

CLEANING

Clean the entire works internally and externally; remove all splashes, stains, clean glass, timber, paintwork etc. Remove all rubbish and leave the entire works in a tidy condition ready for occupation.

EXISTING PROPERTY

Take adequate precautions to prevent damage to existing property by all site personnel. Hoarding to site to be erected & maintained throughout the build, Contractor to submit detailed proposals for hoarding & securing areas of work for approval prior to commencing site work. Adequate precautions to be taken to prevent trespass on or damage to neighbouring property / areas outside of proposed work by all site personnel. Take precautions as necessary to protect from damage existing fabric which is to be retained. Any such damage will be made good at the contractor's expense.

Include for the protection/ covering up of the existing perimeter wrought iron fencing.

HEALTH & SAFETY

a. The contractor shall include for complying with the Safety Health & Welfare at Work Acts and Regulations current at the date of tender.
b. The contractor shall be appointed as Project Supervisor for the Construction Stage in respect of the project pursuant to the Safety Health & Welfare at Work (Construction) Regulations. The contractor shall include all costs for the provision of the services of Project Supervisor for the Construction Stage pursuant to regulations six and seven of the act. Please see attached preliminary health and safety plan for the project supervisor for the design stage.
c. The contractor shall include for procuring that the insurance cover required to be obtained and maintained by the contractor pursuant to the main contract shall provide indemnity in respect of any claim for bodily injury or property damage which the contractor may incur by reason of the performance of the functions and duties of the Project Supervisor for the Construction Stage of the project.
d. The contractor shall include for providing assistance to the appropriate member of the design team (and to relevant nominated sub-contractors) in preparing "as built" drawings for inclusion in the Safety File.
e. The contractor is asked to present a method statement and programme of work that takes the phasing and programming of work fully into account.

The site is to be kept in a neat and orderly manner at all times. Any untidy areas at site will not be tolerated.

SUBMISSION

Submit sufficient copies of each issue of the design / production information, including copies for the consultants to the Main Contractor:

- Architect – 2 hard copies + 1 electronic copy (pdf) + CAD copy

INSPECTION BY THE ARCHITECT

The Architect will inspect all specialist production information drawings, record his comments and return them to the Main Contractor who will return them to the Sub-Contractor. The Architect will require 14 days for such examination of design/production information. Whenever possible comment by the Architect will be issued in less than ten working days period from the date of receipt of the drawings by the Architect, provided submissions by the Sub-Contractor are made on a practical basis.

AMENDMENTS

Make any necessary amendments to the design/production information drawings as per the procedures outlined as follows:

COMMENT PROCEDURE

The comment procedure shall entail the Architect applying a status to each of the contractors:

Status A: There are no comments. The drawings may be used for construction purposes.

Status B: There are comments on the drawings but subject to the incorporation of those comments the drawings may be used for construction purposes. The drawings must be revised to incorporate any comments and must be resubmitted for comment to the Architect.

Status C: The drawing is unacceptable and will have to be drawn and resubmitted for comment. The drawing may not be used for construction purposes. This comment procedure intends that all drawings should obtain Status A prior to manufacture and installation. It shall be the Specialist's responsibility to ensure that the drawings are submitted for comment in sufficient time to avoid any delays in the works. The Specialist shall be responsible for any omissions, errors or any discrepancies in the drawings and other particulars supplied by him or his suppliers, whether such drawings or particular have been commented upon by the Architect or not, provided that such omission, errors or discrepancies are not due to inaccurate information or particulars furnished in writing to the Specialist by the Architect.

CHANGE ORDERS

If submitted design /production information differs from the requirements of the Tender/Sub- Contract drawings/documents each such difference must be the subject of a request for substitution or variation under the procedures used in the contract, supported by all relevant information as requested by the contract.

AMENDMENTS REQUIRED BY THE ARCHITECT

Should any amendments to the design/production information required by the architect be considered to involve a change order that has not already been acknowledged as a variation by the Architect, notify the Main Contractor and the Architect immediately and in any case within 7 days. Do not proceed with ordering, fabrication, or fixing until subsequently instructed. Claims for extra cost of such work, made after it has been carried out, may not be permitted.

DISTRIBUTION OF THE FINAL VERSION

Submit sufficient copies of the design / production information, including copies for the Architect and consultants to the Main Contractor who will distribute drawings to all affected parties. Include drawing issue sheets with all drawing submissions.

PRODUCT SAMPLES

Before commencing detailed design provide the Architect with identified samples of: All wood samples of oak, intended varnish finishes, junction details, edge details, fixings and materials to be used in the assemblies, including and incorporating all services elements, ironmongery, universal access manifestations and other related elements supplied by others are to be approved by Architect.

CONTROL SAMPLES

Procedure:

- Finalize component details.
- Fabricate one of each of the following designated items as part of the quantity required for the project.
- Obtain approval of appearance and quality before proceeding with manufacture of the remaining quantity.
- Designated items: 1no. of each door type as per door schedule.

The Contractor shall include any costs for or in connection with the following, as required by the Works Requirements:

inspections
following quality assurance procedures
items to be inspected or tested before delivery to the site
tests to be carried out
supplying and erecting samples

Specific requirements in relation to samples and/or tests:

As per drawings and specifications.

All products should carry the CE mark to signify that the product conforms with all EU directives.

Samples / mock ups will be required in good time prior to starting the following aspects of work

- **1sqm of slate roof**
- **1 m leadwork to roof;**
- **Rainwater goods – 1m length of downpipe, gutter and support bracketry;**

- **1sqm of external stone light steam cleaning including mortar pointing;**
- **1sqm of external insulation;**
- **1sqm of remediation finish to floors;**
- **Paint colours;**

Method statements will be required for various works or procedures as follows:

- Methodology and Sequencing of works – this must demonstrate an understanding of the timescales involved in agreeing samples of materials, products and workmanship/ control samples with the architect at the earliest possible stage in the project.
- Traffic management plan, site hoarding, temporary works;
- Light stone steam cleaning, buff-coloured porous macadam finish, M&E works, civils works;
- Procedure for repairs of any structural timbers in the roofs or floors
- Roof-works generally, including support methods / temporary stabilisation methods for any rafter end splice repairs.
- Protection of elements of work & temporary weather proofing of roof.
- Programming, safety and enabling works including protections to the building fabric.
- Installation of new mechanical and electrical services.

Tests required upon completion include

- Full hose test of roof and façade (new windows)

Procedure for Control Sample Approval:

- Finalise component details.
- Fabricate one of each of the following designated items as part of the quantity required for the project.

- Obtain approval of appearance and quality before proceeding with manufacture of the remaining quantity.

