d3associates

D3 Associates Ltd

Shotton Parish Council

Shotton Outreach Community Youth Hub - Architectural Specification

1788

Tender

P01

Contents

C20
Demolition

To be read with preliminaries/ general conditions.

5 Desk study/ survey

1. Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of: Existing drains and services.
2. Format of report:

10 Extent of deconstruction/ demolition

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

13 Groundworks

1. Old foundations, slabs and the like: Break out in locations and to the extents stated.
2. Contaminated material: Remove and dispose of contaminated material to appropriate site

20 Features to be retained

1. General: Keep in place and protect the following: Path along north elevation.

25 Location and marking of services

1. Services affected by deconstruction/ demolition work: Locate and mark positions
2. Mains services marking: Arrange with the appropriate authorities for services to be located and marked
   2.1. Marking standard: In accordance with Street Works UK publication 'Guidance on the Positioning and Colour Coding of Underground Utilities' Apparatus'.

30 Services disconnection arranged by contractor

1. General:
2. Arrange with the appropriate authorities and responsible private organizations for disconnection of services, and removal of fittings and equipment owned by those authorities prior to starting deconstruction or demolition

32 Disconnection of drains

1. General: Locate, disconnect and seal disused drain connections. Agree where drains are to be sealed
2. Sealing: Permanent, and within the site

35 Live foul and surface water drains

1. Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings: Protect and maintain normal flow during deconstruction or demolition Make good any damage arising from deconstruction or demolition work Leave clean and in working order at completion of deconstruction or demolition work
2. Other requirements:

45 Services to be retained

1. Damage to services:
2. Repairs to services:

50 Workmanship

1. Standard: Demolish structures in accordance with BS 6187.
2. Operatives
   2.1. Appropriately skilled and experienced for the type of work.
   2.2. Holding, or in training to obtain, relevant Construction Skills certification of competence.
3. Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction and demolition to be used.

55 Site hazards

1. Dust: Minimize airborne dust by periodically spraying deconstruction and demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris
2. Site operatives and general public: Protect from health hazards associated with vibration, dangerous fumes and dust arising during the course of the works.

75 Asbestos-containing materials – known occurrences

1. General: Materials containing asbestos are known to be present in: …….
2. Removal:
3. Timing:

76 Asbestos-containing materials – unknown occurrences

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

85 Site condition at completion

1. Debris: Clear away and leave the site in a clean, tidy and secure condition.
2. Other requirements:

91 Employer's property

1. Components and materials to remain the property of the employer: Timber logs as instructed
2. Protection:
3. Specific limitations:

Ω End of Section

E42
Accessories cast into in situ concrete

General

110 Accessories specified elsewhere

1. Item/ location:

Products

320 Cast-in sockets

1. Description:
2. Material:
   2.1. Coating or treatment:
3. Manufacturer:
   3.1. Product reference:
4. Cleanliness: Plug inside as necessary to prevent ingress of grout during concreting. Cap after concreting to exclude dust and dirt until fixings are installed.
5. Safe working load (minimum):
6. Temporary fixings to shutter/ temporary supports:

335 Shear load connectors

1. Material:
   1.1. Designation:
2. Manufacturer:
   2.1. Product reference:
3. Anchors: Welded to back of section.
   3.1. Type/ centres:
4. Temporary fixings to shutter/ temporary supports:

340 Channels and slots

1. Material:
   1.1. Designation:
   1.2. Coating or treatment:
2. Manufacturer:
   2.1. Product reference:
3. Anchors: Welded to back of section.
   3.1. Type/ centres:
4. Temporary fixings to shutter/ temporary supports:
5. Bolts/ ties:
6. Other requirements:

360 Corner guards

1. Location:
2. Material:
   2.1. Designation:
   2.2. Coating or treatment:
3. Section: Cold formed angle.
   3.1. Size:
4. Anchors: Welded to face in contact with concrete.
   4.1. Type/ centres:
5. Temporary fixings to shutter:

380 Ducts

1. Description:
2. Material:
3. Shape:
   3.1. Size:
4. Location:
5. Other requirements:

390 Galvanized coatings

1. Standard: To …….
2. Galvanizing: Applied and passivated by component manufacturer. Threaded items tapped after galvanizing.

