

Project No. 150457

Client: Council of the Isles of Scilly

Construction Issue 29/01/2018

STRIDE TREGLOWN
ARCHITECTURE

150457_Carn Gwavel School

08 June 2018

C20 Demolition

5 SURVEY

- Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
 - the structure or structures to be deconstructed/ demolished,
 - the site on which the structure or structures stand, and
 - the surrounding area.
- Report and method statements: Submit, describing:
 - Form, condition and details of the structure or structures, the site and the surrounding area.
Extent: As drawing D1001 .
 - Type, location and condition of features of historical, archaeological, geological or ecological importance.
 - Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures or by noise, vibration and/ or dust generated during deconstruction/ demolition.
 - Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
 - Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their 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 deconstruction/ demolition.
 - Details of specific pre-weakening required.
 - Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
 - Arrangements for control of site transport and traffic.
 - Special requirements: - .

10 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to foundation level. Break up and dig out foundations.

15 BENCH MARKS

- Unrecorded bench marks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.

20 FEATURES TO BE RETAINED

- General: Keep in place and protect the following: Refer to Drawing D1001.

25 LOCATION OF SERVICES

- Services affected by the Works: Locate and mark positions.
- Mains services marking: Arrange with the appropriate authorities for services to be located and marked.

- 30 **SERVICES DISCONNECTION ARRANGED BY CONTRACTOR**
- Responsibility: Before starting deconstruction/ demolition arrange with the appropriate authorities for disconnection of services owned by those authorities and removal of associated fittings and equipment.
- 32 **DISCONNECTION OF DRAINS**
- General: Locate, disconnect and seal disused foul and surface water drains.
 - Sealing: Permanent, and within the site.
- 35 **LIVE FOUL AND SURFACE WATER DRAINS**
- General: Protect drains and fittings still in use. Keep free of debris and ensure normal flow during deconstruction/ demolition work.
 - Damage: Make good damage arising from deconstruction/ demolition work. Leave clean and in working order at completion of deconstruction/ demolition work.
- 40 **SERVICE BYPASS CONNECTIONS**
- General: Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/ properties.
 - Notice: Give adequate notice to adjoining owners and all affected occupiers if shutdown is necessary.
- 45 **SERVICES TO BE RETAINED**
- Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
 - Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.
- 50 **WORKMANSHIP**
- Standard: Demolish structures in accordance with BS 6187.
 - Operatives: Appropriately skilled and experienced for the type of work. Holding, or in training to obtain, relevant CITB Certificates of Competence.
 - Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.
- 55 **SITE HAZARDS**
- Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.
 - Dust: Reduce by periodically spraying with an appropriate wetting agent, or contain.
 - Lead dust: Submit method statement for control, containment and clean-up regimes.
 - Site operatives and general public: Protect from vibration, dangerous fumes and dust arising during the course of the Works.
- 60 **ADJOINING PROPERTY**
- Temporary support and 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.
 - Support to foundations: Do not disturb.

65 STRUCTURES TO BE RETAINED

- Extent: As drawing D1001.
- Parts which are to be kept in place: Protect.
- Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

70 PARTLY DECONSTRUCTED/ DEMOLISHED STRUCTURES

- General: Leave partly in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
- Temporary works: Prevent overloading due to debris.
- Access: Prevent access by unauthorized persons.

71 DANGEROUS OPENINGS

- General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
- Access: Prevent access by unauthorized persons.

75 ASBESTOS-CONTAINING MATERIALS – KNOWN OCCURENCES

- General: Materials containing asbestos are known to be present in the structure(s) to be demolished in the following locations: Refer to report.
- Removal: By contractor licensed by the Health and Safety Executive, and prior to other works starting in these locations.

76 ASBESTOS-CONTAINING MATERIALS – UNKNOWN OCCURENCES

- Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
- Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

78 UNFORESEEN HAZARDS

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

85 SITE CONDITION AT COMPLETION

- Debris: Clear away and leave the site tidy on completion.
- Special requirements: Making Good Generally
All surfaces and finishes, pavings, kerbs, edgings, etc. within or outside the contractors compound, affected by the works to be reinstated to their original condition and approval of the supervising officer.

86 SITE LEVELS AT COMPLETION

- Levels: Grade the site to follow the levels of adjacent areas.

90 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from site as work proceeds where not to be reused or recycled for site use.

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91 EMPLOYER'S PROPERTY

- Components and materials to remain the property of the Employer: Description: Existing site/ street furniture.
- Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.
- Specific limitations: None.

95 RECYCLED MATERIALS

- Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.

C45 Damp proof course renewal/ insertion

4 SURVEY AND REPORT

- Survey generally:
 - Purpose: To confirm presence and extent of rising damp and suitability of walls for treatment by the proposed dpc system.
 - Timing: Before starting dpc installation work carry out survey and submit survey report.
- Survey report content:
 - Extent of rising damp: Determine using methods recommended in the Property Care Association (PCA) 'Code of practice for the installation of remedial damp proof courses in masonry walls', clause 6.
 - Proposals: Submit levels and positions of horizontal and vertical dpcs
 - Associated work: Nature and extent of work required to ensure an effective dpc.
 - Limitations: Identify areas where a full survey could not be carried out.
 - Other information: Any considered relevant.

12 ASSOCIATED WORK

- Work shown to be necessary by the survey: Carry out as part of main contract works.

15 BEFORE DPC INSTALLATION

- Internal finishes: Remove only sufficient to expose the proposed line of dpc.
- Fungal or beetle attack to timber sections: Report occurrences.

24 REPOINTING OF WALLS

- Location: On line of proposed dpc.
- Timing: Before installation of dpc.
- Mortar: As section Z21.
 - Mix: As recommended by the chemical dpc manufacturer .

30 CHEMICAL INJECTION DPC SYSTEM

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Installation: In accordance with BS 6576 by a firm approved by the dpc system manufacturer.

40 MAKING GOOD TO EXPOSED INJECTION HOLES

- Mortar mix: As recommended by the dpc manufacturer to match existing masonry in colour and texture.
 - Installation: Fully fill holes. Finish neatly and flush.
- Approval of appearance: Obtain on first few holes before completing the remainder.

50 GUARANTEE

- Type: Insured protection. Administered by an independent insurance protection company.
 - Guarantee period from completion of installation (minimum): 20 years.
- Documentation: Provide certificates/ guarantees at completion of installation.

C46 Cavity wall tie renewal/ insertion

5 SURVEY OF EXISTING CAVITY WALLS

- Timing: Before starting remedial work covered in this section.
- Purpose: To confirm nature and extent of remedial work to wall ties.
- Survey report: Submit, stating:
 - Form of construction, materials used and condition of walls.
 - Thicknesses of internal and external leaves.
 - Widths of cavities.
 - Nature and extent of remedial work including requirements for additional ties at, e.g. sloping verges, movement joints and openings.
 - Schedule of services, fixtures and finishes requiring removal to facilitate renewal of wall ties.
 - Any other information considered relevant.

10 INSERTING CAVITY WALL TIES Generally

- Existing cavity wall construction: Assumed Unfilled cavity wall.
 - External leaf: 100 mm solid concrete block with render finish.
 - Internal leaf: 100 mm dense concrete block.
 - Cavity width: 50 ± 5 mm..
- Existing ties: Galvanized vertical twist.
 - Treatment: Bend down or crop off. Submit proposals.
- Remedial cavity wall ties:
 - Type: Contractor's choice.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Diameter: Contractor's choice.
 - Length: Site measurement.

30 INSTALLATION OF WALL TIES GENERALLY

- Masonry:
 - Stable at all times during wall tie installation.
 - Formation of holes: Minimize.
 - Cavities: Clear and free from debris.
 - Fixing holes: Clean.
- Wall ties:
 - Installation: Accurately and securely.
 - Drips: Centred on cavity.
 - Expansion anchor fixings: Set to the correct torque.
 - Bonded fixings: Thoroughly grouted.
- Facework: Keep clean.

40 POSITIONING OF WALL TIES

- Spacing of wall ties: 750 mm maximum horizontal centres (staggered alternate courses) and 450 mm maximum vertical centres.
- Additional ties:
 - Reveals of unbonded openings and edges (including gables and movement joints): Fix additional ties within 225 mm of edges, joints and roof verges at 300 mm maximum vertical centres.
 - Cavities with insulation batts: Not required.

50 REMOVING MASONRY UNITS

- Removal of units for reuse: In one piece. Clean and set aside.
- Units unsuitable for reuse: Obtain instructions.
- Adjacent masonry:
 - Joints: Do not damage or widen.
 - Old mortar: Remove.
 - Cavities: Keep clean.

60 REMOVAL OF EXISTING WALL TIES FROM INTERNAL LEAF

- Wall ties: Remove carefully and completely.
- Internal leaf/ finishes: Minimize disturbance.

65 MAKING GOOD OF CAVITY WALL INSULATION

- Cavities: Clear of dirt and debris.
- New insulation: confirm if insulation is present.
 - Thickness: To match existing.
 - Installation: Secure. No gaps.

70 REPLACING MASONRY UNITS

- Masonry units: 100 mm concrete block.
- Mortar: As section Z21.
 - Mix: 1:1:5-6 cement:lime:sand, colour matched to approval.
- Mortar joints: Control suction. Lay units on full bed and fully fill vertical joints.
 - Profile: Finish neatly to match existing.
- Cavities: Keep clean.

80 MAKING GOOD OF INSERTION/ INSPECTION HOLES IN EXTERNAL LEAF

- Mortar mixes: To approval.
 - Colour and texture: To match existing masonry units/ joints.
- Insertion/ Inspection holes: Clean and fully filled with repair mortar.
 - Finish: Neat and flush.

90 REPOINTING CRACKED JOINTS

- Extent of repointing: To joints with cracks wider than 1.5 mm.
- Joints:
 - Existing mortar: Remove carefully. Do not damage adjacent masonry or widen joints.
 - Recess to receive pointing: Neat and square, minimum depth twice joint thickness. Remove dust and debris.
- Mortar: As section Z21.
 - Mix: 1:1:5-6 cement:lime:sand, colour matched to approval.
- Repointing: Control suction. Fully fill joints with mortar.
 - Profile: Finish neatly to match existing adjacent joints.
- Facework: Keep clean.

95 DOCUMENTATION

- Submit:
 - Statement of quality control checks.
 - Guarantee certificate.

C52 Fungus/ beetle eradication

5 SURVEY AND REPORT

- Survey generally:
 - Purpose: To ascertain nature and extent of fungal/ beetle attack. To ascertain sources and extent of any dampness.
 - Timing: Before starting eradication work carry out survey and submit survey report.
- Survey report content:
 - Description of method of investigation.
 - Factors affecting execution of the work: Identify problematic site conditions and restrictions including the presence of bats, barn owls, other protected species or breeding birds.
 - Laboratory results identifying attacking organisms. Plan and section drawings or annotated photographs, defining extent of attack.
 - Proposals for eradication treatments and procedures, including measures to halt damp penetration and promote drying out.
 - Measurements of wood moisture content, with identification of instances above 20%.
 - Identification of neighbouring buildings that may be involved in attack.
 - Associated work: Nature and extent of repair/ replacement work required to load bearing constructions and to the building fabric in general.
 - Other information: Any considered relevant.

12 ASSOCIATED WORK

- Work shown to be necessary by survey: NONE KNOWN AT PRESENT.

15 DRYING OUT OF BUILDING FABRIC

- Drying conditions: Establish as soon as possible.
- Drying methods: Submit proposals.

26 FUNGAL ATTACK

- Dry rot:
 - Fruiting bodies: Spray with fungicide. Remove carefully and clean affected surfaces.
 - Infected materials to be removed: Remove carefully without disturbance or damage to adjacent building fabric; dispose of safely.
- Wet rot:
 - Decayed timber to be removed: Cut out until sound timber is reached.
- Infected/ decayed material to be retained: Obtain instructions.

30 BEETLE INFESTATION

- Infected timber: Cut, scrape and trim back to sound timber. Remove debris immediately and dispose of safely.

37 TIMBER PRESERVATIVES/ MASONRY FUNGICIDES GENERALLY

- Products: Registered by the Health and Safety Executive (HSE) and listed on the HSE website under non-agricultural pesticides.
- Application: In accordance with statutory conditions of approval given on product labels and manufacturer's recommendations.

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70 GUARANTEE

- Type: Insured protection. Administered by an independent insurance protection company.
 - Guarantee period from completion of installation (minimum): 20 years.
- Documentation: Provide certificates/ guarantees at completion of treatment.

C90 Alterations - spot items

GENERAL

10 DESCRIPTIONS

- Location of spot item descriptions: Schedule of work.

20 EMPLOYER'S PROPERTY

- Components and materials arising from alterations that are to remain the property of the Employer: All loose and wall mounted fitting except sanitaryware .
 - Protection: Maintain until items listed above are removed by the Employer or reused in the Works, or until the end of the Contract.

30 RECYCLED MATERIALS

- Materials arising from alterations: May be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification.
- Evidence of compliance: Submit full details and supporting documentation.

F10 Brick/ block walling

TYPES OF WALLING

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

345 CONCRETE COMMON BRICKWORK BELOW DPC LEVEL

- Bricks: To BS EN 771-3.
 - Configuration: Group 1.
 - Compressive strength:
Mean value: 7.3 N/mm².
Characteristic value: 7.3 N/mm².
Category: II.
 - Freeze/ Thaw resistance: Suitable for exposed external use below dpc.
 - Water absorption by capillarity: Not applicable.
 - Recycled content: None permitted.
 - Work sizes (length x width x height): 215 x 100 x 65 mm.
Tolerance category: D1.
 - Special shapes: None.
 - Additional requirements: Tie back to concrete slab edge and upstand in accordance with SE's details and wall tie specification. Mortar testing to be carried out if required stipulated by SE..
- Mortar: As section Z21.
 - Standard: To BS EN 998-2.
 - Mix: 1:6.5 masonry cement:sand.
 - Additional requirements: None.
- Bond: Half lap stretcher.

355 CONCRETE COMMON BLOCKWORK BELOW DPC LEVEL

- **Blocks:** To BS EN 771-3.
 - **Manufacturer:** Celcon or equal approved.
Product reference: High Strength Grade.
 - **Configuration:** Group 1.
 - **Compressive strength:**
Mean value: 7.3 N/mm².
Characteristic value: 7.3 N/mm² as specified by SE.
Category: II.
 - **Freeze/ Thaw resistance:** Suitable for exposed external use below dpc.
 - **Thermal properties:** n/a.
 - **Recycled content:** None permitted.
 - **Work sizes (length x width x height):** 440 x 100 x 215mm.
Tolerance category: D1.
 - **Special shapes:** None.
 - **Additional requirements:** Tie back to concrete slab edge and upstand in accordance with SE's details and wall tie specification. Mortar testing to be carried out if required stipulated by SE..
- **Mortar:** As section Z21.
 - **Standard:** To BS EN 998-2.
 - **Mix:** 1:6.5 masonry cement:sand.
 - **Additional requirements:** None.
- **Bond:** Half lap stretcher.

355A CONCRETE COMMON BLOCKWORK FOUNDATION BLOCKS

- **Blocks:** To BS EN 771-3.
 - **Manufacturer:** H+H Celcon or equal approved.
Product reference: Celcon Foundation block.
 - **Configuration:** Group 1.
 - **Compressive strength:**
Mean value: Not applicable.
Characteristic value: 7.3 N/mm² as specified by SE.
Category: II.
 - **Freeze/ Thaw resistance:** Suitable for exposed external use below dpc.
 - **Thermal properties:** N/A.
 - **Recycled content:** None permitted.
 - **Work sizes (length x width x height):** 440 x 300 x 215 mm.
Tolerance category: D1.
 - **Special shapes:** None.
 - **Additional requirements:** None.
- **Mortar:** As section Z21.
 - **Standard:** To BS EN 998-2.
 - **Mix:** 1:6.5 masonry cement:sand.
 - **Additional requirements:** None.
- **Bond:** Half lap stretcher.

355B CONCRETE COMMON BLOCKWORK NEW EXTERNAL CAVITY WALLS

- **Blocks:** To BS EN 771-3.
 - **Manufacturer:** H+H Celcon or equal approved.
Product reference: High Strength Grade.
 - **Configuration:** Group 1.
 - **Compressive strength:**
Mean value: 7.3 N/mm².
Characteristic value: 7.3 N/mm².
Category: II.
 - **Freeze/ Thaw resistance:** Not to be left exposed.
 - **Thermal properties:** N/A.
 - **Recycled content:** None permitted.
 - **Work sizes (length x width x height):** 440 x 100 x 215 mm.
Tolerance category: D1.
 - **Special shapes:** None.
 - **Additional requirements:** None.
- **Mortar:** As section Z21.
 - **Standard:** To BS EN 998-2.
 - **Mix:** 1:6.5 masonry cement:sand.
 - **Additional requirements:** None.
- **Bond:** Half lap stretcher.

356 CONCRETE COMMON BLOCKWORK INFILL CAVITY WALLS ABOVE & BELOW DPC FOR RENDERING

- **Blocks:** To BS EN 771-3.
 - **Manufacturer:** H+H Celcon or equal approved.
Product reference: High Strength Grade.
 - **Configuration:** Group 1.
 - **Compressive strength:**
Mean value: 7.3 N/mm².
Characteristic value: 7.3 N/mm².
Category: II.
 - **Freeze/ Thaw resistance:** Suitable for exposed external use below dpc.
 - **Thermal properties:** N/A.
 - **Recycled content:** Contractor's choice.
 - **Work sizes (length x width x height):** 440 x 90 x 215 mm.
Tolerance category: D1.
 - **Special shapes:** None.
 - **Additional requirements:** None.
- **Mortar:** As section Z21.
 - **Standard:** To BS EN 998-2.
 - **Mix:** 1:6.5 masonry cement:sand.
 - **Additional requirements:** None.
- **Bond:** Half lap stretcher.

357 CONCRETE COMMON BLOCKWORK TO INTERNAL WALLS ABOVE DPC

- Blocks: To BS EN 771-3.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Configuration: Group 1.
 - Compressive strength:
 - Mean value: 7.3 N/mm².
 - Characteristic value: 7.3 N/mm² tbc by SE.
 - Category: II.
 - Freeze/ Thaw resistance: Suitable for exposed external use below dpc.
 - Thermal properties: N/A.
 - Recycled content: Contractor's choice.
 - Work sizes (length x width x height): 440 x 215 x 140mm.
 - Tolerance category: D1.
 - Special shapes: None.
 - Additional requirements: None.
- Mortar: As section Z21.
 - Standard: To BS EN 998-2.
 - Mix: 1:6.5 masonry cement:sand.
 - Additional requirements: None.
- Bond: Half lap stretcher.

WORKMANSHIP GENERALLY

440 CONDITIONING OF CONCRETE BRICKS/ BLOCKS

- Autoclaved concrete bricks/ blocks delivered warm from manufacturing process: Do not use.
- Age of nonautoclaved concrete bricks/ blocks: Do not use until at least four weeks old.
- Avoidance of suction in concrete bricks/ blocks: Do not wet.
 - Use of water retaining mortar admixture: Submit details.

460 MORTAR GROUPS

- Mix proportions: For a specified group select a mix design from the following:
 - Group 1:
 - 1:0–0.25:3 (Portland cement:lime:sand with or without air entraining additive).
 - 1:3 (Portland cement:sand and air entraining additive).
 - Group 2:
 - 1:0.5:4–5 (Portland cement:lime:sand with or without air entraining additive).
 - 1:3 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1:2.5–3.5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1:3–4 (Portland cement:sand and air entraining additive.)
 - Group 3:
 - 1:1:5–6 (Portland cement:lime:sand with or without air entraining additive).
 - 1:3.5–4 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1:4–5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1:5–6 (Portland cement:sand and air entraining additive).
 - Group 4:
 - 1:2:8–9 (Portland cement:lime:sand with or without air entraining additive).
 - 1:4.5 (masonry cement:sand containing Portland cement and lime in approximate ratio 1:1, and an air entraining additive).
 - 1:5.5–6.5 (masonry cement:sand containing Portland cement and inorganic materials other than lime and air entraining additive).
 - 1:7–8 (Portland cement:sand and air entraining additive).
- Batching: Mix proportions by volume.
- Mortar type: Continuous throughout any one type of masonry work.

500 LAYING GENERALLY

- Mortar joints: Fill vertical joints. Lay bricks, solid and cellular blocks on a full bed.
- AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
- Clay block joints:
 - Thin layer mortar: Lay blocks on a full bed.
 - Interlocking perpend: Butted.
- Bond where not specified: Half lap stretcher.
- Vertical joints in brick and concrete block facework: Even widths. Plumb at every fifth cross joint.

520 ACCURACY

- Courses: Level and true to line.
- Faces, angles and features: Plumb.
- Permissible deviations:
 - Position in plan of any point in relation to the specified building reference line and/ or point at the same level ± 10 mm.
 - Straightness in any 5 m length ± 5 mm.
 - Verticality up to 3 m height ± 10 mm.
 - Verticality up to 7 m height ± 14 mm.
 - Overall thickness of walls ± 10 mm.
 - Level of bed joints up to 5 m (brick masonry) ± 11 mm.
 - Level of bed joints up to 5 m (block masonry) ± 13 mm.

535 HEIGHT OF LIFTS IN WALLING USING CEMENT GAUGED OR HYDRAULIC LIME MORTAR

- Quoins and advance work: Rack back.
- Lift height (maximum): 1.2 m above any other part of work at any time.
- Daily lift height (maximum): 1.5 m for any one leaf.

545 LEVELLING OF SEPARATE LEAVES

- Locations for equal levelling of cavity wall leaves: As follows:
 - Every course containing vertical twist type ties or other rigid ties.
 - Every third tie course for double triangle/ butterfly ties.
 - Courses in which lintels are to be bedded.

560 COURSING BRICKWORK

- Gauge: Four brick courses including bed joints to 300 mm.

580 LAYING FROGGED BRICKS

- Single frogged bricks: Frog uppermost.
- Double frogged bricks: Larger frog uppermost.
- Frog cavity: Fill with mortar.

585 LAYING CELLULAR BRICKS

- Orientation: Cavities downward.

595 LINTELS

- Bearing: Ensure full length masonry units occur immediately under lintel ends.

610 SUPPORT OF EXISTING WORK

- Joint above inserted lintel or masonry: Fully consolidated with semidry mortar to support existing structure.

620 BLOCK BONDING NEW WALLS TO EXISTING

- Pocket requirements: Formed as follows:
 - Width: Full thickness of new wall.
 - Depth (minimum): 100 mm.
 - Vertical spacing:
 - Brick to brick: 4 courses high at 8 course centres.
 - Block to block: Every other course.
- Pocket joints: Fully filled with mortar.

635 JOINTING

- Profile: Consistent in appearance.

645 ACCESSIBLE JOINTS NOT EXPOSED TO VIEW

- Jointing: Struck flush as work proceeds.

665 POINTING TO ALL WALLING

- Joint preparation: Remove debris. Dampen surface.
- Mortar: As section Z21.
 - Standard: To BS EN 998-2.
 - Mix: 1:1:6 cement:lime:sand.
 - Additional requirements: Submit samples of mortar for approval.
- Profile: Bucket handle.

671 FIRE STOPPING

- Avoidance of fire and smoke penetration: Fit tightly between cavity barriers and masonry. Leave no gaps.

690 ADVERSE WEATHER

- General: Do not use frozen materials or lay on frozen surfaces.
- Air temperature requirements: Do not lay bricks/ blocks:
 - In cement gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising.
 - In hydraulic lime:sand mortars when at or below 5°C and falling or below 3°C and rising.
 - In thin joint mortar glue when outside the limits set by the mortar manufacturer.
- Temperature of walling during curing: Above freezing until hardened.
- Newly erected walling: Protect at all times from:
 - Rain and snow.
 - Drying out too rapidly in hot conditions and in drying winds.

780 GROUND LEVEL

- Commencement of facework: Not less than 150 mm below finished level of adjoining ground or external works level.

830 CLEANLINESS

- Facework: Keep clean.
- Mortar on facework: Allow to dry before removing with stiff bristled brush.
- Removal of marks and stains: Rubbing not permitted.

F30 Accessories/ sundry items for brick/ block/ stone walling

To be read with Preliminaries/ General conditions.

CAVITIES

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 110 **CONCRETE FILL TO BASE OF CAVITY**
- Concrete generally: To BS EN 206-1 and BS 8500-2.
 - Designated concrete: ST2 to soil conditions .
 - Workability: High.
 - Extent: Maintain 75 mm between top of fill and external ground level and a minimum of 225 mm between top of fill and ground level dpc.
 - Placement: Compact to eliminate voids.
- 120 **CLEANLINESS**
- Cavity base and faces, ties, insulation and exposed dpcs: Free from mortar and debris.
- 130 **PERPEND JOINT WEEP HOLES**
- Form: Open perpend joint.
 - Locations: Through outer leaf immediately above base of cavity, at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
 - Provision: At not greater than 1000 mm centres and not less than two over each opening.
- 132 **PERPEND JOINT PLASTICS WEEP HOLES**
- Manufacturer: Rytons Building Products Ltd or equal approved. .
 - Product reference: Rytweep clear ref RYTWECL
 - Accessories: Rytweep Tube ref RYTW TUBE .
 - Locations: Through outer leaf immediately above base of cavity, at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
 - Provision: At not greater than 1000 mm centres and not less than two over each opening.
- 150 **FULL FILL CAVITY INSULATION**
- Insulation: Bellow DPC Expanded polystyrene (EPS) bead boards to BS EN 13163.
 - Product certification: Not Applicable.
 - Manufacturer: Jabilte or similar approved.
 - Product reference: Classic Board.
 - Recycled content: Contractors Choice.
 - Face size (nominal length x width): 1200x2400mm.
 - Thickness (nominal): 100mm to suite full width of cavity.
 - Thermal conductivity: 0.035W/m2K.
 - Reaction to fire class: F.
 - Additional requirements: None.
 - Placement: Continuous and free of mortar and debris.

155 PARTIAL FILL CAVITY INSULATION

- Insulation: Extruded polystyrene boards to BS EN 13164.
 - Product certification: British Board of Agreement (BBA) Certificate.
- Manufacturer: Kingspan Kootherm K108 Cavity Board.
 - Product reference: External Wall Insulation.
- Recycled content: As recommended by Manufacturer.
- Face size (length x width): 1200 x 600 mm.
- Thickness (nominal): 50mm.
- Thermal conductivity: 0.020 W/(m.K).
- Reaction to fire class: F.
- Additional requirements: A+ BRE green guide rated. Close remainder of cavity up to a level 75mm below external ground level with weak mix concrete fill as spec F30/110. Sit down onto concrete toe at foot of brickwork..
- Placement: Secure against face of inner leaf.
 - Residual cavity: Clear and unobstructed.
- Joints between boards, at closures and penetrations: No gaps and free from mortar and debris.

156 PARTIAL FILL CAVITY INSULATION TO BRICK PLINTH

- Insulation: Phenolic foam boards to BS EN 13166.
 - Product certification: British Board of Agreement (BBA) Certificate.
- Manufacturer: Jablite.
 - Product reference: External Wall Insulation.
- Recycled content: As recommended by Manufacturer.
- Face size (length x width): 1200 x 600 mm.
- Thickness (nominal): 50mm.
- Thermal conductivity: 0.032 W/(m.K).
- Reaction to fire class: F.
- Additional requirements: Min. u-value 0.7 W/(m².K) through plinth. A+ BRE green guide rated. Close remainder of cavity up to a level 75mm below external ground level with weak mix concrete fill as spec F30/110. Sit down onto concrete toe at foot of brickwork..
- Placement: Secure against face of inner leaf.
 - Residual cavity: Backfill as spec F30/110.
- Joints between boards, at closures and penetrations: No gaps and free from mortar and debris.

180 CAVITY CLOSERS NEW WINDOW OPENINGS IN NEW OR EXISTING BLOCKWORK WALLS

- Manufacturer: Kingspan or equal quality. Spec based on Kingspan - contractor to check width of cavity .
 - Product reference: Thermabate Plus cavity closer with twin flange .
- Accessories: To include integral insulation .

- 185A TRANSMITTED NOISE REDUCTION SYSTEM Thermal Bridging.
- Walls - Prevention of Thermal Bridging - Foamglas (Load Bearing) Perimeter Insulation - Perinsul HL
 - " Manufacturer: FOAMGLAS®
 - Web: www.foamglas.co.uk
 - Email: info@foamglas.co.uk
 - Tel: +44 (0)20 7492 1731
 - Fax: +44 (0)20 7492 1730
 - Address: 31-35 Kirby Street, Hatton Garden, London EC1N 8TE
 - " Product reference: 5.2 Walls - Prevention of Thermal Bridging - Foamglas Perimeter Insulation - Perinsul HL
 - " Mounting bituminous waterproofing membrane: As section J40
 - " Insulation:
 - Type: Foamglas® Perinsul HL, laid in a bed of mortar
 - Thickness: 65 x 100mm

REINFORCING/ FIXING ACCESSORIES

- 211 CAVITY WALL TIES USED WITH PARTIAL FILL INSULATION FOR ALL CAVITY WALLS USING PARTIAL FILL INSULATION
- Standard: refer SE.
 - Type: refer SE .
 - Manufacturer: refer SE.
 - Product reference: refer SE.
 - Material/ finish: refer SE .
 - Sizes: refer SE .
 - Tie mounted insulation retaining clips: As recommended by tie manufacturer.
- 220 WALL TIES To Infill Walls
- Manufacturer:
 - SIMPSON STRONG-TIE®
 - Winchester Road
 - Cardinal Point
 - Tamworth
 - Staffordshire
 - B78 3HG
 - Telephone: 01827 255600
 - Fax: 01827 255616 .
 - Product reference: WTS2 wire wall tie .
 - Material/ finish: Stainless steel .
 - Sizes: In accordance with manufacturer's recommendations .

228 FIXING TIES IN MASONRY CAVITY WALLS WITH FULL FILL CAVITY INSULATION

- Embedment in mortar beds (minimum): 50 mm.
- Placement: Sloping slightly downwards towards outer leaf, without bending. Drip centred in the cavity and pointing downwards.
- Spacing: Staggered in alternate courses.
 - Horizontal centres: 750 mm .
 - Vertical centres: 450 mm .
- Provision of additional ties:
 - One row to support lowest row of insulation batts.
 - Within 225 mm of reveals of unbonded openings.
 - Spacing: At not more than 300 mm centres vertically .

233 FIXING TIES IN MASONRY CAVITY WALLS WITH PARTIAL FILL CAVITY INSULATION

- Embedment in mortar beds (minimum): 50 mm.
- Placement: Sloping slightly downwards towards outer leaf, without bending. Drip centred in the cavity and pointing downwards.
- Spacing: Evenly space in non staggered horizontal and vertical rows.
 - Horizontal centres: 600 mm .
 - Vertical centres: 450 mm .
- Spacing centres of top (eaves) row of ties: Not more than 450 mm .
- Provision of additional ties: Within 225 mm of reveals of unbonded openings.
 - Spacing: At not more than 300 mm centres vertically .

241 WALL STARTERS/ CONNECTORS

- Manufacturer:
SIMPSON STRONG-TIE®
Winchester Road
Cardinal Point
Tamworth
Staffordshire
B78 3HG
Telephone: 01827 255600
Fax: 01827 255616 .
 - Product reference: C2K crocodile wall extension profile .
- Material/ finish: Austenitic stainless steel .
- Sizes: In accordance with manufacturer's recommendations .

FLEXIBLE DAMP PROOF COURSES/ CAVITY TRAYS

360 GAS RESISTANT DPCS/ CAVITY TRAYS

- Manufacturer: Visqueen Building Products, Maerdy Industrial Estate, Rhymney, Tradegar, NP22 5PY. Tel: 01685 804672 Fax: 01685 842580 Email: enquires@visqueenbuilding.co.uk Web: www.visqueenbuilding.co.uk .
 - Product reference: Visqueen Zedex CPT High Performance DPC: a co-polymer thermoplastic damp proof course suitable for horizontal, vertical or cavity tray applications. Suitable to prevent the ingress of radon gas. .

370 PREFORMED CAVITY TRAYS

- Manufacturer: Cavity Trays Ltd or equal quality. Spec based on Cavity Trays Ltd., Web: www.cavitytrays.com - Email: enquiries@cavitytrays.co.uk - Tel: +44 (0)1935 474769 .
 - Product references and locations: TYPE C .
- Placement: To provide a free draining and watertight installation.