EVIDENCE OF PERFORMANCE

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

DESIGN AND PRODUCTION INFORMATION PROCEDURE

Design and Detailing:
The Specialist is to complete the detailed design of the work and provide complete production information (including as appropriate, fabrication / installation drawings, all design calculations, specifications, approvals where required, etc.) based on the drawings, this specification and other information provided, liaising with the Main Contractor, Suppliers and others necessary to help ensure the co-ordination of the work with related building elements and services.
Request Additional Information from the Main Contractor as necessary, and provide information, as necessary, in sufficient time to meet the programme.

Submission:
Submit sufficient copies of each issue of the design / production information, including copies for the consultants to the Main Contractor:

- Architect – 2 hard copies + 1 electronic copy (pdf) + CAD copy
- Others as may be relevant from time to time

Inspection by the Architect:
The Architect will inspect all design/production information drawings, record his comments and return them to the Main Contractor who will return them to the Sub-Contractor. The Architect will require 14 days for such examination of design/production information. Whenever possible comment by the Architect will be issued in less than ten working days period from the date of receipt of the drawings by the Architect, provided submissions by the Sub-Contractor are made on a practical basis.

Amendments:
Make any necessary amendments to the design/production information drawings as per the procedures outlined as follows:

Comment Procedure:
The comment procedure shall entail the Architect applying a status to each of the contractors:
Status A: There are no comments. The drawings may be used for construction purposes.
Status B: There are comments on the drawings but subject to the incorporation of hose comments the drawings may be used for construction purposes. The drawings must be revised to incorporate any comments and must be resubmitted for comment to the Architect.
Status C: The drawing is unacceptable and will have to be drawn and resubmitted for comment. The drawing may not be used for construction purposes.

The intention of this comment procedure is that all drawings should obtain Status A prior to manufacture and installation. It shall be the Specialist's responsibility to ensure that the drawings are submitted for comment in sufficient time to avoid any delays in the works.
The Specialist shall be responsible for any omissions, errors or any discrepancies in the drawings and other particulars supplied by him or his suppliers, whether such drawings or particular have been commented upon by the Architect or not, provided hat such omission, errors or discrepancies are not due to inaccurate information or particulars furnished in writing to the Specialist by the Architect.

Change Orders:
If submitted design /production information differs from the requirements of the Tender/Sub-Contract drawings/documents each such difference must be the subject of a request for substation or variation under the procedures used in the contract, supported by all relevant information as requested by the contract.

Amendments required by the Architect:
Should any amendments to the design/production information required by the architect be considered to involve a change order that has not already been acknowledged as a variation by the Architect, notify the Main Contractor and the Architect immediately and in any case within 7 days. Do not proceed with ordering, fabrication, or fixing until subsequently instructed. Claims for extra cost of such work, made after it has been carried out, may not be permitted.

Distribution of Final Version:
Submit sufficient copies of the design / production information, including copies for the Architect and consultants to the Main Contractor who will distribute drawings to all affected parties. Include drawing issue sheets with all drawing submissions.

REMOVALS / DEMOLITION

To be read in conjunction with architectural, Structural and M&E drawings & specification

as well as with Preliminaries/General conditions

GENERAL REQUIREMENTS

DESK STUDY/ SURVEY

Before starting deconstruction / demolition work, examine available information and carry out a survey of:

- All demolition and works are to be in accordance with the plans for this project.
- Allow for the removal/ demolitions as shown on the Architect's demolition plans.
- Existing services to be removed are to be understood in advance of commencing works and are to be co-ordinated with A2 Architects and the client.

Extent: As per tender drawings.

Prior to demolition, the contractor is to submit a report describing the following:

- Form and location of flammable, toxic or hazardous materials and proposed methods for removal and disposal.
- **Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.**
- Proposed programme of work, including sequence and methods of removal / demolition.
- Arrangement for protection of personnel and general public, including exclusion of unauthorized persons.
- Arrangement for control of site transport and traffic.
- Special requirements: Details of services supplied by utilities companies or the local authority.

EXTENT OF DECONSTRUCTION / DEMOLITION

- General: Subject to retention requirements specified elsewhere, removal / demolition fixtures/fittings as shown on tender drawings.

SERVICES REGULATIONS

- Work carried out to or affecting new and / or existing services: Carry out in accordance with the regulations of the relevant Statutory Authority

LOCATION OF SERVICES

- Services affected by removals / demolition work: Locate and mark positions.

SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

- General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to starting removals / demolition.

SERVICES DISCONNECTION ARRANGED BY CONTRACTOR WITH EMPLOYER

- Responsibility: The Contractor will arrange with Employer with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to any removals work.

- Disconnection of remaining services: Arrange with the appropriate authorities. Remove fittings and equipment for storage if requested.

- Timing: Do not start deconstruction/ demolition until disconnections are completed and location of fittings and equipment has been agreed with employer.

REMOVALS WORK

WORKMANSHIP

- Operatives: Appropriately skilled and experienced for the type of work.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of removals to be used.

DUST CONTROL

- General: Reduce airborne dust from removing / demolition works where possible. Keep corridors and circulation spaces clear of debris.

- Dust: Submit method statement for control, containment and clean-up regimes.

HEALTH HAZARDS

- Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

ADJOINING SPACES

- Temporary protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.

- Defects: Report immediately on discovery.
- Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.

UNFORESEEN HAZARDS

- Discovery: Give notice immediately when hazards such as unrecorded voids are discovered during removals / demolition.
- Removal: Submit details of proposed methods for removal, etc.

CLIENT'S PROPERTY

- Components and materials to remain the property of the Employer:
- Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.

SLATE ROOF

Removal and Storage of Existing Slates:
Existing slates shall be carefully removed and stored in a safe, dry location during roof upgrading works to prevent damage. Slates shall be reinstated in their original positions wherever indicated on the drawings.

New Slate Installation:

- Any new slates shall match the existing slates in colour, size, and thickness.
- A sample of the proposed new slate shall be submitted to and approved by the architect prior to installation.
- Locations for both reinstated and new slates are as indicated on the drawings.

General Requirements:

- Care shall be taken to ensure proper alignment, bedding, and fixing of all slates.
- Workmanship shall comply with current best practice for slate roofing to ensure weatherproofing and durability.

3.13.1.1 Roof finish buildup

Natural slate to specification fixed with 3.5mm x 30mm copper nails to 25mm x 50mm treated softwood battens mechanically fixed to 25mm x 50mm treated softwood counter-battens on breather membrane to specification on roof truss.

3.13.1.5 Natural Slate

Products or approved equivalents:

Molina Natural Slate

- Supplier: Cedral or equivalent.
- Product reference: Molina Natural Slate or equivalent.
- Standard: To BS EN 12326-1
- Type: blue-grey.
- Size: 600 x 300 mm.
- Head-lap (minimum): 100 mm.
- Fixing: Slate nails (40x3.35mm), Slate hooks (2.5-3mm dia.).