395 Sherardized coatings

1. Standard: To BS 7371-8.

Execution

610 Hollow accessories

1. Filling/ sealing: Temporally fill or seal accessory to prevent ingress of grout during concreting. Leave filling/ seals in position until accessory is used.

620 Temporary supports

1. Location: Provide to hold accessories for casting into unshuttered surface of concrete, set at a level that will not adversely affect finish of concrete surface remote from accessory.
2. Position: Hold securely to prevent lateral movement or rotation of accessory during concreting.

630 Protective coatings

1. Inspect: Immediately prior to casting concrete.
2. Damage to coatings
   2.1. Minor: Submit proposals for coating repair.
   2.2. Significant: Replace accessory.

640 Installation

1. Cleanliness: At time of casting, surfaces in contact with concrete to be free from contaminants which may adversely affect accessory, reinforcement, concrete, or bond between accessory and concrete.
2. Position: Hold accessory firmly in position, preventing displacement during concreting.
3. Other requirements:

Ω End of Section

F10
Brick/ block walling

Clauses

36 Concrete common blockwork

1. Description:
2. Blocks: To BS EN 771-3.
    2.1. Manufacturer:
    2.2. Product reference:
    2.3. Configuration:
    2.4. Compressive strength: 7.3 N/mm²
    2.5. Category:
    2.6. Freeze/ thaw resistance: Frost resistant
    2.7. Thermal properties:
    2.8. Recycled content:
    2.9. Work sizes (length x width x height): 440 x 100 x 215 mm
        2.9.1. Tolerance category: D1
    2.10. Special shapes: None
    2.11. Additional requirements:
3. Mortar: As section Z21.
    3.1. Standard:
    3.2. Mix: 1:3 masonry cement:sand
4. Bond:

45 Engineering brickwork

1. Description:
2. Bricks: To BS EN 771-1.
    2.1. Manufacturer:
        2.1.1. Product reference:
    2.2. Mean compressive strength:
    2.3. Category:
    2.4. Water absorption:
    2.5. Freeze/ thaw category: F2.
    2.6. Active soluble salts content category: S2.
    2.7. Additional requirements:
3. Mortar: As section Z21.
    3.1. Standard:
    3.2. Mix:
    3.3. Additional requirements:
4. Bond:
5. Joints: Flush.

51 Basic workmanship

1. Bond where not specified: Half lap stretcher.
2. Mortar joints: Fill all vertical joints. Lay bricks, solid and cellular blocks on a full bed.
3. AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
4. Clay block joints
   4.1. Thin layer mortar: Lay blocks on a full bed.
   4.2. Interlocking perpends: Butted.
5. Quoins and advance work: Rack back.
6. Locations for equal levelling of cavity wall leaves
   6.1. Every course containing vertical twist type ties or other rigid ties.
   6.2. Every third tie course for double triangle/ butterfly ties.
   6.3. Courses in which lintels are to be bedded.
7. Lift height (maximum) for walling using cement gauged or hydraulic lime mortar: 1.2 m above any other part of work at any time.
8. Daily lift height (maximum) for walling using cement gauged or hydraulic lime mortar: 1.5 m for any one leaf.
9. Lift height (maximum) for walling using thin layer mortar: 1.3 m above any other part of work at any time.

55 Facework

1. Commencement of facework: Not less than 150 mm below finished level of adjoining ground or external works level.
2. Brick/ block selection: Do not use units with damaged faces or arrises.
3. Cut masonry units: Where cut faces or edges are exposed cut with table masonry saw.
4. Coursing brickwork and concrete blockwork: Evenly spaced using gauge rods. To produce satisfactory junctions and joints with built-in elements and components.