380 PREFORMED DPC/ CAVITY TRAY JUNCTION CLOAKS/ STOP ENDS

- Manufacturer: Visqueen Ltd .
 - Product references and locations: Pre-formed cloaks using Visqueen Zedex CPT High Performance DPC. Locations; Internal corners of perimeter concrete upstand, external and Internal corners around each external door opening to form continuous and tidy damp proofing detail. Dimensioned drawings to be provided by Visqueen for approval by Architect prior to placing order. .
- Placement: To provide a free draining and watertight installation. Seal laps with dpcs and/ or cavity trays.

385A PREFORMED DPC/ CAVITY TRAY JUNCTION CLOAKS/ STOP ENDS

- Manufacturer: Cavity Trays Ltd.
 - Web: www.cavitytrays.com.
 - Email: enquiries@cavitytrays.co.uk.
 - Tel: +44 (0)1935 474769.
 - Address: Administration Centre, Lufton Trading Estate, Yeovil, Somerset. BA22 8HU.
 - Product reference: Type C Cavitytray
- Location: ABOVE CONCRETE LINTELS .
- Lintel type/ profile: CONCRETE - REFER TO SE DETAILS FOR SIZES.
- Cavity width: ASSUMED 50MM.
- Opening width: AS DRAWINGS.
- Lintel length: REFER TO SE SCHEDULE.
- Dpc thickness: 1.5 mm.
- Inner skin return: Not required.

INSTALLATION OF DPCS/ CAVITY TRAYS

415 HORIZONTAL DPCS

- Placement: In continuous lengths on full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.
- Width: At least full width of leaf unless otherwise specified. Edges of dpc not covered with mortar or projecting into cavity.
- Overlying construction: Immediately cover with full even bed of mortar to receive next masonry course.
- Overall finished joint thickness: As close to normal as practicable.

425 GROUND LEVEL DPCS

- Joint with damp proof membrane: Continuous and effectively sealed.

445 SILL DPCS

- Form and placement: In one piece and turned up at back when sill is in contact with inner leaf.

- 446 DOOR THRESHOLD DPCS
- Form and placement: In one piece and turned up at back when threshold is in contact with inner leaf or slab edge. Ensure continuity of DPC / DPM around door openings generally.
- 455 COPING/ CAPPING DPCS
- Placement: Bed in one operation to ensure maximum bond between masonry units, mortar and dpc.
 - Dpcs crossing cavity: Provide rigid support to prevent sagging.
- 465 SEALING DPCS TO PLINTH
- Overlaps and junctions: Seal with DPC manufacturers double sided adhesive tape .
- 475 SITE FORMED CAVITY TRAYS
- Requirements to prevent downward ingress of water:
 - Profiles: To match those shown on drawings. Firmly secured.
 - Joint treatment: Use unjointed wherever possible, otherwise lap at least 100 mm and seal to produce a free draining and watertight installation.
 - Horizontal cavity trays: Support using cavity closer.
 - Sloping cavity trays: Prevent sagging.
 - Cleanliness: Free from debris and mortar droppings.
- 485 CAVITY TRAYS OVER OPENINGS AND OTHER CAVITY BRIDGINGS
- Length: To extend not less than 150 mm beyond ends of lintels/ bridgings.
- 495 GAS RESISTANT DPCS/ CAVITY TRAYS
- Joint treatment: Use unjointed wherever possible, otherwise lap at least 150 mm and seal to form a gas and watertight installation.
 - Joint with damp proof membrane: Overlap dpc/ cavity tray not less than 150 mm.
- 515 DPC/ CAVITY TRAY LEADING EDGE IN FACEWORK - FLUSH
- Treatment at face of masonry: Finish flush and clear of mortar at the following locations: At ground level .
- 525 DPC/ CAVITY TRAY LEADING EDGE IN FACEWORK - SET BACK
- Treatment at face of masonry: Set back 5 mm from face of wall with recessed mortar joint to expose edge at the following locations: To visible areas on the plinth. .
- 560 VERTICAL DPCS GENERALLY
- Form: In one piece wherever possible.
 - Joints: Upper part overlapping lower not less than 100 mm.
- 560A VERTICAL DPCS To Existing Wall (Refer to Callout 6 on Drawing 41001)
- Form: In one piece wherever possible.
 - Joints: Upper part overlapping lower not less than 100 mm.

570 JAMB DPCS AT OPENINGS

- Joint with cavity tray/ lintel at head: Full underlap.
- Joint with sill/ horizontal dpc at base: Full overlap.
- Projection into cavity: Not less than 25 mm.
- Relationship with frame: In full contact.

JOINTS

610 MOVEMENT JOINTS WITH SEALANT TO EXTERNAL FACING BRICKWORK

- Joint preparation and sealant application: As section Z22.
- Filler: Closed cell polyethylene foam .
 - Thickness: To match design width of joint.
 - Manufacturer: contactor choice .
 - Product reference: TBC .
 - Placement: Build in as work proceeds with no projections into cavities and to correct depth to receive sealant system.
- Sealant:
 - Designation: ISO 11600-F-20LM .
 - Manufacturer: Dow Corning or equal quality .
 - Product reference: 210 polysulphide sealant .
 - Colour: to match mortar .

PROPRIETARY SILLS/ LINTELS/ COPINGS/ DRESSINGS

736 PRECAST CONCRETE THRESHOLDS TO EXTERNAL DOORWAYS.

- Standard: To BS EN 845-2.
- Manufacturer: CONTRACTORS CHOICE.
 - Product reference: Precast Once Weathered Threshold, Colour; Mid / Dark Grey .
- Types: Once Weathered, Min. 50mm thk .
- Sizes: 125mm wide, Length - Refer External Door schedule .
- Additional requirements: Smooth Finish, Freeze/ thaw: Resistant .
- Placement: Bed on mortar used for adjacent work and DPC.
 - Bearing length (minimum): 150 mm .

745 PRESTRESSED CONCRETE LINTELS

- Standard: To BS EN 845-2.
- Manufacturer: TO SE SPEC .
 - Product reference: TO SE SPEC .
- Types: Single .
- Sizes: As schedule .
- Additional requirements: As schedule .
- Placement: Bed on mortar used for adjacent work. Prop at not more than 1.2 m centres to prevent displacement during construction. Retain props in position for not less than 14 days or until mortar has matured, whichever is longer.
 - Bearing length (minimum): 150 mm .

780A COPING SYSTEM

- **Manufacturer:** Dales Fabrications Ltd, Crompton Road Industrial Estate, Ilkeston, Derbyshire. DE7 4BG. Tel: 0115 930 1521, Fax: 0115 903 7625. Email: techinfo@dales-eaves.co.uk Website: www.dales-eaves.co.uk. The supplier shall design and manufacture the system in accordance with BS EN ISO 9001 and hold Professional Indemnity Insurance to cover their design activities. The Design of the system, including components, support structure, fixings and sealant, shall accommodate typical loadings/stresses in accordance with relevant British Standards.
- **Product Reference:** Dales Weatherstruck Meridian Coping System.
- **Material:** Aluminium Sheet to BS EN 485/515/573: Grade 1050 AH14, supplied by BS EN ISO 9002 registered stockist to ensure traceability.
- **Size/Gauge:**

Up to 300mm wide	16 gauge (1.5mm)
300 to 410mm wide	14 gauge (2mm)
Over 410mm wide	12 gauge (2.5mm)
- **Finish:** Polyester Powder coated to BS 6496, coated only by Syntha Pulvin approved and BS EN IOS 9002 registered applicators.
- **Colour:** Colour from Dales' standard range (available from www.dales-eaves.co.uk/finishes)
- **Fixings:** Fixings recommended for the purpose and supplied by Dales Fabrications Ltd. All exposed visible fixings to be supplied pre-coated in colour-matched paint.
- **Accessories:** Corners/Transitions/Junction/Stopends/Special items to be designed and factory manufactured specifically for the application.
- **Method of Jointing/Fixing:** Joints assembled centrally over brackets and snapped into place and in accordance with project specific drawings and installation instructions provided by Dales Fabrications Ltd.

850 WALL PLATES

- **Placement:** On full bed of mortar to correct horizontal level.

G20 Carpentry/ timber framing/ first fixing

GENERAL

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 105 **TIMBER PROCUREMENT**
- Timber (including timber for wood based products): Obtained from well managed forests/ 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, or
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
- 150 **STRENGTH GRADING OF TIMBER**
- Grader: A company currently registered under a third party quality assurance scheme operated by a certification body approved by the UK Timber Grading Committee.
- 160 **GRADING AND MARKING OF SOFTWOOD**
- Timber of a target/ finished 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).
 - Timber graded undried (green) and specified for installation at higher moisture contents: Clearly marked as 'WET' or 'GRN'.
 - Structural timber members cut from large graded sections: Regraded to approval and marked accordingly.

PRODUCTS

- 210 **STRUCTURAL SOFTWOOD (GRADED DIRECT TO STRENGTH CLASS) FOR STRUCTURAL USE GENERALLY**
- Grading standard: To BS 4978, BS EN 14081-1, or other national equivalent and so marked.
 - Strength class to BS EN 338: C16.
 - Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.
Design service life: Not applicable.
 - Fire retardant treatment: None required.

- 270 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: Regularized.
 - Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.
 - Design service life: 40 years.
 - Fire retardant treatment: None required.
- 311 NON-STRUCTURAL PLYWOOD AS FIXING BACKGROUNDS FOR STUD PARTITIONS
- Standard: To an approved national standard.
 - Thickness: 15mm min..
 - Appearance class to BS EN 635: E.
 - Use class to BS EN 335: Use class 2.
 - Bonding quality to BS EN 314-2: Class 3.
 - Finish: Unsanded.
 - Edges: Square.
 - Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C11.
 - Design service life: 40 years.
 - Fire retardant treatment: None required.
- 312 NON-STRUCTURAL PLYWOOD Over Roof Joists, Parapet Upstands and Layboard on existing rafters
- Standard: To an approved national standard.
 - Thickness: 18mm.
 - Appearance class to BS EN 635: E.
 - Use class to BS EN 335: Sub class 3.1.
 - Bonding quality to BS EN 314-2: Class 3.
 - Finish: Unsanded.
 - Edges: Square.
 - Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C11.
 - Design service life: 40 years.
 - Fire retardant treatment: None required.

312A NON-STRUCTURAL PLYWOOD Over insulation for GRP roof finish refer to Section J42

- Standard: To an approved national standard.
- Thickness: 18mm.
- Appearance class to BS EN 635: E.
- Use class to BS EN 335: Sub class 3.1.
- Bonding quality to BS EN 314-2: Class 3.
- Finish: Unsanded.
- Edges: Square.
- Treatment:
 - Preservative treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C11.
Design service life: 40 years.
 - Fire retardant treatment: None required.

WORKMANSHIP GENERALLY

401 CROSS SECTION DIMENSIONS OF STRUCTURAL SOFTWOOD AND HARDWOOD

- Dimensions: Dimensions in this specification and shown on drawings are target sizes as defined in BS EN 336.
- Tolerances: The tolerance indicators (T1) and (T2) specify the maximum permitted deviations from target sizes as stated in BS EN 336, clause 4.3:
 - Tolerance class 1 (T1) for sawn surfaces.
 - Tolerance class 2 (T2) for further processed surfaces.

402 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL SOFTWOOD

- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
- Maximum permitted deviations from finished sizes: As stated in BS EN 1313-1, clause 6 for sawn sections.

403 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL HARDWOOD

- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
- Maximum permitted deviations from finished sizes: As stated in BS EN 1313-2:
 - Clause 6 for sawn sections.
 - Clause NA.3 for further processed sections.

420 WARPING OF TIMBER

- Bow, spring, twist and cup: Not greater than the limits set down in BS 4978 or BS EN 14081-1 for softwood, or BS 5756 for hardwood.

430 SELECTION AND USE OF TIMBER

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

435 NOTCHES, HOLES AND JOINTS IN TIMBER

- Notches and holes:
 - General: Avoid if possible.
 - Sizes: Minimum needed to accommodate services.
 - Position: Do not locate near knots or other defects.
 - In same joist: Minimum 100 mm apart horizontally.
 - Notches in joists:
 - Position: Locate at top. Form by sawing down to a drilled hole.
 - Depth (maximum): 0.15 x joist depth.
 - Distance from supports: Between 0.1 and 0.2 x span.
 - Holes in joists:
 - Position: Locate on neutral axis.
 - Diameter (maximum): 0.25 x joist depth.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from supports: Between 0.25 and 0.4 of span.
 - Notches in roof rafters, struts and truss members: Not permitted.
 - Holes in struts and columns: Locate on neutral axis.
 - Diameter (maximum): 0.25 x minimum width of member.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from ends: Between 0.25 and 0.4 of span.
- Scarf joints, finger joints and splice plates: Do not use without approval.

440 PROCESSING TREATED TIMBER

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

450 MOISTURE CONTENT

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

451 MOISTURE CONTENT TESTING

- Procedure: When instructed, test timber sections with an approved electrical moisture meter.
- Test sample: Test 5% but not less than 10 lengths of each cross-section in the centre of the length.
- Test results: 90% of values obtained to be within the specified range. Provide records of all tests.

510 PROTECTION

- Generally: Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
- Timber and components: Store under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
- Trussed rafters: Keep vertical during handling and storage.

JOINTING TIMBER

570 JOINTING/ FIXING GENERALLY

- Generally: Where not specified precisely, select methods of jointing and fixing and types, sizes and spacings of fasteners in compliance with section Z20.

630 BOLTED JOINTS

- Bolt spacings (minimum): To BS EN 1995-1-1, section 8.5.
- Holes for bolts: Located accurately and drilled to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger.
- Washers: Placed under bolt heads and nuts that would otherwise bear directly on timber. Use spring washers in locations which will be hidden or inaccessible in the completed building.
- Bolt tightening: So that washers just bite the surface of the timber. Ensure that at least one complete thread protrudes from the nut.
 - Checking: At agreed regular intervals up to Completion. Tighten as necessary.

670 ANTI-CORROSION FINISHES FOR FASTENERS

- Galvanizing: To BS 7371-6, with internal threads tapped and lightly oiled following treatment.
- Sherardizing: To BS 7371-8, Class 1.
- Zinc plating: To BS EN ISO 4042 and passivated.

ERECTION AND INSTALLATION

740 PRE-ERECTION CHECKING

- Timing: Not less than 10 days before proposed erection start date.
- Checklist:
 - Foundations and other structures to which timber structure will be attached: Check for accuracy of setting out.
 - Holding down bolts: Check for position, protruding length, condition and slackness.
- Inaccuracies and defects: Report without delay.
- Erection: Obtain permission to commence.

750 MODIFICATIONS/REPAIRS

- Defects due to detailing or fabrication errors: Report without delay.
- Methods of rectification: Obtain approval of proposals before starting modification or remedial work.
- Defective/damaged components: Timber members/ components may be rejected if the nature and/or number of defects would result in an excessive amount of site repair.

760 TEMPORARY BRACING

- Provision: As necessary to maintain structural timber components in position and to ensure complete stability during construction.

770 ADDITIONAL SUPPORTS

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

775 BEARINGS

- Timber surfaces which are to transmit loads: Finished to ensure close contact over the whole of the designed bearing area.
- Packings: Where provided, to cover the whole of the designed bearing area.
 - Crushing strength: Not less than timber being supported.
 - In external or inaccessible locations: Rot and corrosion proof.

850 INSPECTION GENERALLY

- Structural timber-work: Give reasonable notice before covering up.

H21 Timber weatherboarding

To be read with Preliminaries/ General conditions.

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 110A **VERTICAL TIMBER RAINSCREEN CLADDING TO EXTERNAL WALLS**
- Substrate: Blockwork.
 - Breather membrane: As clause 130.
 - Manufacturer: NORclad Ltd. 21 C&D Somerset Square, Nailsea, Bristol, BS48 1RQ. T: 01275 810475. W: www.timbercladdingsolutions.co.uk or similar approved
 - Timber Battens: 70% PEFC certified European Whitewood sawn regularised battens. Kiln dried 16-20% moisture content. E406 Koppers treated – Coated with Sikksens WF771, 1 base coat all round and 1 top coat to the face and edges, painted Charcoal (black).
 - Vertical Counterbattens:
 - Size: 38 x 50 mm.
 - Centres: 600 mm.
 - Horizontal Battens:
 - Size: 25 x 50 mm.
 - Centres: 600 mm.
 - Boarding:
 - Standard: To BS EN 14915.
 - Quality of timber (exposed surfaces): NORclad timber cladding conforms to the European standard: Quality of timber (exposed surfaces) to EN 14915/EN 15146/EN 14519 and BS 1186-3 produced in accordance with factory production control for the selection, grading, machining and preservative treatment of solid wood cladding..
 - Species: NORclad Canadian Western Red Cedar - Grade 2 Clear & Better.
 - Profile: Square edged boards on battens: Sizes- 18 x 69mm PSE, 18 x 120mm PSE, 18 x 194mm PSE to achieve variable width cladding appearance.
 - Moisture content at time of fixing: Approx. 18 - 22%.
 - Treatment: Koppers MicroShades "Brunnea" - 30 years warranty against rot and fungal decay (out of ground contact) **NO OTHER COATING REQUIRED.**
Standard: To NBS section Z12 and Wood Protection Association Commodity Specification C6.
Type: Copper-organic.
 - Fire Retardant Coating: Factory applied fire retardant coating to be applied to all rainscreen cladding.
 - Method of fixing to each support: Single nailed with 50 mm stainless steel lost head annular ring shank nails.
 - Material: Stainless Steel Grade 304.
 - Type: Flat head Annular Ring Shank Nails
 - Length: The fixing length should be: Cedar (2.5x thickness of cladding)
 - Gauge: 2.9mm, Drill pilot holes in cladding.
 - Other requirements: Visible cladding fixings all set out and aligned, pilot holes uniform with use of drilling template. C16 timber grade battens. Batten and counter batten fixing to be stainless steel and in accordance with Structural Engineers design and specification..

120 CONTROL SAMPLE

- General: Complete an area of boarding in an approved location and obtain approval of appearance before proceeding.

130A BREATHER MEMBRANE Over blockwork

- Manufacturer: Kingspan - or similar approved
 - Web: www.kingspaninsulation.co.uk.
 - Email: info@kingspaninsulation.co.uk.
 - Tel: +44 (0)1544 387601.
 - Address: Pembridge, Leominster, Herefordshire. HR6 9LA.
 - Product reference: Nilvent®
- Installation: Fix carefully and neatly to provide a complete barrier to water, snow and wind blown dust. Extend membrane below lowest timber member and into reveals of openings.
 - Laps: Horizontal: 100 mm. Vertical: 150 mm and staggered, to shed water away from substrate.
 - Fasteners: Galvanized, sherardized or stainless steel large head nails or stainless steel staples.

135 BATTENS/ COUNTERBATTENS

- Timber: Regularized softwood free from decay, insect attack (except ambrosia beetle damage) and with no knots wider than half the section width.
- Preservative treatment: As recommended by manufacturer and as spec H21 / 110A.
 - Standard: To NBS section Z12 and Wood Protection Association Commodity Specification C8.
 - Type: Organic solvent.
- Moisture content: Not exceeding 20% at time of fixing.

141 FIXING BATTENS/ COUNTERBATTENS TO FRAMING/ SHEATHING

- Setting out: In straight, vertical lines at centres coincident with vertical framing members.
- Batten/ Counterbatten length (minimum): 1200 mm.
- Installation: Where sheathing is provided, fix through sheathing into framing. Fastener heads to finish flush with or slightly below batten face.

142 FIXING BATTENS TO COUNTERBATTENS

- Setting out: In straight, horizontal lines. Align on adjacent areas.
- Batten/ Counterbatten length (minimum): 1200 mm.
- Joints: Square cut, butted centrally on counterbattens and not occurring more than once in any group of four battens on any one counterbatten.
- Installation: Fix each batten to each counterbatten. Use splay fixings at joints. Fastener heads to finish flush with or slightly below batten face.

145 TREATED TIMBER

- Surfaces exposed by minor cutting and/ or drilling: Treat with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.

Project No. 150457

Client: Council of the Isles of Scilly

STRIDE TREGLOWN
ARCHITECTURE

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161 BOARD FIXING

- General: Fix boards securely to give flat, true surfaces free from undulations, lipping, splits, hammer marks and protruding fasteners.
- Movement: Allow for movement of boards and fixings to prevent cupping, springing, excessive opening of joints or other defects.
- Heading joints: Position centrally over supports and at least two board widths apart on any one support.
- Nail heads: Flush or just below surface of cladding face.

H65 Single lap roof tiling

To be read with Preliminaries/ General conditions.

ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

TILING GENERALLY

220 REMOVING EXISTING TILING

- General: Carefully remove tiles, battens, underlay, etc. with minimum disturbance of adjacent retained tiling.
- Undamaged tiles: Set aside for reuse.

EDGES/ JUNCTIONS/ FEATURES

305 GENERALLY

- Fittings and accessories: As recommended by tile manufacturer. Do not improvise.
 - Exposed fittings and accessories: To match tile colour and finish.
- Cut tiles: Cut only where necessary, to give straight, clean edges.
- Flashings: Fix with or immediately after tiling. Form neatly.

355 VENTILATED EAVES - SEPARATED GRILLES/ TRAYS

- Fascia grilles:
 - Manufacturer: Glidevale.
 - Product reference: FV100 Over Fascia Ventilator.
- Ventilator trays:
 - Manufacturer: Glidevale.
 - Product reference: RV RAFTER VENTILATORS.
 - Fix to provide free passage of air over insulation.
- Underlay support: Protect EAVES SKIRT.
 - Continuous to prevent water retaining troughs.
- Gutter: Dress underlay or underlay support tray to form drip into gutter.
- Eaves filler units for profiled tiles: Fix to close underside of first course tiles.
- First course tiles: Fix with tails projecting 50 mm over gutter or to centre of gutter, whichever dimension is the lesser.

Project No. 150457

Client: Council of the Isles of Scilly

STRIDE TREGLOWN
ARCHITECTURE

Signed Off **Construction Issue 29/01/2018**

840A TILE ROOF VENTILATORS

- Manufacturer: Hambleside Danelaw Ltd.
 - Web: www.hambleside-danelaw.co.uk.
 - Email: marketing@hambleside-danelaw.co.uk.
 - Tel: +44 (0)1327 701900.
 - Address: Hambleside Danelaw Ltd, Long March, Daventry, Northamptonshire. NN11 4NR.
 - Product reference: HD TV15/3 Tile roof vent
- Colour: Brown.
- Adapter: TVSPA.
- Requirement: For attachment.

850 ROOF SLOPE TERMINALS

- Ventilator tiles:
 - Manufacturer: Refer to M & E specification & drawing M/02
 - Product reference: As M & E.
 - Connect to WC, Kitchette, Baby Change, Disable WC, ventilation pipes.

H72 Aluminium strip/ sheet coverings/ flashings

TYPES OF ALUMINIUM WORK

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

470 MISCELLANEOUS FLASHINGS GENERALLY

- Aluminium: Coated sheet/ strip.
 - Alloy designation: -.
 - Temper: -.
 - Finish: Polyester Powder Coated.
 - Thickness: 2 mm.
- Dimensions:
 - Lengths: Not more than 2 m.
- Fixing: to be agreed.

GENERAL REQUIREMENTS/ PREPARATORY WORK

510 WORKMANSHIP GENERALLY

- Standard: Generally to CP 143-15.
- Fabrication and fixing: To provide a secure, free draining and completely weathertight installation.
- Operatives: Trained in the application of aluminium coverings/ flashings. Submit records of experience on request.
- Measuring, marking, cutting and forming: Prior to assembly wherever possible.
- Marking out: With pencil, chalk or crayon. Do not use scribes or other sharp instruments without approval.
- Folding: With mechanical or manual presses to give straight, regular and tight bends, leaving panels free from ripples, kinks, buckling and cracks. Use hand tools only for folding details that cannot be pressed.
- Surface protection: Fully coat surfaces to be embedded in concrete or mortar with high build bitumen based paint, after folding.
- Sharp metal edges: Fold under or remove as work proceeds.
- Joints: Do not use sealants to attain waterproofing.
- Finished aluminium work: Fully supported, adequately fixed to resist wind uplift and able to accommodate thermal movement without distortion or stress.
 - Protection: Prevent staining, discolouration and damage by subsequent works.

515 WELDING

- In situ welding: Not permitted.

516 WELDING

- In situ welding: Permitted subject to completion of a 'hot work permit' form and compliance with its requirements.

535 INTEGRITY OF ALUMINIUM

- Requirement: Design coverings/ flashings and methods of attachment to prevent loss of weathertightness and permanent deformation due to wind pressure or suction.
- Wind loads: To be determined.
- Structural requirements:
 - Generally: As section B50.
 - Modifications: TBC.
- Design: Complete in accordance with the designated code of practice to satisfy specified performance criteria.

550 LIGHTNING PROTECTION

- Aluminium coverings: Attach the following to a lightning protection system refer to drawings. Lightning protection to utilise steel frame/ rc frame to sub contractor design.-.
- Electrical continuity: Provide between aluminium strips/ sheets via welting of joints.

555 LAYOUT

- Setting out of longitudinal and cross joints: Submit proposals.

560 CONTROL SAMPLES

- General: Complete areas of finished work and obtain approval of appearance before proceeding:
- Size: TBA.
- Location: Parapets.

610 SUITABILITY OF SUBSTRATES

- Condition: Dry and free of dust, debris, grease and other deleterious matter.

FIXING

710 FIXINGS FOR CLIPS

- Nails to timber substrates: Aluminium to BS 1202-3 for aluminium clips. Stainless steel (austenitic) for stainless steel clips.
 - Shank type: Annular ringed or helical threaded.
 - Shank diameter: Not less than 2.65 mm.
 - Head: Flat.
 - Length: Not less than 25 mm or equal to substrate thickness.
- Screws to concrete/ masonry substrates: Sherardized or zinc plated steel to BS 1210, table 2, or aluminium to BS 1210, table 5 for aluminium clips. Stainless steel (austenitic) to BS 1210, table 4 for stainless steel clips.
 - Diameter: Not less than 3.35 mm.
 - Length: Not less than 25 mm.
 - Washers and plastic plugs: Compatible with screws.
- Screws to composite metal decks: Self tapping, as recommended by the deck and aluminium manufacturer/ supplier for aluminium or stainless steel clips.

JOINTING

810 FORMING DETAILS

- Folds and welts: Form without thinning or splitting the strip/ sheet.
- Thermal movement: Form details with appropriate allowance for movement, without impairment of security at full expansion or contraction.

860 DRIP/ STEP JOINTS

- Strip/ Sheet from below step: Fold up full height of upstand and fix to top edge.
- Form aluminium underlap/ continuous clip:
 - Cover to roof slope: Not less than 100 mm with anticapillary welt at top edge.
 - Projection: 25 mm for forming into drip welt.
 - Downstand: Not less than 40 mm with welt at bottom edge.
 - Fixing: To roof slope at 100 mm centres, avoiding through fixings at longitudinal joint positions.
- Strip/ Sheet from above step: Fold around underlap projection and single welt to form a drip.

J40 Flexible sheet waterproofing/ damp proofing

To be read with Preliminaries/ General conditions.

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

TYPES OF TANKING/ DAMP PROOFING

- 140A **LOOSE LAID POLYETHYLENE GAS RETARDANT DAMP PROOFING**
- Substrate: Sand blinding.
 - Manufacturer: Atal Cyf, Unit 27, Tafarnaubach Industrial Estate, Tafarnaubach, Tredegar NP22 3AA.
 - Product reference: Atal Radbar 500, Colour - Green.
 - Thickness/ Gauge: 500 micrometres.
 - Joints:
 - Surfaces to be joined: Clean and dry beyond full width of joint.
 - Laps (minimum): min 150mm.
 - Sealing: ATAL DS butyl tape, placed centrally in the lap. Atal single sided tape, lap. Atal single sided tape, laid over the edge of the upper sheet, by 50mm, and adhered onto the lower sheet.
 - Accessories: See product data sheet .
- 190A **SELF-ADHESIVE BITUMEN DAMP PROOFING/ TANKING**
- Substrate: Reinforced concrete or masonry.
 - Provider: Atal Cyf
 - Address: Unit 27, Tafarnaubach Industrial Estate, Tafarnaubach, Tredegar NP22 3AA
 - Product Reference: atal Premsil GMA
 - Thickness: 1.5mm
 - Full. Smooth out to exclude air
 - Joints:
 - Surfaces to be joined : Clean and dry beyond full width of joint.
 - Laps (minimum) : 50mm, side and 100mm end / cut rolls.
 - Sealing : Roll to fully adhere.
 - Accessories : atal Premsil Primer

WORKMANSHIP

310A WORKMANSHIP GENERALLY

Condition of substrate: Clean and even textured, free from voids and sharp protrusions.

- Moisture content: Compatible with DPM/ tanking.
- Air and surface temperature: Do not apply sheets if below minimum recommended by membrane manufacturer.
- Condition of membrane at completion:
- Neat, smooth and fully supported, dressed well into abutments and around intrusions.
- Completely impervious and continuous.
- Undamaged. Prevent mechanical damage during following work.
- Permanent overlying construction: Cover membrane as soon as possible.

320 INSPECTION

- Give notice: Before covering any part of membrane with overlying construction.

335A PRIMERS

- Give notice : Before covering any part of membrane with overlying construction
- Manufacture:
atal Cyf, Unit 27, Tafarnaubach Industrial Estate,
Tafarnaubach, Tredegar NP22 3AA
Tel: 01495 717202
Email: enquiries@ataluk.com
Web: www.ataluk.com
- Product reference : atal Premsil Primer
- Coverage per coat (minimum) : 8m² / litre.
- Curing : Allow to dry thoroughly before covering..

360A JUNCTIONS WITH PROJECTING DPCS/ CAVITY TRAYS

Adjoining surfaces : Clean and dry.

- Dpc's / cavity trays : Lap and fully bond / seal with sheeting.
- Laps (minimum) : 150mm.
- Bonding / Sealing : atal Premsil GMA 150mm wide.

370A PREFORMED COLLARS FOR PIPES, DUCTS, CABLES, ETC.

- Where these pass through sheeting, make junctions completely impervious using atal Premsil GMA in accordance with the data sheet for the product.

380A PROTECTION BOARDS FOR DAMP PROOFING/ TANKING

- Manufacture: atal Cyf, Unit 27, Tafarnaubach Industrial Estate,
Tafarnaubach, Tredegar NP22 3AA Tel: 01495 717202
Email: enquiries@ataluk.com
Web: www.ataluk.com
- Product reference : atal Flo Board 4e.
- Thickness : 4mm.
- Application : Membrane surface clean and free from contaminants.
- Bonding : None required
- Board joints : Butted together.
- Board contact with membrane : Secure, full and continuous.

J42 Single layer polymeric sheet roof coverings

To be read with Preliminaries/ General conditions.

TYPES OF ROOF COVERING

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

110A ROOF COVERING SYSTEM Roof Type R1

- Waterproof Membrane: Dryseal GRP Roofing System
- Installation Contractor: Approved installers only.
- Manufacturer and Reference: Dryseal Roofing System by Hambleside Danelaw Limited, Long March, Daventry, Northants, NN11 4NR, Tel:- 01327 701900
- Sheet Material: Pre-formed Dryseal GRP H1250F membrane.
- Jointing: Wet laminate applied to GRP membrane & trims comprising 450g chopped strand glass matting and seaming tissue consolidated in catalysed polyester resin, to be applied to all seams, laps and details
- Attachment: as Clause 710
- Top Coat: Polyester resin top coat, colour Dryseal Dark Grey to be applied to all areas of pre-cured and insitu GRP laminate following through cleaning using approved solvent at application rate of 3m² per litre maximum. Crushed glass to be incorporated in top coat to offer non-slip finish to walkway areas as directed.
- Accessories:
 - Pre-formed Dryseal GRP trims to suit all roof detailing and roof perimeter details.
 - Drawing Reference(s): Refer to drawings HDL_TRIMS and individual Dryseal detail drawings.
- Substrate: 18mm WBP plywood or OSB CE2+.
- Lower Protection Layer: Not required.
- Vapour Control Layer: Visqueen HP Vapour Barrier or equal approved. Refer to Dryseal recommended VCL document for acceptable alternatives.
- Laying: as clause 670
- Insulation: as clause 420
- Attachment: Loose lay as clause 680, mechanically fixed with Dryseal Sheet.