Loading Rate:	15.49 Longitudinal, 14.26 Transverse.
Mean thickness:	5.8 Longitudinal, 5.6 Transverse.
Failure Load:	1105.2 Longitudinal, 964.3 Transverse.
Mean modulus of rapture:	68.1 Longitudinal, 64.7 Transverse.

Standard deviation: 6.01 Longitudinal, 6.82 Transverse.

Characteristic modulus of rapture: 57.7 Longitudinal, 52.9 Transverse.

Water Absorption: 0.40%, Sample thickness 5.5mm: Result A1

Non-carbonate carbon 0.3%

CaCO3 (Carbonates) % mass 0.3

Sulfur dioxide exposure test: S1 (no alterations, no colour changes)

Thermal cycle test: T1 (no oxydations, no colour changes, no aspect changes)

Roof Battens, Counter-Battens, Timber, and Ventilation Specification

1. **Counter-Battening:**
    - Vertical and horizontal counter battens shall be provided.
    - Double battening is essential for this approach to maximise the roof's vapour drying capacity to the outside.
2. **Treated Timber:**
    - All timber used for battens, counter-battens, rafters, or other roof support elements shall be sound, straight, and free from defects.
    - Timber shall be pressure-treated with a suitable preservative to protect against fungal decay, insect attack, and moisture ingress in accordance with EN 335 and relevant standards.
    - Moisture content at installation shall not exceed 20%.
    - Fixings for treated timber shall be non-corrosive (stainless steel, hot-dipped galvanised, or equivalent).
    - Timber shall be installed in strict accordance with design drawings, maintaining correct alignment, spacing, and level.
    - Timber shall be compatible with adjacent materials (e.g., lead flashing, slate battens) to avoid corrosion or chemical reaction.
3. **Ventilation:**
    - Continuous ventilation shall be provided at both eaves and ridge to ensure effective airflow and prevent condensation.
    - Ventilation openings shall be maintained clear of obstructions and designed in accordance with current best practice for ventilated roof systems.

REINFORCED ROOFING UNDERLAY

Technical data:

Fleece Polypropylene microfibre
Functional film Monolithic TEEE
Reinforcement Polypropylene non-woven fabric

Colour	Light blue	
Surface weight	BS EN 1849-2	170 g/m²
Thickness	BS EN 1849-2	0.55 mm
Water vapour resistance factor μ	BS EN ISO 12572	73
sd value	BS EN ISO 12572	0.04 m
sd value, humidity-variable		< 0.02 m
g value		0.20 MN·s/g
g value, humidity-variable		< 0.10 MN·s/g
Fire class	BS EN 13501-1	E
Outdoor exposure		3 months
Watertight joints with 'connect' adhesive strips	BS EN 13859-1	W1
Sarking/roofing underlay membrane (Germany)	ZVDH Produktdatenblatt 2024	USB / UDB
Suitable as temporary roof covering (Germany)	ZVDH	Yes
Water column	BS EN ISO 811	> 2 500 mm
Watertightness, non-aged/aged*	BS EN 13859-1	W1 / W1
Tensile strength MD/CD	BS EN 13859-1 (A)	450 N/5 cm / 330 N/5 cm
Tensile strength MD/CD, aged*	BS EN 13859-1 (A)	495 N/5 cm / 350 N/5 cm
Elongation MD/CD	BS EN 13859-1 (A)	20% / 20%
Elongation MD/CD, aged*	BS EN 13859-1 (A)	15 % / 15 %
Nail tear resistance MD/CD	BS EN 13859-1 (B)	370 N / 400 N
*** Durability after artificial ageing**	BS EN 1297 / BS EN 1296	Passed
Flexibility at low temperature	BS EN 1109	-40 °C ; -40 °F
Temperature resistance	Permanent -40 °C to 100 °C ; -40 °F to 212 °F	
Thermal conductivity		0.04 W/(m·K)
CE labelling	BS EN 13859-1	Yes

Fastening Restrictions:

- Fasteners shall not be applied in areas where water may collect, such as roof valleys, to prevent water ingress.

Ridge Ventilation (Non-Insulated Attics):

- For unconverted, non-insulated attics, ridge ventilation shall be provided.
- Install the roofing underlay so that it stops approximately 5 cm below the ridge to allow airflow.
- Permanent ventilation fittings shall also be provided in the unconverted attic.

UV Protection and Temporary Covering:

- The membrane shall be protected against long-term UV exposure during construction.
- The underlay may be used as a temporary covering for up to three months to protect the building structure, provided the roof pitch is sufficient and in accordance with relevant regulations.

Sealing of Overlaps and Joints:

- All overlaps and joints shall be sealed to ensure airtightness and water tightness.
- Sealing tapes or adhesive strips shall be used in accordance with the manufacturer's instructions and applicable regulations.

Additional Rain Protection:

- When installed as a freely hanging underlay with simple overlapping beneath roof tiles, the membrane provides additional rain protection.
- When installed over timber sheathing as an underlay with simple overlapping, it is also suitable for enhanced rain protection under more demanding conditions.

Blown-In Insulation Materials:

- The membrane may serve as a boundary layer for all types of blown-in insulation.
- Nail-sealing or other suitable fixing methods shall be used underneath counter battens before the insulation is applied.
- Counter battens shall be fitted prior to the blowing-in process.
- A protruding lath shall be installed under horizontal roof battens in the centre of the rafter spacing. This lath shall be at least 1 cm thicker than the counter battens to:
    - Limit membrane bulging during the blowing-in process, and
    - Ensure adequate cross-sectional area for ventilation and moisture drainage.
- If insulation is blown in from the outside, blow-in holes shall be sealed after installation using suitable adhesive or sealing tape.

ASSOCIATED ROOF INSULATION

As called up in A2 Architects drawings.

100mm thick moisture-resistant wood fibre insulation board for rainscreen façades, as additional above-rafter insulation, or as under-rafter insulation

Ingredients

- Untreated fir and spruce
- 4.0 % PUR resin
- 1.0 % paraffin

Disposal

- Waste code numbers as per AVV 030105, 170201

Roof Insulation Specification

1. **Insulation Material:**

- Roof insulation boards shall have a minimum thickness of 100 mm.
- Insulation boards are not load-bearing and shall not be relied upon for structural support, including snow loads.

2. **Rafter Spacing and Board Installation:**

- The maximum on-centre spacing of rafters shall not exceed 90 cm.
- Joints between insulation boards shall be offset from row to row by at least one rafter spacing unit.
- Gaps between rafters shall remain inaccessible after installation.

3. **Protection and Fixing:**

- After installation, insulation boards shall be immediately protected with a suitable sarking membrane or protective layer.
- The insulation and sarking shall be fastened to the rafters using counter-battens in accordance with structural requirements.
- Fastening shall comply with approved structural guidance to ensure stability and safety.