Ω End of Section

G20
Carpentry/ timber-framing/ first fixing

Clauses

2 Timber procurement

1. Timber (including timber for wood-based products): Obtained from well-managed forests/ plantations in accordance with:
   1.1. The laws governing forest management in the producer country or countries.
   1.2. International agreements such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
2. Documentation: Provide either in accordance with chain of custody certification scheme requirements:
   2.1. Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied. or
   2.2. Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
3. Chain of Custody Certification scheme:

5 Structural softwood

1. Description: FOR EXTERNAL WALL INFILL
2. Grading standard: To the appropriate BS EN 14081-1-compliant standard.
   2.1. Grade: GS to BS 4978
3. Strength class to BS EN 338:
4. Treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8, service life: 40 years

10 Ungraded softwood

1. Description: FOR INTERNAL STUDS
2. Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
3. Surface finish: Sawn
4. Treatment: None required

10 Ungraded softwood Type A

1. Description: FOR WALL BATTENS
2. Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
3. Surface finish: Regularized
4. Treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C5, service life: 40 years

15 Plywood

1. Description: BIRCH FACED PLY PANELLING
2. Standard: To an approved national standard.

3. Service class to BS EN 1995-1-1: Class 1
4. Use class to BS EN 335: Use Class 2
5. Nominal thickness: 12 mm
6. Appearance class to BS EN 635: II/III
7. Bonding quality to BS EN 314-2: Class 2
8. Finish: Sanded
9. Treatment:

30 Selection and use of timber

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

32 Notches, holes and joints in timber

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

40 Moisture content

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

85 Vertical restraint straps

1. Type: Flat, Bent
2. Manufacturer:
   2.1. Product reference:
3. Material/ finish: Galvanized steel
4. Size
   4.1. Cross section: Not less than …….
   4.2. Length:
5. Centres: Not more than …….
6. Fixing
   6.1. To timber members with not less than …….
   6.2. To masonry with not less than ……. screws evenly spaced.
   6.3. At least one screw to be located within 150 mm of the bottom end of each strap.

Ω End of Section

H20

Rockpanel Colours 8mm Durable and **Rockpanel® Woods – 8mm Durable**

A Rockpanel surface treated with four layers of water-based acrylic coating and a two-component end layer with Protect Plus as standard. Woods is available in a range of 17 standard colours/ effects. The surface has excellent UV resistance when tested in accordance with ISO 4893-1&2 and judged in accordance with ISO 105-A02 and ISO 105-A03. Rockpanel Woods can only be used in ventilated constructions.

Board dimensions: 3050 x 1200mm

Board thickness: 8mm

Protect plus finish is standard which improves UV protection and provides an anti-graffiti and self-cleaning finish.

ROCKPANEL® Colours – 8mm Durable

A ROCKPANEL surface treated with triple layer water-based acrylic coating, available in a range of 50 standard colours with any RAL or NCS colour available to order (subject to 100m2 minimum quantity). Full colour range of 144 colours. Special Colours have a minimum order of 50m2.

The surface has excellent UV resistance when tested in accordance with ISO 4893-1&2 and judged in accordance with ISO 105-A02 and ISO 105-A03.

Board dimensions: 3050 x 1200mm/ 2500 x 1200mm

Board thickness: 8mm

Fire classification of B s1-d0 when installed in accordance with ETA 07/0141

(Please delete clauses in Red to suit specification)

150 RIGID SHEET CLADDING…….

Product reference:

Rockpanel Woods Durable

Material: Inert Rockwool panels with woodgrain finish

Manufacturer: ROCKWOOL BV, Industrieweg 15

6045 JG Roermond, The Netherlands

Sales Representative: Ann Bone, Rockpanel, Wern Tarw, Pencoed, Bridgend CF35 6NY.

Tel: 07977 472453 Fax: 01656 863611.