110B ROOF COVERING SYSTEM Roof Type R2

- Waterproof Membrane: Dryseal GRP Roofing System or similar approved.
- Installation Contractor: Approved installers only.
- Manufacturer and Reference: Dryseal Roofing System by Hambleside Danelaw Limited, Long March, Daventry, Northants, NN11 4NR, Tel:- 01327 701900
- Sheet Material: Pre-formed Dryseal GRP H1250F membrane.
- Jointing: Wet laminate applied to GRP membrane & trims comprising 450g chopped strand glass matting and seaming tissue consolidated in catalysed polyester resin, to be applied to all seams, laps and details
- Attachment: as Clause 710
- Top Coat: Polyester resin top coat, colour Dryseal Dark Grey to be applied to all areas of pre-cured and insitu GRP laminate following through cleaning using approved solvent at application rate of 3m² per litre maximum. Crushed glass to be incorporated in top coat to offer non-slip finish to walkway areas as directed.
- Accessories:
 - Pre-formed Dryseal GRP trims to suit all roof detailing and roof perimeter details.
 - Drawing Reference(s): Refer to drawings HDL_TRIMS and individual Dryseal detail drawings.
- Substrate: 18mm WBP plywood or OSB CE2+.
- Lower Protection Layer: Not required.
- Vapour Control Layer: Refer to Clause P10/140A
- Laying: as clause 670
- Insulation: Refer to Clause P10/140A
- Attachment: Loose lay as clause 680, mechanically fixed with Dryseal Sheet.

PERFORMANCE

201 MANUFACTURERS GUARANTEE

- The manufacturer will provide a 20 Year guarantee covering Product and Design.
- To be read in conjunction with the manufacturers guarantee terms and conditions (sample available on request). The manufacturer will only guarantee roofing systems installed by their approved roofing contractors.

210 ROOF PERFORMANCE

- Roof covering: Secure, free draining and weathertight.

225 AVOIDANCE OF INTERSTITIAL CONDENSATION: WARM AND INVERTED ROOFS

- Interstitial condensation within roof construction: Determine risk as recommended in BS 5250 and BS EN ISO 13788.
- Vapour control layer: If necessary, provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

230 INSULATION

- Requirement: Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
 - Thermal transmittance of the roof (maximum): 0.16 W/m²K.
 - Compressive strength of insulation (minimum) at 10% compression: n/a.
 - Finished surface: Suitably even, stable and robust to receive roof covering.
 - Insulation compliance: To a relevant European Standard, or Agrément certified.

PRODUCTS

330A TIMBER TRIMS, ETC

- Planed, free from wane, pitch pockets, decay and insect attack except pinhole borers
- Moisture content: Not more than 22% at time of covering
- Preservative Treatment: CCA as section Z12 and British Wood Preserving and Damp Proofing Association Commodity Specification C8
- Fix with sheradised steel screws at not more than 600mm centres

345A PERIMETER TRIMS

- Pre-cured Dryseal GRP drip and angle trims to all perimeter details in accordance with drawings supplied and Dryseal Technical Manual.

355A MECHANICAL FASTENERS, WASHERS, PRESSURE PLATES, ETC

- Fastenings, including washers, pressure plates, etc.. must be approved by Hambleside Danelaw Ltd. and comply with the current edition of the British Board of Agrément MOAT 55, 'UEAtc Supplementary guide for the assessment of mechanically fastened roof waterproofing for Class 2 fasteners and must be types recommended for the purpose by the manufacturer
- Install fastenings using manufacturers recommended equipment, fitted with bit stop etc.. to ensure correct and consistent insertion

420A RIGID URETHANE FOAM WARM DECK ROOF INSULATION

- Manufacturer: Kingspan Insulation.
 - Web: www.kingspaninsulation.co.uk.
 - Email: info@kingspaninsulation.co.uk.
 - Tel: +44 (0)1544 387601.
 - Address: Pembridge, Leominster, Herefordshire. HR6 9LA.
 - Product reference: Thermaroom TR26® LPC/ FM
- Insulation thickness: 120mm.

EXECUTION GENERALLY

500 ROOFING GENERALLY

- Lay roof covering to provide a secure, free draining and completely weathertight roof, with membrane free from wrinkles and other blemishes
- Ancillary products and accessories, where not specified, to be types recommended for the purpose by the membrane manufacturer
- Use operatives trained in the application of Dryseal system and who have attended a recognised training course. Submit evidence of training to CA on request
- Maintain a minimum of one fully trained and approved operative on site throughout the installation period

510A ADVERSE WEATHER

- The membrane must not be laid in wet or damp conditions or at temperatures below 5°C.
- The laminate joints and top coat must not be laid in wet or damp conditions or where temperatures may fall below 5°C before full cure has been achieved.
- Provide temporary covers and drainage as required to keep unfinished areas of the roof dry
- Suspend work in severe or continuously wet weather unless effective temporary roof is provided over the working area
- If unavoidable wetting of the construction does occur, take prompt action to minimise and make good damage
- Temporary ballast incomplete areas of membrane as necessary to protect from wind action

520A INCOMPLETE WORK: AT THE END OF THE WORKING DAY

- Temporary seal the membrane to the deck to prevent any water filtration
- Protect warm deck insulation with temporary seal
- Ensure that the sequence of laying enables temporary sealing of loose membrane edges to be down the slope and not against the flow of water
- On resumption of work cut away the tail of the membrane from completed area and remove from roof

PROTECTION AND STORAGE OF MATERIALS

560 PROTECTION OF WORK

- Ensure that from completion of the roof until practical completion:
 - The roof is not used as working platform unless fully protected to the satisfaction of the CA
 - No building material are stored on the roof
 - Finished roof areas are adequately protected from damage by subsequent building operations

SUBSTRATES/ VAPOUR CONTROL LAYERS/ WARM DECK ROOF INSULATION

610A SUITABILITY OF SUBSTRATES

- Before installing roof covering ensure that:
 - Surfaces to be covered are firmly fixed, clean, dry, smooth, free from frost, contaminants, voids and protrusions.
 - All preliminary work including formation of upstands, kerbs, box gutters, sumps, grooves, chases, expansion joints, etc and fixing of battens, fillets, anchoring plugs / strips etc. is complete and satisfactory.

670A LAYING VAPOUR CONTROL LAYER

- - Lay sheets loose, flat and without wrinkles to 100mm side and end laps.
- Seal laps using materials and method recommended by membrane manufacturer (tape or gun applied sealant)
- Dress the vapour control layer up all upstands, kerbs and other penetrations, around the edge of the insulation and under the waterproof membrane to form a complete seal. Seal onto upper face of insulant.

680A LAYING WARM DECK ROOF INSULATION

- - Loose lay boards with long edges at 90° to structure, tightly butted with staggered end joints.
- On completion of laying ensure that boards are in good condition, well fitting and with no springing or rocking.
- Other Requirements: Fix treated s.w. insulation stops to the depth of insulation x 50mm min. to support GRP material at unprotected edges along gutter.

WATERPROOF MEMBRANES/ ACCESSORIES

- 710A MECHANICAL FIXING OF WATERPROOF MEMBRANE-** Mechanical fixings along side, end and trim laps at maximum of 300mm centres
- Fixings: Dryseal approved roofing screws min 140mm long and DP40 stress plates for fixing membrane and trims to timber decking.
 - Washers / Pressure Plates must lie completely flat on overlapping section of membrane, 1 to 4mm from edge.
 - Sheet and trim overlaps to extend beyond washers / pressure plates by a minimum of 10mm.

755 JOINTING OF PRE - FORMED GRP

- Thoroughly clean down areas to receive insitu jointing work using approved solvent cleaner.
- Lap side and end joints not less than 50mm or as clause 710 ensuring that water will drain over and not into them wherever practical.
- Using approved 450gm chopped strand glass mat, seaming tissue and catalysed polyester resin, form consolidated laminated seams in approved manner to all seam laps and exposed fixings

780A ROOF PENETRATIONS THROUGH GRP MEMBRANE

- Cut membrane around all roof penetrations.
- Install pre-formed wall fillet trims suitable to accommodate Plateau access rooflights terminating behind appropriate drip/cover strips.
- Form insitu laminate collar to soil vent pipe penetrations and to roof membrane. Form outer collar from pre-formed sheet material only if required and seal to pipe using insitu laminate.

785A RAINWATER OUTLETS

- Recess in to the gutter sole / insulation wherever possible and firmly secure with no lip preventing the free flow of water.
- Type(s) recommended for the purpose by the membrane manufacturer incorporating separate sealing / clamping ring and strainer.

795A ADJOINING ROOFS OR ROOF COVERINGS

- Any junctions or joins with existing roof coverings should:
 - Be formed in an appropriate manner subject to the detail with all laps in the direction of flow of water.
 - Provide sufficient weather proof cover or adequate long term sealing to all laps.
 - Raise any joint between dissimilar waterproofing materials above the level of standing or running water.

COMPLETION

910A INSPECTION

- Inspection of the roof installation whilst in progress and on completion as required.

920A ELECTRONIC ROOF INTEGRITY TEST

- Electronic membrane testing is NOT a requirement for the Dryseal 20 year Guarantee, but may be employed as a Client Requirement.

940A COMPLETION

Ensure that

- Roof areas are left clean with all outlets clear.
- All work by others necessary to provide watertight finish is satisfactorily completed.
- Defects are repaired without delay to minimise damage and nuisance.

K10 Gypsum board dry linings/ partitions/ ceilings

To be read with Preliminaries/ General conditions.

TYPES OF DRY LINING

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

125A METAL STUD PARTITION SYSTEM WALL TYPE IW1

- Manufacturer: British Gypsum.
 - Web: www.british-gypsum.com.
 - Email: bgtechnical.enquiries@bpb.com.
 - Tel: +44 (0)844 800 1991.
 - Address: Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - Product reference: GypWall Classic A206261S
- Studs:
 - Type: 92 mm Gypframe 92 S 50 'C' studs.
 - Centres: 600 mm
- Head condition:
 - Type: Gypframe 94 C 50 Floor and Ceiling Channels.
- Insulation: Not required
- Linings:
 - Type: 1 x 15 mm Gyproc SoundBloc to each side.
 - Edge: Square edged.
- Finishing:
 - Type: Skim coat Thistle Multifinish.
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
- Accessories: Rigid beads/ stops.
- Other requirements: None.

125B METAL STUD PARTITION SYSTEM WALL TYPE IW2

- **Manufacturer:** British Gypsum.
 - **Web:** www.british-gypsum.com.
 - **Email:** bgtechnical.enquiries@bpb.com.
 - **Tel:** +44 (0)844 800 1991.
 - **Address:** Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - **Product reference:** GypWall Classic A206264S
- **Studs:**
 - **Type:** 92 mm Gypframe 92 S 50 'C' studs.
 - **Centres:** 600 mm
- **Head condition:**
 - **Type:** Gypframe 94 C 50 Floor and Ceiling Channels.
- **Insulation:**
 - **Type:** Isover Modular Roll
 - **Thickness:** 100mm

Linings:

 - **Type:** 1 x 15 mm Gyproc SoundBloc MR to each side .
 - **Edge:** Square edged.
- **Finishing:**
 - **Type:** Skim coat Thistle Multifinish.
 - **Primer/ Sealer:** As recommended by board manufacturer for vapour control.
- **Accessories:** Rigid beads/ stops.
- **Other requirements:** None.

125C METAL STUD PARTITION SYSTEM WALL TYPE IW6

- **Manufacturer:** British Gypsum.
 - **Web:** www.british-gypsum.com.
 - **Email:** bgtechnical.enquiries@bpb.com.
 - **Tel:** +44 (0)844 800 1991.
 - **Address:** Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - **Product reference:** GypWall Classic A206305S
- **Studs:**
 - **Type:** 92 mm Gypframe 92 S 50 'C' studs.
 - **Centres:** 600 mm
- **Head condition:**
 - **Type:** Gypframe 94 C 50 Floor and Ceiling Channels.
- **Insulation:**
 - **Type:** Isover Modular Roll
 - **Thickness:** 100mm

Linings:

 - **Type:** 1 x 15 mm Gyproc SoundBloc F to each side .
 - **Edge:** Square edged.
- **Finishing:**
 - **Type:** Skim coat Thistle Multifinish.
 - **Primer/ Sealer:** As recommended by board manufacturer for vapour control.
- **Accessories:** Rigid beads/ stops.
- **Other requirements:** None.

166A WALL LINING ON METAL STUDS - WALL TYPE IW5 TO SLEEP ROOM

- Name of project: Carn Gwarvel School, Isles of Scilly.
- Drawing reference(s): 150457_11001
- Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
Website: www.british-gypsum.com, Tel: 0115 945 6123, E-Mail: bgtechnical.enquiries@bpb.com.
- British Gypsum contact: Graham Lloyd Tel 07786 337414, email graham.lloyd@bpb.com
- Product reference: GypLyner UNIVERSAL.
- Background: Plaster (13mm), Dense Blockwork wall (mass 1700kg/m³), plaster (13mm).
- Performance criteria:
 - Sound insulation: Rw 57 dB (Estimated)
 - Duty Rating to BS 5234: Parts 1 and 2: n/a.
 - Stand off (background to face of channel): 35mm.
- Framing:
 - Grid: Gypframe GL1 lining channels at 600mm centres.
 - Channel connectors: Gypframe GL3.
 - Brackets: Gypframe GL2 (75mm) at 800mm maximum centres.
 - Floor/ceiling track: Gypframe GL8.
- Installation: As clause 481A.
- Cavity insulation: 25mm Isover Acoustic Partition Roll (APR 1200).
- Recycled content: Up to 86%.
- Lining: One layer of 15mm Gyproc SoundBloc, sheet width 1200mm.
- Fixings: As clause 591A.
- Screws: 25mm British Gypsum Drywall Screws.
- Thermal sealant: As clause 331A, if required.
- Gyproc Sealant: As clause 516A.
- Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A
- Accessories: None
- Other requirements:
 - Please Note: Before altering this specification check with the design team that any proposed changes will not jeopardise the project environmental assessment rating target (BREEAM, CfSH, LEED, etc.)
 - Please Note: Before altering an ACTIVair specification check with the design team that any proposed changes will not jeopardise the project's indoor air quality performance or air quality management plan.
 - Please always refer to current literature by visiting www.british-gypsum.com

185B WALL LINING SYSTEM Wall Tpe IW3 & IW4

- Manufacturer: British Gypsum.
 - Web: www.british-gypsum.com.
 - Email: bgtechnical.enquiries@bpb.com.
 - Tel: +44 (0)844 800 1991.
 - Address: Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - Product reference: DriLyner BASIC
- Parge coat: Not required.
- Adhesive method: Dabs, as clause 626A.
- Linings: 1 x 15 mm Gyproc WallBoard.
- Finishing:
 - Type: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
 - Accessories: Rigid beads/ stops.

205A LINING ON TIMBER Wall Type EW1

- Manufacturer: British Gypsum.
 - Web: www.british-gypsum.com.
 - Email: bgtechnical.enquiries@bpb.com.
 - Tel: +44 (0)844 800 1991.
 - Address: Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - Product reference: Timber stud (Non Loadbearing and Loadbearing)
- Metal resilient (acoustic) bars: Not required.
- Linings:
 - Type: 2 x 15 mm Gyproc FireLine.
 - Fixing: British Gypsum drywall timber screws.
- Finishing:
 - Type: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
 - Accessories: Rigid beads/ stops.
- Other requirements: None.

205B LINING ON TIMBER Wall Type IW7

- Manufacturer: British Gypsum.
 - Web: www.british-gypsum.com.
 - Email: bgtechnical.enquiries@bpb.com.
 - Tel: +44 (0)844 800 1991.
 - Address: Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - Product reference: Timber stud (Non Loadbearing and Loadbearing)
- Metal resilient (acoustic) bars: Not required.
- Linings:
 - Type: 2 x 15 mm Gyproc FireLine.
 - Fixing: British Gypsum drywall timber screws.
- Finishing:
 - Type: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
 - Accessories: Rigid beads/ stops.
- Other requirements: None.

220A PROPRIETARY SUSPENDED CEILING SYSTEM Ceiling Type C4 - Moisture Resistant to New Construction Areas

- Manufacturer: British Gypsum.
 - Web: www.british-gypsum.com.
 - Email: bgtechnical.enquiries@bpb.com.
 - Tel: +44 (0)844 800 1991.
 - Address: Drywall Academy, East Leake, Loughborough, Leicestershire. LE12 6HX.
 - Product reference: CasoLine MF suspended ceiling system
- Suspension system:
 - Hanger type: Gypframe MF8 strap hangers.
 - Primary grid centres: 1200 mm.
Hanger centres: 1200 mm.
 - Secondary grid centres: 450 mm.
- Linings: 12.5 mm GTEC Moisture Resistant board.
- Finishing: Skim coat plaster finish.
- Primer/ Sealer:
 - Type: As recommended by board manufacturer for vapour control.
- Accessories : Metal beads/ stops recommended by board manufacturer.
- Other requirements: Apply continuous bead GTEC sealant to all board perimeters and all wall/ceiling abutments.

245A CEILING LINING ON TIMBER Roof Type R1

- Background: Timber joists to SE detail with 25mm SW treated counter battens.
- Linings: 15mm GTEC Fireboard.
 - Fixings: In accordance with manufacturer's recommendations.
- Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
 - Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements:
 - Fire stopping around service penetrations as section P12
 - Apply continuous bead GTEC acoustic intumescent sealant to all board perimeters and all wall/ceiling abutments..

245B CEILING LINING ON TIMBER Roof Type R2

- Background: timber joists - refer to SE detail..
- Linings: 15mm GTEC Fireboard.
 - Fixings: In accordance with manufacturer's recommendations.
- Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
- Insulation: 65mm SuperFOIL SF40 insulation over and between joists. 50mm rigid insulation between joists.
- Vapour control layer: SuperFOIL SFTV VCL under joists.
- Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements:
 - Fire stopping around service penetrations as section P12
 - Apply continuous bead GTEC acoustic intumescent sealant to all board perimeters and all wall/ceiling abutments..

- 245C CEILING LINING ON TIMBER Ceiling Type C1 - To Store
- Background: 25mm timber batten to existing roof.
 - Linings: 12.5 mm GTEC Wallboard.
 - Fixings: In accordance with manufacturer's recommendations.
 - Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
 - Accessories: Metal beads/ stops recommended by board manufacturer .
 - Other requirements: Apply continuous bead GTEC sealant to all board perimeters and all wall/ceiling abutments..
- 245D CEILING LINING ON EXISTING CEILING TIE Ceiling Type C2 - Generally
- Background: Existing 120mm ceiling tie.
 - Linings: 12.5 mm GTEC SoundBloc board.
 - Fixings: In accordance with manufacturer's recommendations.
 - Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: Not required.
 - Insulation: 100mm insulation between ceiling ties. 170mm insulation over ceiling ties.
 - Accessories: Metal beads/ stops recommended by board manufacturer .
 - Other requirements: Apply continuous bead GTEC sealant to all board perimeters and all wall/ceiling abutments..
- 245E CEILING LINING ON EXISTING CEILING TIE Ceiling Type C3 - To Sleep Room
- Background: 25mm timber batten to existing roof.
 - Linings: 15 mm GTEC SoundBloc Rapid board.
 - Fixings: In accordance with manufacturer's recommendations.
 - Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: Not required.
 - Insulation: 100mm insulation between ceiling ties. 170mm insulation over ceiling ties.
 - Accessories: Metal beads/ stops recommended by board manufacturer .
 - Other requirements: Apply continuous bead GTEC sealant to all board perimeters and all wall/ceiling abutments..
- 245F CEILING LINING ON EXISTING CEILING TIE Ceiling Type C4 - Moisture Resistant In Existing Area
- Background: Existing 120mm ceiling tie.
 - Linings: 12.5 mm GTEC Moisture Resistant board.
 - Fixings: In accordance with manufacturer's recommendations.
 - Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
 - Insulation: 100mm insulation between ceiling ties. 170mm insulation over ceiling ties.
 - Accessories: Metal beads/ stops recommended by board manufacturer .
 - Other requirements: Apply continuous bead GTEC sealant to all board perimeters and all wall/ceiling abutments..

245G CEILING LINING ON EXISTING CEILING TIE Ceiling Type C5 - To Kitchen

- Background: Existing 120mm ceiling tie.
- Linings: 12.5 mm Gyproc Fireline MR board.
 - Fixings: In accordance with manufacturer's recommendations.
- Finishing: 2mm Thistle Skim coat plaster (General use) as clause 681A .
 - Primer/ Sealer: As recommended by board manufacturer for vapour control.
- Insulation: 100mm insulation between ceiling ties. 170mm insulation over ceiling ties.
- Accessories: Metal beads/ stops recommended by board manufacturer .
- Other requirements:
 - Fire stopping around service penetrations as section P12
 - Apply continuous bead GTEC acoustic intumescent sealant to all board perimeters and all wall/ceiling abutments.

GENERAL/ PREPARATION

300 ENVIRONMENT – ISO14001

- British Gypsum has ISO 14001 certification across the entire business including: mining, manufacture, distribution, and all ancillary services to support the business function.

301 ENVIRONMENT – BREEAM RATED PROJECTS

- Prior to making any amendments to British Gypsum specifications consult with the design team responsible for the project for guidance. BREEAM (or similar environmental framework) ratings may be downgraded as a result of changes to this specification.

315 EXISTING FIXTURES, SERVICES ETC

- Ensure that surface mounted pipework, conduit, cables, electrical outlets, fixtures, appliances, fixing brackets, clips, skirtings, architraves, etc., are removed from existing backgrounds which are to be lined.

325A PREPARATION OF SOLID BACKGROUNDS

- Complete all cutting, chasing, plugging and making good.
- Remove all loose material by brushing thoroughly.
- Remove all oil, grease, wallpaper, etc. by scrubbing with water and detergent. Rinse with clean water and allow to dry.
- For adhesive fixed wall linings, adjust suction of background as necessary using primers or bonding agents recommended for the purpose.

326A PARGE COATS

- Apply a continuous coat of Gyproc Soundcoat Plus at least 6mm thick to the entire surface of the background ensuring all cracked or unfilled joints are covered. Allow to set before following on with Gyproc plasterboard installation.

331A THERMAL SEALS FOR GYPROC LININGS

- Manufacturer and reference: British Gypsum, Gyproc Dri-Wall Adhesive or Gyproc Sealant.
- Before/during installation of dry lining system, fully seal all airpaths around the perimeter of the background and around structural openings and service penetrations through the background.
- Apply as a continuous fillet, leaving no gaps.

- 345 **ADDITIONAL SUPPORTS FOR PARTITION HEADS**
Provide or ensure provision of accurately positioned and securely fixed framing to receive partition heads running parallel with, but offset from main structural supports.
- 355 **ADDITIONAL SUPPORTS FOR FIXTURES AND FITTINGS**
Provide or ensure provision of accurately positioned and securely fixed framing to support fixtures, fittings and services. After fixing boards, mark positions of framing for following trades.
- 365 **ADDITIONAL SUPPORTS FOR BOARD EDGES AND PERIMETERS**
Provide or ensure provision of additional framing, accurately positioned and securely fixed, to give full support to board edges and lining perimeters in accordance with board manufacturer's recommendations.
- 375A **NEW WET LAID BASES**
Provide or ensure provision of a continuous strip of bituminous felt DPC or other approved material under partitions/freestanding wall linings, cut to the full width of the partition/lining.
- 385 **SERVICE PENETRATIONS**
- The dry lining contractor must liaise with the Main Contractor and other contractors to ensure that fire resistance and other specified performance requirements are not impaired by service penetrations.
In particular:
 - Form framed openings accurately for grouped services, ducts, etc. allowing for associated fire barriers.
 - Provide insulation backings to recessed electrical outlets and switches as recommended by the plasterboard manufacturer.
- 395A **CONTROL SAMPLES**
- General: Complete areas of finished work and obtain approval of appearance before proceeding.

COMPONENTS

- 405 **PLASTERBOARD GENERALLY**
- To BS EN 520: types A, H1(Moisture Resistant), F, P, D, R or I with exposed surface and edge profiles suitable to receive the specified finish.
- 411 **GYPSUM BOARD WITH MAT REINFORCEMENT (GLASROC F FIRECASE)**
- To EN 15283: Part 1, Types GM-F & H2 (Moisture Resistant).
- 412 **GYPSUM BOARD WITH MAT REINFORCEMENT (GLASROC F MULTIBOARD)**
- a) 6mm thick to EN 15283: Part 1, Types GM-F & H1(Moisture Resistant)
b) 10mm/ 12.5mm thick to EN 15283: Part 1, Types GM-F.
- 413 **GYPSUM FIBRE BOARD (RIGIDUR H)**
To EN 15283: Part 2, Types GF, C1, I & W2.

- 414 GYPSUM BOARD WITH MAT REINFORCEMENT (GLASROC H TILEBACKER)
To EN 15283: Part 1, Types GM-H1(Moisture Resistant).
- 416 GYPSUM PLASTERBOARD Generally
ACTIVair Technology:
- Products:
 - Gyproc SoundBloc ACTIVair
 - Gyproc SoundBloc MR ACTIVair
 - Gyproc DuraLine ACTIVair
 - Gyproc DuraLine MR ACTIVair
 - Rigidur H ACTIVair
 - Gyptone
 - Rigitone
 - Decoration: After the joint treatment or plaster skim has dried, decoration including any decorator's preparatory work should follow. Please note however that any decoration should be breathable to allow Formaldehyde and other pollutants to pass through the finish and be absorbed by the plasterboard.
Painting: Breathable paints – please consult the appropriate paint manufacturer.
Wallpaper: Use only breathable wallpapers– please consult the appropriate wallpaper manufacturer.
 - Limitations: Finishes that restrict the board surface permeability e.g. Tiling, Marble and other non-breathable wall finishes, will limit the absorption of Formaldehyde and other pollutants for the area covered

INSTALLATION

- 436 DRY LININGS GENERALLY
- Fixing, jointing and finishing materials and accessories, where not specified otherwise, to be as recommended by the board manufacturer.
 - Handle and store materials in accordance with BS 8212, section 5. Do not use damaged boards.
 - Use operatives properly trained for dry lining work and who have attended a recognised training scheme.
 - Fix boards only in areas which have been made weathertight. Prevent frost damage.
 - Cut boards neatly and accurately without damage to core or tearing of paper facing. Keep cut edges to a minimum and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
 - Fix boards securely and firmly to suitably prepared and accurately levelled backgrounds. Set heads of fastenings in a depression; do not break paper or gypsum core. Finish neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.
- 445 CEILINGS
- Sequence: Fix boards to ceilings before installing dry lined walls and partitions.
 - Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
 - Two layer boarding: Stagger joints between layers.

455A METAL STUD FRAMING

- Install using components, accessories and methods recommended by the board manufacturer.
- Set out floor/head channels and perimeter studs to give a framework which is accurately aligned with a true vertical plane. Fix securely at all perimeters at not more than 600 mm centres.
- Position studs at equal centres to suit specified linings, maintaining sequence across openings. Provide additional studs as necessary to ensure support to all vertical edges of boards.
- Accurately form openings to receive doorsets using Gypframe metal studs and suitable timber framing or Gypframe metal studs sleeved with Gypframe channel as necessary to achieve the strength grade requirements of the framing assembly and adequately support the weight of the door.

475A METAL FURRINGS FOR WALL LININGS

- Install using components, accessories and methods recommended by the board manufacturer.
- Set out furrings vertically, at specified centres and adjacent to angles, openings, movement joints, etc. Maintain centres of furrings across openings. Bed in 200mm long dabs of adhesive at each end of furring and thereafter at 450mm centres. Bed horizontal lengths of furring to provide continuous support to top and bottom edges of boards.
- Accurately align all furrings to a true, vertical plane.
- Install additional furrings where necessary to accept junctions with partitions. Use a continuous line of adhesive to ensure there are no gaps across the cavity.

476 JUNCTIONS

- between partitions and GypLyner IWL independent wall linings: Where board linings are installed prior to partitions, install additional Gypframe I studs at each partition abutment (number of additional I studs subject to width of partition).

481A METAL FRAMING FOR GYPLYNER UNIVERSAL WALLING LINING

- Securely fix Gypframe GL8 floor/ceiling track at 600mm centres.
- Position Gypframe GL2/GL9 brackets at equal vertical centres and fix to background with Gypframe GL11 GypLyner Anchors for solid backgrounds or proprietary fixings for hollow backgrounds.
- Position Gypframe GL1 lining channels at equal centres, maintaining sequence across openings, and locate in Gypframe GL8 track at floor and ceiling. Provide additional Gypframe GL1 lining channels as necessary to ensure support to all vertical edges of boards. Fix Gypframe GL1 lining channels to Gypframe GL2/GL9 brackets using Wafer Head Screws.
- Provide additional Gypframe GL1/GL8 sections at wall abutments and corners as recommended by board manufacturer.
- Install Gypframe GFT1 Fixing T for single layer board applications, inserted between face of framework and back of plasterboard lining, or Gypframe GFS1 Fixing Strap for double layer board applications, inserted between board layers, to receive fixings at end board joints. Ensure end board joints do not coincide with Gypframe GL1 lining channel joints.

485 SUSPENDED CEILING GRIDS

- Setting out: Accurately aligned and level.
 - Grid members and hangers: Centres to suit specified linings and imposed loads.
 - Additional grid members: Provide bracing and stiffening at upstands, partition heads, access hatches, etc.
- Fixing: Securely at perimeters, grid joints, top and bottom hanger fixings.

495 MINERAL WOOL INSULATION TO METAL STUD PARTITIONS/LINGS

- Fit securely with closely butted joints, leaving no gaps. Unless the insulation is of a self supporting slab type fitted between studs, fix at head of frame using timber battens or proprietary clips.

505 INSTALLING MINERAL WOOL INSULATION

- Fitting insulation: Closely butted joints and no gaps. Use fasteners to prevent slumping or displacement.
- Services:
 - Electrical cables overlaid by insulation: Sized accordingly.
 - Ceilings: Cut insulation around electrical fittings, etc.

510 SEALING GAPS AND AIR PATHS

- Location of sealant: To perimeter abutments and around openings.
 - Pressurized shafts and ducts: At board-to-board and board-to-metal frame junctions.
- Application: To clean, dry and dust free surfaces as a continuous bead with no gaps.
 - Gaps greater than 6 mm between floor and underside of gypsum board: After sealing, fill with jointing compound.

516A ACOUSTIC SEALANT:

- Manufacturer and reference: British Gypsum, Gyproc Sealant.
- Location: At junctions with adjoining structure, and at other airpaths.
- Apply as a continuous bead to clean, dry, dust-free surfaces, leaving no gaps.
- After application of sealant, bulk fill gaps between floor and underside of plasterboard using Gyproc joint compound.

526A CAVITY BARRIERS

Maintain continuity of fire barrier formed by perimeter channels using short lengths of close fitting plasterboard screwed into the web across joints in channel sections and around service holes, except where:

- The partitions abut plasterboard linings or masonry.
- Timber sole or head plates are fitted.
- Form continuous vertical barriers using lengths of close fitting plasterboard screwed into the web of individual studs or channels.

530 CAVITY FIRE BARRIERS WITHIN PARTITIONS/ WALL LININGS

- Metal framed systems:
 - Material: Plasterboard 12.5 mm thick.
 - Installation: Form accurately and fix securely with no gaps to provide a complete barrier to smoke and flame.
- Adhesive fixed wall lining systems:
 - Material: Adhesive compound.
 - Installation: Form in a continuous line with no gaps to provide a complete barrier to smoke and flame.

551C MOVEMENT JOINTS DRYLYNER BASIC

- Manufacturer and reference: British Gypsum, Gyproc Control Joint.
 - Width of gap: 12mm
 - Fix through each flange using 13mm corrosion resistant staples at 150mm centres. Seal ends with Gyproc Sealant or acrylic caulk.
 - Support edges of plasterboard either side of joint with a continuous vertical line of adhesive dabs.

551D MOVEMENT JOINTS GYPLYNER IWL

Manufacturer and reference: British Gypsum, Gyproc Control Joint.

- Width of gap: 12mm
- Fix through each flange using 13mm corrosion resistant staples at 150mm centres. Seal ends with Gyproc Sealant or acrylic caulk.
- Support edges of plasterboard on each side of joint with Gypframe I studs.