3.13.1.7 Breather membrane

Robust windtight and vapour permeable (diffusion open) sealing and breathable roofing membrane with built-in self-adhesive strips so overlaps can be sealed with no additional tape.

Technical data:

Fleece Polypropylene
Functional film Polyethylene copolymer
Reinforcement Polypropylene non-woven fabric

Colour	White-translucent	
Surface weight	BS EN 1849-2	110 g/m²
Thickness	BS EN 1849-2	0.4 mm
Water vapour resistance factor μ	BS EN 1931	35 000
sd value	BS EN 1931	14 m
sd value, humidity-variable	BS EN ISO 12572	0.25 - >25 m
g value		70 MN·s/g
g value, humidity-variable	EN ISO 12572	1.25 - >125 MN·s/g
Hydrosafe value	DIN 68800-2	2 m
Fire class	BS EN 13501-1	E
Airtightness	BS EN 12114	Tested
Tensile strength MD/CD	BS EN 13859-1 (A)	340 N/5 cm / 220 N/5 cm
Elongation MD/CD	BS EN 13859-1 (A)	15% / 15%

Nail tear resistance MD/CD	BS EN 13859-1 (B)	200 N / 200 N
Durability after artificial ageing	ETA-18/1146	Passed
Temperature resistance	EN 1109, EN 1296, EN 1297	Permanent -40 °C to 80 °C
Thermal conductivity		0.04 W/(m·K)
Passive House Certification	Passivhaus Institut	phA
CE labelling	ETA-18/1146	

Vapour Control Membrane (VCM) Installation Specification

General Conditions:

- The membrane shall be installed taut and without slack, either parallel or perpendicular to the supporting structure (e.g., rafters).
- For horizontal installation (perpendicular to the supporting structure), the maximum spacing of the supporting elements shall not exceed 1.0 m.
- After installation, perpendicular battens shall be fitted on the inside at a maximum spacing of 0.5 m to support the weight of the insulation.
- Adhesion may be carried out using single-sided adhesive tape on the smooth side of the membrane where possible.

Fixing Requirements:

- For mat or panel-shaped insulation materials, where tensile loads on adhesive bonds are expected, an additional supporting batten shall be installed over membrane overlaps.
- Fastening staples shall be at least 10 mm wide by 8 mm long and spaced at 10–15 cm along the membrane edges.
- Overlaps between membrane strips shall be approximately 8–10 cm.
- Airtight seals can only be achieved if the membrane is installed without folds or creases.

Moisture and Ventilation:

- During construction, the building shall be ventilated regularly to prevent excessive humidity. Intermittent ventilation is insufficient; use mechanical drying if required.
- To prevent condensation, the membrane shall be sealed and taped immediately after installation of insulation, particularly in cold weather conditions.

RAFER EXTENSION FILLER PIECES

Description:
Timber filler pieces to extend existing rafters, sized **550 mm long x 100 mm high**, to match existing rafters in both **section and finish**. Suitable for a **coastal environment**. Existing timber assumed to be **teak**.

Material:

- **Timber:** Teak (Tectona grandis) or equivalent, durable in marine/coastal conditions.
- **Moisture content at installation:** Max 12–15% for stability.
- **Appearance:** Match existing rafter in **colour, grain, and surface finish**.

Treatment & Durability:

- Naturally durable timber, suitable for **salt-laden, coastal exposure**.
- Oil or clear preservative finish compatible with existing timber to protect against UV, salt spray, and fungal attack.
- All cut surfaces to be **pre-treated** with suitable teak oil or preservative.

Fabrication:

- Cut to exact dimensions: **550 mm long x 100 mm high**, accurately squared for tight fit with existing rafters.
- Edges and surfaces **planed smooth**; ends chamfered or eased to avoid splitting.

Fixings:

- Stainless steel or non-corrosive screws/bolts, compatible with teak and coastal environment.
- Countersink fixings where necessary; fill and finish to match timber.

Installation:

- Fit accurately to existing rafters, ensuring alignment in line with structural and aesthetic requirements.
- Maintain continuity of roofline and overhangs.
- Ensure **mechanical stability** and integration with existing roof structure.
- Apply finish to match existing rafters after installation, including final sanding and oiling as necessary.

Quality Assurance:

- Ensure timber pieces are free from knots, splits, or defects that could compromise structural integrity or appearance.
- Inspect on delivery for any damage or warping.
- Install only by skilled carpenter familiar with coastal timber construction.

Environmental Consideration:

- Sourced from sustainable plantations with FSC certification where possible.
- Minimise waste and retain off-cuts for potential reuse.

CLOSER PIECE – TIMBER

Description:

- Timber closer piece, 100 mm high, located to match existing installation.

- Length and thickness as required for installation; thickness **minimum 18 mm**.
- Material to match existing timber in species, appearance, and finish. **Assumed existing timber: Teak**.
- Environment: Coastal, exterior exposure.

Material Properties:

- Durable, rot-resistant timber suitable for coastal exposure.
- Free from defects, wane, cracks, or splits.
- Moisture content at installation: ≤20%.

Finish:

- Finished to match existing timber, including colour, sheen, and surface texture.
- Surface preparation: smooth-planed, all edges chamfered or rounded as required to match adjacent components.
- All surfaces exposed to weather to be treated with compatible protective finish to enhance durability in coastal environment.

Fixing:

- Securely fixed to existing timber or structure using corrosion-resistant fixings (stainless steel or hot-dipped galvanised) suitable for external use.
- Ensure tight joints and alignment with adjacent timber components.

Quality Assurance:

- All timber sourced from sustainably managed plantations.
- Workmanship to comply with best practice for exterior timber joinery in coastal environments.
- Inspect for alignment, finish, and secure fixing prior to handover.

Aluminium Verge Trim – Slate Roof

Product: Aluminium Slate Trim Type 2 – Slate Dry Verge System

Purpose:
The system permanently secures slate applications at gable ends, providing protection against wind uplift and rain. The drop-down section covers and protects the exposed end grain of the slate battens.

Suitability:

- Can be used on roofs with no fascia and soffit.
- Compatible with natural and fibre cement slate.

- Available for slate thicknesses of 18 mm and 25 mm.

Material:

- High-quality aluminium, corrosion-resistant, suitable for coastal environments.
- Finish to suit the slate roof aesthetics (natural or pre-finished coating as specified).

Dimensions:

- Length: 3 meters per unit
- Profile to suit standard slate sizes and batten exposure

Installation Requirements:

- Fix securely in accordance with manufacturer's instructions.
- Ensure proper alignment with slate courses and roof slope.
- Compatible with existing slate battens; provide necessary trims or support if required.

Performance:

- Wind uplift resistant
- Durable in coastal environments
- Provides long-term protection to slate battens

GUTTERS & DOWNPIPES

General:

- Salvaged rainwater goods to be carefully taken from storage and refitted in their original positions wherever possible.
- Include all necessary new brackets to ensure secure fixing and correct alignment.
- Work to be carried out in accordance with the manufacturer's guidelines and current best practice for roof drainage systems.