E-Mail ann.bone@rockpanel.com. Web: www.rockpanel.co.uk.

Thickness: 8mm

Finish: Protect Plus as standard

Colours: Various from standard range

Product Reference – Colours Durable

Thickness – 8mm

Colours:

From Standard range

Fixings:

Rockpanel Torx screw:

Stainless steel torx head A1S1 316 grade 4.5x35mm screws, according ETA approval with colour matched heads.

.

Number and location:

8mm boards

Torx head screws fixed at maximum spans of 600mm and 600mm vertical centres.

For this project, battens at 450mm centres

Fixings to be positioned minimum 15mm from the vertical edge of the board and minimum 50mm from the horizontal edge of the board.

Colour: Colour matched to board

Panel layout: See elevations

Woods horizontal strips

Joints

Type/treatment:

Vertical joint treatment

Flexible Joint Gasket weather and UV resistance at vertical board joints (for example ref: 090/60P of Plastestrip)

Colour: Black

Flexible Joint Gasket weather and UV resistance at intermediate supports (for example ref: 090/36P of Plastestrip)

Colour: Black

Flexible Joint Gasket weather and UV resistance at vertical corner joints (for example ref: 090/75P of Plastestrip)

Colour: Black

Note: Gaskets are fixed to increase longevity of timber battens and must be used.

Horizontal joint treatment

Open joints 5mm

External Corner Treatment

8mm boards

Rockpanel profile E: External capped corner profile (aluminium)

Or

Rockpanel profile D: External corner profile (aluminium)

Colour: Colour matched to board

Distance between boards: 5mm

Air gap: Minimum 25mm –

Consult local regulations for recommendations and details if designing to NHBC requirements

Support system: Timber battens as clause 230

Size: Min 75mm wide x 38mm deep at boards joints.

Min 50mm wide x 38mm deep at intermediate supports.

(Above timbers can be planed down to 70mmx28mm and 45mmx28mm respectively)

Thermal Insulation: As clause H92 775

Breather membrane: As clause H92 785

ROCKPANEL Accessories:

Ventilated profiles:

Ref: 025/10K bottom vent strip – 25mm cavity

Colour: Colour matched to board

Manufacturer: Plastestrip (Profiles) Ltd, 1 Enterprise Park, St Austell, Cornwall, PL25 4EJ.

Tel: 01726 74771. Fax: 01726 69238.

E-Mail: sales@plastestrip.com Web: www.plastestrip.com

GENERAL REQUIREMENTS

210 CONTROL SAMPLES

- General: Complete an area of the cladding and obtain approval of appearance before proceeding.
    - Location :…….
    - Extent of area…….

260 FIXING SHEETS

- General: Secure to supports without producing distortion.
- Fasteners: Evenly spaced in straight lines, in pairs across joints and sufficient distance from edge of sheet to prevent damage.

H43
Metal insulating sandwich panel roofing QuadCore KS1000RW Roof Panel 150mm

Types of cladding/ roofing system

120 **Carbon steel insulating sandwich panels QuadCore KS1000RW Roof Panel 150mm**