555A FIRE STOPPING

- Seal any gaps at junctions of linings and cavity barriers with perimeter abutments, service penetrations, etc. using tightly packed stone mineral wool or fire resisting / intumescent sealant, to prevent penetration of smoke and flame.

560A JOINTS BETWEEN BOARDS

- Gyproc plasterboards: Lightly butt boards together.
 - Square edged Gyproc plasterboards to be finished with Artex textured compound: 3mm gap.
- Glasroc F fibre reinforced gypsum boards: Lightly butt boards together.

565A VERTICAL JOINTS

Centre joints on studs. For partitions, ensure that joints on opposite sides of core are staggered.

- For two layer boarding, stagger joints between layers.

570A HORIZONTAL JOINTS

Horizontal joints will not be permitted in surfaces exposed to view except where the height of partition/lining exceeds the maximum available length of board. Agree positions of joints where not specified.

- For two layer boarding, stagger joints between layers by at least 600mm. If previous layer of plank plasterboard, stagger joints between layers by 300mm.
- Ensure that edges of boards are supported by additional framing. For two layer boarding framing must support the outer layer.

572A CEILING JOINTS

For multi-layer boarding, stagger joints between layers by at least 600mm.

591A FIXING PLASTERBOARD TO METAL SUPPORTS

- Partitions/linings/casings:
- Face layer (Plasterboard):
Fix securely to all supports at maximum 300mm centres (reduced to 200mm at external angles where recommended by the board manufacturer).
- Face layer (Habito):
Fix securely to all supports at maximum 600mm centres (reduced to 400mm at external angles where recommended by the board manufacturer).
- Previous layer of plank plasterboard: Install with long edges at right angles to studs, and fix securely to each stud using two screws.
- Other previous layers: Fix securely to supports around the perimeter of each board at maximum 300mm centres.
- Ceilings: Fix securely to all supports at maximum 230mm centres (reduced to 150mm at board ends and at lining perimeters where recommended by the board manufacturer).
- Fix working from the centre of each board. Position screws not less than 13mm from cut edges and 10mm from bound edges of boards. Set heads in a depression; do not break paper or gypsum core.

593B BOARD END SUPPORTS (GYPLYNER UNIVERSAL CEILING)

The specified GL1 lining channel centres are the maximum permitted. Closer centres may be used for some board lengths to ensure end joints are fully supported; alternatively, cut boards to a co-ordinating length.

595 DEFLECTION HEADS

- Fixing boards: Do not fix to head channels.

601A FIXING PLASTERBOARD TO METAL FURRINGS

- Apply two continuous 6mm dia. beads of Gyproc Sealant to Gypframe MF10 channels where board joints occur and one bead to all other Gypframe MF10 channels.
- Fix to Gypframe MF10 channel at each vertical board edge using three Drywall Screws, at mid-height and 600mm above and below. Where lining is to receive a ceramic finish fix using Drywall Screws at maximum 300mm centres.

610 FIXING GYPSUM BOARD TO TIMBER

- Fixing to timber: Securely at the following centres (maximum):
 - Nails: 150 mm.
 - Screws to partitions/ wall linings: 300 mm. Reduce to 200 mm at external angles.
 - Screws to ceilings: 230 mm.
- Position of nails/ screws from edges of boards (minimum):
 - Bound edges: 10 mm.
 - Cut/ unbound edges: 13 mm.
- Position of nails/ screws from edges of timber supports (minimum): 6 mm.

626A FIXING DRILYNER BASIC

- Apply dabs of Gyproc Dri-Wall Adhesive to the background for one board at a time, to achieve at least 20% contact with the surface area of the boards:
 - One row of horizontal dabs to coincide with the top edge of each board.
 - One continuous line of horizontal dabs to coincide with the bottom edge of each board.
 - One row of vertical dabs to coincide with the side edges of each board, and additional vertical row(s) at the following max centres:
 - 400mm for boards 9.5mm thick x 1200mm wide.
 - 600mm for boards 12.5mm thick x 1200mm wide.
 - 450mm for boards 9.5mm thick x 900mm wide.
 - 450mm for boards 12.5mm thick x 900mm wide.
 - Ensure dabs are at least 25mm from board edges.
 - For linings to receive ceramic finishes, apply one additional row of dabs at mid storey height.

FINISHING

671A TAPED SEAMLESS FINISH TO PLASTERBOARD

Manufacturer: British Gypsum.

Joint compound: One or more of the following Gyproc products:

- " Gyproc Easi-Fill
- " Gyproc Easi-Fill 45
- " Gyproc Joint Filler
- " Gyproc Joint Cement
- " Gyproc Ready Mix Joint Cement
- " Gyproc ProMix LITE Joint Cement.

Joints/gaps:

- " Gyproc Joint Tape or

Internal/ angled corners:

- " Gyproc Joint Tape or
- " Gyproc Easyflex PRO (for Extra Durability)

External corners:

- " Gyproc Aquabead (for Speed and Extra Durability)
- " Gyproc Easyflex PRO (for Extra Durability)
- " Gyproc Corner Tape
- " Gyproc Drywall Metal Angle Bead

Shadow gaps:

- " BGM105 Styletrim (25 x 10mm)
- " BGM106 Styletrim (12.5 x 10mm)

Board ends:

- " Gyproc Drywall Plastic Edge Bead
- " or Gyproc Drywall Metal Edge Bead

Primer/sealer:

- " Two coats Gyproc Drywall Sealer where vapour control required (will provide vapour resistance only and does not meet performance requirements for moisture resistant grade boards as defined in BS EN520, type H1)

- " Alternatively, one coat Gyproc Drywall Sealer for simple steam stripping of wall coverings (except for vinyl or other low permeability wall coverings) at a later date.

- " One coat Gyproc Drywall Primer elsewhere.

- Lightly sand cut edges of boards to remove paper burrs.
- Fill all joints, gaps and internal angles with joint compound and cover with continuous lengths of tape, fully bedded. Reinforce external angles, stop ends, etc. with the specified bead/corner tape.
- When set, cover with joint compound, feathered out to give a flush, smooth, seamless surface.
- Spot nail/screw depressions with joint compound to give a flush surface.
- Fill minor indents. After joint, angle and spotting treatments have dried, lightly sand to remove any minor imperfections.
- Apply specified primer/sealer to give a continuous consistent texture to surface of boards.

671B TAPED SEAMLESS FINISH TO RIGIDUR H FIBRE REINFORCED GYPSUM BOARD:

Manufacturer: British Gypsum.

Joint compound:

" Gyproc Easi-Fill

Joints/gaps:

" Gyproc Joint Tape

Internal/ angled corners:

" Gyproc Joint Tape or

" Gyproc Easyflex PRO (for Extra Durability)

External corners:

" Gyproc Aquabead (for Speed and Extra Durability)

" Gyproc Easyflex PRO (for Extra Durability)

" Gyproc Corner Tape

" Gyproc Drywall Metal Angle Bead

Shadow gaps:

" BGM105 Styletrim (25 x 10mm)

" BGM106 Styletrim (12.5 x 10mm)

Board ends:

" Gyproc Drywall Plastic Edge Bead

" or Gyproc Drywall Metal Edge Bead

Primer/sealer:

" Two coats Gyproc Drywall Sealer where vapour control required (will provide vapour resistance only and does not meet performance requirements for moisture resistant grade boards as defined in BS EN520, type H1)

" Alternatively, one coat Gyproc Drywall Sealer for simple steam stripping of wall coverings (except for vinyl or other low permeability wall coverings) at a later date.

- Reinforce external angles, etc. with the specified bead/corner tape.

- Apply Gyproc Easi-Fill to the joint and bed in Gyproc Joint Tape. Allow to dry and lightly sand to remove any high spots. Gyproc Joint Tape should be used in internal angle joints. Trowel apply a second coat of Gyproc Easi-Fill and feather out to about 200mm width on each side of the joint. Allow to dry and lightly sand.

- Spot nail/screw/staple depressions with two coats of joint compound to give a flush surface.

- Fill minor indents with a single coat of joint compound to give a flush surface.

- After joint, angle and spotting treatments have dried, lightly sand to remove any minor imperfections.

676A TAPED SEAMLESS FINISH TO GLASROC FIBRE REINFORCED GYPSUM BOARD:

Manufacturer: British Gypsum.

Joint compound:

" Gyproc Joint Cement

Joints/gaps/internal corners:

" Gyproc Joint Tape or

" Thistle ProTape FT50

External corners:

" Gyproc Easyflex PRO (for Extra Durability)

" Gyproc Corner Tape

" Gyproc Drywall Metal Angle Bead (bedded on to Gyproc Joint Filler)

- Apply Gyproc Joint Cement to the joint and bed in Gyproc Joint Tape. Allow to dry and lightly sand to remove any high spots. Gyproc Joint Tape should be used in internal angle joints. Trowel apply a second coat of Gyproc Joint Cement and feather out to about 200mm width on each side of the joint. Allow to dry and lightly sand.

- Spot nail/screw/staple depressions with two coats of joint compound to give a flush surface.

- Fill minor indents with a single coat of joint compound to give a flush surface.

- After joint, angle and spotting treatments have dried, lightly sand to remove any minor imperfections.

681A SKIM COAT PLASTER FINISH: (Hand applied only):

Manufacturer and reference: British Gypsum, Thistle Multi-Finish.

Thickness: 2mm.

- Pre-Treatment: Thistle Bond-IT (Glasroc H TILEBACKER & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).

- Reinforcement:

Joints/gaps/internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT50 or FT100 may be used.

External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.

Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.

- Fill and tape all joints except where coincident with metal beads.

- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

681B SKIM COAT PLASTER FINISH: (HAND APPLIED ONLY):

- Manufacturer and reference: British Gypsum, Thistle PureFinish.
Thickness: 2mm.
- Pre-Treatment: Thistle Bond-IT (Glasroc H TILEBACKER & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).
- Reinforcement:
Joints/gaps/internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT50 or FT100 may be used.
External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.
Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.
- Fill and tape all joints except where coincident with metal beads.
- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.
- ACTIVair Technology:
- Decoration: After the plaster skim has dried, decoration including any decorator's preparatory work should follow. Please note however that any decoration should be breathable to allow Formaldehyde and other pollutants to pass through the finish and be absorbed by the plaster.
Painting: Breathable paints – please consult the appropriate paint manufacturer.
Wallpaper: Use only breathable wallpapers– please consult the appropriate wallpaper manufacturer.
- Limitations: Finishes that restrict the board surface permeability e.g. Tiling, Marble and other wall coverings, will limit the absorption of Formaldehyde and other pollutants for the area covered

681C SKIM COAT PLASTER FINISH: (HAND APPLIED ONLY):

Manufacturer and reference: British Gypsum, Thistle Board Finish.

Thickness: 2mm.

- Pre-Treatment: Thistle Bond-IT (Glasroc H TILEBACKER & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).
- Reinforcement:
Joints/gaps/internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT50 or FT100 may be used.
External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.
Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.
- Fill and tape all joints except where coincident with metal beads.
- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

681D SKIM COAT PLASTER FINISH: (HAND APPLIED ONLY):

Manufacturer and reference: British Gypsum, Thistle Durafinish (For improved impact & abrasion resistance).

Thickness: 2mm.

- Pre-Treatment: Thistle GypPrime (required for Rigidur H boards to control suction).
- Reinforcement:

Joints/gaps/internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT50 or FT100 may be used.

External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.

Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.

- Fill and tape all joints except where coincident with metal beads.
- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

681E SKIM COAT PLASTER FINISH: (MACHINE OR HAND APPLIED):

- Manufacturer and reference: British Gypsum, Thistle Spray Finish.

Thickness: 2mm.

- Pre-Treatment: Thistle Bond-IT (Glasroc H TILEBACKER & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).
- Machine spray application: Worm pump plastering machine e.g. M-Tec M100SC or PFT Ritmo.
- Reinforcement:

Joints/gaps: Gyproc Joint Tape or Thistle ProTape FT50/ FT100

Internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT100 may be used.

External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.

Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.

- Fill and tape all joints except where coincident with metal beads.
- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

681F SKIM COAT PLASTER FINISH: (HAND APPLIED ONLY):

- Manufacturer and reference: British Gypsum, Thistle Magnetic Plaster.

Thickness: 3mm Minimum.

- Pre-Treatment: Thistle Bond-IT (Glasroc H TILEBACKER & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).
- Reinforcement:

Joints/gaps/internal corners: Any gaps exceeding 3mm pre-filled and joints reinforced using Gyproc Joint Tape alternatively Thistle ProTape FT50 or FT100 may be used.

External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.

Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.

- Fill and tape all joints except where coincident with metal beads.
- Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

695A BEADS/ STOPS GENERALLY

- Cut neatly using mitres at return angles. Fix securely using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with background.
- After joint compounds/plasters have been applied, remove surplus material while still wet from surfaces of beads which are exposed to view.

725 REPAIRS TO EXISTING GYPSUM BOARD

- Filling small areas with broken cores: Cut away paper facing, remove loose core material and fill with jointing compound.
 - Finish: Flush, smooth surface suitable for redecoration.
- Large patch repairs: Cut out damaged area and form neat hole with rectangular sides. Replace with matching gypsum board.
 - Fixing: Use methods to suit type of dry lining, ensuring full support to all edges of existing and new gypsum board.
 - Finishing: Fill joints, tape and apply jointing compound to give a flush, smooth surface suitable for redecoration.

K11 Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/ casings

To be read with Preliminaries/ General conditions.

TYPES OF FLOORING/ SHEATHING/ DECKING/ SARKING/ LINING/ CASINGS

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 817 PLYWOOD WALL SHEATHING Between lightweight metal studwork as pattress substrate fixing for sanitaryware / services / wall fixtures / overhead door closer etc
- Drawing reference: See Partition layout and fixtures and fittings drawings.
 - Location: As described on the partition setting out drawing –fixed within partition framing zone.
 - Substrate: Lightweight metal framed partitions.
 - Additional supports: as clause K11/930
 - Sheathing: Plywood manufactured to the relevant standards and quality control procedures specified in BS 5268-2, and so marked.
 - Type: Class 1
 - Grade: II/III
 - Nominal thickness/ number of plies: 18mm.
 - Setting out: To be set out between main C stud centres to suit location of service support plates.
 - Height of sheathing: To be agreed on detailing
 - Fixing to supports:
 - Use Lafarge support plate detail fixed in accordance with their approved details.
 - Fasteners: Dry wall screws into plate
 - Fixing centres (maximum): As plate location
 - Around board edges: NA
 - Along intermediate supports: NA
 - Fixing distance from edges (minimum): NA

WORKMANSHIP

- 910 INSTALLATION GENERALLY
- Timing: Building to be weathertight before fixing boards internally.
 - Moisture content of timber supports (maximum): 18%.
 - Joints between boards: Accurately aligned, of constant width and parallel to perimeter edges.
 - Methods of fixing, and fasteners: As section Z20 where not specified otherwise.

930 ADDITIONAL SUPPORTS

- Additional studs, noggings/ dwangs (Scot) and battens:
 - Provision: In accordance with board manufacturer's recommendations and as follows:
 - Tongue and groove jointed rigid board areas: To all unsupported perimeter edges.
 - Butt jointed rigid board areas: To all unsupported edges.
 - Size: Not less than 50 mm wide and of adequate thickness.
 - Quality of timber: As for adjacent timber supports.
 - Treatment (where required): As for adjacent timber supports.

940 BOARD MOISTURE CONTENT AND CONDITIONING

- Moisture content of boards at time of fixing: Appropriate to end use.
- Conditioning regime: Submit proposals.

950 MOISTURE CONTENT TESTING

- Test regime and equipment: Submit proposals.
- Test results: Submit record of tests and results.

960 FIXING GENERALLY

- Boards/ sheets: Fixed securely to each support without distortion and true to line and level.
- Fasteners: Evenly spaced in straight lines and, unless otherwise recommended by board manufacturer, in pairs across joints.
 - Distance from edge of board/ sheet: Sufficient to prevent damage.
- Surplus adhesive: Removed as the work proceeds.

975 METAL WALL FRAMING

- Setting out: Framing accurately aligned, vertical and securely fixed to surrounding structure at maximum 600 mm centres. All board edges supported.

976 MINERAL WOOL INSULATION TO METAL FRAMING

- Installation: Neat and secure with close butted joints and no gaps. Where insulation is not self supporting, fixed at head of frame using clips or other suitable proprietary fixings.

980 OPEN JOINTS

- Perimeter joints, expansion joints and joints between boards: Free from plaster, mortar droppings and other debris.
- Temporary wedges and packings: Removed on completion of board fixing.

K32 Panel cubicles/ duct and wall linings/ screens

To be read with Preliminaries/ General conditions.

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

121 PANEL CUBICLES TO CHILDRENS WC'S

- Drawing reference(s): Refer to room loading drawings.
- Manufacturer: Venesta Washroom Systems or Amwell Systems Ltd.
- Product: Venesta 'Lollipop' range or Amwell 'Playtime' range with Skittles Pilasters.
- Board/panel type: 13mm thk Solid Grade Laminate (SGL).
- Thickness: 13mm nominal.
- Edge treatment: As manufacturers standard for SGL.
- Depth: 1500mm to face of IPS panel internally.
- Floor Clearance: 100mm.
- Overall height: 1350mm overall from FFL.
- Door Height: 1150mm from FFL to top of door including 100mm ground clearance.
- Colour/Finish - Panels/Doors: From standard colour range. Contrasting.
- Headrail: n/a
- Hinges: Powder coated aluminium anti finger trap safety hinge. Colours to be approved by Architect.
- Pedestals: Adjustable, to pilasters and/or partitions.
- Indicator bolt and keep: Easy grip sliding bolt with emergency release facility and concealed fixings.
- Cleats: with concealed fixings.
- Colour/Finish – Frame/Fittings: Light or Dark Grey powder coated aluminium.
- Optional Accessories: n/a.

161 IPS DUCT PANELLING WITH PROPRIETARY CORROSION RESISTANT FRAMES TO WC AREAS

- Drawing reference(s): Refer to room loading drawings.
- Manufacturer: Venesta Washroom Systems or Amwell Systems Ltd.
- Product: SGL washroom panelled wall lining system.
- Site framing: Extruded aluminium base and headrail sections and rolled galvanised steel wall channels.
- Panel: 13mm thk Solid Grade Laminate (SGL), lockable hinged panels.
- Panel Thickness: 13mm nominal.
- Edge treatment: As standard.
- Flashgaps: 13mm thk Solid Grade Laminate (SGL).

Flashgap Thickness: 13mm nominal.

Panel/Flashgap Colour/Finish: From manufacturers standard colour range. Colours to be confirmed by Architect.

Site framing: Extruded aluminium base and headrail sections and rolled galvanised ultra steel wall channels.

Baseraill: 100mm high powder coated 2 part aluminium baseraill to secure subframe units.

Subframe: Rolled galvanised ultra steel subframe with riveted aluminium bracing bars, fitted to site frame with nylon click-fix locator brackets.

- Panel sections fitted to subframe with concealed nylon lift-off fixing clips, using zinc plated steel rivets with butt joints fitted with zinc plated steel dowel clips and mating nylon dowel-docks.
- Pre-plumbing: n/a unless specifically requested by contractor.
- Included features:

Hinged access panel using riveted linear-bearing hinges in zinc plated steel and nylon with riveted panel ratchets in zinc plated steel allowing 10 different opening heights.

Subframe tie-back system using M8 zinc plated steel tie-back rods and supporting bracketry in zinc plated steel.

Riveted slider brackets in nylon to allow the top panel to rise and fall where a mid-mounted panel is hinged.

Riveted push-pull clips where applicable to allow bottom panels to be removed.

- Integrated factory fitted WC carrier in 26mm SGL for use with wall hung WC's.

210 SAMPLES

- General: Before placing orders submit representative samples of the following: Panel and door material and colours.
- Delivered materials/ products: To match samples.

250 INSTALLATION

- Programming: Do not install cubicles or duct/ wall panels before building is weathertight, wet trades have finished their work, wall and floor finishes are complete, and the building is well dried out.
- Accuracy: Set out to ensure frames and/ or panels and doors are plumb, level and accurately aligned.
- Modifications: Do not cut, plane or sand prefinished components except where shown on drawings.
- Fixing: Secure components using methods and fasteners recommended by the cubicle/ panel manufacturer. Prevent pulling away, bowing or other distortions to frames, panels and doors.
- Moisture and thermal movement: Make adequate allowance for future movement.

L10 Windows/ Rooflights/ Screens/ Louvres

To be read with Preliminaries/ General conditions.

GENERAL

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

110 EVIDENCE OF PERFORMANCE

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

120 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items:
Installation of new double glazed REHAU Total 70C externally coloured PVCu windows

Designated items: Refer to the window schedules/drawings from Stride Treglown Architects
150457-STL-XX-XX-DR-A-XXXX-71001 Rev P26 Door Schedule
150457-STL-XX-XX-DR-A-XXXX-72001 Rev P26 Window Schedule
150457-STL-XX-ZZ-DR-A-XXXX-21001 Rev P26 Elevation Drawings .

140 CONTROL SAMPLES

- Procedure:
 - 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 manufacturer of the remaining quantity.
- Designated items: Provide smallest opening window for approval prior to manufacture.

PRODUCTS

350A HIGH PERFORMANCE PVC-U WINDOWS

- System Supplier:
REHAU Limited
Hill Court
Walford
Ross on Wye
Herefordshire
HR9 5QN
Tel 01989 762600
Contact Steve Tonkiss Email: Steve.Tonkiss@rehau.com
- Product reference: REHAU Total 70C Window & Door System (Casement - Top Hung)
 - All window profiles MUST be extruded and certified to BS EN12608 Class A profile
 - All window profiles to be tested and certified by the British Standards Institute as Severe weather rated.
 - Site Pascal rating 1085. Calculated at 1600 Pa
- Sill: 150mm Article 246360 reinforced and vented with Steel Article 255924 in accordance with REHAU technical manual. Sill dimension TBC following site survey. (to suit wall thickness)
- Drainage: Concealed
- Colour: External RAL 7016 Anthracite Grey (Smooth). RAL 9016 REHAU White (Smooth), Internal RAL 9016 REHAU White
- All glazed windows are to be internally beaded.
- Glazing details:
 - Double glazed units (28mm) to achieve a centre pane u value of 1.0 W/m2k
 - External pane: 6.8mm Laminated, Cavity 16mm 90% Argon filled cavity with Swiss spacer bar + butyl sealant, Inner pane 4mm Toughened Planiclear coating Planitherm One on face 3
 - G Value 0.48.
 - All glazing in compliance with Building Regulations K Part 4
- Whole frame u value 1.4w/m2k

- **Window WG01 & WG02 - TYPE A**

Approx. dimension 1170 x 1170.
Top hung over fixed casement

62mm Outerframe – Article 586825 fully reinforced with Article 216392

75mm Sash – Article 586855 fully reinforced with Article 216394

69mm Z transom – Article 576275 fully reinforced with Article 261748

28mm Bead – Article number 546132

Colour: External RAL 9016 White (Smooth), Internal RAL 9016 REHAU White

- **Window WG03, WG04, WG05, WG06 - TYPE B**

Approx. dimension 910 x 1170

Single Top hung casement

Colour: External RAL 7016 Anthracite Grey (Smooth), Internal RAL 9016 REHAU White

62mm Outerframe – Article 586825 fully reinforced with Article 216392

75mm Sash – Article 586855 fully reinforced with Article 216394

69mm Z transom – Article 576275 fully reinforced with Article 261748

28mm Bead – Article number 546132

- **Trickle ventilation**
All windows supplied and fitted with trickle ventilation to comply with Part F of the building regulations. This is to be achieved via sleeved and sealed slot vent through the fully steel reinforced outerframe or sash profile. Vents are to be coloured matched externally RAL 7016 Anthracite Grey / White Internal with integral insect screen.
- **Casement Hinges**
- **Securistyle Defender restricted hinge.** Hinge **MUST** be supplied in grade 304 austenitic steel.
- **Casement Handle**
Offset White Key locking i.e. Securistyle Virage or similar approved

- **Windows**

Performance of windows and doors shall be in accordance with:

BS 6375-1:2004 – Classification for weather tightness and guidance on selection and specification with normative references

BS EN 1991-1-1:2002 Loading for buildings – Part 2: Code of practice for wind loads

BS EN 12207 Window and doors Air Permeability – Classification

BS EN 1026 Window and doors – Air Permeability – Test method

BS EN 12208 Windows and doors – Watertightness – Classification

BS EN 1027:2000 Window and doors – Watertightness – Test method

BS EN 12210 Window and doors – Resistance to wind load – Classification

BS EN 12211 Window and doors – Resistance to wind load – Test method

Wind loads are to be determined with particular reference to site location and conditions and in accordance with BSEN 1991-1-1:2002 or other recognised testing authority for the type of window to be used. Windows shall be reinforced in accordance with BS 7412 and fixed into chamber walls as stated in REHAU general fixing instructions for each system and the client's requirements.

The exposure category of a window or door shall be classified in accordance with Table 1 as set out within BS 6375-1:2004

Expected categories can be as set out below:

Air Permeability: A pressure class of 2

Water Tightness: A pressure class of 7A

Wind resistance: Class 4 with 1/150 deflection - as laid down in BS 6375 Part 1 2004.

- Static calculations and / or CAD detail is available from the REHAU Commercial Manager Steve Tonkiss. Email steve.tonkiss@rehau.com

EXECUTION

710 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: Stack vertical or near vertical on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Prime or seal as specified before fixing components.

750 BUILDING IN

- General: Not permitted unless indicated on drawings.
 - Brace and protect components to prevent distortion and damage during construction of adjacent structure.

755A PVC-U WINDOW INSTALLATION

- To be completed by an approved REHAU fabricator or installation company. Contact details on request.

Standard: In accordance with BS 8213 part 4: Code of practice for the survey and installation of windows and external doorsets.

760 REPLACEMENT WINDOW INSTALLATION

- Standard: To BS 8213-4.

765A WINDOW INSTALLATION GENERALLY

- Installation: Into prepared openings.
- Gap between frame edge and surrounding construction:
 - Minimum: 5mm gap.
 - Maximum: 10mm gap.
- Distortion: Install windows without twist or diagonal racking.
- Note: Allow for internal trimming to all internal reveals
- Installation of Fire rated Products (RAUFERNO Window and Agila Fire Door) should be completed by a FIRAS approved installer or similar approved. Note sealants MUST be Fire rated and steel anchor bolts are to be used. For further information please contact REHAU.

766 LOCATION OF OPENABLE WINDOWS IN NATURALLY VENTILATED BUILDINGS

- Location: Over 10 m from sources of external pollution.

770 DAMP PROOF COURSES IN PREPARED OPENINGS

- Location: Ensure correct positioning in relation to window frames. Do not displace during fixing operations.

783A FIXING OF PVC-U FRAMES

- Standard: As section Z20.
- Fasteners: Fixing anchors as appropriate.
 - Spacing: When not predrilled or specified otherwise, position fasteners 150-250 mm from ends of each jamb, adjacent to each hanging point of opening lights, but no closer than 150 mm to a transom or mullion centre line, and at maximum 500 mm centres

810 SEALANT JOINTS

- Sealant:
 - Manufacturer: Subcontractor's choice.
Product reference: Subcontractor's choice.
 - Colour: To match window colour in contact.
 - Application: As section Z22 to prepared joints. Finish triangular fillets to a flat or slightly convex profile.

820 IRONMONGERY

- Fixing: Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
- Checking/ Adjusting/ Lubricating: Carry out at Completion and ensure correct functioning.

Project No. 150457

Client: Council of the Isles of Scilly

Signed Off **Construction Issue 29/01/2018**

STRIDE TREGLOWN
ARCHITECTURE

L20 Doors/ Shutters/ Hatches

To be read with Preliminaries/ General conditions.

GENERAL

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers,
alternative or similar quality and performance may be substituted subject to prior approval.

110A EVIDENCE OF PERFORMANCE

- The frames are to comply with all relevant British Standard Specifications, Codes of Practice, and Statutory Requirements (including all revisions and amendments), as well as the guides and recommendations laid down by the relevant trade organisation relating to their performance, constituent materials, methods of assembly and use. Any exceptions to the above are to be advised in writing by the specifier.

All frames and other sections to be extruded to BS EN 755-9: 2016, Specification 6060 T6 or 6063 T6.

All materials and ancillary products are to be used and fitted entirely in accordance with the instructions of the relevant manufacturer.

The Door Fabricator/Installer (Specialist Contractor) is expected to make a pre tender visit to site/inspection of all relevant drawing and documents in order to ascertain all relevant conditions, structural details and site layout. No additional claim will be entertained for items that would be apparent during the pre-tender site visit and/or inspection of documents. The Specialist Contractor must allow in his tender for the replacement of all items specified and/or required.

The Specialist Contractor shall allow in his price for a survey visit to site in order to take the dimensions and adjacent structural details of every window and door that is to be replaced.

The units supplied are to be manufactured to suit prepared openings.

Notwithstanding any information within this Specification, all framing and infills shall be capable of withstanding the design wind loadings calculated in accordance with BS6399 Pt2: 1997 or BS EN 1991-1-1 and imposed loads as defined in BS6399 Pt1: 1996 or BS EN 1991-1-4, and the Specialist Contractor shall carry out calculations to demonstrate this.

The Specialist Contractor is responsible for ensuring that all new doors are square and central in the opening, and that a perimeter gap shall be provided to allow adequate thermal expansion and contraction of the framing, consistent with the site location and limitations of the perimeter sealant used. Any packing sections or materials required to compensate for misaligned apertures shall be agreed by the Contract Administrator prior to manufacture.

The Specialist Contractor shall provide drawings to the Main Contractor depicting all profiles, glazing, weather seals, gasket fixings and sealants to be used and the relationship of the above to the adjacent structural details for each door type.

Allow for anomalies and variations in the size of the openings, and for out-of-square openings. This is to include for the manufacture of specials as necessary.

The Specialist Contractor is to provide drawings showing the relationship of framing to structure, including all profiles, sealants, fixings, trims and weather seals.

111 EVIDENCE OF PERFORMANCE

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements such as acoustic performance, fire performance, durability etc.

115 FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES

- Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements for fire resistance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.

150 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items:
Structural openings for internal doors or external doors and roof or ceiling hatches .

170 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:
typical variations of the following specified products.

PRODUCTS

410A LAMINATED INTERNAL DOORSETS GENERALLY

- Manufacturer: Hanson and Beards Ltd or equal approved
- Hanson and Beards Ltd. Spring Hall Works, Spring Hall Grove, Halifax HX2 0BU. Tel: (01422) 306830. Email: info@hansonandbeards.co.uk..
 - Product reference: Anodoor range doorsets, in accordance with specifiers issued drawings and schedules..
- Fire resistance rating: Tested to BS 476 Part 22: 1987. In accordance with manufacturers certified tested dimensions and published technical manual.
Non fire rated, FD30/S & FD60/S.
- Acoustic Rating: Tested to 30 dB Rw & 35 dB Rw in accordance with BS EN ISO 140-3:1995 with results expressed as a single weighted index in accordance with BS EN ISO 717-1:1997.
Doorsets fitted with acoustic seals etc to meet the specified requirements.
- Mechanical Strength: Mechanical Test evidence to Severe Duty in accordance with DD171: 1987
- Timber Chain of Custody: FSC (Forestry Stewardship Council) mixed sources.
- Door leaf:
 - Core:
 - a) Anodoor standard core, 44 mm thick door, weighing 27 kg m2 with graduated density particle board.
 - b) Anodoor standard core, 54 mm thick door, weighing 34 kg m2, with graduated density particle board.
 - Facings: Laminate finish (Colour TBC) .
 - Lippings: American Ash hardwood 10 mm thick, with a 5 mm chamfered lipping to all 4 no edges, with factory applied clear lacquer..
 - Meeting Stiles: Square vertical.
 - Threshold: Acoustic rated leaves to have factory fitted drop down threshold acoustic seals.
- Door Frame: (to suit partition thickness as indicated on Internal Door Schedule)
 - Non fire rated and FD30 door frames to be approved softwood with a minimum density 450kg/m3 and fitted with approved / tested intumescent strips / smoke seals.
 - FD60 door frames to be approved hardwood with a minimum density of 640kg/m3 and fitted with approved / tested intumescent strips / smoke seals.
 - Type: INT-LS, (up to FD60) rectangular single action frame, minimum dimensions 70mm x 32mm (30mm for MDF) having separate timber stop 32mm x 12mm.
 - Finish: Factory primed paint for on-site finish (by others).
- Architraves:
 - Ref: AR-TO-03, 69mm wide x18mm thick with 1no pencil round edge.
 - Timber species: MDF, factory primed paint finish.
 - Preservative treatment: Required in wet areas.
- Glazing details: Vision panels required as indicated on Internal Door Schedule
 - a) Non fire rated with 6.4mm laminated safety glass. (1.9 m2 max)
 - b) FD30 Integrity only, 7 mm clear Pyroguard (1.14 m2 max)
 - c) FD60 integrity only, 11 mm clear Pyroguard. (0.87 m2 max).
- Ironmongery: Minimum 3 No lift off hinges to be provided by the supplier.
Other requirements to be confirmed in Ironmongery Schedule
NB: Safehinge Alumax Finger guards to be site fitted by others to some doors as indicated on Internal Door Schedule..
- Perimeter seals: See manufacturers recommendations / information.