Fixing:

- Pipework and gutters to be securely fixed, plumb, and true to line.
- Socketed pipes and fittings to have sockets facing upstream.
- Bracket spacing: Maximum 1500 mm for vertical pipework.
- Provide additional supports where necessary to support junctions, bends, and changes in direction.

- Wall and floor penetrations: Pipes to be isolated from the structure using sleeves or masking plates to prevent movement and vibration.

Brackets – Cast Iron Half Round Gutter Side Rafter Brackets:

- **Code:** HR4542
- **EAN Code:** 0691208228909
- **Weight:** 0.3 kg
- **Brand:** Hargreaves Premier
- **Colour:** Galvanised
- **Dimensions:** 380 mm (L) x 20 mm (W) x 85 mm (D)
- **Material:** Galvanised Steel
- **Life Expected:** 100+ years
- **Specification:** BS460
- **Size:** 115 mm
- **Profile:** Half Round
- Used in situations with no fascia board, typically on barns and country houses, as an alternative to standard fascia brackets.
- The metal arm is screwed to the side of the rafter at the eaves, with the gutter clipped into the projection.
- Bracket is formed from a single length of 20 mm x 5 mm steel with an arm approx 180 mm long (7") and two fixing holes before a twist meets the cup section.
- Designed for cast iron guttering; if plastic guttering is intended, consult manufacturer for alternative fixing options.

Materials:

- Brackets: Galvanised steel as specified above.
- All fasteners: Stainless steel or other corrosion-resistant materials approved by the architect.

Testing & Handover:

- After installation, the entire rainwater system shall be tested for leaks using clean water.
- Testing records to be submitted to the architect or client.
- Ensure smooth, unblocked flow throughout the system.

Maintenance:

- Ensure access for future cleaning and maintenance is maintained.

EXTERNAL WALL WEATHER PROOFING

IMPERMIABILIZATION

Ensure all stone onto which waterproof coatings must be free from contaminants and coatings i.e. paints, oils. Any wall fixings holes (rain water pipes, etc) to be filled with a chemical resign to seal them, prior of new fixing going in.

Clean the wall with a propriety nanotechnology formulated water repellent, which is UV resistant and highly breathable, designed for use on cement-based materials, mortars and limestone surfaces.

LEAD ROOF/ SHEET COVERINGS/ FLASHINGS

Lead Flashing Works

1. **Removal and Reinstatement:**
   Existing lead flashing is to be carefully removed to avoid damage. Wherever possible, it should be reinstated in its original position.
2. **Remedial or Extension Works:**
   Any remedial work, repairs, or extensions to existing lead flashing shall be carried out in accordance with the following specification:
   - All new lead flashing shall match the existing in thickness, profile, and finish.
   - Lead shall be installed in strict accordance with current industry best practice
   - All joints shall be properly dressed and sealed to prevent water ingress.
   - Flashings shall be secured using non-corrosive fixings and with appropriate laps to ensure durability.
   - Care shall be taken to integrate new and existing lead without compromising the weatherproofing.

ROLLED LEAD SHEET ROOF COVERING

- Lead: Rolled Lead Sheet, 100% recycled raw material, reliably sourced and processed by the latest rolling mill technology to ensure uniform thickness and maximum lifespan.
- Manufacturer: Contractors choice, approved by architect.
  Product reference: Rolled Lead Sheet, Material to European standard equivalent to BS EN 12588.
- Recycled content: Manufactuers standard.
- Face size (nominal length x width): As per architectural drawings.
- Thickness (nominal): Code 8.
- Colour: Grey.
- Substrate: 18mm Marine grade plywood to 1:80mm min fall.
- Additional requirements: None.
- Fixing & Dressing: In accordance with Lead Sheet Association Details.

Lead sheet material thickness to be used on the external roof envelope:

- Parapet Gutters: **Code 8**
- Chute Outlets & Catch Pits: **Code 8**
- Parapet Cover Flashings: **Code 6**
- Gutters**: Code 6**
- Chimney Saddles, Aprons & Flashings: **Code 6**
- Soakers: **Code 3**
- Ridge & Hip Lead: **Code 7**
- Lead Flashing Generally: **Code 6**

GUTTER LININGS

- Underlay: On 18mm marine grade plywood, thermally isolated on tapered rigid insulation to achieve required falls.
- Lead:
  Thickness: Code 6.
- Laying: Over and beyond tilting fillets. In lengths, not more than 1500 mm.
  Cross joints: Lapped not less than 200 mm.
- Fixing: Welt edges. Nail top edge of each sheet. Dress bottom edge neatly into eaves gutter.
- Include for leaf gutter guard, to architects approval.

CHIMNEY FLASHINGS

- Lead:
  - Thickness: Code 6.
- Front apron:
  - Dimensions:
    - Length: Width of chimney plus not less than 150 mm underlap to each side flashing.
    - Upstand: Not less than 75 mm.
    - Cover to roof: Not less than 220 mm.
  - Fixing: Lead wedges into bed joint.
  - Fixing: Lead wedges into bed joint.

MATERIALS AND WORKMANSHIP GENERALLY

- Lead production method:
  1. Rolled, to BS 6915:2001, BS EN 12588:1999, the recommendations in BS 5250 and BS 6229 (equivalent European standard).
  2. Machine cast: BBA certified.
- All leadwork detailing shall be in accordance with the recommendations of the Lead Sheet Association.
- Identification: Colour marked for thickness/ code, weight and type.
- Workmanship standard: To BS 6915 and latest editions of 'Rolled lead sheet. The complete manual' published by the Lead Sheet Association.
- Fabrication and fixing: To provide a secure, free draining and weathertight installation.
- Marking out: Do not use scribers or other sharp instruments to mark out lead without approval.
- Solder: Use only where specified.
- Finished leadwork: Fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
- Patination oil: Apply smear coating to all visible lead, evenly in one direction and in dry conditions.

STANDARDS

Conforming to IS EN 12588.

A copy of Lead Sheet Association's most up to date *Rolled Lead Sheet Manual* to be present on site at all times. Any discrepancies between the drawings and the Lead Sheet Manual are to be brought to the attention of the Architect and any proposed variation from standard detailing is to be described in detail and approved by the Lead Sheet Association Technical Services prior to undertaking work.

All leadwork must be undertaken by experienced qualified lead-workers and the Contractor must demonstrate to the Architect the suitability of the proposed roofing specialists.

LEAD WELDING

- Any requirement for lead welding should be considered in such a manner as to allow it to be carried out on a workbench in order to minimise need for hot works.

MATERIAL AND ACCESSORIES

- Rolled lead sheet to IS EN 12588: 1999, layered and fixed as fully supported lead sheet roof and wall coverings.