3. **Support structure:** Kingspan Structural Multibeam cold rolled purlins.
   - 3.1. **Bearing width (minimum):** 50 mm intermediate 60mm end laps
   - 3.2. **Pitch:** minimum 4° or more after deflection
4. **Panels:** Kingspan Insulated Panels, roof cladding system for standard internal & external non-corrosive, inland environments
   - 4.1. **Manufacturer:** Kingspan Insulated Panels
     - 4.1.1. Contact details
       - 4.1.1.1. **Address:** Kingspan Limited
         Greenfield Business Park No. 2
         Greenfield
         Holywell
         Flintshire
         United Kingdom
         CH8 7GJ
       - 4.1.1.2. **Telephone:** +44 (0)1352 716100
       - 4.1.1.3. **Web:** www.kingspanpanels.co.uk
       - 4.1.1.4. **Email:** marketing@kingspanpanels.com
     - 4.1.2. **Product reference:** QuadCore KS1000RW Roof Panel (150 mm Core Thickness)
   - 4.2. **Standard:** To BS EN 14509.
   - 4.3. **Panels:** Self-supporting double skin metal faced insulating panels. Factory made products.
   - 4.4. Panel construction
     - 4.4.1. Panel external face
       - 4.4.1.1. **Material:** Steel.
       - 4.4.1.2. **Grade:** S280GD.
       - 4.4.1.3. **Profile:** Trapezoidal.
     - 4.4.2. Panel internal face
       - 4.4.2.1. **Material:** Steel.
       - 4.4.2.2. **Grade:** S220GD.
       - 4.4.2.3. **Profile:** Ribbed.
     - 4.4.3. **Core insulation:** QuadCore, 150 mm.
   - 4.5. Panel dimensions
     - 4.5.1. **Length:**
     - 4.5.2. **Cover width:** 1000 mm.
     - 4.5.3. **Thickness:** 181 mm.
   - 4.6. Joint type
     - 4.6.1. **Side or vertical:** Overlapping.

4.6.2. **End or horizontal:** Overlapping.

4.7. Finish as delivered

4.7.1. Outer skin

4.7.1.1. **Material:** XL Forte

4.7.1.2. **Thickness:** 200 µm.

4.7.1.3. **Colour:** Merlin Grey RAL 180 40 05

4.7.2. Inner skin

4.7.2.1. **Material:** CLEANsafe 15

4.7.2.2. **Thickness:** 15 µm.

4.7.2.3. **Colour:** Bright white.

4.8. **Integral accessories:**

2. Self-drilling, self-tapping stainless steel primary fasteners with non-ferrous EPDM backed washer.
3. Stainless steel secondary fasteners with non-ferrous EPDM backed washer.
4. Butyl tape sealants.
5. Film backed butyl tape.
6. PVC foam tape.
7. Butyl co-laminate tape sealant.
8. Non-setting butyl sealant.
9. Profiled foam fillers.

4.9. Fire performance

4.9.1. Reaction to fire

4.9.1.1. **Panel external face:** To BS EN 13501-5, Class Broof(t4).

4.9.1.2. **Panel internal face:** To BS EN 13501–1, Class B-s1, d0.

4.9.2. **Fire resistance:**

4.10. **U-value:** 0.12 W/m²·K.

4.11. **Weight:** 13.2 kg/m².

4.12. **Dimensions:** 181 x 1000 mm.

5. **Primary fasteners:** As determined by clause 220A.

5.1. **Number and location::** As determined by clause 197A,
Eaves ridge location - Panel to be fixed with 3 through fasteners, 1 per valley
End lap – Panel to be fixed with 3 through fasteners, 1 per valley, located 40mm upslope from the panel end lap location,
End laps to be stitched with two number EJOT CF15 JF3-5.5x25 or SFS SL2-S-S14-5.5x25 or SFS SXL2-AV19-6.3x28 stitching screws per valley, located 40mm from end lap.
An additional crown fixing to the 4 way lap complete with storm washer 35x23. (supplied by SFS Intec/EJOT UK Ltd or Fixfast).

Mid supports – 2 fasteners minimum subject to applicable wind loadings.

5.2. **Secondary Fasteners:** Stitch external side laps at 450mm maximum centres using EJOT CF15 JF3-5x25 or SFS SL2-S-S14-5.5x25.

6. **End laps size (minimum):** 75 mm.

7. Sealing laps

7.1. **End laps:** - Single run of 50mm x 6mm co-laminate butyl seal.

7.2. **Side laps:**

3. Single line of 6 x 5mm, DWR10 butyl rubber sealant or similar, site applied at lap in external facing
4. **At four way lap position:** Apply an additional 150mm run of 6mm x 5mm DWR10 butyl sealant or similar to the panel underlay crown, located directly on top of the top of the existing side lap seal on upper panel.