- Other requirements: Moisture content on delivery: All door cores to be 6% with hardwood lippings to be 10% (+/- 2%).
- Fixing: See manufacturers recommendations / information.

480A DOORSETS ALUMINIUM GLAZED DOOR

- **MANUFACTURER AND REFERENCE**

Sapa Building Systems Limited, Severn Drive, Tewkesbury. Gloucestershire. GL20 8SF. Tel: 01684 853500. STII Thermally Broken Commercial Door & Screen System and 202 Non Thermally Broken Commercial Door & Screen System

Notwithstanding any information within this Specification, all framing and infills shall be capable of withstanding the design wind loadings calculated in accordance with BS6399 Pt2: 1997 or BS EN 1991-1-1 and imposed loads as defined in BS6399 Pt1: 1996 or BS EN 1991-1-4, and the Specialist Contractor shall carry out calculations to demonstrate this.

The STII thermal barrier section is achieved using two separate aluminium extrusions and two glass reinforced polyamide extrusions mechanically jointed to form a single compound profile. The sections forming the doors are to incorporate a thermal break, achieved using a high strength, glass reinforced polyamide barrier to PA6.6 GF25.

Ancillary profiles may incorporate a polyurethane resin thermal break.

Door leaves to be of mechanical cleated construction and to be pivot hung, incorporating integral rotating anti finger trap hinge stiles.

The sections forming the STII doors are to incorporate a thermal break, achieved using a high strength, glass reinforced polyamide barrier.

Outer frames to be fitted with closer plates or frame depth adaptor profile where coupled to adjacent window frames.

Low threshold to be fitted compliant with Part M of the Building Regulations.

Width of all doors to suit the requirements of Part M of the Building Regulations.

All fabrication to be strictly in accordance with the system company's Fabrication and Specification Manuals and all current Technical Bulletins.

Doors shall have horizontal midrail through centres of leaves at a height from FFL to be agreed with Contracts Administrator.

485 DOORSETS ALUMINIUM GLAZED DOORS

- Manufacturer: Sapa Building Systems Limited, Severn Drive, Tewkesbury. Gloucestershire. GL20 8SF. Tel 01684 853500. STII Thermally Broken Commercial Door & Screen System and 202 Non Thermally Broken Commercial Door & Screen System.
 - Product reference: STII Door (ED01, ED02) 202 Door (IDG01).
- Door leaf: Varies - see door type drawings.
 - Finish as delivered: Aluminium leaf to be polyester powder-coated to BS EN 12206-1:2004 Colour: Sapa house white RAL9910G colour finish for the internal 202 door and Sapa RAL7016M for the external STII doors to be confirmed by the Contracts Administrator.

Marine standard coating to a minimum of 60 microns to be supplied, details of any special guarantees to be advised. Specifying a minimum coating thickness of 60 microns does not necessarily provide protection in a marine environment.

Any finishing to be undertaken by Sapa Building Systems Limited prior to delivery to fabricator .
- Frame and architraves: Aluminium.
 - Finish as delivered: Aluminium sections to be polyester powder-coated to BS EN 12206-1:2004 Colour: Sapa house white RAL9910G colour finish for the internal 202 door and Sapa RAL7016M for the external STII doors to be confirmed by the Contracts Administrator.(EXTENSION DOOR TO MATCH WINDOW COLOUR GREY/WHITE OF THE INSIDE)

Marine standard coating to a minimum of 60 microns to be supplied, details of any special guarantees to be advised. Specifying a minimum coating thickness of 60 microns does not necessarily provide protection in a marine environment.

Any finishing to be undertaken by Sapa Building Systems Limited prior to delivery to fabricator...
- Glazing details: Glazing to be hermetically sealed double-glazed 28mm & 24mm units, comprising inner pane of 6mm toughened glass and an outer pane of 6mm toughened with an argon filled cavity and warm edge spacer bar. The sealed units are to have a centre pane U value no greater than 1.1W/m²k.

Solar control glass if required, with location and 'g' value to be confirmed by Contracts Administrator.

All glass within 800mm from FFL shall be toughened or laminated. (Below 1500mm if within a door or 300mm of a door)

All glass and glazing shall conform to:

EN 12600:2002	Specification for Impact Performance;
BS6262:	Parts 1-7:2005 Code of Practice for Glazing Buildings;
BS952-1:1995	Glass for Glazing;Classification
BS EN 1279	Glass in Buildings. Insulating Glass Units.
Part 1:2004	Generalities, dimensional tolerances and rules for the system
description	
Part 2:2002	Long term test method and requirements for moisture penetration
Part 3:2002	Long term test method and requirements for gas leakage rate and for gas concentration tolerances
Part 4:2002	Methods of test for the physical attributes of edge seals
Part 5:2005+A2:2010	Evaluation of conformity
Part 6:2002	Factory production control and periodic tests

Manifestation design and location to be confirmed by the Contract Administrator

Recommendations of the Glass and Glazing Federation should be adhered to. .
- Ironmongery: STII Doors (ED03)

Closer:

Sapa 202-188 EA compliant concealed door closer with 90 degree hold open. Opening force to be adjustable between EN1 to EN4 to ensure force no greater than 30 newtons for first 30 degrees of opening and 22.5 newtons from 31 to 60 degrees.

Locking:

Adams Rite 960 concealed rod panic exit device (or equal and approved) with dogging for daytime traffic use. To comply with BS EN 1125:2008. External key access to be confirmed by Contracts Administrator.

Handles:

External handle type and finish to be confirmed by Contracts Administrator.

STII Door (ED01)

Closer:

Electrically operated swing door operating mechanism (Dorma ED100 or equal and approved) linked to entry control system supplied and installed by others.

Locking:

Single point hook bolt dead lock operated by cylinder thumb turn internally and cylinder key externally for additional night time security.

Handles:

External handle type and finish to be confirmed by Contracts Administrator.

STII Door (ED02)

Closer:

Sapa 202-188 EA compliant concealed door closer with 90 degree hold open. Opening force to be adjustable between EN1 to EN4 to ensure force no greater than 30 newtons for first 30 degrees of opening and 22.5 newtons from 31 to 60 degrees.

Locking:

Single point hook bolt dead lock operated by cylinder thumb turn internally and cylinder key externally for additional night time security.

Handles:

External handle type and finish to be confirmed by Contracts Administrator.

202 Door (IDG01)

Closer:

Sapa 202-188 EA compliant concealed door closer with 90 degree hold open. Opening force to be adjustable between EN1 to EN4 to ensure force no greater than 30 newtons for first 30 degrees of opening and 22.5 newtons from 31 to 60 degrees.

Locking:

Adams Rite 4750 deadlatch with external key, Europrofile cylinder and key actuated bolt hold-back feature. To include 7100 Series electric strike connected to entry control system supplied and installed by others. Voltage, current and fail safe/secure to be confirmed prior to installation.

Handles:

External handle type and finish to be confirmed by Contracts Administrator. The Specialist Contractor is to obtain the written confirmation of the Contract Administrator as to the type and position of all ironmongery before commencing manufacture. .

- Perimeter seals: EPDM weatherseal .
- Other requirements: Flush Threshold Required .
- Fixing: To suit curtain walling .

545A HINGED SLIDING FOLDING PARTITION

- Manufacturer: Accordial Wall Systems Ltd or equal approved
 - Web: www.accordial.co.uk.
 - Email: walls@accordial.co.uk.
 - Tel: +44 (0)1923 246600.
 - Address: Accordial House, 35 Watford Metro Centre, Tolpits Lane, Watford, Herts. WD18 9XN.
 - Product reference: WallSpan
- Partition assembly: As drawing.
Track:
 - Layout: Endfold, single unit.
 - Type: Ceiling running track (no floor rail required).
 - Finish: Aluminium, RAL 9010.
- Panel:
 - Type: Standard panel.
 - Finish: HP laminate.
 - Vertical edge finish: Aluminium, satin anodized.
 - Acoustic insulation: Rw 42 dB.
 - Fire rating: Class 3.
- Accessories: Flush lever handle with latch and thumb turn lock.

EXECUTION

710 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.

730 PRIMING/ SEALING

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

740 CORROSION PROTECTION

- Surfaces to be protected: where recommended by door manufacturers .
- Protective coating: Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
 - Timing of application: Before fixing components.

750 FIXING DOORSETS

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

750A FIXING DOORSETS

- As section Z20 using appropriate fixings.
Door framing to be securely fixed direct to the building structure, no further than 150mm from each corner and at centres not exceeding 450mm, as laid down in procedures issued by the systems company.

Frames are to be positioned to cover the cavity within the reveals, and level with the existing external window line wherever possible, ensuring that they are plumb, level and without bow.

The removal of existing doors must be programmed to ensure that units are only removed if they are to be replaced within the same working day. Immediately on removal, the existing windows and doors, together with any debris associated with the removal of existing units, are to be cleared away to an approved tip or storage location. At the end of each working day, the Specialist Contractor shall be responsible for the removal of any debris from the existing units and new materials from site, and shall thoroughly clean the working area in accordance with the requirements of the Schedule of Works.

The Specialist Contractor is to ensure that all metal framing materials and all glass is recycled once removed from site.

The Specialist Contractor is to make all due allowance to ensure that no damage is caused to the property internally or externally. The Specialist Contractor's attention is drawn specifically to the need to protect soft landscaping and external and internal fabric and finishes. Any damage caused as a result of the replacement of windows and doors will be the Specialist Contractor's liability.

The Specialist Contractor shall allow for all necessary making good of all work disturbed.

Any gap between the internal frame face and the existing plaster line is to be filled with expanding foam void filler, knifed off flush with the plaster. The foam and a minimum of 15mm of plaster are to be covered with PVCu trims from a product range which carries BBA certification or Kitemarking to BS7619: 2010. Trims to be fixed with acrylic caulking.

Integral timber cills and sub frames with any existing doors are to be removed completely with glazing and ventilation intact.

Should any glazing be broken on removal, all glass must be immediately cleaned up, both internally and externally.

The Specialist Contractor is to allow for necessary measures to protect the occupants, fittings and finishes within the rooms for the duration of the works.

Allow for making good work to window/door openings, both internally and externally, including masonry, plaster, cladding and decorative finishes to reveals. No additional allowance will be made for costs associated with making good which would be visible on a site inspection.

Allow unclipping all existing telephone cables, aerial cables and the like from existing windows and door frames, and re-clip to surround in a suitable location using new cable clips of appropriate size and colour. Any cables passing through a frame/structure joint shall be routed through a plastic sleeve, the inner end of which is to be higher than the

outer to prevent water penetration along or through the sleeve.

Upon completion of the installation of each door, all glazing, handles and all other surfaces are to be cleaned with a mild detergent. All components are to be checked for security of fixings, adequacy of clearances, adjustment of hinges, locks etc. as may be necessary to leave the door units in good working order.

760 BUILDING IN

- General: Not permitted unless indicated on drawings.

780 DAMP PROOF COURSES IN PREPARED OPENINGS

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

784 FIXING OF COMPOSITE FRAMES

- As section Z22 using galvanized mild steel cramps or as otherwise recommended by manufacturer.
 - When not predrilled or specified otherwise, position fixing not more than 150 mm from each end of jamb, adjacent to each hanging point of openings lights, and at maximum 600 mm centres and in accordance with Idealcombi fixing instructions.
 - Fasteners appropriate to surrounding structure.

790 FIXING OF WOOD FRAMES

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

800 FIXING OF LOOSE THRESHOLDS

- Spacing of fixings: Maximum 150 mm from each end and at 600 mm maximum centres.

809 FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS

- Installation: By a firm currently registered under a third party accredited fire door installer scheme in accordance with instructions supplied with the product conformity certificate, test report or engineering assessment.

820 SEALANT JOINTS

- Sealant:
 - Manufacturer: as recommended by door manufacturer in order to meet both fire and acoustic requirements .
 - Product reference: as recommended by door manufacturer in order to meet both fire and acoustic requirements .
 - Colour: to compliment door colour .
 - Application: As section Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile.

830 FIXING IRONMONGERY GENERALLY

- Fasteners: Supplied by ironmongery manufacturer.
 - 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.

840 FIXING IRONMONGERY TO FIRE RESISTING DOOR ASSEMBLIES

- General: All items fixed in accordance with door leaf manufacturer's recommendations ensuring that integrity of the assembly, as established by testing, is not compromised.
- Holes for through fixings and components: Accurately cut.
 - Clearances: Not more than 8 mm unless protected by intumescent paste or similar.
- Lock/ Latch cases for fire doors requiring \geq 60 minutes integrity performance: Coated with intumescent paint or paste before installation.

851 LOCATION OF HINGES

- Hinges as for fire resisting doors: Positioned in accordance with door leaf manufacturer's recommendations.

860 INSTALLATION OF EMERGENCY EXIT DEVICES

- Standard: Unless specified otherwise, install panic bolts/ latches in accordance with BS EN 1125.

L40 General glazing

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 111 **PREGLAZING**
- Preglazing of components: Permitted.
 - Prevention of displacement: Submit details of precautions to be taken to protect glazing and compound/ seals during delivery and installation.
 - Defective/ displaced glazing/ compound/ seals: Reglaze components in situ.
- 150 **WORKMANSHIP GENERALLY**
- Glazing generally: To BS 6262.
 - Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
 - Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
 - Materials:
 - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
 - Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.
- 152 **PREPARATION**
- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing.
- 155 **GLASS GENERALLY**
- Standards: To BS 952 and relevant parts of:
 - BS EN 572 for basic soda lime silicate glass.
 - BS EN 1096 for coated glass.
 - BS EN 1748-1 for borosilicate glass.
 - BS EN 1748-2 for ceramic glass.
 - BS EN 1863 for heat strengthened soda lime silicate glass.
 - BS EN 12150 for thermally toughened soda lime silicate safety glass.
 - BS EN 12337 for chemically strengthened soda lime silicate glass.
 - BS EN 13024 for thermally toughened borosilicate safety glass.
 - BS EN ISO 12543 for laminated glass and laminated safety glass.
 - Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.
 - Edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.

165 HEAT SOAKING OF THERMALLY TOUGHENED GLASS

- Standard: To BS EN 14179.
 - Holding period (minimum): 2 hours.
 - Mean glass temperature: $290^{\circ} \pm 10^{\circ}\text{C}$.
- Certified evidence of treatment: Submit.
- Designated locations: All Toughened Glass.

TYPES OF GLAZING

520 FIRE RATING

- Assessment of capability: Submit proposed construction details of designated items to a UKAS/ NAMAS accredited laboratory or other approved authority for assessment of capability of achieving specified fire ratings.
 - Test standard: To BS EN 1364-1.
- Assessment/ test results and reports: Submit immediately they are available, and before installing glazing.
- Designated items: All Fire Rated Elements.

630 MANIFESTATION Generally

- Design: Row of dots 50mm diameter as shown on drawings, or logo or other TBC and to comply with Part K of Building Regulations.
 - Art work: To be prepared by contractor and submitted for approval.
 - Media: Scale drawings.
- Technique: Applied film.

Project No. 150457

Client: Council of the Isles of Scilly

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STRIDE TREGLOWN
ARCHITECTURE

M10 Cement based levelling/ wearing screeds

To be read with Preliminaries/General conditions.

TYPES OF SCREED

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

TYPES OF SCREED SCREED/TOPPING - TO CONTRACTOR DESIGN. CONTRACTOR TO SUBMIT DETAILS PRIOR TO INSTALLATION FOR COMMENTS.

M20 Plastered/ Rendered/ Roughcast coatings

To be read with Preliminaries/ General conditions.

TYPES OF COATING

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 160A PROPRIETARY SILICONE BASED FIBRE REINFORCED RENDER SYSTEM TO EXTERNAL WALLS
- Manufacturer: [Knauf, Connis S Top Coat].
 - System reference: [Render Only Solution - Proprietary Reinforced Basecoat with Silicone Top Coat].
 - Render Carrier Board: [Knauf Aquapanel Exterior Cement Board as spec K11/486.].
 - Thickness: [12.5mm].
 - Density: [1150 +/-50 kg m3].
 - Minimum compressive strength: [To manufacturers recommendations].
 - Method of fixing: [Stainless steel screw fixed to 60x47mm vertical regularised treated timber battens in accordance with manufacturers recommendations].
 - Recycled content: [n/a]
 - Cavity barriers: [n/a].
 - Thickness: [n/a].
 - Density: [n/a].
 - Minimum compressive strength: [n/a].
 - Beads/ Trims: [PVC].
 - Construction/ Movement joints: [As required to manufacturers recommendations].
 - Reinforcement: [As required to manufacturers recommendations].
 - Method of fixing: [Embed within basecoat].
 - Render: [Conni S].
 - Decorative finish: [1.5mm Grain].
- 280 GYPSUM PLASTER SKIM COAT ON PLASTERBOARD
- Plasterboard: British Gypsum 'Duraline' .
 - Preparation: Tape joints with manufactureres approved skim tape .
 - Plaster: Board finish/ finish plaster to BS EN 13279-1.
 - Manufacturer: British Gypsum .
 - Product reference: Thistle MultiFinish .
 - Thickness: 2mm .
 - Finish: Smooth.
 - Accessories: Skrim tape, stop and corner beads, intumescent / acoustic mastic .

GENERAL

510 SUITABILITY OF SUBSTRATES

- Soundness: Free from loose areas and significant cracks and gaps.
- Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.
- Tolerances: Permitting specified flatness/ regularity of finished coatings.
- Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.

BACKINGS/ BEADS/ JOINTS

630 BEADS/ STOPS FOR INTERNAL USE

- Material: Galvanized steel to BS EN 13658-1.

640 BEADS/ STOPS GENERALLY

- Location: External angles and stop ends except where specified otherwise.
- Corners: Neat mitres at return angles.
- Fixing: Secure, using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
 - Beads/ stops for external render: Fix mechanically.
- Finishing: After coatings have been applied, remove surplus material while still wet, from surfaces of beads/ stops exposed to view.

659 PLASTERBOARD JOINTS

- Joints and angles (except where coincident with metal beads). Reinforce with continuous lengths of jointing tape.

INTERNAL PLASTERING

710 APPLICATION GENERALLY

- Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.
- Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
 - Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.
- Drying out: Prevent excessively rapid or localized drying out.

715 FLATNESS/ SURFACE REGULARITY

- Sudden irregularities: Not permitted.
- Deviation of plaster surface: Measure from underside of a straight edge placed anywhere on surface.
 - Permissible deviation (maximum) for plaster not less than 13 mm thick: 3 mm in any consecutive length of 1800 mm.

742 THIN COAT PLASTER

- Preparation for plasters less than 2 mm thick: Fill holes, scratches and voids with finishing plaster.

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STRIDE TREGLOWN
ARCHITECTURE

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777 SMOOTH FINISH

- Appearance: A tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks. Avoid water brush, excessive trowelling and over polishing.

M40 Stone/ Concrete/ Quarry/ Ceramic tiling/ Mosaic

1 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

5A TILE TO All splash backs

as indicated in finishes plans 150457_45001

" Tiles: Ceramic.

- Manufacturer/ Supplier: Johnson or Equal.

Product reference: Prismatic.

- Colour: TBC with Client

- Finish: Gloss.

- Size: 150 x 150mm.

- Thickness: 6.5mm.

- Setting out: stack bond.

- Slip potential:

Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2, -3 or BS EN

14231 (natural stone only): Not applicable.

Surface roughness (Rz) (minimum) to BS 1134: Manufacturer's standard.

SlipSTD class: Not applicable.

- Recycled content: Not applicable.

" Background/ Base: plasterboard walls.

- Preparation: to manufacturer's recommendations.

" Intermediate substrate: Not required.

" Bedding: to manufacturer's recommendations.

- Reinforcement: to manufacturer's recommendations.

- Adhesive to BS EN 12004: Contractor's choice.

" Joint width: As spacer lugs.

" Grout: Epoxy resin waterproof grout to approval.. Mid Grey.

- Type/ classification: -.

- Admixture: None.

" Movement joints: to manufacturer's recommendations - none anticipated.

" Accessories: Stainless steel or aluminium 90 deg angle trim to all exposed tile edges to match tile thickness..

15 NEW BACKGROUNDS/BASES

- Background drying times (minimum):

- Brick/block walls: 6 weeks.

- Rendering: 2 weeks.

- Gypsum plaster: 4 weeks.

- Base drying times (minimum):

- Concrete slabs: 6 weeks.

- Cement:sand screeds: 3 weeks.

20 EXISTING BACKGROUNDS/BASES GENERALLY

- Efflorescence, laitance, dirt, loose and defective material: Remove and make good defective areas with materials compatible with background/base and bedding.
- Deposits of oil, grease and other materials incompatible with the bedding: Remove.
- Tile, paint and other nonporous surfaces: Clean.
- Wet backgrounds: Dry before tiling.
- Paint with unsatisfactory adhesion: Remove so as not to impair bedding adhesion.

25 NEW PLASTER

- Plaster primer: Apply if recommended by adhesive manufacturer.

30 FIXING GENERALLY

- Colour/ shade: Avoid unintended variations within tiles for use in each area/ room.
 - Variegated tiles: Mix thoroughly.
- Adhesive: Compatible with background/ base.
- Cut tiles: Neat and accurate.
- Fixing: Provide adhesion over entire background/ base and tile backs.
- Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints.
- Deviation of surface: Measure from underside of a 2 m straightedge with 3 mm thick feet placed anywhere on surface. The straightedge should not be obstructed by the tiles/ mosaics and no gap should be greater than 6 mm, i.e. a tolerance of ± 3 mm.
- Surplus bedding material: Clean from joints and face of tiles/ mosaics.

32 MORTAR BEDDING

- Bedding mix:
 - Cement: Portland to BS EN 197-1, type CEM I/42.5.
 - Sand for walls: Fine aggregate to BS EN 13139.
Grading designation: 0/2 (CP or MP) category 2 fines.
 - Sand for floors: Fine aggregate to BS EN 13139.
- Grading designation: 0/4 (MP) category 1 fines and between 20-66% passing a 0.5 sieve.
- Batching: Select from:
 - Batch by weight.
 - Batch by volume: Permitted on the basis of previously established weight:volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistence. Use a suitable forced action mechanical mixer. Do not use a free fall type mixer.
- Application: At normal temperatures use within two hours. Do not use after initial set. Do not retemper.

35 SETTING OUT

- Joints: True to line, continuous and without steps.
 - Joints on walls: Horizontal, vertical and aligned round corners.
 - Joints in floors: Parallel to main axis of space or specified features.
- Cut tiles: Minimise number, maximise size and locate unobtrusively.
- Joints in adjoining floors and walls: Align.
- Joints in adjoining floors and skirtings: Align.

55 ADHESIVE BED - NOTCHED TROWEL AND BUTTERING METHOD TO WALLS

- Application: By floated coat of adhesive to dry background. Comb surface.
- Tiling: Apply thin even coat of adhesive to backs of dry tiles. Fill any profiles. Press tiles firmly onto float coat.
- Finished adhesive thickness: 3 mm or within the range allowed by the adhesive manufacturer.

70 GROUTING

- Sequence: Grout when bed/adhesive has set sufficient to prevent disturbance of tiles.
- Joints: 6 mm deep (or depth of tile if less). Free from dust and debris.
- Grouting: Fill joints completely, tool to profile, clean off surface. Leave free from blemishes.
- Polishing: When grout is hard, polish tiling with dry cloth.

M50 Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

To be read with Preliminaries/ General conditions.

TYPES OF COVERING

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 130 CARPET TILING
- Location: See Finishes Schedule.
 - Base: Latex levelling compound.
 - Preparation: as manufacturers recommendations.
 - Fabricated underlay: N/A.
 - Carpet tiles:
 - Manufacturer: Forbo Flooring UK Ltd, P O Box 1, Kirkcaldy Fife, KY1 2SB.
Tel: 0800 0282 162 Fax: 01772 646912
Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
Product reference: Tessara Mix.
 - Type: Textured loop pile. Random Lay. Batchless. .
 - BS EN 1307 classification:
Levels of use class: Heavy Contract 33.
Luxury rating class: -.
 - Additional performance properties to BS EN 1307: None.
 - Recycled content: 50%.
 - Size: 500 x 500 mm.
 - Colour/ pattern: TBA.
 - Method of laying: Mix should be installed in a Random fashion.
 - Accessories: Edging and cover strips, as clause 740.
 - Other requirements: Adhesive: 542 Eurofix Tack Plus.

150 SHEETING VINYL to Nursery Rooms and Sleep Rooms

- Location: See Finishes Schedule.
- Base: Latex levelling compound .
 - Preparation: as manufacturers recommendations.
- Fabricated underlay: N/A.
- Flooring roll: Heterogeneous PVC to BS EN 651; ISO11638..
 - Manufacturer: Forbo Flooring UK Ltd, P O Box 1, Kirkcaldy Fife, KY1 2SB.
Tel: 0800 0282 162 Fax: 01772 646912
Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
Product reference: Forbo Sarlon Cristal 19dB.
 - BS EN ISO 10874 class: 34 / 42.
 - Slip potential:
Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: R9.
Surface roughness (Rz) (minimum) to BS 1134: Not applicable.
 - Recycled content: 0% (minimum) to BS EN ISO 14021.
 - Width: 2000 mm.
 - Thickness: 3.4mm.
 - Colour/ pattern: TBC.
- Adhesive (and primer if recommended by manufacturer): Eurocol 640 Eurostar Special – A superior acrylic dispersion low VOC emission adhesive with a high initial grab .
- Seam welding: Hot welding with matching coloured rod.
- Accessories:
 - Edging and cover strips, as clause 740
 - Skirtings, as clause 771...
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Seek advice from Forbo for specific requirements for flooring.

- 151 SHEETING VINYL to circulation areas
- Location: See Finishes Schedule.
 - Base: Latex levelling compound.
 - Preparation: as manufacturers recommendations.
 - Fabricated underlay: N/A.
 - Flooring roll: Heterogeneous PVC to BS EN 651; ISO11638..
 - Manufacturer: Forbo Flooring UK Ltd, P O Box 1, Kirkcaldy Fife, KY1 2SB.
Tel: 0800 0282 162 Fax: 01772 646912
Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
Product reference: Forbo Sarlon Cristal 15dB.
 - BS EN ISO 10874 class: 34 / 42.
 - Slip potential:
Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: R9.
Surface roughness (Rz) (minimum) to BS 1134: Not applicable.
 - Recycled content: 0% (minimum) to BS EN ISO 14021.
 - Width: 2000 mm.
 - Thickness: 2.6mm.
 - Colour/ pattern: TBC.
 - Adhesive (and primer if recommended by manufacturer): Eurocol 640 Eurostar Special – A superior acrylic dispersion low VOC emission adhesive with a high initial grab .
 - Seam welding: Hot welding with matching coloured rod.
 - Accessories:
 - Edging and cover strips, as clause 740
 - Skirtings, as clause 771..
 - Finishing: As clause 820 omitting polish finish.
 - Other requirements: Seek advice from Forbo for specific requirements for flooring.

152 SHEETING VINYL to Stores, Toilets and Kitchen

- Location: See Finishes Schedule.
- Base: Latex levelling compound.
 - Preparation: as manufacturers recommendations.
- Fabricated underlay: N/A.
- Flooring roll: Heterogeneous PVC to BS EN 651; ISO11638..
 - Manufacturer: Forbo Flooring UK Ltd, P O Box 1, Kirkcaldy Fife, KY1 2SB.
Tel: 0800 0282 162 Fax: 01772 646912
Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
Product reference: Forbo Surestep Original..
 - BS EN ISO 10874 class: 34 / 43.
 - Slip potential:
Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: R10.
Surface roughness (Rz) (minimum) to BS 1134: =20.
 - Recycled content: 0% (minimum) to BS EN ISO 14021.
 - Width: 2000 mm.
 - Thickness: 2.0mm.
 - Colour/ pattern: TBC.
- Adhesive (and primer if recommended by manufacturer): Eurocol 640 Eurostar Special – A superior acrylic dispersion low VOC emission adhesive with a high initial grab .
- Seam welding: Hot welding with matching coloured rod.
- Accessories:
 - Edging and cover strips, as clause 740
 - Skirtings, as clause 771...
- Finishing: As clause 820 omitting polish finish.
- Other requirements: Seek advice from Forbo for specific requirements for flooring.

GENERAL REQUIREMENTS

210 WORKMANSHIP GENERALLY

- Base condition after preparation: Rigid, dry, sound, smooth and free from grease, dirt and other contaminants.
- Finished coverings: Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains.

330 COMMENCEMENT

- Required condition of works prior to laying materials:
 - Building is weathertight and well dried out.
 - Wet trades have finished work.
 - Paintwork is finished and dry.
 - Conflicting overhead work is complete.
 - Floor service outlets, duct covers and other fixtures around which materials are to be cut are fixed.
- Notification: Submit not less than 48 hours before commencing laying.

340 CONDITIONING

- Prior to laying: Condition materials by unpacking and separating in spaces where they are to be laid. Maintain resilient flooring rolls in an upright position. Unroll carpet and keep flat on a supporting surface.
- Conditioning time and temperature (minimum): As recommended by manufacturer with time extended by a factor of two for materials stored or transported at a temperature of less than 10°C immediately prior to laying.

350 ENVIRONMENT

- Temperature and humidity: Before, during and after laying, maintain approximately at levels which will prevail after building is occupied.
- Ventilation: Before during and after laying, maintain adequate provision.

PREPARING BASES

410 NEW BASES

- Suitability of bases and conditions within any area: Commencement of laying of coverings will be taken as acceptance of suitability.

430 NEW WET LAID BASES

- Base drying aids: Not used for at least four days prior to moisture content testing.
- Base moisture content test: Carry out in accordance with BS 5325, Annexe A or BS 8203, Annexe A.
 - Locations for readings: In all corners, along edges, and at various points over area being tested.
- Commencement of laying coverings: Not until all readings show 75% relative humidity or less.

440 SUBSTRATES TO RECEIVE THIN COVERINGS

- Trowelled finishes: Uniform, smooth surface free from trowel marks and other blemishes. Abrade suitably to receive specified floor covering material.

460 SMOOTHING/ LEVELLING UNDERLAYMENT COMPOUND

- Type: As recommended by covering manufacturer.
- Manufacturer: Forbo Flooring UK Ltd, P O Box 1, Kirkcaldy Fife, KY1 2SB.
Tel: 0800 0282 162 Fax: 01772 646912
Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
 - Product reference: Forbo Eurocol 902 Europlan.

LAYING COVERINGS

610 SETTING OUT TILES

- Method: Set out from centre of area/ room, so that wherever possible:
 - Tiles along opposite edges are of equal size.
 - Edge tiles are more than 50% of full tile width.

620 COLOUR CONSISTENCY

- Finished work in any one area/ room: Free from banding or patchiness.

640 ADHESIVE FIXING GENERALLY

- Adhesive type: As specified, as recommended by covering/ underlay, manufacturer or as approved.
- Primer: Type and usage as recommended by adhesive manufacturer.
- Application: As necessary to achieve good bond.
- Finished surface: Free from trowel ridges, high spots caused by particles on the substrate, and other irregularities.

650 SEAMS

- Patterns: Matched.
- Joints: Tight without gaps.

680 SEAM WELDING COVERINGS

- Commencement: At least 24 hours after laying, or after adhesive has set.
- Joints: Neat, smooth, strongly bonded, flush with finished surface.