SUITABLE SUBSTRATE

- Timber

- Plywood
- Concrete
- Masonry

SUITABLE SUBSTRATE

Underlay selected for use, as a separation layer between lead and the substrate should contain the following properties.

1. Allow for thermal movement by reducing the amount of drag between the substrate and lead sheet.
2. Protect lead sheet by providing a barrier against corrosive attack from stone, concrete or discharge from timber and roof condensation.
3. Provide an even surface and level out imperfections such as nail heads, board edges and knots.
4. Fully support lead sheet to prevent sag or puncture.
5. Provide sound reducing layer in periods of heavy rain.
6. Reduce risk of moisture being trapped between lead and substrate.

Free of substances deleterious to lead sheet material.

UNDERLAY TO LEADWORK

All new leadwork to be laid on an underlay.

Generally all Underlay to be needle punched non-woven needle punched geotextile polyester felts 220g/m^2 (± 5%) unless otherwise specified. New underlay and lead to be laid on a dry substrate. Underlay to be laid in strips across the fall of the roof, lapped and stapled into position with an upturn against any abutments. The underlay must not drape over the edges at the verge or eaves.
Wood cored rolls to be fitted over the underlay.

TIMBER FOR USE WITH LEADWORK

- Quality: Planed, free from wane, pitch pockets, decay and insect attack (ambrosia beetle excepted).
- Moisture content: Not more than 22% at time of fixing and covering. Give notice if greater than 16%.
- All new timbers to be Double Vac treated achieving pressure impregnation of 6mm with exposed cut end grain treated.
- Preservative treatment: Wood Protection Association Commodity Specification.
- Timber substrates to be marine grade plywood to a minimum thickness of 25mm. Timber to be well seasoned and completely dry prior to lead being laid.

CLIPS

Clips to be 0.6mm thick tinned copper sheet or 0.38 terne coated stainless steel. Minimum width of 50mm, turned over lead by minimum of 25mm except where tucked into a welted edge. Copper sheet to conform to BSEN 1172. Stainless steel sheet to conform to BSEN 10088.

NAILS & SCREWS

Nails to be large headed copper or stainless steel to BS 1020 – 1 & 2. Shanks to be annular, helical ring or serrated not less that 20mm long. Heavy duty nails at a min. diameter of 3.35mm and light duty min. diameter of 2.65mm. Screws to be brass or stainless steel to BS 1210 min. length 19mm and diameter 3.35mm

PATINATION

A coat of patination treatment is to be applied to all leadwork as soon each section is complete, at the end of the day, in accordance with manufacturer's instructions. Note that a coating will be required between laps and underneath lead for minimum of 75mm.

Lead sheet should be treated as soon as possible after fixing preferably. Patination oil should be applied not later than end of day's work, if it can't be done as the work proceeds.

Is important to apply a coating under the lower edge of lead-work and between the laps.

Clips along the edges of flashings should be turned over after application of patination oil treatment.

Weather using solvent or water based patination oil, follow the manufacturers guide to application.

SOLDER

Solder should conform to BS EN 29453.

Generally solder is only used for soldered dots or where lead welding or bossing is impracticable.

JOINTS IN LEAD-WORK

Wood core rolls are acceptable for flat roofing, sloping valley gutter work, pitched roofing and cladding.

Rolls shall be positioned in the direction of the falls except at ridges, hip intersections and high points in gutter linings.

Do not use hollow core rolls.

Joints running with the falls shall be wood core rolls having an over-cloak splash lap of 40mm

DRIPS

Provide drips across the fall for gradients with a minimum fall of 1:80 and up to 10□.

Joints across the fall shall be drips being a minimum height of 55mm.

Under-lap shall be dressed to the full height of the drip upstand with the head of the bay abutting the drip secured with two rows of nails. Rows to be 25mm and 50mm from the face of the upstand with the nails spaced at 75mm C/s in a staggered pattern.

Heads of the nails shall be sealed by soldering or lead welding to ensure fixings will be watertight.

Overlap from upper bay to be formed with a 75mm splash lap.

LEAD THICKNESS

Durability of lead in its working context is determined by the appropriate and correct selection of lead thickness.

When specifying lead thickness, include in your evaluation the following:

1. Anticipated life of the building vis-a-vis the anticipated working life expectancy of the lead sheet material.
2. The longer the desired working life, heavier the code to be used.
3. Bossing or dressing.
4. Vulnerability to wind uplift
5. Mechanical wear from foot traffic.

6. Risks of moss and lichen growth.
7. Use of thicker lead in longer pieces can be more economical than using thinner material with additional joints, particularly when detailing gutter linings.

For flat roof constructions – consider practicability of ventilating the void between the substrate and insulation.

Refer to building regulations and relevant codes of practice for guidance.

Lead sheet material for damp proof coursing use must be treated on both sides with bitumastic paint. The high alkaline content of bedding mortars will corrode unprotected lead sheet.

All lead-work must conform to BS EN 12588 and IS EN 112588 and I.C.P. 2: 2002 and the Lead Sheet Association guide to good practice detail manuals.

CARPENTRY/ TIMBER FRAMING

TIMBER PROCUREMENT

- Timber (including timber for wood-based products): Obtained from well managed forests/ plantations in accordance with:
    1. The laws governing forest management in the producer country or countries.
    2. International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
    1. Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied, or
    2. Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.

STRUCTURAL SOFTWOOD FOR STRUCTURAL USE GENERALLY

- Grading standard: To BS 4978, BS EN 14081-1, or other national equivalent and so marked.
    1. Timber of a target thickness less than 100 mm and not specified for wet exposure: Graded at an average moisture content not exceeding 20% with no reading being in excess of 24% and clearly marked as 'DRY' or 'KD' (kiln dried).
    2. Timber graded undried (green) and specified for installation at higher moisture contents: Clearly marked as 'WET' or 'GRN'.
- Strength class to BS EN 338: To engineers requirements.
- Treatment: Organic solvent impregnation, Service life: 40 years.

UNGRADED SOFTWOOD FOR INTERNAL NONSTRUCTURAL USE

- Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
- Surface finish: Planed all round.
- Treatment: None required unless otherwise specified.

SELECTION AND USE OF TIMBER

- Timber members damaged, crushed or split beyond the limits permitted by their grading: Do not use.

NOTCHES, HOLES AND JOINTS IN TIMBER

- Notches and holes: Position in relation to knots or other defects such that the strength of members will not be reduced.
- Scarf joints, finger joints and splice plates: Do not use without approval.

PROCESSING TREATED TIMBER

- Cutting and machining: Carry out as much as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thicknessed, planed, ploughed, etc.
- Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

MOISTURE CONTENT

- Moisture content of wood and wood based products at time of installation: Not more than:
    1. Covered in generally unheated spaces: 24%.
    2. Covered in generally heated spaces: 20%.
    3. Internal in continuously heated spaces: 20%.