8. **Air leakage rate:** 3m^3/hr/m^2 at 50 Pa, based on the assumption that the full building envelope is constructed using Kingspan panels.
9. **Additional requirements:** - Single line of non-setting gun-grade, PremSeal BR, site applied across panel side lap in line with internal air seal, located at eaves and ridge locations.
   - Sealing: Internal face of panel to be air sealed to perimeter supports / flashing using a SGV15p 20x9mm PVC foam tape (premier sealants).
   - Any joints in the secondary steel frame and cleader angles, which are forming part of the building air seal line, must be sealed with a film backed Butyl tape/PremSeal SWRP10.

   Kingspan recommend that the appointed cladding sub-contractor attends the appropriate product installation training course at our offices in Holywell prior to commencing installation on site. Panel end laps to be left clear and not concealed below a PV system.
10. **QuadCore® Assured System Warranty::**
    2. 25 years thermal performance
    3. 25 years fire performance
    4. 25 years structural performance
    5. 25 years environmental performance
    6. Up to 40 years coating performance
    7. 25 years on System Accesories*
11. **Panels manufactured under the following standards:-:**
    3. ISO 9001, Quality Management Systems.
    4. ISO 14001, Environmental Management Systems.
    5. ISO 18001, Occupational Health and Safety Management Systems.
    6. ISO 50001, Energy Management Certificate

General requirements - Not Used

Design/ performance requirements

197 **A Attachment**

3. Determine the number and location of cladding fasteners recommended by the cladding manufacturer to resist wind loads calculated in accordance with BS EN 1991-1-4:2005 Eurocode 1 – Actions on structures Part 1-4.
4. Calculate wind loads on roof and wall cladding appropriate to location, exposure, roof height, building shape and size in accordance with NA of BS EN 1991-1-4:2005 the UK National Annex to Eurocode 1 – Actions on structures Part 1-4.
   Wind Speed (V_{bmap}): ___ m/s
   Altitude Factor (C_{alt}): ___
   Direction Factor (C_{dir}): ___
   Seasonal Factor (C_{season}): ___
   Probability Factor (C_{prop}): ___
   Orography Factor $C_o(Z)$: ___
   Exposure Factor $C_e(Z)$: ___
   Correction Factor $_{cr,t}$: ___
   Peak Velocity Pressure q_p: ___ kN/m^2

Fixing cladding/ roofing

220 A Fasteners For Roof Panels

3. **Recommended manufacturer:** SFS Intec, EJOT UK Ltd, Fixfast
4. **Primary fasteners:** High threaded screws with bonded washers.
   - 4.1. **Type(s), size(s) and drilling capacity:** As recommended by fastener manufacturer to suit type and thickness of supports, and thickness of cladding panels.
   - 4.2. **Screw material:** Carbon steel as per fastener suppliers' guidance.
   - 4.3. **Washer material:** Non-ferrous.
   - 4.4. **Washer size:** 19mm diameter for main fix.
   - 4.5. **Heads:** Coloured plastic heads or painted heads.
   - 4.6. **Storm washer material:** Profiled aluminium storm washer (35x23) 1mm thick x 50mm long incorporating reinforcement ribs along back and sides, dimensions to match the crown of the panel. A raised / profiled area around the fastener hole to ensure correct compression of the fastener and washer. The diameter of the fastener hole designed in conjunction with the fastener. The aluminium material to conform to EN 485.
5. **Secondary fasteners:** Ejot CF15 JF3-5.5x25 or SFS SL2-S-S14-5.5x25 (all locations including end laps) SFS SXL2-AV19-6.3x28 (end laps only).
   - 5.1. **Screw/washer material:** Carbon steel as per fastener suppliers guidance.
   - 5.2. **Washer size:** 14mm diameter.
   - 5.3. **Heads:** Coloured plastic heads or painted heads

240 Fasteners Generally Fasteners for gutters

3. Recommended manufacturer: to be confirmed by architect / cladding sub-contractor.
   Fasteners: Stitching screws with bonded washers.
   3. Type(s), size(s) and drilling capacity: 4.8mm diameter, 20mm long. Drill capacity as recommended by fastener manufacturer to suit type and thickness of supports.
   4. Screw material: Grade 304 austenitic stainless steel.
   5. Washer material: Grade 304 austenitic stainless steel.
   6. Washer size: 14 mm diameter.
   7. Heads: Coloured plastic head.