700 LOOSE LAID CARPET TILES

- Areas of adhered tiles: Secure using double sided tape or peelable adhesive.
- Joints: Butted.
 - Perimeter joints: Accurately cut to match abutment and prevent movement.

720 DOORWAYS

- Joint location: On centre line of door leaf.

740 EDGINGS AND COVER STRIPS

- Manufacturer: Gradus or equal approved .
 - Product reference: ACS38, ACT61, ACT81, TA25 .
- Material/ finish: Mill finished aluminium .
- Fixing: Secure with edge of covering gripped. Use matching fasteners where exposed to view

771A SKIRTINGS

- Manufacturer: Gradus Accessories, Park Green, Macclesfield, Cheshire, SK11 7LZ.
Tel: 01625 428922 Fax: 01625 433939
Website: www.gradusworld.com
Email: sales@gradusworld.com
- Reference: SO 100
- Material: Flexible pvc
- Height: 100mm
- Foot Dimension: 19mm
- Colour: TBC
- Fixing: Adhesive fix – as per manufacturers instructions

COMPLETION

820 FINISHING PLASTICS FLOORING

- Cleaning operations:
 - Wash floor with water containing neutral (pH 6-9) detergent. If necessary, lightly scrub heavily soiled areas.
 - Rinse with clean water, removing surplus to prevent damage to adhesive. Allow to dry.
- Emulsion polish: Two coats of a type recommended by covering manufacturer.

880 WASTE

- Spare covering material: Retain suitable material for patching. On completion submit pieces for selection. Hand over selected pieces to Employer.

M60 Painting/clear finishing

To be read with Preliminaries/General conditions.

COATING SYSTEMS

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 111 EMULSION PAINT Internal walls to non circulation areas - refer to Finishes Schedules
- Manufacturer: Dulux Trade, ICI Paints AkzoNobel, Wrexham Road, Slough, Berkshire, SL2 5DS, 08444 817818, www.dulux.trade-decorating.co.uk or equal.
 - Product reference: Dulux Trade Diamond Matt or equivalent.
 - Surfaces: Skimmed plasterboard partitions, skimmed, plasterboarded blockwall walls & existing walls.
 - Preparation: As manufacturer's recommendations.
 - Initial coats: thinned by 10%.
 - Number of coats: 1.
 - Finishing coats: Diamond Matt.
 - Number of coats: 2.
 - Colours:
 - To be agreed.
- 150 EGGSHELL/ SATIN PAINT INTERNAL WALLS TO CIRCULATION AREAS
- Manufacturer: Dulux or equal approved.
 - Product reference: Dulux Trade Diamond High Performance Eggshell or equivalent.
 - Surfaces: Skimmed plasterboard partitions, skimmed, plasterboarded blockwall walls & existing walls.
 - Preparation: As manufacturer's recommendations.
 - Initial coats: As recommended by manufacturer.
 - Number of coats: -.
 - Undercoats: thinned.
 - Number of coats: 1.
 - Finishing coats: Dulux Trade Diamond High Performance Eggshell.
 - Number of coats: 2.

- 151 EGG SHELL/ SATIN PAINT To cills and skirtings - refer to Finishes Schedules
- Manufacturer: Dulux Trade, ICI Paints AkzoNobel, Wrexham Road, Slough, Berkshire, SL2 5DS, 08444 817818, www.dulux.trade-decorating.co.uk or equal.
 - Product reference: Quick Dry Dulux Trade Satinwood - Water Based..
 - Surfaces: Primed MDF.
 - Preparation: as manufacturer's recommendations.
 - Initial coats: Primer.
 - Number of coats: 1.
 - Undercoats: n/a if applied to pre-primed surfaces. Otherwise as recommended by manufacturer.
 - Number of coats: 1.
 - Finishing coats: Quick Dry Dulux Trade Satinwood - Water based..I.
 - Number of coats: 2.
 - Colours: To be agreed.
- 151A EGG SHELL/ SATIN PAINT To architraves - refer to Finishes Schedules
- Manufacturer: Dulux Trade, ICI Paints AkzoNobel, Wrexham Road, Slough, Berkshire, SL2 5DS, 08444 817818, www.dulux.trade-decorating.co.uk or equal.
 - Product reference: Quick Dry Dulux Trade Satinwood - Water Based..
 - Surfaces: Primed MDF.
 - Preparation: as manufacturer's recommendations.
 - Initial coats: Primer.
 - Number of coats: 1.
 - Undercoats: n/a if applied to pre-primed surfaces. Otherwise as recommended by manufacturer.
 - Number of coats: 1.
 - Finishing coats: Quick Dry Dulux Trade Satinwood - Water based..I.
 - Number of coats: 2.
 - Colours: Frames to be painted grey to match existing
- 152 WASHABLE EGG SHELL PAINT Internal walls in Kitchen and WCs- refer to Finishes Schedules
- Manufacturer: Dulux Trade, ICI Paints AkzoNobel, Wrexham Road, Slough, Berkshire, SL2 5DS, 08444 817818, www.dulux.trade-decorating.co.uk or equal.
 - Product reference: Dulux Trade Sterishield Diamond Eggshell.
 - Surfaces: Skimmed plasterboard partitions, skimmed, plasterboarded blockwall walls & existing walls.
 - Preparation: As manufacturer's recommendations.
 - Initial coats: thinned by 10%.
 - Number of coats: 1.
 - Finishing coats: Dulux Trade Sterishield Diamond Eggshell.
 - Number of coats: 2.
 - Colours: To be agreed.

181 FLOOR COATING FLOOR PAINT

- Manufacturer: Crown Paints or equal approved.
 - Product reference: Epimac anti slip floor paint.
- Surfaces: Floated Concrete.
 - Preparation: as clause 400.
- Number of coats: 2.

GENERALLY

210 COATING MATERIALS

- Manufacturers: Obtain materials from any of the following:
As referred to in specification or equal alternatives expressly approved by the architect.
- Selected manufacturers: Submit names before commencement of coating work.

215 HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
- Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.

220 COMPATIBILITY

- Coating materials selected by contractor:
 - Recommended by their manufacturers for the particular surface and conditions of exposure.
 - Compatible with each other.
 - Compatible with and not inhibiting performance of preservative/fire retardant pretreatments.

280 PROTECTION

- 'Wet paint' signs and barriers: Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.

300 CONTROL SAMPLES

- Sample areas of finished work: Carry out, including preparation, as follows:

Types of coating	Location	
M60/ 111,112,151,155,170 .		An example of each .
- Approval of appearance: Obtain before commencement of general coating work.

320 INSPECTION BY COATING MANUFACTURERS

- General: Permit manufacturers to inspect work in progress and take samples of their materials from site if requested.

PREPARATION

400 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering 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: Remove.
- Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
- Surface irregularities: Remove.
- Joints, cracks, holes and other depressions: Fill flush with surface, to provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Water based stoppers and fillers:
 - Apply before priming unless recommended otherwise by manufacturer.
 - If applied after priming: Patch prime.
- Oil based stoppers and fillers: Apply after priming.
- Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 - Prime resulting bare areas.

420 FIXTURES AND FITTINGS

- Removal: Before commencing work remove: Coverplates, grilles, wall clocks, and other surface mounted fixtures.
- Replacement: Refurbish as necessary, refit when coating is dry.

425 IRONMONGERY

- Removal: Before commencing work: Remove ironmongery from surfaces to be coated.
- Hinges: Remove.
- Replacement: Refurbishment as necessary; refit when coating is dry.

471 PREPRIMED WOOD

- Areas of defective primer: Take back to bare wood and reprime.

481 UNCOATED WOOD

- General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
- Heads of fasteners: Countersink sufficient to hold stoppers/fillers.
- Resinous areas and knots: Apply two coats of knotting.

511 GALVANIZED, SHERARDIZED AND ELECTROPLATED STEEL

- White rust: Remove.
- Pretreatment: Apply one of the following:
 - 'T wash'/ mordant solution to blacken whole surface.
 - Etching primer recommended by coating system manufacturer.

- 521 UNCOATED STEEL - MANUAL CLEANING
- Oil and grease: Remove.
 - Corrosion, loose scale, welding slag and spatter: Remove.
 - Residual rust: Treat with a proprietary removal solution.
 - Primer: Apply as soon as possible.
- 541 UNCOATED ALUMINIUM/ COPPER/ LEAD
- Surface corrosion: Remove and lightly key surface.
 - Pretreatment: Etching primer if recommended by coating system manufacturer.
- 560 UNCOATED CONCRETE
- Release agents: Remove.
- 580 UNCOATED PLASTER
- Nibs, trowel marks and plaster splashes: Scrape off.
 - Overtrowelled 'polished' areas: Key lightly.
- 590 UNCOATED PLASTERBOARD
- Depressions around fixings: Fill with stoppers/ fillers
- 622 ORGANIC GROWTHS
- Dead and loose growths and infected coatings: Scrape off and remove from site.
 - Treatment biocide: Apply appropriate solution to growth areas and surrounding surfaces.
 - Residual effect biocide: Apply appropriate solution to inhibit re-establishment of growths.
- 645 SEALING OF INTERNAL MOVEMENT JOINTS
- General: To junctions of walls and ceilings with architraves, skirtings and other trims.
 - Sealant: Water based acrylic.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Preparation and application: As section Z22.

APPLICATION

- 711 COATING GENERALLY
- Application standard: In accordance with BS 6150, clause 9.
 - Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
 - Surfaces: Clean and dry at time of application.
 - Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
 - Overpainting: Do not paint over intumescent strips or silicone mastics.
 - Priming coats:
 - Thickness: To suit surface porosity.
 - Application: 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.

720 PRIMING JOINERY

- Preservative treated timber: Retreat cut surfaces with two flood coats of a suitable preservative before priming.
- End grain: Coat liberally allow to soak in, and recoat.

731 SITE COATING OF CONCEALED JOINERY SURFACES

- General: After priming, apply additional coatings to surfaces that will be concealed when fixed in place.
 - Components: All.
 - Additional coatings: One undercoat.

740 CONCEALED METAL SURFACES

- General: Apply additional coatings to surfaces that will be concealed when component is fixed in place.
 - Components: all.
 - Additional coatings: 1 no primer.

800 GLAZING

- Etched, sand blasted and ground glass: Treat or mask edges before coating to protect from contamination by oily constituents of coating materials.

810 WATER REPELLENT

- Application: Liberally flood surface, giving complete and even coverage.

N10 General fixtures/ furnishings/ equipment

To be read with Preliminaries/General conditions.

PRODUCTS

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 146 VANITY AND WASHROOM FURNITURE TO CHILDREN WCS AND PLAY SPACES
- Drawing reference(s): Refer to Room Loading drawings.
 - Manufacturer and reference: Venesta Washroom Systems, Chartwell Court, West Mill, Imperial Business Park, Gravesend, Kent. DA11 0DL. Tel 01474 353333.
 - Vanity Top: Solid surface range.
 - Top: To include upstand with single waste and produced from solid surface – a blend of minerals and acrylic polymer delivering a stone appearance.
 - Length: Varies, refer to drawings
 - Thickness: 13mm nominal.
 - Under Panel type: High Density Solid Grade laminate (SGL) with decorative face both sides.
 - Panel Thickness: 13mm nominal.
 - Edge treatment: radiused and polished.
 - Support framing: By main contractor.
 - Support frame fascia/ Underframe: High Density Solid Grade laminate (SGL) with decorative face both sides.
 - Panel and top Colour/Finish: From the Venesta standard colour range.
 - Method of fixing panels: Concealed plastic clips fixed to edge of underframe cutouts and reverse of facing panels.
 - Joint treatment: Nominal 70mm wide shadowgap between each panel section
 - Components/Accessories: Angle brackets, screws and plugs for fixing underframe to floor and vanity top to underframe and back wall.
 - Included features: Removable access panels. Low level bespoke size due to pupil age 4 years or less.
 - Pre-plumbing: n/a.
- 240 BLINDS to Sleep Room
- Manufacturer: Sol Komfort.
 - Product reference: R20 Sidewinder.
 - Type: Vertical roller.
 - Material: DART.
 - Finish/ Colour: to be agreed.
 - Operation: Manual.
 - Accessories/ Other requirements: As required.

- 300 ENTRANCE MATTING to Entrance Lobbys
- Manufacturer: Forbo Flooring Systems Ltd, High Holborn Road, Ripley, Derbyshire, DE5 3NT. Tel: 0800 0282 162 Fax: 01772 646912. Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
 - Product reference: Coral Brush Welcome with Eurocol 640 Eurostar Special adhesive .
 - Colour: TBA .
 - Size: Refer to Finishes Schedule and Plan .
- 301 ENTRANCE MATTING inside Nursery Room external door and Fire Exit door
- Manufacturer: Forbo Flooring Systems Ltd, High Holborn Road, Ripley, Derbyshire, DE5 3NT. Tel: 0800 0282 162 Fax: 01772 646912. Email: info.flooring.uk@forbo.com. Web: www.forbo-flooring.co.uk .
 - Product reference: Coral Classic with Eurocol 640 Eurostar Special adhesive .
 - Colour: TBA .
 - Size: Refer to Finishes Schedule and Plan .

EXECUTION

- 710 MOISTURE CONTENT OF WOOD AND WOOD BASED BOARDS
- Temperature and humidity: During delivery, storage, fixing and to handover maintain conditions to suit specified moisture contents of timber components.
 - Testing: When instructed, test components with approved moisture meter to manufacturer's recommendations.
- 770 TRIMS
- Lengths: Wherever possible, unjointed between angles or ends of runs.
 - Running joints: Where unavoidable, obtain approval of location and method of jointing.
 - Angle joints: Mitred.

COMPLETION

- 910 GENERAL
- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.
 - Ironmongery: Checked, adjusted and lubricated to ensure correct functioning.
- 920 APPLIANCES
- Test: Ensure that all functions and features work correctly.
 - Documentation: Submit guarantees, instruction manuals, etc.

N11 Domestic kitchen fittings, furnishings and equipment

To be read with Preliminaries/ General conditions.

PRODUCTS

- 300 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 310 FITTED BASE UNITS TO KITCHEN, STAFF ROOM AND UTILITY
- Standard: To BS 6222 -2 and -3, and BS EN 14749.
 - Manufacturer: Howdens Joinery Ltd or equal approved..
 - Product reference: GREENWICH or similiar, to be confirmed with client.
 - Structural performance: To BS 6222-2, test level H.
 - Dimensions: To BS EN 1116.
 - Surface finishes: To BS 6222-3.
 - Doors and drawer fronts:
 - Material: Laminated MDF.
 - Finish and colour: From Greenwich range.
 - Edges: All edges to be laminated.
 - Other requirements: Blum 170° zinc plated steel cushion close hinges, Upgrade door box, Upgrade Runners.
 - Side panels, plinths and shelves:
 - Material: Laminated MDF.
 - Finish and colour: From Greenwich range.
 - Edges: All edges to be laminated.
 - Accessories: 1No shelf with adjustable mounting heights, 'T' Bar Handles, 100mm high MDF plinth pair of soft close hinges per door, adjustable feet, show backs to match carcass.
Removable show back will be required where base units are housing a sink unit.
 - Special requirement: All worktops to slightly overhang base unit at the front edge, adjust service zone depths to achieve this requirement.
Floor finishes to be laid prior to fitting units.
 - Refer to room loading drawings for sizes and layouts
 - Manufacturer to submit design for approval .

320 FITTED WALL UNITS TO KITCHEN, STAFF ROOM AND UTILITY

- Standard: To BS 6222 -2 and -3, and BS EN 14749.
- Manufacturer: Howdens Joinery Ltd or equal approved.
 - Product reference: GREENWICH or similiar, to be confirmed with client.
- Structural performance: To BS 6222-2, test level H.
- Dimensions: To BS EN 1116.
- Surface finishes: To BS 6222-3.
- Doors and drawer fronts:
 - Material: Laminated MDF.
 - Finish and colour: FROM FULL Greenwich range.
 - Edges: All edges to be laminated.
 - Other requirements: Blum 170° zinc plated steel cushion close hinges, Upfgrade door box, Upgrade Runners.
- Side panels and shelves:
 - Material: Laminated MDF.
 - Finish and colour: From Greenwich range.
 - Edges: all edges to be laminated.
- Accessories: 1No shelf with adjustable mounting heights, 'T' Bar Handles, 100mm - Refer to room loading drawings for sizes and layout.
 - Manufacturer to submit design for approval.

340 WORKTOPS TO KITCHEN, STAFF ROOM AND UTILITY

- Standard: Not applicable.
- Manufacturer: BOYCO (UK) LTD, EUROPA WAY, CHEADLE HEATH, STOCKPORT SK10 0XE | TELEPHONE +44 (0)161 428 7077.
 - Product reference: Trespatop TM. Solid grade laminate worktop and 100mm high bonded upstand.
- Material: 16mm thk Solid Grade Laminate.Colour TBC..
- Dimensions: Refer to drawings.
- Exposed edges: Black as standard for (SGL).
- Support: Mounted to kitchen carcassing.
- Other requirements: None.

- 351 SINKS, WRAS APPROVED TAPS, TRAPS AND WASTES TO KITCHEN, STAFF ROOM AND UTILITY
- Sinks: Stainless Steel, Commercial use.
 - Standard: To BS EN 13310.
 - Manufacturer: BOYCO (UK) LTD, EUROPA WAY, CHEADLE HEATH, STOCKPORT SK3 0XE | TELEPHONE +44 (0)161 428 7077.
 - Product reference: SB/SD(H)
 - Configuration: Handed single bowl and single drainer.
 - Overall size: 940 x 490mm
 - Material: Stainless steel
 - Tap/ chainstay/ overflow holes: Pair of tap holes as standard.
 - Taps: Pillar
 - Manufacturer: BOYCO (UK) LTD, EUROPA WAY, CHEADLE HEATH, STOCKPORT SK3 0XE | TELEPHONE +44 (0)161 428 7077.
 - Product reference: To contractors choice. Put forward proposals to Architect / CA for approval.
 - Wastes and plumbing kit: To contractors choice.
 - Standard: To BS EN 274-1, -2 and -3.
 - Manufacturer: To contractors choice.
 - Product reference: (-)
- 391 SEALANT
- As Clause Z22

EXECUTION

- 610 MOISTURE CONTENT OF WOOD AND WOOD BASED BOARDS
- Control and monitoring:
 - Method statement: Submit.
- 620 INSTALLATION GENERALLY
- Fixings and adhesives: As section Z20.
 - Services: as M&E drawings and specification.
- 630 INSTALLING UNITS AND WORKTOPS
- General: Well fitting, stable and secure.
- 640 INSTALLING APPLIANCES
- Connections: Provide to electric, gas, and hot and cold water services.
- 650 INSTALLING SINKS, TAPS AND WASTES
- Water supply: To BS EN 806-2 and -4.
 - Taps:
 - Fixing: Secure, watertight seal with the appliance.
 - Positioning: Hot tap to left of cold tap as viewed by the user of the appliance.
 - Wastes:
 - Bedding: Waterproof jointing compound.
 - Fixing: With resilient washer between appliance and backnut.

660 SEALANT BEDDING AND POINTING

- Application: As section Z22.
- Bedding: sinks to worktops.
- Pointing: between units and splashbacks.

670 INSTALLING TRIMS AND MOULDINGS

- Lengths: Un-jointed between angles or ends of runs.
- Angle joints: Mitred.

COMPLETION

910 GENERAL

- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.
- Ironmongery: Checked, adjusted and lubricated to ensure correct functioning.

920 APPLIANCE COMMISSIONING

- Appliance operation, functions and controls: Verify.
- Documentation: Submit guarantees, instruction manuals, etc.

N13 Sanitary appliances and fittings

To be read with Preliminaries/ General conditions.

PRODUCTS

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

300A WCS AND CISTERNS To Staff WC

- Duct linings – As per K32/161 spec and room loading drawings.
 - Sanitary appliances; Supplied loose with appropriate fixings.
 - WC arrangement: Back to wall, rimless floor mount WC with concealed cistern.
 - Pan: Armitage Shanks S305601 Contour 21 WC, (supplied as a loose item).
 - Lip Height: 410mm High.
 - Pan projection: 520mm.
 - Fixings: included.
- Seat: S406501 Contour 21 White seat & cover, top fix hinges.
- Pan Connector: Armitage Shanks S430501 (converts horizontal outlet to P trap).
- Conceala 2 cistern & cover: EEM13590167 - 6.0 or 4.5 litre lever flush (side inlet) with EEM35460367 flushpipe.
- Valve/Float/Operating mechanism: ½ Microvalve HP/LP ballvalve.
- Flushing Mechanism: C03SN20CP - Stainless steel lever.
- Fittings: S951467 Domex screw (part2) ARM030, S972301 White procaster size 3 screw cap.
 - Sealing: Joint between WC and IPS by installer / main contractor.

300B WCS AND CISTERNS To Children's WCs

- Duct linings – As per K32/161 spec and room loading drawings.
 - Sanitary appliances: Supplied loose with appropriate fixings.
 - WC arrangement: Back to wall, open rim floor mount WC with concealed cistern.
 - Pan: Armitage Shanks S304601 Contour 21 Schools (supplied as a loose item).
 - Lip Height: 305mm High.
 - Pan projection: 490mm.
 - Seat: Contour 21 seat no cover, bottom fix hinges.
 - Pan Connector: Armitage Shanks S430501 (converts horizontal outlet to P trap).
- Conceala 2 cistern & cover: EEM13590167 - 6.0 or 4.5 litre lever flush (side inlet) with EEM35460367 flushpipe.
- Valve/Float/Operating mechanism: ½ Microvalve HP/LP ballvalve.
- Flushing Mechanism: Stainless steel lever.
- Fittings: S951467 Domex screw (part2) ARM030, S972301 White procaster size 3 screw cap.
 - Sealing: Joint between WC and IPS unit by installer / main contractor.

300C WCS AND CISTERNS To Accessible WCs

- Duct linings – As per K32/161 spec and room loading drawings.
- Sanitary appliances: Supplied loose with appropriate fixings.
- WC arrangement: Back to wall, rimless floor mount WC with concealed cistern.
- Pan: Armitage Shanks S311601 Contour 21, (supplied as a loose item).
- Lip Height: 450mm (480mm to seat).
- Pan Projection: 750mm.
- Fixings: Included.
- Seat: S406601 - Contour 21 White seat no cover, top fix hinges.
- Pan Connector: Armitage Shanks S430501 (converts horizontal outlet to P trap).
- Conceala 2 cistern & cover: EEM13590167 - 6.0 or 4.5 litre lever flush (side inlet) with EEM35460367 flushpipe.
- Valve/Float/Operating mechanism: ½ Microvalve HP/LP ballvalve.
- Flushing Mechanism: C03SN20CP - Chrome plated lever.
- Fittings: S430267 Contour 21 Inlet connector and constructed bend. S951467 Domex screw (part2) ARM030, S972301 White procaster size 3 screw cap.
- Sealing: Joint between WC and IPS by installer / main contractor.
- Accessories: Document M 2004 Compliant grab rails and door pulls (NBS Clause N13/436). Refer to room loading drawings.
- Loose Grabrails: Colour: TBC
- S6454** Contour 21 grab rail, straight 60cm long x 35mm diameter (x4)
- S6452** Contour 21 grab rail, straight 45cm long x 35mm diameter
- S6360** Contour 21 hinged support rail, 80cm x 35mm O.D,
- S6466** Contour 21 back support, 40cm x 22cm x 35mm OD tube
- S688467 Cushioned back support with clips - White
- S6363** Toilet roll holder for Contour 21 hinged arm rail
- 0600400 Hinged grabrail bracket (Rail not included)

335A WASH BASINS To Accessible Staff WC/ Baby Change (Left Tap Hole

- Duct linings – As per K32/161 spec and room loading drawings.
- Sanitary appliances: Supplied loose.
- Basin: Armitage Shanks S247301 Contour 21 Short projection panel mounted handrinse basin. 370mm, left hand tap hole, no overflow or chainstay hole.
- Taps: A4131AA - Contour 21 thermostatic lever action sequential basin mixer tap with with flexible tails (Suitable for low or high pressure supply systems).
- Waste: TSWC102 - Chromium plated 1¼ strainer waste with 80mm unslotted tail.
- Trap: 7360700SC - 1¼ self-colour (Chrome plated.), plastic re-sealing bottle trap with 75mm seal.
- Fixings: S911167 concealed steel hangers
- Sealing: Joint between basin and IPS by installer / main contractor.

- 335B WASH BASINS To Accessible WCs (Right Tap Hole)
Duct linings – As per K32/161 spec and room loading drawings.
- Sanitary appliances pre-fixed and sealed to V-epps unit by Venesta unless stated elsewhere.
- Basin: Armitage Shanks S247401 Contour 21 Short projection panel mounted handrinse basin. 370mm, right hand tap hole, no overflow or chainstay hole.
Taps: A4131AA
- Contour 21 thermostatic lever action sequential basin mixer tap with with flexible tails (Suitable for low or high pressure supply systems).
Waste: TSWC102 - Chromium plated 1¼ strainer waste with 80mm unslotted tail.
Trap: 7360700SC - 1¼ self-colour (Chrome plated.), plastic re-sealing bottle trap with 75mm seal.
- Fixings: S911167 concealed steel hangers
Sealing: Joint between basin and IPS by installer / main contractor.
- 335C WASH BASINS To Child WC
Duct linings – As per K32/161 spec and room loading drawings.
- Sanitary appliances pre-fixed and sealed to V-epps unit by Venesta unless stated elsewhere.
- Basin: Armitage Shanks S247401 Contour 21 Short projection panel mounted handrinse basin. 370mm, right hand tap hole, no overflow or chainstay hole.
Taps: A4131AA
- Contour 21 thermostatic lever action sequential basin mixer tap with with flexible tails (Suitable for low or high pressure supply systems).
Waste: TSWC102 - Chromium plated 1¼ strainer waste with 80mm unslotted tail.
Trap: 7360700SC - 1¼ self-colour (Chrome plated.), plastic re-sealing bottle trap with 75mm seal.
- Fixings: S911167 concealed steel hangers
Sealing: Joint between basin and IPS by installer / main contractor.
- 336 WASH BASINS to Vanity Units in Child WC
- Manufacturer: Armitage Shanks.
 - Web: www.idealstandard.com.
 - Email: info@thebluebook.co.uk.
 - Tel: +44 (0)870 122 8822.
 - Address: Armitage, Old Road, Rugeley, Staffordshire. WS15 4BT.
 - Product reference: [S2462 Sandringham 500 mm semi-countertop basin, two tapholes, with overflow, no chainstay hole, complete with fixing clips].
 - Colour: [White].
 - Water supply fittings: [Delabie Temposoft Taps].
 - Wastes: [S8733 1¼" Anti-theft chrome plated waste, swivel plug, slotted tail].
 - Traps: [S8910 1¼" Bottle trap, self colour plastics, multi-purpose outlet, 75 mm seal].
- 429 CLOTHES HOOKS TO CIRCULATION AND PLAY SPACES WHERE REQUIRED
- Manufacturer: Saville Stainless.
 - Product reference: SSAC215 single hook or equal approved for clothes and bags..
 - Material: Chrome nickel steel.
 - Finish/ Colour: satin.

- 436 HANDRAILS AND GRAB BARS To Staff WC areas
 - Manufacturer: Armitage Shanks.
 - Product reference: S6726AC.
 - Diameter: 33mm.
 - Material: Aluminium.
 - Finish/ Colour: TBC.

- 438 MIRRORS To WC areas generally
 - Manufacturer: Saint Gobain or equal approved.
 - Product reference: TBA..
 - Material: plastic mirror sheet with smoothed edges to give maximum reflection, free from tarnishing, discolouration, scratches, and other defects visible in the designed viewing conditions
 - Size: tba mm with holes for screw fixing with mirror screws and domed heads.
 - Position accurately with sides vertical and fixed securely, adjusting as necessary to ensure a true undistorted reflection...
 - Finish/ Colour: N/A.

- 439 MIRRORS to Accessible WCs
 - Manufacturer: Saint Gobain or equal approved.
 - Product reference: TBA..
 - Material: plastic mirror sheet with smoothed edges to give maximum reflection, free from tarnishing, discolouration, scratches, and other defects visible in the designed viewing conditions
 - Size: 1350 x 500 mm with holes for screw fixing with mirror screws and domed heads.
 - Position accurately with sides vertical and fixed securely, adjusting as necessary to ensure a true undistorted reflection...
 - Finish/ Colour: N/A.

- 442 PAPER TOWEL DISPENSERS
 - Manufacturer: Armitage Venesta .
 - Product reference: 0302020.
 - Material: Plastic.
 - Finish/ Colour: Grey.

- 446 SANITARY TOWEL DISPOSAL BINS To all WCs for adult use
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Material: Plastic.
 - Finish/ Colour: Grey.

- 447 DISPOSAL BINS -
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Material: plastic.
 - Finish/ Colour: white.

- 449 SHELVES TO ACCESSIBLE WC
 - Manufacturer: BOYCO UK Ltd.
 - Product reference: Boyco 'Trespatop'.
 - Material: Solid grade laminate.
 - Finish/ Colour: TBC.

- 449A BABY CHANGING UNIT
 - Manufacturer: Boyco (UK) Ltd.
 - Web: www.boycouk.com.
 - Email: sales@boycouk.com.
 - Tel: +44 (0)161 428 7077.
 - Address: Europa Way, Cheadle Heath, Stockport, Cheshire. SK3 0XE.
 - Product reference: Baby Changing Unit
 - Type: L284.

- 458 SOAP DISPENSERS To WHBs in all WC areas
 - Manufacturer: Armitage Venesta .
 - Product reference: 0302006.
 - Material: Plastic.
 - Finish/ Colour: White.

- 462 TOILET PAPER HOLDERS to WC's
 - Manufacturer: Armitage Venesta .
 - Product reference: Contractor's choice.
 - Material/ finish: Plastic.
 - Finish/ Colour: Grey.

- 473 HAND DRIERS To WC areas
 - Standard: To BS EN 60335-2-23.
 - Refer to M&E Engineers Specification

- 580 SEALANT FOR POINTING
 - Standard: -.
 - Class: -.
 - Type: High modulus 1 part silicone sealant with fungicide.
 - Manufacturer: Adshead Ratcliffe or equal approved.
 - Product reference: Arbosil 1081.
 - Colour: White.

EXECUTION

610 INSTALLATION GENERALLY

- Assembly and fixing: Surfaces designed to falls to drain as intended.
- Fasteners: Nonferrous or stainless steel.
- Supply and discharge pipework: Fix before appliances.
- Fixing: Fix appliances securely to structure. Do not support on pipework.
- Jointing and bedding compounds: Recommended by manufacturers of appliances, accessories and pipes being jointed or bedded.
- Appliances: Do not use. Do not stand on appliances.
- On completion: Components and accessories working correctly with no leaks.
- Labels and stickers: Remove.

613 COMPATIBILITY OF COMPONENTS

- General: Each sanitary assembly must consist of functionally compatible components, preferably obtained from a single manufacturer.
 - Exceptions: Water supply fittings, wastes and traps.

620 NOGGINGS AND BEARERS

- Noggings, bearers, etc. to support sanitary appliances and fittings: Position accurately. Fix securely.

630 TILED BACKGROUNDS OTHER THAN SPLASHBACKS

- Timing: Complete before fixing appliances.
- Fixing appliances: Do not overstress tiles.

650 INSTALLING WC PANS

- Floor mounted pans: Screw fix and fit cover caps over screw heads. Do not use mortar or other beddings.
- Seat and cover: Stable when raised.

670 INSTALLING CISTERNS

- Cistern operating components: Obtain from cistern manufacturer.
 - Float operated valve: Matched to pressure of water supply.
- Overflow pipe: Fixed to falls and located to give visible warning of discharge.
 - Location: Agreed, where not shown on drawings.

710 INSTALLING TAPS

- Fixing: Secure against twisting.
- Seal with appliance: Watertight.
- Positioning: Hot tap to left of cold tap as viewed by user of appliance.

720 INSTALLING WASTES AND OVERFLOWS

- Bedding: Waterproof jointing compound.
- Fixing: With resilient washer between appliance and backnut.

Project No. 150457

Client: Council of the Isles of Scilly

STRIDE TREGLOWN
ARCHITECTURE

Signed Off **Construction Issue 29/01/2018**

725 INSTALLING HAND DRIERS

- Fused connection units:
 - Type: Switched.
 - Engraving: With 'HAND DRIER'.
 - Location: Submit proposals.
- Final connection: Concealed.
 - Containment: 25 mm HG galvanized conduit.