FRAMING ANCHORS

- Manufacturer: Contractor's choice.
    1. Product reference: Contractor's choice.
- Material/ finish: Stainless steel.
- Fasteners: Galvanized or sherardized square twist nails.
    1. Size: Not less than size recommended by anchor manufacturer.

- Fixing: Secure using not less than the number of nails recommended by anchor manufacturer.

ADDITIONAL SUPPORTS

- Provision: Position and fix additional studs, noggings and/ or battens to support edges of sheet materials, and wall/ floor/ ceiling mounted appliances, fixtures, etc. shown on drawings.
- Material properties: Timber to be of adequate size and have the same treatment as adjacent timber supports.

TIMBER PROCUREMENT

- Timber (including timber for wood-based products): Obtained from well-managed forests and/ or plantations in accordance with:
- The laws governing forest management in the producer country or countries.
- International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
- Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
- Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
- Certification scheme: FSC Certification

PAINT FINISH TO ALL INTERNAL DOORS TO BE PROVIDED + TO BE REFURBISHED

1no. prime coat and 2no. coats low sheen satin paint finish in RAL 7016 to all internal doors to be provided and to be refurbished.

PAINTING

MATT EMULSION PAINT TO INTERNAL PLASTERED SURFACES AS SPECIFIED ON DRAWINGS

- Manufacturer: Colourtrend, Dulux, or similar approved by architect.
  Product reference: Matt finish, breathable water-based paint. Colour to be selected by architect.
- Surfaces: All proposed internal walls and ceilings.
  Preparation: Fill and smooth all defects & wash down surfaces.
- Initial coats: The first coat should be thinned by 20-50% with the addition of clean water (for plaster skim), 5-25% with the addition of clean water (for existing plaster walls).
- Second and third coat: Applied in full strength.

METAL PAINT TO EXTERNAL EXPOSED GUTTERS

- Manufacturer: Hammerite Ltd.
  Product reference: colour and finish to be selected by architect.
- Surfaces: externally exposed metal gutters.
  Preparation:
- - Clean out gutters of any lose debris and grass
- - Repair sections of gutters, brackets and downpipes that are damaged by rust/decay.
- - Wire brush clean existing rainwater goods
- Initial coats: Prime existing rainwater goods with anti-corrosive primer
- Second and third coat: Paint 2no. coats of Hammerite paint in black to match existing.

POWDERCOATING TO GALVANISED/ STAINLESS STEEL/ SERVICE KIOSKS/ RAILINGS

- Allow for powder coating to architects specification and approval.
- Qualicoat approved applicator
- 8 stage pre-treatment
- Chrome free pre-treatment plant, eco-friendly
- Meeting AAMA specifications
- Insure excellent paint adhesion and corrosion protection full coverage
- Marine Guarantee
- Colour to architects specification

GENERAL

None other than skilled workman, except apprentices, to be employed on the works. All paint, surfaces etc. is to be prepared and applied strictly in accordance with the manufacturers instructions.

WORKMANSHIP

All surfaces to be thoroughly dry before knotting, stopping or painting. No paint shall be applied externally in foggy or inclement weather and all necessary precautions are to be taken to prevent damage to paint by frost, etc. The surfaces of all new priming coats and undercoats are to be properly filled and sanded down and dusted of between coats as required. Painting shall not be proceeded with in any room unless it is free from dust and washed out. Walls to be rubbed down, fitted and free of all blisters and blemishes before decoration. On no account is emulsion paint to be used as a primer to woodwork. Unless otherwise noted paint or coat all exposed surfaces usually painting including piping, radiators trim etc. Ensure that the function of any moving parts of fittings, components etc. is not impaired by paint.

MATERIALS

All painting materials to be the best of the respective kinds. Approved proprietary brands such as Colourtrend to be applied in accordance with manufacturers' instructions. Store and mix materials in clean dry areas. Remove empty containers as they accumulate. Do not thin any produce unless specified by the manufacturer.

PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.

- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing

  work.

- Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- Substrates: Sufficiently dry in depth to suit coating.
- Efflorescence salts, dirt, grease and oil: Remove.
- Surface irregularities: Provide smooth finish.
- Organic growths and infected coatings:
  - Remove with assistance of biocidal solution.

  - Apply residual effect biocidal solution to inhibit regrowth.

- Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.

- Dust, particles and residues from preparation: Remove and dispose of safely.
- Doors, opening windows and other moving parts:
  - Ease, if necessary, before coating.

  - Prime resulting bare areas.

FIXTURES AND FITTINGS

- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment & reoccupation & obtain approval before commencing.

- Removal: Before commencing work: Ironmongery, cover plates, grilles, wall clocks, and other surface mounted fixtures.

- Replacement: Refurbish as necessary, refit when coating is dry.

WOOD PREPARATION

- General: Provide smooth, even finish with lightly rounded arrises.
- Degraded or weathered surface wood: Take back surface to provide suitable substrate.
- Degraded substrate wood: Repair with sound material of same species.
- Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
- Resinous areas and knots: Apply two coats of knotting.
- Defective primer: Take back to bare wood and re-prime.

MASONRY AND RENDERING PREPARATION Loose and flaking material: Remove.

PLASTER PREPARATION

- Nibs, trowel marks and plaster splashes: Scrape off.
- Over-troweled 'polished' areas: Provide suitable key.

COATING GENERALLY

- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing: Not permitted unless recommended by manufacturer.
- Priming coats: Apply as soon as possible on same day as preparation is completed.
- Finish:
  - Even, smooth and of uniform colour.

  - Free from brush marks, sags, runs and other defects.

  - Cut in neatly.

- Doors, opening windows and other moving parts: Ease before coating and between coats.

BEAD GLAZING TO COATED WOOD

- Before glazing: Apply first two coats to rebates and beads.

EXISTING GUTTERS

- Dirt and debris: Remove from inside of gutters.
- Defective joints: Clean and seal with suitable jointing material.
- Suspected hazardous materials: submit method statement.

PAINTING

Generally:

None other than skilled workman, except apprentices, to be employed on the works. All paint, surfaces etc. is to be prepared and applied strictly in accordance with the manufacturers instructions. The contractor to allow for a minimum of five panels (900mm x 900mm) for selection of internal colours and finishes by the architect and employer.

Workmanship:

All surfaces to be thoroughly dry before knotting, stopping or painting. No paint shall be applied externally in foggy or inclement weather and all necessary precautions are to be taken to prevent damage to paint by frost, etc. The surfaces of all new priming coats and undercoats are to be properly filled and sanded down and dusted of between coats as required. Painting shall not be proceeded with in any room unless it is free from dust and washed out. Walls to be rubbed down, fitted and free of all blisters and blemishes before decoration. On no account is emulsion paint to be used as a primer to woodwork. Unless otherwise noted paint or coat all exposed surfaces usually painting including piping, radiators trim etc. Ensure that the function of any moving parts of fittings, components etc. is not impaired by paint.

Materials:

All painting materials to be the best of the respective kinds. Approved proprietary brands such as Colortrend to be applied in accordance with manufacturers instructions. Store and mix materials in clean dry areas. Remove empty containers as they accumulate. Do not thin any produce unless specified by the manufacturer.

Internal Painting:

- Surfaces: Skim or plaster finished wall
  Preparation: to manufacturers recommendations

- Initial coats: to manufacturers recommendation
  Number of coats: one

- Undercoats: to manufacturers recommendation
  Number of coats: two

- Finishing coats
  Number of coats: two

External Painting of External Walls:

Refer to architects drawings & finishes schedule for details.

Ceilings:

Refer to architects drawings & finishes schedule for details.

Internal Joinery:

All existing internal joinery to be made good, lightly sanded and painted with no.1 coat of gloss over no.2 undercoat. New joinery to be finished with no.2 coats of eggshell satin gloss over two coats of undercoat.

EXTERNAL WINDOWS AND DOORS

GENERAL

EXECUTION

PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.

- Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Primed or sealed as specified before fixing components.

CORROSION PROTECTION

- Surfaces to be protected: aluminium to galvanized mild steel.
- Protective coating: Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
- Timing of application: Before fixing components.

FIXING DOORSETS

- Timing: After associated rooms have been made weather-tight and the work of wet trades is finished and dried out.

BUILDING IN

- General: Not permitted unless indicated on drawings.

DAMP PROOF COURSES IN PREPARED OPENINGS

- Location: Correctly positioned in relation to door frames. Do not displace during fixing operations.

FIXING OF WOOD FRAMES

- Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb and at 600 mm maximum centres.

FIXING IRONMONGERY GENERALLY

- Fasteners: Supplied by ironmongery manufacturer to architects approval.
- Finish/ Corrosion resistance: To match ironmongery.
- Holes for components: No larger than required for satisfactory fit/ operation.
- Adjacent surfaces: Undamaged.
- Moving parts: Adjusted, lubricated and functioning correctly at completion.

RAINWATER DRAINAGE SYSTEM

FIXING PIPEWORK

- Pipework: Fix securely, plumb and/ or true to line.
- Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
- Externally socketed pipes and fittings: Fix with sockets facing upstream.
- Additional supports: Provide as necessary to support junctions and changes in direction.
- Vertical pipes:
- - Provide a loadbearing support at least at every level.
- - Tighten fixings as work proceeds.
- - Wedge joints in unsealed metal pipes to prevent rattling.
- Wall and floor penetrations: Isolate pipework from structure.
- - Pipe sleeves: As per manufacturers guidance.
- - Masking plates: Fix rigidly to buildings. Elsewhere, provide brackets and fixings that allow pipes to slide.

FIXING VERTICAL PIPEWORK

- Bracket fixings: Screw-fixed with stainless steel screws
- Distance between bracket fixing centres (maximum): 1500mm

TESTING

- Dates for testing: Give notice.
- - Period of notice (minimum): 5 days.
- Preparation:
- - Pipework: Complete, securely fixed, free from defects, obstruction and debris before testing.
- Testing:
- - Supply clean water, assistance and apparatus
- - Do not use smoke to trace leaks.
- Records: submit a record of tests.

WALL TREATMENT

Brush-Applied Water-Repellent Coating for Masonry

Product: Diasen BKK Eco (or architect-approved equivalent)

Description:
Colourless, water-based siloxane coating, designed to protect absorbent walls made of brick, stone, cement, and similar mineral-based materials from rainwater infiltration. The product:

- Does not alter the colour or appearance of the masonry.
- Protects against frost and blocks humidity penetration.
- Allows existing moisture in masonry to evaporate.
- Enables deep impregnation, even on slightly damp surfaces.

Advantages:

- Quick and easy to apply ("Do it yourself" friendly).
- Long-lasting water repellency.
- Maintains water vapour permeability.
- Highly resistant to weathering and UV rays.
- Prevents efflorescence and mould formation.
- Low molecular weight for deep penetration; lime-stable and invisible.
- Solvent-free formulation.

Yield / Coverage:

- Brick: 0.30 – 0.40 L/m² (101.86 – 135.82 ft²/gal)
- Stone: 0.40 – 0.70 L/m² (58.21 – 101.86 ft²/gal)

Colour:

- Colourless

Packaging:

- 5 L (1.30 gal U.S.) plastic bucket
- Pallet: 20 boxes (4 pieces per box), total 400 L (105.60 gal U.S.)

Application Fields:

- Water-repellent impregnation for external and internal mineral-based masonry.

- Suitable for historic buildings or buildings of architectural significance.
- Can be used indoors in bathrooms, kitchens, and shower stalls.
- Preventive treatment against carbonation of exposed concrete.

Storage:

- Store in original, tightly closed containers in ventilated areas.
- Protect from sunlight, rain, frost; temperature above +5°C (41°F).
- Storage time: 24 months.

Preparation of Support:

- Substrate temperature: +5°C to +35°C.
- Clean surfaces thoroughly using cold water; steam or hot water if oil/grease is present. Do not use detergents.
- Remove fungi, algae, and efflorescence.
- Fill damaged joints with cement-based grout.
- Test visual effect before application due to variability in masonry.

Mixing:

- Product is ready to use.
- Do not add antifreeze, cement, or aggregates.

Application:

1. Best effect is obtained on a dry, absorbent surface.
2. Apply BKK Eco by brush or spray, giving a first abundant coat to ensure total coverage.
3. Apply a second coat evenly before the first is completely dry.
4. Continue until saturation. Generally, 2–3 coats applied about 1 hour apart are sufficient for complete impregnation.

Drying Time:

- At 23°C (73.4°F) and 50% relative humidity, drying is approx. 4 hours.
- Drying time varies with humidity and temperature.

Suggestions / Precautions:

- Environmental and substrate temperature must be between +5°C and +30°C (+41°F – +95°F).
- In summer, apply during cooler hours, away from direct sunlight.

- Do not apply during imminent rain, frost, strong fog, or RH > 70%.
- Not suitable for horizontal surfaces with standing water (basements, water basins, lift pits).
- Can be painted over with water-based paints.
- For indoor applications or unplastered absorbent external surfaces (exposed stone/brick), consider long-term protection using breathable paint or hydrophobic coating.
- Rilem/Karsten cup tests (EN 16302:2013) and hygrothermal modelling (EN 15026) may be used to assess absorption and guide additional protective measures.

Cleaning:

- Wash tools with spirit (turpentine) before the product hardens.

Safety:

- Follow instructions in the product safety data sheet.
- Use protective gloves and an anti-dust mask when handling.