755 SEALANT BEDDING AND POINTING

- Bedding: Bed and point basins to underside of vanity units. .
- Pointing: Joints between appliances and splashbacks. .

N15 Internal fire and safety signage systems

To be read with Preliminaries/ General Conditions.

GENERAL

100 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

110A FIRE SIGNAGE SYSTEMS INTERNALLY

- System manufacturer: Stocksigns, Redhill, Surrey RH1 2LG, OEA or similar
 - Product reference: Standard ranges of Fire and safety signs
 - Layout and dimensions: Positions to be agreed with school
 - Language: English
 - Sign type: Escape signage
 - Manufacturing process: Material Rigid Plastic 2 series
 - Supports/ Fixings: Secured to background with adhesive pads / screw fixings.
- Ceiling Fixing: Suspended with 1mm stainless steel wires with appropriate fixings for hanging off ceiling tiles
- Accessories: As required – suspended / wall mounted frames.

115 ILLUMINATED SIGNAGE

For details and location of any illumination signage see M&E Engineers details.

SYSTEM PERFORMANCE

210 GENERAL REQUIREMENTS

- Signage system design:
 - Complete to: BS 559 and BS ISO 16069.
 - Comply with the requirements of: Fire Strategy Report .
- Proposals: Submit drawings, schedules, technical information, calculations and manufacturer's literature.

240 SIGNAGE SYSTEM SPECIFICATION

- Content: Signs including facing information, components, inserts, accessories and fixings necessary to complete the system.
- Geometric shapes, colours and layout: To BS 5499-1.
 - Font: Helvetica medium.
- Escape route: In accordance with BS 5499-4 and BS ISO 16069
- Safety meaning: In accordance with BS 5499-5.
- Water safety: In accordance with BS 5499-11.

280 DESIGN LIFE OF FIRE SIGNAGE SYSTEM

- Duration: 15 years .
 - Subject to reasonable wear and tear.
- Condition of use: Subject to regular maintenance.

290 SIGNAGE SAMPLES

- Sign type: Fire .
 - Action: Submit labelled samples.
 - Conformity: Retain samples on site for the duration of the contract or until instructed to remove.
 - Delivered products: To conform with labelled samples

290A SIGNAGE SAMPLES

- Sign type: General mix for approval .
 - Action: Submit labelled samples.
 - Conformity: Retain samples on site for the duration of the contract or until instructed to remove.
 - Delivered products: To conform with labelled samples

PRODUCTS

305 INTERNAL SIGNAGE PRODUCTS GENERALLY

- Standard: To BS 559.
- Colorimetric and photometric properties: To BS 5378-2.

320 ALUMINIUM PLATE FOR HAZARD SIGNS

- Manufacturer: Contractor's choice .
 - Product reference: Contractor's choice .
- Component thickness: 2 mm .
- Finish: Manufacturer's standard .
- Perimeters: Manufacturer's standard .

400A PHOTOLUMINESCENT SIGNS

• **PHOTOLUMINESCENT SIGNS**

- Standard: In accordance with Photoluminescent Safety Products Association (PSPA) Standard 002 part 1.
- PSPA material: Class A
- Manufacturer: Stocksigns, Redhill, Surrey RH1 2LG, OEA
- Product reference: Photoluminescent Fire to BS 5499, Part 4 2000
- Base material: S.A. Vinyl / Rigid plastic
- Component thickness: 1.3mm.
- Finish: As supplied.
- Size: 350 x 100mm
- Perimeters: radiused corners
- Wall Fixing: Self Adhesive
- Ceiling Fixing: Suspended with 1mm stainless steel wires with appropriate fixings for hanging off ceiling tiles.
- Reference: See signage drawing for location of signage.
-
- Type FA - Denotes Straight Ahead Fire Exit Sign (Direction Arrow Up)
- Type FB - Denotes Straight Ahead Fire Exit Sign (Direction Arrow Down)
- Type FC - Denotes Left for Fire Exit Sign (Direction Arrow Left)
- Type FD - Denotes Right for Fire Exit Sign (Direction Arrow Right)
- Type FE - Denotes Left and Down for Fire Exit Sign (Direction Arrow Left & Down)
- Type FF - Denotes Right and Down for Fire Exit Sign (Direction Arrow Right & Down)

401 PHOTOLUMINESCENT REFUGE SIGNS

- Standard: In accordance with Photoluminescent Safety Products Association (PSPA) Standard 002 part 1.
- PSPA material: min class A
 - Manufacturer: Stock signs or equivalent
 - Base material: rigid PVC
- Component thickness: 1.3mm
- Size: 250 x 300mm
- Perimeters: radiused corners
- Fixing: Self Adhesive
- Position: fix at 1500mm affl

Type FG - Refuge Sign

EXECUTION

610 FIXING SIGNS GENERALLY

- Installation: To BS 559.
 - Secure, plumb and level.
- Fasteners and adhesives: As section Z20.
- Strength of fasteners: Sufficient to support live and dead loads.
- Fasteners for external signs: Corrosion resistant material or with a corrosion resistant finish. Isolate dissimilar metals to avoid electrolytic corrosion.
- Fixings showing on surface of sign: Must not detract from the message being displayed.

COMPLETION

910 DOCUMENTATION

- Submit:
 - Manufacturer's maintenance instructions.
 - Guarantees, warranties, test certificates, record schedules and logbooks.

930 SPECIALIST TOOLS

- Supply as follows: 1 set suspension adjustment tools .

N16 Bird and vermin control systems

To be read with Preliminaries/ General conditions.

GENERAL

ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

- 110 BIRD CONTROL New roof & gutter
- Species: Seagull.
 - System manufacturer: Contractor's choice.
 - Detection: None.
 - Prevention: Net barriers.
 - Other requirements: Net on self supporting weighted post system. Detachable clips to facilitate gutter maintenance.
- 130 INSECT CONTROL Timber cladding cavity
- Species: Wasps and Winged insects.
 - System manufacturer: Contractor's choice.
 - Detection: None.
 - Prevention: Mesh screens.
 - Elimination: None.
 - Other requirements: Sealant.

SYSTEM PERFORMANCE

210 GENERAL REQUIREMENTS

- Standard: In accordance with BPCA members' information manual.
 - Documentation. Submit certification of training and experience for operatives.
- Survey: Identify nature, source and extent of infestation and/ or damage.
- Report content:
 - List pest species detected.
 - Factors affecting execution of the work: Identify problematic site conditions and restrictions, including the presence of protected species.
 - Associated work: None.
 - Other contaminants: Notify.
- Control measures: Submit proposals for:
 - Detection: Not required.
 - Prevention measures.
 - Elimination and disposal.
- Proposals: Include:
 - Drawings, schedules, technical information, calculations and manufacturers' literature.
 - Method statements.
 - Maintenance procedures and logbook.
- Mesh, nets, roost inhibitors, traps and guards: Capable of resisting temporary and permanent loads.

PRODUCTS

320 MESH SCREENS Timber cladding cavity

- Manufacturer: Contractor's choice.
 - Product reference: Submit proposal.
- Material: Submit proposal.
- Mesh size: Submit proposal.
- Colour: Submit proposal.

330 NET BARRIERS Roof & gutter

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Duty: Submit proposal.
- Material: Submit proposal.
 - Gauge: Submit proposal.
- Mesh size: Submit proposal.
- Colour: Submit proposal.
- Straining wire: Submit proposal.

FABRICATION

505 FABRICATION GENERALLY

- Design: Complete detailed design of items specified in this sub-section and obtain approval prior to commencing fabrication.
- Shop drawings: Submit.
- Structural calculations: Submit.
- Frameworks: Assemble and brace, including temporary members required for installation.
- Contact between dissimilar metals: Avoid.
- Temporary support: Do not subject members to non-design loadings.

EXECUTION

610 WORKMANSHIP GENERALLY

- Preparation:
 - Water supplies: Do not contaminate.
 - Existing building services and components: Protect, and leave undamaged.
- Timing: Coordinate with other related trades.
- Damaged building components: Obtain instructions.
- Contaminants: Remove and leave affected area clean.
- Coatings:
 - Suitability of substrates: Sufficiently dry and sound, to suit coatings.
 - Preparation and application: As section M60, and in accordance with BS 6150.
- Fasteners and adhesives: As section Z20.
 - Material: Compatible with building components and substrate.
 - Metals: Isolate dissimilar metals to avoid electrolytic corrosion.
- Thermal and building movement: Allow for, where appropriate.
 - Movement joints: Do not bridge.
- Roost inhibitors, nets and mesh screens: Correctly fitted and tensioned.

COMPLETION

940 DOCUMENTATION

- General: Submit:
 - Manufacturer's maintenance instructions.
 - Recommendations for measures to prevent re-infestation.
 - General product information.
 - Installation information.
 - Guarantees, warranties, test certificates, record schedules and log books.
- Number of copies: TBC.
- Submission: 2 weeks after request by contract administrator.

P10 Sundry Insulation/ Proofing Work

SUNDRY INSULATION/ PROOFING WORK

To be read with Preliminaries/ General conditions.

TYPES OF INSULATION

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 111 INSULATION [GENERAL FOR PACKING]
- Location: As indicated on the detail drawings.
 - Material: Mineral wool.
 - Manufacturer: Rockwool Ltd or equal approved
 - Product reference: Rockwool Roll or equal approved
 - Thickness: as shown on drawings
 - Installation requirements: Pack tightly around and into voids
 - Joints: no gaps. Avoid sagging
- 120 ROOF INSULATION GENERALLY
- Manufacturer and product reference: Refer to Section H31 & J42
- 125A INSULATION LAID BETWEEN CEILING TIES/ JOISTS Roof Type R4
- Manufacturer: ROCKWOOL Ltd.
 - Web: www.rockwool.co.uk.
 - Email: info@rockwool.com.
 - Tel: +44 (0)1656 862621.
 - Address: ROCKWOOL Ltd, 14th Floor, Chiswick Tower, 389 Chiswick High Road, London. W4 4AJ.
 - Product reference: ROCKWOOL Roll Batt.
 - Thickness: 100mm
- 135A INSULATION LAID ACROSS CEILING TIES/ JOISTS Roof Type R4
- Manufacturer: ROCKWOOL Ltd.
 - Web: www.rockwool.co.uk.
 - Email: info@rockwool.com.
 - Tel: +44 (0)1656 862621.
 - Address: ROCKWOOL Ltd, 14th Floor, Chiswick Tower, 389 Chiswick High Road, London. W4 4AJ.
 - Product reference: Rockwool Rolls
 - Thickness: 170 mm.

140A INSULATION FITTED BETWEEN JOISTS Roof Type R2

- Material: Multi foil insulation.
- Manufacturer:
SuperFOIL Insulation
Black Horse Farm
Main Street
Norwell
Newark
Notts
NG23 6JN.
 - Product reference: SuperFOIL SF40.
- Thickness: 65mm (over and between joists).
- Air gap: 13mm
- Insulation between joists: 50mm rigid insulation (0.022W/mK)
- VCL: SuperFOIL SFTV reflective VCL to underside of joists
Installation requirements:
 - Joints: Butted, no gaps.
 - Fasteners: Used where necessary to retain insulation and/ or prevent slumping.
 - Air space above insulation: Not restricted.
 - Eaves ventilation: Unobstructed.

169A GROUND FLOOR INSULATION

- Manufacturer: Kingspan Insulation.
 - Web: www.kingspaninsulation.co.uk.
 - Email: info@kingspaninsulation.co.uk.
 - Tel: +44 (0)1544 387601.
 - Address: Pembridge, Leominster, Herefordshire. HR6 9LA.
 - Product reference: Kooltherm K103
- Insulation thickness: 60mm.
- Loose laid polythene vapour control layer to be laid between insulation and concrete slab.

169B PERIMETER SLAB INSULATION

- Manufacturer: Kingspan Insulation.
 - Web: www.kingspaninsulation.co.uk.
 - Email: info@kingspaninsulation.co.uk.
 - Tel: +44 (0)1544 387601.
 - Address: Pembridge, Leominster, Herefordshire. HR6 9LA.
 - Product reference: Kooltherm K103
- Insulation thickness: 25mm.

217A FRAMING BOARD INSULATION

- Manufacturer: Kingspan Insulation.
 - Web: www.kingspaninsulation.co.uk.
 - Email: info@kingspaninsulation.co.uk.
 - Tel: +44 (0)1544 387601.
 - Address: Pembridge, Leominster, Herefordshire. HR6 9LA.
 - Product reference: Kooltherm® K112 Framing Board
- Insulation thickness: 80mm.

- 310 VAPOUR CONTROL LAYER FIXED TO TIMBER STUDS/ JOISTS/ FRAMING
- Material: 1000 gauge virgin polyethylene.
 - Manufacturer: Visqueen.
 - Product reference: 'Vapour Barrier'.
 - Minimum vapour resistance: 530 MN s/g.
 - Moisture content of timber at time of fixing (maximum): 20%.
 - Installation requirements:
 - Setting out: Joints minimized.
 - Method of fixing: Staples at 250 mm centres maximum along all supports. Membrane not sagging.
 - Joints: At supports only, lapped 150 mm minimum.
 - Openings: Membrane fixed to reveals.
 - Joints and edges: Sealed with double sided tape with vapour resistivity not less than the vapour control layer.
 - Penetrations: Sealed.
- 316 POLYTHENE SEPARATION LAYER BELOW SCREED
- Material: Virgin polyethylene.
 - Manufacturer: Visqueen.
 - Product reference: 'Vapour Barrier'.
 - Minimum vapour resistance: 530 MN s/g.
 - Installation requirements:
 - Setting out: Joints minimized.
 - Method of fixing: To manufacturer installation guidelines.
 - Joints: At supports only, lapped 150 mm minimum.
 - Openings: Membrane fixed to reveals.
 - Joints and edges: Sealed with double sided tape of vapour resistivity not less than the vapour control layer.
 - Substrates: Primed as necessary.
 - Penetrations: Sealed.
- 320A BREATHER MEMBRANE To Wall Type EW1
- Manufacturer: Kingspan Insulation.
 - Web: www.kingspaninsulation.co.uk.
 - Email: info@kingspaninsulation.co.uk.
 - Tel: +44 (0)1544 387601.
 - Address: Pembridge, Leominster, Herefordshire. HR6 9LA.
 - Product reference: Nilvent®
- 411 FLEXIBLE CAVITY BARRIERS TO WALL LININGS, PARTITIONS & ABOVE CEILINGS
- Cross refer to Clauses K10 / 530 & 545
- 412 FLEXIBLE CAVITY BARRIERS ABOVE DEMOUNTABLE SUSPENDED CEILING VOIDS
- Cross refer to Clauses K40 / 288

P12 Fire stopping systems

5 ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

GENERAL

PRODUCTS

40 MINERAL WOOL RIGID BATTS

- Standard: To BS EN 13162.
- Manufacturer: PFC Corofil Units 3-4 King George Trading Estate Davis Road Chessington Surrey KT9 1TT
Tel: + 44 (0) 208 391 0533 Fax: + 44 (0) 208 391 2723
Email: sales@pfc-corofil.com
www.pfc-corofil.com.
 - Product reference: PFC Corofil VFB+ Ventilated Fire Barrier.
- Recycled content: None permitted.

EXECUTION

62 EXECUTION GENERALLY

- Gaps: Seal gaps between building elements and services, to provide fire resistance and resist the passage of smoke.
- Adjacent surfaces: Prevent overrun of sealant or mortar on to finished surfaces.

66 INSTALLING MINERAL WOOL BATTS

- Installing batts: Fit tight into void between the penetrating services and the surrounding construction to form a solid barrier.
 - Brackets: To manufactures details.
Bracket fixing: To manufactures details.
- Face of batts: Flush with the surface of wall, floor or soffit.
- Joints between batts: To manufactures details.
- Gaps between services and barrier: Seal with fire resisting sealant.

COMPLETION

91 CLEANING

- Masking tapes: Remove.
- Cleaning: Clean off splashes and droppings. Wipe down finishes.

92 INSPECTION

- Notice for inspection (minimum): 3 working days.

P20 Unframed Isolated Trims/ Skirtings/ Sundry Items

To be read with Preliminaries/ General conditions

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 201 **MEDIUM DENSITY FIBREBOARD WINDOW SILL BOARDS - GENERALLY**
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Standard: To BS EN 622-5.
 - Type: Primed MDF.
 - Formaldehyde class: To BS EN 622-1, Class E1.
 - Fire rating: To BS 476-7, Class 1.
 - - Thickness: 25 mm.
 - Finished size: Depth of window reveal plus 32mm, width of window plus 50mm. Refer to window schedule.
 - Edges: Quarter rounded.
 - Finish: Prepared, primed and decorated, as section M60, Satinwood finishl.
 - Support/ Fixing: Plugged, screwed and pelleted @max 600mm centres.
- 202 **MEDIUM DENSITY FIBREBOARD WINDOW SILL BOARDS - WET AREAS**
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Standard: To BS EN 622-5.
 - Type: Moisture Resistant MDF.
 - Formaldehyde class: To BS EN 622-1, Class E1.
 - Fire rating: To BS 476-7, Class 1.
 - - Thickness: [25 mm].
 - Finished size: Depth of window reveal plus 32mm
 - Edges: [Quarter rounded].
 - Finish: Prepared, primed and decorated, as section M60, clause 150, Acrylic Eggshell.
 - Support/ Fixing: Plugged, screwed and pelleted @max 600mm centres.
- 203 **MEDIUM DENSITY FIBREBOARD SKIRTINGS - GENERALLY**
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Standard: To BS EN 622-5.
 - Type: Primed MDF.
 - Formaldehyde class: To BS EN 622-1, Class E1.
 - Fire rating: To BS 476-7, Class 1.
 - Profile: Bullnose.
 - Finished size: 19 x 150mm.
 - Finish as delivered: Prepared, primed and decorated, as section M60, clause 150, Acrylic Eggshell.
 - Fixing: Plugged, screwed and pelleted @ max 600mm centres.

205 MEDIUM DENSITY FIBREBOARD ARCHITRAVES - GENERALLY

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Standard: To BS EN 622-5.
 - Type: Primed MDF.
 - Formaldehyde class: To BS EN 622-1, Class E1.
- Fire rating: To BS 476-7, Class 1.
- Profile: As Architects drawings.
 - Finished size: 18 x 69mm.
- Finish as delivered: Prepared, primed and decorated, as section M60, Satinwood finish.
- Fixing: Plugged, screwed and pelleted @ max 600mm centres.

206 MEDIUM DENSITY FIBREBOARD ARCHITRAVES - WET AREAS

- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Standard: To BS EN 622-5.
 - Type: Primed Moisture Resistant MDF.
 - Formaldehyde class: To BS EN 622-1, Class E1.
- Fire rating: To BS 476-7, Class 1.
- Profile: Square pencil round edge.
 - Finished size: 14 x 69mm.
- Finish as delivered: Prepared, primed and decorated, as section M60, Satinwood finish.
- Fixing: Plugged, screwed and pelleted @ max 600mm centres.

EXECUTION

510 INSTALLATION GENERALLY

- Joinery workmanship: As section Z10.
- Metal workmanship: As section Z11.
- Methods of fixing and fasteners: As section Z20 where not specified.
- Straight runs: To be in one piece, or in long lengths with as few joints as possible.
- Running joints: Location and method of forming to be agreed where not detailed.
- Joints at angles: submit proposals.
- Position and level: To be agreed where not detailed.

P21 Door/ Window Ironmongery

To be read with Preliminaries/ General conditions.

- 5 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

PRE-TENDER

- 10 **QUANTITIES AND LOCATIONS**
- Quantities and locations of ironmongery are scheduled by the supplier and indicated on door schedule .
 - Fixing: As sections L10 and L20.

GENERAL

- 121 **IRONMONGERY FROM SINGLE PROPRIETARY RANGE**
- Manufacturer: Select Architectural Ironmongery Ltd Tel 01626 337447 .
 - Product reference: to be agreed .
 - Principal material/ finish: Grade 304 Satin Stainless Steel .
 - Items unavailable within selected range: Submit proposals.
- 131 **APPROVED SUPPLIERS**
- Source: Obtain door ironmongery from one of the following: Select Architectural Ironmongery Ltd Tel 01626 337447 .
 - Notification: Submit details of selected supplier.
- 140 **SAMPLES**
- General: Before placing orders with suppliers submit labelled samples of the following: all components .
 - Conformity: Retain samples on site for the duration of the contract. Ensure conformity of ironmongery as delivered with labelled samples.
- 141 **SAMPLE BOARDS**
- General: Before placing orders with suppliers submit a sample board, containing labelled samples of ironmongery and showing methods of fixing.
 - Range: Include all components .
 - Conformity: Retain board on site in an approved location for the duration of the contract. Ensure conformity of ironmongery as delivered with labelled samples.

171 IRONMONGERY FOR FIRE DOORS

- Relevant products: Ironmongery fixed to, or morticed into, the component parts of a fire resisting door assembly.
- To match general door ironmongery
- Compliance: Ironmongery included in successful tests to BS 476-22 or BS EN 1634-1 on door assemblies similar to those proposed.
 - Certification: Submit CERTIFIRE certificates .
- Melting point of components (except decorative non functional parts): 800°C minimum.
NOTE: Ironmongery specified to be CE marked and have the appropriate manufacturers DOP where legally required. Necessary literature apertaining to same to be produced prior to order being placed.

181 CATEGORY OF DUTY FOR DOOR IRONMONGERY

- Standard: To DD 171.
 - Category of duty of doors: Heavy duty .
- General: Durability of ironmongery components to be compatible with stated category of duty of each door leaf. Escape ironmongery for external doors to withstand heavy duty traffic where appropriate.
 - Exclusions: Ironmongery with specific duty or 'category of use' defined elsewhere.
Documentation: Before placing orders with suppliers submit documentation showing product compliance with stated category of duty.

DOOR HANGING DEVICES

320A DOOR HINGES GENERALLY to be provided by door manufacturer/supplier

WINDOW HANGING DEVICES

WINDOW HANGING DEVICES [GENERALLY] to be provided by window manufacturer

371 WINDOW HINGES GENERALLY to be provided by window manufacturer.

DOOR OPERATING DEVICES

411 OVERHEAD DOOR CLOSERS GENERALLY

- Standard: To BS EN 1154.
Classification 481-4114
 - Door closing devices to fire/ smoke control doors: CE marked.
- Manufacturer: Geze .
 - Product reference: 3000V .
- Type: Slide Arm .
- Power size: 2-4 .
- Other functions: Adjustable and latching action .
- Casing finish: As schedule .
- Operational adjustment:
 - Variable power: Matched to size, weight and location of doors.
 - Latched doors: Override latches and/ or door seals when fitted.
 - Unlatched doors: Hold shut under normal working conditions.
 - Closing against smoke seals of fire doors: Positive. No gaps.

472 PERFORMANCE SPECIFICATION FOR ELECTROMAGNETIC HOLD OPEN/ SWING-FREE DEVICES (24 V) GENERALLY

- Standard: To BS EN 1155.
 - Electromagnetic devices to fire/ smoke control doors: CE marked.
- Type: Hold open, integral with closer .
- Minimum classification grades:
 - Category of use: 3.
 - Durability: 8 .
 - Hold open power size: Adjustable 2-6, so that force required to open the door when the doors have closed, conform to Part M of the building Regulations .
 - Suitability for use on fire/ smoke doors: 1.
 - Safety: 1.
 - Corrosion resistance: 4 .
- Material/ finish: Satin stainless steel, Grade (304) .
- Means of release: Alarm system and/ or failure of power supply.
- Test switch: Located in a convenient position adjacent to door.
- Operational adjustment of integral closer:
 - Variable power: Matched to size, weight and location of doors.
 - Latched doors: Override latches and/ or door seals when fitted.
 - Unlatched doors: Hold shut under normal working conditions.

473 DOOR ACCESS PADS GENERALLY

- Standard: refer M&E spec requirements
- Manufacturer: Refer to M&E spec .
 - Product reference: refer M&E spec .
 - Material/ finish: refer M&E spec .

DOOR SECURING DEVICES

516 DOOR LOCKS INTERNAL GENERALLY

- Standard: To BS EN 12209.
Classification 3X81*0G4BA30
- Manufacturer: Supplied by Select Architectural Ironmongery Ltd .
 - Product reference: Refer to Schedule of ironmongery provided. .
- Type: As schedule .
- Backset: 60 mm .
- Material/ finish: Stainless steel faceplate .
- Keying: Euro Type .

588 ALL WINDOW SECURING DEVICES AND IRONMONGERY

- To be provided by window manufacturer. All window opening mechanisms / levers are to tonally contrast with windows.

DOOR FURNITURE

861 DOOR SEALS FOR: SOUND PROOFING GENERALLY

- Manufacturer: Contractor's choice .
 - Product reference: Contractor's choice .
- Type: As schedule .
- Size: As manufacturer's recommendations .
- Material/ finish: As manufacturer's recommendations .

895 DOOR MOUNTED AIR TRANSFER GRILLES AS REQUIRED BY THE M&E CONSULTANT

- Manufacturer: Contractor's choice .
 - Product reference: To M&E Engineer's Specification .
- Type: To M&E Engineer's Specification .
- Size: To M&E Engineer's Specification .
- Material/ finish: PPC Aluminium .

897 DOOR MOUNTED FIRE RESISTING AIR TRANSFER GRILLES WITH SMOKE SHUTTER AS REQUIRED BY THE M&E CONSULTANT .

- Manufacturer: Contractor's choice .
 - Product reference: To M&E Engineer's Specification .
- Type: To M&E Engineer's Specification .
- Size: To M&E Engineer's Specification .
- Fire resistance: To M&E Engineer's Specification and Fire Strategy .
- Material/ finish: Satin stainless steel, Grade (304) .
- Activator: Smoke detection and/ or fire alarm system.

899 WINDOW FURNITURE

to be provided by window manufacturer. All window opening mechanism / levers are to tonally contrast with windows

Q10 Kerbs/ edgings/ channels/ paving accessories

TYPES OF KERBS/EDGINGS AND CHANNELS

ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

110A PRECAST CONCRETE KERB

- Manufacturer: Marshalls plc.
 - Web: www.marshalls.co.uk.
 - Email: info@marshalls.co.uk.
 - Tel: +44 (0)870 241 4725.
 - Address: Landscape House, Premier Way, Lowfields Business Park, Elland, West Yorkshire. HX5 9HT.
 - Product reference: Bullnosed Kerb BN3
- Size: 125 x 150 mm.
- Special shapes: Drop kerb 125 x 150 centre.

110B PRECAST CONCRETE KERB

- Manufacturer: Marshalls plc.
 - Web: www.marshalls.co.uk.
 - Email: info@marshalls.co.uk.
 - Tel: +44 (0)870 241 4725.
 - Address: Landscape House, Premier Way, Lowfields Business Park, Elland, West Yorkshire. HX5 9HT.
 - Product reference: Bullnosed Kerb
- Size: Refer to drawing 42004.
- Special shapes: Refer to drawing 42004.

170A LINEAR SLOT DRAINAGE CHANNEL SYSTEMS

- Manufacturer: ACO Technologies plc.
 - Web: www.aco.co.uk.
 - Email: technical@aco.co.uk.
 - Tel: +44 (0)1462 816666.
 - Address: ACO Technologies plc, ACO Business Park, Hitchin Road, Shefford, Bedfordshire. SG17 5TE.
 - Product reference: HexDrain Brickslot
- Accessories:
 - Closing end cap;
 - Leaf guard; and
 - Outlet connector.

180 DRAINAGE CHANNEL SYSTEMS WITH GRATINGS

- Manufacturer: Aco Technologies.
 - Product reference: Doorway Drain.
- Size: 125mm.
- Type of fall: Integral continuous fall.
- Finish: Standard.
- Colour: Charcoal.
- Accessories: Endcaps - closing pieces and Endcaps - outlets.
- Bedding: Cement mortar.
- Joints generally: Silicone sealant.
- Cover gratings: Stainless steel, slotted, heel guard.
 - Fixings: Friction clips.
 - Loading grade to BS EN 124: A15.
 - Finish/ Colour: Silver.

LAYING

510 LAYING KERBS, EDGINGS AND CHANNELS

- Cutting: Neat, accurate and without spalling. Form neat junctions.
 - Long units (450 mm and over) minimum length after cutting: 300 mm.
 - Short units minimum length after cutting: The lower of one third of their original length or 50 mm.
- Bedding of units: Positioned true to line and levelled along top and front faces, in a mortar bed on accurately cast foundations or on a race of fresh concrete.
- Securing of units: After bedding has set, secured with a continuous haunching of concrete or on a race of fresh concrete with backing concrete cast monolithically.

520 ADVERSE WEATHER

- Conditions: Do not construct if the temperature is below 3°C on a falling thermometer or 1°C on a rising thermometer. Adequately protect foundations, bedding and haunching against frost and rapid drying by sun and wind.

530 CONCRETE FOR FOUNDATIONS, RACES AND HAUNCHING

- Standard: To BS 8500-2.
- Designated mix: Not less than GEN0 or Standard mix ST1.
- Workability: Very low.

540 CEMENT MORTAR BEDDING

- General: To section Z21.
- Mix (Portland cement:sand): 1:3.
 - Portland cement: Class CEM I 42.5 to BS EN 197-1.
 - Sand: to BS EN 12620, grade 0/4 or 0/2 (MP).
- Bed thickness: 12-40 mm.

590 DRAINAGE CHANNEL SYSTEMS WITH BUILT IN FALL

- Installation: Top of channels level, installed in correct sequence to form an even gradient without ponding or backfall. Commence laying from outlets.
- Silt and debris: Removed from entire system immediately before handover.
- Washings and detritus: Safely disposed without discharging into sewers or watercourses.

Project No. 150457

Client: Council of the Isles of Scilly

Signed Off **Construction Issue 29/01/2018**

STRIDE TREGLOWN
ARCHITECTURE

620 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3 mm in 3 m.

R10 Rainwater drainage systems

To be read with Preliminaries/ General conditions.

GENERAL

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 110 **GRAVITY RAINWATER DRAINAGE SYSTEM**
- Rainwater outlets: Proprietary as clause 365.
 - Gutters: Box gutter to main roof, preformed UPVC gutter to buggy store.
 - Pipework: Galvanized steel, pressed.
 - Below ground drainage: to engineers design.
 - Disposal: to engineers design.
 - Controls: to engineers design.
 - Accessories: to manufacturers recommendations.

SYSTEM PERFORMANCE

- 210 **DESIGN**
- Design: Complete the design of the rainwater drainage system.
 - Standard:
 - To BS EN 12056-3, clauses 3–7, Annex A and National Annexes.
 - To BS EN 12056-5, clauses 3, 4, 6 and 11.
 - Proposals: Submit drawings, technical information, calculations and manufacturers' literature.
- 221 **COLLECTION AND DISTRIBUTION OF RAINWATER**
- General: Complete, and without leakage or noise nuisance.

PRODUCTS

- 336 GALVANIZED STEEL RAINWATER SYSTEM EXTENSION & EXTERNAL CANOPY.
- Manufacturer: Lindab Ltd www.lindab.co.uk Tel: +44 (0)1604 788350.
 - Product reference: Rainline System.
 - Profile: Half round.
 - Gauge: tbc.
 - Size: Extension: 100mm, External Play Canopy: 125mm .
 - Treatment: Hot dip galvanized to BS EN ISO 1461 after manufacture.
 - Finish: Aluzinc, uncoated.
 - Brackets: To manufacturers recommendations.
 - Fixings: To manufacturers recommendations.
 - Size: To manufacturers recommendations.
 - Accessories: Complete system containing; Stop ends, box hoppers, outlets, gutter clips, sealant, fixings brackets, down pipes, shoes and leaf guards.
 - Other Requirements: Due to projecting brick plinth a swan neck / crank will be required at each below ground connection point.
- 350A PVC-U GUTTERS To Buggy Store
- Standard: To the relevant parts of BS EN 607 and BS EN 1462, Kitemark certified.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Recycled content: Contractor's choice.
 - Profile: Half round.
 - Nominal size: 100 mm.
 - Colour: White.
 - Brackets: Contractors choice.
 - Fixings: Contractors choice.
 - Size: Contractors choice.
 - Accessories: Gutter stop ends and Leaf guards.
- 360 SEALANT FOR GUTTERS
- Type: as recommended by manufacturer.

EXECUTION

- 600 PREPARATION
- Work to be completed before commencing work specified in this section:
 - Below ground drainage. Alternatively, make temporary arrangements for dispersal of rainwater without damage or disfigurement of the building fabric and surroundings.
 - Painting of surfaces which will be concealed or inaccessible.
- 605 INSTALLATION GENERALLY
- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
 - Plastics and galvanized steel pipes: Do not bend.
 - Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
 - Protection:
 - Fit purpose made temporary caps to prevent ingress of debris.
 - Fit access covers, cleaning eyes and blanking plates as the work proceeds.

610 FIXING AND JOINTING GUTTERS

- Joints: Watertight.
- Brackets: Securely fixed.
 - Fixings: to manufacturers recommendations.
 - Fixing centres: to manufacturers recommendations.
 - Additional brackets: Where necessary to maintain support and stability, provide at joints in gutters and near angles and outlets.
- Roofing underlay: Dressed into gutter.

615 SETTING OUT EAVES GUTTERS - TO FALLS

- Setting out: To true line and even gradient to prevent ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Outlets: Align with connections to below ground drainage.

630 INSTALLING RAINWATER OUTLETS

- Fixing: Secure. Fix before connecting pipework.
 - Method: to manufacturers recommendations.
- Junctions between outlets and pipework: Accommodate movement in structure and pipework.

635 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 storey level.
 - Tighten fixings as work proceeds so that every storey is self supporting.
 - Wedge joints in unsealed metal pipes to prevent rattling.
- Wall and floor penetrations: Isolate pipework from structure.
 - Pipe sleeves: As section P31.
 - Masking plates: Fix at penetrations if visible in the finished work.
- Expansion joint pipe sockets: Fix rigidly to buildings. Elsewhere, provide brackets and fixings that allow pipes to slide.

650 JOINTING PIPEWORK AND GUTTERS

- General: Joint with materials and fittings that will make effective and durable connections.
- Jointing differing pipework and gutter systems: Use adaptors intended for the purpose.
- Cut ends of pipes and gutters: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.
- Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.
- Junctions: Form with fittings intended for the purpose.
- Jointing material: Strike off flush. Do not allow it to project into bore of pipes and fittings.
- Surplus flux, solvent jointing materials and cement: Remove.

675 CUTTING COATED PIPEWORK AND GUTTERS

- Cutting: Recoat bare metal.

700 ACCESS FOR TESTING AND MAINTENANCE

- General: Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.
- Access fittings and rodding eyes: Position so that they are not obstructed.

COMPLETION

900 TESTING GENERALLY

- Dates for testing: Give notice.
 - Period of notice (minimum): a week.
- 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.

910 GUTTER TEST

- Preparation: Temporarily block all outlets.
- Testing: Fill gutters to overflow level and after 5 minutes closely inspect for leakage.

915 MAINTENANCE INSTRUCTIONS

- General: At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation, including full details of recommended inspection, cleaning and repair procedures.

920 IMMEDIATELY BEFORE HANDOVER

- Construction rubbish, debris, swarf, temporary caps and fine dust which may enter the rainwater system: Remove. Do not sweep or flush into the rainwater system.
- Access covers, rodding eyes, outlet gratings and the like: Secure complete with fixings.

Z10 Purpose made joinery

To be read with Preliminaries/ General conditions.

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 110 **FABRICATION**
- Standard: To BS 1186-2.
 - Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
 - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
 - Joints: Tight and close fitting.
 - Assembled components: Rigid. Free from distortion.
 - Screws: Provide pilot holes.
 - Screws of 8 gauge (4 mm diameter) or more and screws into hardwood: Provide clearance holes.
 - Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.
 - Adhesives: Compatible with wood preservatives applied and end uses of timber.
- 120 **CROSS SECTION DIMENSIONS OF TIMBER**
- General: Dimensions on drawings are finished sizes.
 - Maximum permitted deviations from finished sizes:
 - Softwood sections: To BS EN 1313-1:-
Clause 6 for sawn sections.
 - Hardwood sections: To BS EN 1313-2:-
Clause 6 for sawn sections.
Clause NA.3 for further processed sections.
- 130 **PRESERVATIVE TREATED WOOD**
- Cutting and machining: Completed as far as possible before treatment.
 - Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
 - Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.
- 140 **MOISTURE CONTENT**
- Wood and wood based products: Maintained within range specified for the component during manufacture and storage.

210 LAMINATED PLASTICS VENEERED BOARDS/ PANELS

- Fabrication: To British Laminated Plastics Fabricators Association Ltd (BLF) fabricating standards.
- Balancing veneer: From decorative veneer manufacturer and of similar composition. Applied to reverse side of core material.
- Finished components: Free from defects, including bow, twist, scratches, chipping, cracks, pimpling, indentations, glue marks, staining and variations in colour and pattern.
- Joints visible in completed work: Tight butted, true and flush.

220 WOOD VENEERED BOARDS/ PANELS

- Core material and veneers: Conditioned before bonding.
- Setting out: Veneer features and grain pattern aligned regularly and symmetrically unless instructed otherwise.
- Balancing veneer: Applied to reverse side of core material.
 - Moisture and temperature movement characteristics: As facing veneer.
- Veneer edges: Tight butted and flush, with no gaps.
- Tolerance of veneer thickness (maximum): ± 0.5 mm.
- Finished components: Free from defects, including bow, twist, scratches, chipping, splits, blebs, indentations, glue marks and staining.
- Surface finish: Fine, smooth, free from sanding marks.

250 FINISHING

- Surfaces: Smooth, even and suitable to receive finishes.
 - Arrises: Eased unless shown otherwise on drawings.
- End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

Z11 Purpose made metalwork

To be read with Preliminaries/ General conditions.

- 300 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 310 **MATERIALS GENERALLY**
- Grades of metals, section dimensions and properties: To appropriate British Standards. When not specified, select grades and sections appropriate for the purpose.
 - Prefinished metal: May be used if methods of fabrication do not damage or alter appearance of finish, and finish is adequately protected.
 - Fasteners: To appropriate British Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.
- 320 **STEEL LONG AND FLAT PRODUCTS**
- Hot rolled structural steels (excluding structural hollow sections and tubes): To BS EN 10025-1.
 - Fine grain steels, including special steels: To BS EN 10025-3 and -4.
 - Steels with improved atmospheric corrosion resistance: To BS EN 10025-5.
- 330 **STEEL PLATE, SHEET AND STRIP**
- Plates and wide flats, high yield strength steel: To BS EN 10025-6.
- 340 **HOT ROLLED STEEL PLATE, SHEET AND STRIP**
- Flat products, high yield strength for cold forming: To BS EN 10149-1, -2 and -3.
 - Carbon steel sheet and strip for cold forming: To BS EN 10111.
 - Narrow strip, formable steel and steel for general engineering purposes: To BS 1449-1.8 and BS 1449-1.14.
- 350 **COLD ROLLED STEEL PLATE, SHEET AND STRIP**
- Steel sections: To BS EN 10162.
 - Flat products, high yield strength micro-alloyed steels for cold forming: To BS EN 10268.
 - Carbon steel flat products for cold forming: To BS EN 10130 and BS EN 10131.
 - Uncoated carbon steel narrow strip for cold forming: To BS EN 10139 and BS EN 10140.
 - Narrow strip steel for general engineering purposes: To BS EN 10132-1, -2, and -3.
 - Carbon steel flat products for vitreous enamelling: To BS EN 10209.
- 360 **COATED STEEL FLAT PRODUCTS**
- Hot dip zinc coated carbon steel sheet and strip for cold forming: To BS EN 10346 and BS EN 10143.
 - Hot dip zinc coated structural steel sheet and strip: To BS EN 10143 and BS EN 10346.
 - Hot dip zinc-aluminium (za) coated sheet and strip: To BS EN 10346.
 - Hot dip aluminium-zinc (az) coated sheet and strip: To BS EN 10346.
 - Organic coated flat products: To BS EN 10169.

- 370 STEEL STRUCTURAL HOLLOW SECTIONS (SHS)
- Non alloy and fine grain steels, hot finished: To BS EN 10210-1 and -2.
 - Non-alloy and fine grain steels, cold formed welded: To BS EN 10219-2.
 - Weather resistant steels, hot finished: To BS 7668.
- 380 OTHER STEEL SECTIONS
- Equal flange tees: To BS EN 10055.
 - Equal and unequal angles: To BS EN 10056-1 and -2.
 - Wire, carbon steel for general engineering purposes: To BS 1052.
 - Wire and wire products, general: To BS EN 10218-2.
 - Tubes:
 - Seamless circular: To BS EN 10297-1.
 - Seamless cold drawn: To BS EN 10305-1.
 - Welded and cold sized square and rectangular: To BS EN 10305-5.
 - Welded circular: To BS EN 10296-1.
 - Welded cold drawn: To BS EN 10305-2.
 - Welded cold sized: To BS EN 10305-3.
- 400 STAINLESS STEEL PRODUCTS
- Chemical composition and physical properties: To BS EN 10088-1.
 - Sheet, strip and plate: To BS EN 10088-2.
 - Semi-finished products bars, rods and sections: To BS EN 10088-3.
 - Wire: To BS EN 1088-3.
 - Tubes:
 - Welded circular: To BS EN 10296-2.
 - Seamless circular: To BS EN 10297-2.
- 410 ALUMINIUM ALLOY PRODUCTS
- Designations:
 - Designation system, chemical composition and forms: To BS EN 573-1, -2, -3 and -5.
 - Temper designations: To BS EN 515.
 - Sheet, strip and plate: To BS EN 485-1 to -4.
 - Cold drawn rods, bars and tubes: To BS EN 754-1 and -2.
 - Extruded rods, bars, tubes and profiles: To BS EN 755-1 and -2.
 - Drawn wire: To BS EN 1301-1, -2 and -3.
 - Rivet, bolt and screw stock: To BS 1473.
 - Structural sections: To BS 1161.
- 420 COPPER ALLOY PRODUCTS
- Sheet, strip, plate and circles for general purposes: To BS EN 1652.
 - Sheet and strip for building purposes: To BS EN 1172.
 - Rods: To BS EN 12163.
 - Profiles and rectangular bars: To BS EN 12167.
 - Wire: To BS EN 12166.
 - Tubes: To BS EN 12449.

FABRICATION

515 FABRICATION GENERALLY

- Contact between dissimilar metals in components: Avoid.
- Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
 - Moving parts: Free moving without binding.
- Corner junctions of identical sections: Mitre.

520 COLD FORMED WORK

- Profiles: Accurate, with straight arrises.

525 ADHESIVE BONDING

- Preparation of surfaces of metals to receive adhesives:
 - Degrease.
 - Abrade mechanically or chemically etch.
 - Prime: To suit adhesive.
- Adhesive bond: Form under pressure.

527 WELDING Metals .

- Welding procedures:
 - Method and standard: Metal arc welding to BS EN 1011-1 and -2..
 - Welding Procedure Specification (WPS): Submit 2 copies before commencement of welding.
- Preparation:
 - Joint preparation: Clean thoroughly.
 - Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
- Jointing:
 - Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
 - Dissimilar metals: Filler metal grade to be approved by a qualified metallurgist.
 - Strength requirements: Welds to achieve design loads.
 - Heat straightening: Submit proposals.
 - Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds.
 - Tack welds: Use only for temporary attachment.
 - Jigs: Provide to support and restrain members during welding.
 - Filler plates: Submit proposals.
 - Lap joints: Minimum 5 x metal thickness or 25 mm, which ever is greater.
 - Weld terminations: Clean and sound.

530 STAINLESS STEEL FABRICATION

- Guillotining or punching: Do not use for metal thicknesses greater than 10 mm.
- Thermal cutting:
 - Carbonation in the heat affected zone: Remove, after cutting.
- Bending:
 - Plates or bars: Cold bending radius not less than material thickness.
 - Tubes: Cold bending radius not less than 2 x tube diameter.
- Welding: In addition to general welding requirements:
 - Protect adjacent surfaces from weld spatter.
 - Pickle all welds before post fabrication treatments.
- Protection: Provide protection to fabricated components during transit and on site.

555 BRAZING

- Standard: To BS EN 14324.
- Testing:
 - Destructive testing: To BS EN 12797.
 - Nondestructive testing: To BS EN 12799.

FINISHING

710 FINISHING WELDED AND BRAZED JOINTS VISIBLE IN COMPLETE WORK

- Standard: To BS EN ISO 8501-3.
 - Preparation grade: TBC.
- Butt joints: Smooth, and flush with adjacent surfaces.
- Fillet joints: Neat.
- Grinding: Grind smooth where indicated on drawings.

745 PREPARATION FOR APPLICATION OF COATINGS

- General: Complete fabrication, and drill fixing holes before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Remove.

750 LIQUID ORGANIC COATING FOR ALUMINIUM ALLOY COMPONENTS

- Standard: To BS 4842.

760 ZINC AND CADMIUM PLATING OF IRON AND STEEL SURFACES

- Zinc plating: To BS EN ISO 2081.
- Cadmium plating: To BS EN ISO 2082.

770 CHROMIUM PLATING

- Standard: To BS EN ISO 1456.

780 GALVANIZING

- Standard: To BS EN ISO 1461.
- Preparation:
 - Vent and drain holes: Provide in accordance with BS EN ISO 14713-1 and -2. Seal after sections have been drained and cooled.
 - Components subjected to cold working stresses: Heat treat to relieve stresses before galvanizing.
 - Welding slag: Remove.
 - Component cleaning: To BS EN ISO 8501-3.
 - Grade: TBC.

790 VITREOUS ENAMELLING

- Standard: To BS EN ISO 28722.
- Substrate metal: Steel to BS EN 10209.

COMPLETION

910 DOCUMENTATION

- Submit:
 - Manufacturer's maintenance instructions.
 - Guarantees, warranties, test certificates, record schedules and log books.

920 COMPLETION

- Protection: Remove.
- Cleaning and maintenance: Carry out in accordance with procedures detailed in fabricators' guarantees.

Z21 Mortars

To be read with Preliminaries/ General conditions.

CEMENT GAUGED MORTARS

- 100 ALTERNATIVE PRODUCTS OR MANUFACTURES
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 110 CEMENT GAUGED MORTAR MIXES
- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.
- 120 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS
- Standard: To BS EN 13139.
 - Grading: 0/2 (FP or MP).
 - Fines content where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5-6):
 - Lower proportion of sand: Use category 3 fines.
 - Higher proportion of sand: Use category 2 fines.
 - Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.
- 131 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
- Standard: To BS EN 998-2.
 - Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
 - Pigments for coloured mortars: To BS EN 12878.
- 135 SITE MADE LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
- Permitted use: Where a special colour is not required and in lieu of factory made ready-mixed material.
 - Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
 - Mixing: Thoroughly mix lime with sand, in the dry state. Add water and mix again. Allow to stand, without drying out, for at least 16 hours before using.

160 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
 - Types: Portland cement, CEM I.
Portland limestone cement, CEM II/A-L or CEM II/A-LL.
Portland slag cement, CEM II/B-S.
Portland fly ash cement, CEM II/B-V.
 - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1 and CE marked.
 - Type: Portland cement, CEM I.
 - Strength class: 52.5.
- Sulfate resisting Portland cement:
 - Types: To BS 4027 and Kitemarked.
To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
 - Strength class: 32.5, 42.5 or 52.5.
- Masonry cement: To BS EN 413-1 and CE marked.
 - Class: MC 12.5.

180 ADMIXTURES FOR SITE MADE CEMENT GAUGED MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
- Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

200 STORAGE OF CEMENT GAUGED MORTAR MATERIALS

- Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
- Factory made ready-mixed lime:sand/ ready to use retarded mortars: Keep in covered containers to prevent drying out or wetting.
- Bagged cement/ hydrated lime: Store off the ground in dry conditions.

210 MAKING CEMENT GAUGED MORTARS

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
 - Mix proportions: Based on dry sand. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
 - Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
- Working time (maximum): Two hours at normal temperatures.
- Contamination: Prevent intermixing with other materials.

LIME:SAND MORTARS

310 LIME:SAND MORTAR MIXES

- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

320 SAND FOR LIME:SAND MASONRY MORTARS

- Type: Sharp, well graded.
 - Quality, sampling and testing: To BS EN 13139.
 - Grading/ Source: As specified elsewhere in relevant mortar mix items.

345 ADMIXTURES FOR HYDRAULIC LIME:SAND MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

350 STORAGE OF LIME:SAND MORTAR MATERIALS

- Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
- Ready prepared nonhydraulic lime putty: Prevent drying out and protect from frost.
- Nonhydraulic lime:sand mortar: Store on clean bases or in clean containers that allow free drainage. Prevent drying out or wetting and protect from frost.
- Bagged hydrated hydraulic lime: Store off the ground in dry conditions.

360 MAKING LIME:SAND MORTARS GENERALLY

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
- Contamination: Prevent intermixing with other materials, including cement.

370 SITE PREPARED NONHYDRAULIC LIME:SAND MORTARS

- Mixing: Mix materials thoroughly by compressing, beating and chopping. Do not add water.
 - Equipment: Roller pan mixer or submit proposals.
- Maturation period before use (maximum): Seek instructions.

380 READY TO USE NONHYDRAULIC LIME:SAND MORTARS

- Manufacturer: Contractor's choice.
 - Product reference: Submit proposals.
- Materials: Select from:
 - Lime putty slaked directly from quicklime to BS EN 459-1 and mixed thoroughly with sand.
 - Quicklime to BS EN 459-1 slaked directly with sand.
- Maturation period before use (maximum): Seek instructions.

390 KNOCKING UP NONHYDRAULIC LIME:SAND MORTARS

- Knocking up before and during use: Achieve and maintain a workable consistency by compressing, beating and chopping. Do not add water.
 - Equipment: Roller pan mixer or submit proposals.

400 MAKING HYDRAULIC LIME:SAND MORTARS

- Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix.
 - Water quantity: Only sufficient to produce a workable mix.
- Working time: Within limits recommended by the hydraulic lime manufacturer.

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Z22 Sealants

To be read with Preliminaries/General conditions.

ALTERNATIVE PRODUCTS OR MANUFACTURES

Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.

PRODUCTS

- 310 JOINTS Classification: Refer to schedule of sealants below for type. The type shall mean
- Silicone ex (external)
 - Dow – C60 low modulus sealant
 - Silicone
 - Adshead Ratcliffe - Arbosil 1081 high modulus neutral cure sealant with fungicide
 - Caulk
 - Adshead Ratcliffe Arbo Caulk
 - Intumescent / acoustic
 - Adshead Ratcliffe 1075 Intumescent acoustic sealant

SCHEDULE OF SEALANTS

1. EXTERNAL
 - Movement joints in block and brick work Silicone ex
 - Perimeter of curtain walling Silicone ex
 - Perimeter of doors and windows Silicone ex
 2. PLANTROOMS
 - Perimeter of doors and louvres Silicone ex
 - Penetrations of services through cladding Silicone ex
 3. INTERNAL PERIMETER WALLS
 - Perimeter of all windows and doors Silicone ex
 - Block work / pc plank junction ground floor Intumescent / air seal
 - Dry lining slab and roof decking junction Intumescent / air seal
 - Movement joints in block wall Silicone ex
 - Dry lining around steel beams Intumescent / air seal
 - Junction between cill board and dry lining Caulk
 4. INTERNAL
 - Sole and head track stud partitions both sides Intumescent / acoustic seal
 - Back of all door frame architraves Caulk
 - Vinyl floor to door linings Silicone
 - Movement joints in block walls Silicone
 5. FIXTURES / FITTINGS
 - Base of all wc pans to floors Silicone
 - Perimeter of ceiling mounted light fittings Silicone
 - Perimeter of disabled wc back box to IPS Silicone
 6. MECHANICAL AND ELECTRICAL / BUILDERS WORK
 - Perimeter of surface fixed trunking Silicone
 - Perimeter of wall mounted panels / vents Silicone
 7. BUILDERS WORK
 - Drainage pipes passing through walls and floors Acoustic / intumescent
 - Ducts / pipes passing through walls and floors Acoustic / intumescent
- Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.

EXECUTION

610 SUITABILITY OF JOINTS

- Presealing checks:
 - Joint dimensions: Within limits specified for the sealant.
 - Substrate quality: Surfaces regular, undamaged and stable.
- Joints not fit to receive sealant: Submit proposals for rectification.

620 PREPARING JOINTS

- Surfaces to which sealant must adhere:
 - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
 - Clean using materials and methods recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
- Protection: Keep joints clean and protect from damage until sealant is applied.

630 APPLYING SEALANTS

- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Do not dry or raise temperature of joints by heating.
- Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
- Sealant profiles:
 - Butt and lap joints: Slightly concave.
 - Fillet joints: Flat or slightly convex.
- Protection: Protect finished joints from contamination or damage until sealant has cured.

Z31 Powder coatings

To be read with Preliminaries/ General conditions.

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 120 **POWDER COATING MATERIALS**
- Manufacturer: Obtain from one only of the following: Contractor Choice.
 - Selected manufacturer: Submit details before commencement of powder coating including:
 - Name and contact details.
 - Details of accreditation schemes.
 - Technical data of product including current Agrément certificates.
- 210 **WORKING PROCEDURES**
- Comply with the follow following standards.
 - Aluminium components: To BS 6496 or BS EN 12206-1.
 - Steel components: To BS EN 13438.
 - Safety standards: To British Coatings Federation 'Code of safe practice - Application of thermosetting powder coatings by electrostatic spraying'.
- 220 **POWDER COATING APPLICATORS**
- Applicator requirements:
 - Approved by powder coating manufacturer.
 - Currently certified to BS EN ISO 9001.
 - Comply with quality procedures, guarantee conditions, standards and tests required by powder coating manufacturer.
 - Applicator to use only one plant.
 - Selected applicator: Submit details before commencement of powder coating including:
 - Name and contact details.
 - Details of accreditation schemes.
- 225 **GUARANTEES**
- Powder coating manufacturer and applicator guarantees:
 - Submit sample copies before commencement of powder coating.
 - Submit signed project specific copies on completion of work.

230 CONTROL SAMPLES

- Sequence: Prior to ordering materials for the works, obtain approval of appearance for:
 - Powder coated samples: Of various grades and forms of background metal to be used, showing any colour, texture and gloss variation.
 - Fabrication samples: Showing joint assembly, how powder coating is affected and how any cut metal edges are finished and protected.
- Samples to include the following information:
 - Product reference.
 - Colour.
 - Reference number.
 - Name.
 - Gloss level.

235 INDEPENDENT INSPECTION AT PLANT

- Requirement: Contractors/ suppliers of the following designated components must commission an approved Independent Inspection Authority to carry out acceptance inspections to confirm that powder coating application complies with this specification.
 - Designated components: Curtain Walling frame and cover caps / Windows .
- Acceptance inspections: Carry out for each variation of colour and finish of each component work package at applicator's plant prior to any fabrication of units, in accordance with the following:
 - Where three or more production runs are required for application of coatings, not less than three acceptance inspections must be carried out in accordance with BS 6001-1, general inspection level 2, with an acceptance quality limit of 1%.
 - Where less than three production runs are required for application of coatings, one acceptance inspection must be carried out in accordance with BS 6001-2, with a limiting quality of 5% where the probability of acceptance is 10%.
- Components failing inspection: Reprocess or replace and reinspect.
- Inspection reports: Independent Inspection Authority must submit copies.

240 QUALITY ASSURANCE SYSTEM

- Requirement: Powder and coating application to the following designated components is to be tested and approved in accordance with the Qualicoat system.
 - Designated components: TBA.

250 COMPONENT DESIGN

- Condition of components to be powder coated:
 - To comply with relevant recommendations of BS 4479-1, -3, and -4.
 - Of suitable size to fit plant capacity.
 - Of suitable thickness to withstand oven curing.

310 PRETREATMENT OF ALUMINIUM COMPONENTS

- Condition of components to be pretreated:
 - Free from corrosion and damage.
 - All welding and jointing completed and finish off as specified.
 - Free from impurities including soil, grease, oil.
 - Suitable for and compatible with the pretreatment process.
- Conversion coating requirements:
 - Chromate system: To BS 6496 or BS EN 12206-1.
 - Chromate-free system: To BS EN 12206-1. Submit details before using.
- Rinsing requirements: Use demineralized water. Drain and dry.

320 PRETREATMENT OF STEEL COMPONENTS

- Condition of components to be pretreated:
 - Free from corrosion and damage.
 - All welding and jointing completed and finish off as specified.
 - Free from impurities including soil, grease, oil.
 - Suitable for and compatible with the pretreatment process.
- Conversion coating requirements: To BS EN 13438.
- Rinsing requirements: Use demineralized water. Drain and dry.

430 EXTENT OF POWDER COATINGS

- Application: To visible component surfaces, and concealed surfaces requiring protection. Coated surfaces will be deemed 'significant surfaces' for relevant BS 6496 or BS EN 13438 performance requirements.

435 APPLICATION OF POWDER COATINGS

- Surfaces to receive powder coatings: Free from dust or powder deposits.
- Powder colours: Obtain from one batch of one manufacturer.
- Commencement of powder coating: To be continuous from pretreatment.
- Jig points: Not visible on coated components.
- Curing: Controlled to attain metal temperatures and hold periods recommended by powder coating manufacturer.
- Stripping and recoating of components: Only acceptable by prior agreement of powder coating manufacturer. Stripping, pretreatment and powder coating are to be in accordance with manufacturer's requirements.
- Overcoating of components: Not acceptable.

440 PERFORMANCE AND APPEARANCE OF POWDER COATINGS

- For aluminium components:
 - Standard: To BS 6496 or BS EN 12206-1.
- For steel components:
 - Standard: To BS EN 13438.
- Visual inspection after powder coating: Significant surface viewing distances to be as specified in the relevant Standard, unless specified otherwise.
- Colour and gloss levels: To conform with approved samples.

450 ALUMINIUM ALLOY FABRICATIONS

- Units may be assembled:
 - Before powder coating.
 - From components powder coated after cutting to size.
 - Where approved, from components powder coated before cutting to size.
- Exposure of uncoated background metal: Not acceptable.
- Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

460 STEEL FABRICATIONS

- Unit assembly: Wherever practical, before powder coating.
- Exposure of uncoated background metal: Not acceptable.
- Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

470 FIXINGS

- Exposed metal fixings: Powder coat together with components, or coat with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.

480 DAMAGED COMPONENTS - REPAIR/ REPLACEMENT

- Before delivery to site: Check all components for damage to powder coatings. Replace damaged components.
- Site damage: Submit proposals for repair or replacement.

510 PROTECTION

- Powder coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.
- Protective coverings: Must be:
 - Resistant to weather conditions.
 - Partially removable to suit building in and access to fixing points.
- Protective tapes in contact with powder coatings: Must be:
 - Low tack, self adhesive and light in colour.
 - Applied and removed in accordance with tape and powder coating manufacturers' recommendations. Do not use solvents to remove residues as these are detrimental to the coating.
- Inspection of protection: Carry out monthly. Promptly repair any deterioration or deficiency.

535 DOCUMENTATION

- Submit the following information for each batch of powder coated components:
 - Supplier.
 - Trade name.
 - Colour.
 - Type of powder.
 - Method of application.
 - Batch and reference number.
 - Statutory requirements.
 - Test certificates.
 - Maintenance instructions.

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540 COMPLETION

- Protection: Remove.
- Cleaning and maintenance of powder coatings: Carry out in accordance with procedures detailed in powder coating manufacturer and applicator guarantees.

Z33 Anodizing

To be read with Preliminaries/ General conditions.

- 100 **ALTERNATIVE PRODUCTS OR MANUFACTURES**
Where reference is made in this document to specific products or manufacturers, alternative or similar quality and performance may be substituted subject to prior approval.
- 110 **ANODIC COATING**
- Anodizer: Select one only of the following: Contractors Choice.
 - Selected anodizer: Submit details before commencement of anodizing, including:
 - Name and contact details.
 - Details of accreditation schemes.
 - Technical data of product including current Agrément certificates.
- 210 **WORKING PROCEDURES**
- Standard: To BS 3987 for anodic coatings on wrought aluminium.
- 220 **ANODIZER REQUIREMENTS**
- Processing:
 - Approved: By the Aluminium Finishing Association.
 - Certified: To BS EN ISO 9001.
 - Anodizing plant: Each anodizer to use only one plant.
- 230 **GUARANTEES**
- Anodizer guarantees: Submit sample copies before commencement of anodizing.
 - Project specific guarantees: Submit signed copies on completion of work.
 - Guarantees to cover:
 - Life expectancy.
 - Colour: Opacity and consistency.
 - Texture: Gloss, satin or matt.
 - Quality of coating.
- 240 **CONTROL SAMPLES**
- Sequence: Prior to ordering materials for the works, obtain approval of appearance for:
 - Anodic coated samples: Showing colour and texture variation.
 - Fabrication samples: Showing joint assembly, how anodic coating is affected and how cut metal edges are finished and protected.

250 INDEPENDENT INSPECTION AT PLANT

- Requirement: Contractors/ suppliers of the following designated components must commission an approved Independent Inspection Authority to carry out acceptance inspections to confirm that anodic coating application complies with this specification.
 - Designated components: Curtain Walling Section H11
- Acceptance inspections: Carry out for each variation of colour and finish of each component work package at anodizer's plant prior to any fabrication of units, in accordance with the following:
 - Where three or more production runs are required for application of coatings, not less than three acceptance inspections must be carried out in accordance with BS 6001-1, general inspection level 2, with an acceptance quality limit of 1%.
 - Where less than three production runs are required for application of coatings, one acceptance inspection must be carried out in accordance with BS 6001-2, with a limiting quality of 5% where the probability of acceptance is 10%.
- Components failing inspection: Reprocess or replace and reinspect.
- Inspection reports: Independent Inspection Authority must submit copies.

255 QUALITY ASSURANCE SYSTEM

- Requirement: Powder and coating application to the following designated components is to be tested and approved in accordance with the Qualanod system.
 - Designated components: section H11.

270 COMPONENT DESIGN

- Condition of components to be anodized:
 - To comply with relevant recommendations of BS 4479-1, and -5.
 - Of suitable size to fit plant capacity.

310 PRETREATMENT

- Condition of components to be anodized:
 - Free from corrosion and damage.
 - Suitable for and compatible with the pretreatment and anodizing process.
- Process: In accordance with the specification requirements for the finish.

410 EXTENT OF ANODIC COATINGS

- Application: To visible component surfaces, and concealed surfaces requiring protection. Coated surfaces will be deemed 'significant surfaces' for relevant BS 3987 performance requirements.

420 APPLICATION OF ANODIC COATINGS

- Surfaces to receive anodic coatings: Clean.
- Commencement of anodic coating: To be continuous from pretreatment.
- Jig points: To be agreed. Not on visible areas of anodic coated components.
- Use of touch-up paint: Not acceptable.

430 PERFORMANCE AND APPEARANCE OF ANODIC COATINGS

- Standard: To BS 3987.
- Visual inspection after anodizing: Significant surfaces to be free from visible coating/ defects when viewed from a distance of not less than 5 m for external and 3 m for internal applications.

440 FABRICATION

- Units may be assembled:
 - Before anodizing, providing sufficient drainage holes are included in components to fully drain components.
 - From components anodized after cutting to size.
 - Where approved, from components anodized before cutting to size.
 - Exposure of uncoated background metal: Not acceptable.
 - Assembly sealants: Compatible with anodic coatings. Obtain approval of colour if sealants are visible after fabrication.

450 DAMAGED COMPONENTS - REPAIR/ REPLACEMENT

- Before delivery to site: Check all components for damage to anodic coatings. Replace damaged components.
- Site damage: Submit proposals for repair or replacement.

510 PROTECTION

- Anodic coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.
- Protective coverings: Must be:
 - Resistant to weather conditions.
 - Partially removable to suit building in and access to fixing points.
- Protective tapes in contact with anodizing to be:
 - Low tack, self adhesive and light in colour.
 - Applied and removed in accordance with tape and anodizers recommendations.
- Inspection of protection: Carry out weekly. Promptly repair any deterioration or deficiency.

530 DOCUMENTATION

- Submit the following information for each batch of anodic coated components:
 - Supplier.
 - Trade name.
 - Colour (if required).
 - Batch and reference number.
 - Statutory requirements.

540 COMPLETION

- Protection: Remove.
- Cleaning and maintenance of anodic coatings: Carry out in accordance with procedures detailed in anodizer's guarantees.