275 Continuity thermal insulation

4. **Material:** At junctions between the roof panel system and walls / penetrations insulated with PIR board insulation, any gaps filled with , fire rated gun applied canister urethane insulation.
   - 4.1. **Manufacturer:** PIR Board: Kingspan
     Canister Insulation:Premier Sealants (01724 864 100)
     - 4.1.1. **Product reference:** Canister Insulation: Firefoam (class B1 rated)
5. **Installation:** Secure and continuous with cladding/ roofing insulation.
6. **Psi Values:** Psi values of junction details to be calculated by Kingspan Insulated Panels, as per the guidance set out in BRE report BR497 Conventions for Calculating Linear Thermal Transmittance and Temperature Factors.

300 Profile fillers generally

3. **Material:** MP (Metallocene polyolefin)
4. **Manufacturer:** Premier Sealant Systems Limited

4.1. **Product references:** ref:M25, type to suit cladding profile.

5. **Colour:** Black.
6. **Thickness:**
7. **Fixing method:** Seal the top, bottom and sides of each profile filler with a single line of non-setting gun-grade, PremSeal BR.
   7.1. **Requirement:** Locate where shown on drawings and wherever necessary to close off corrugation cavities from the inside and outside of the building. Ensure a tight fit and leave no gaps.

310 A Purpose-made cold-formed metal accessories External

4. **Material:** Steel
   4.1. **Thickness/ gauge:** 0.63 mm nominal
   4.2. **Finish/ colour:** Kingspan XL Forte external coating.
5. Fasteners
   5.1. **Type:** Secondary fasteners as specified for the cladding system.
   5.2. **Location:** Stitch to external face of panels
   5.3. **Fixing centres:** at max. 450 mm centres
6. **Sealing:** Single line of 9 x 3 mm butyl rubber tape, Class A, ref: NFRC TB36, site applied between flashing and panel.

311 A Purpose-made cold-formed metal accessories Internal

3. **Material:** Steel
   3.1. **Thickness/ gauge:** 0.4 mm nominal
   3.2. **Finish/ colour:** Kingspan CleanSafe 15. White.
4. Fasteners
   4.1. **Type:** Secondary fasteners as specified for the cladding system.
   4.2. **Location:** Stitch to internal face of panels
   4.3. **Fixing centres:** at max. 450 mm centres
5. **Sealing:** End laps to be air sealed with film backed butyl tape / PremSeal SWRP10, or gun grade sealant.

580 A Insulated Panel Identification & Labelling

3. When the roofing and / or the wall cladding to this building is completed, a label identifying the composition of the insulated panels is to be applied to assist insurers, fire officers, owners and occupiers identify the envelope composition.
   It is a recommendation of the Kingspan QuadCore Assured System Warranty that the insulated panel identification label, which will have a specific project registration number, is installed in an agreed location. The project architect, cladding sub-contractor or owner should place or communicate the positioning of these labels in an appropriate and accessible location on the building.

Ω End of Section

J40
Flexible sheet waterproofing/ damp proofing

To be read with preliminaries/ general conditions.

10 Soft blinding to hardcore beds

1. Material: Soft sand
   1.1. Thickness (minimum): 50 mm
2. Finish on completion: Smooth, consolidated bed free of sharp projections.

20 Plastics sheets

1. Substrate: Suspended block and beam floor. Soft blinded hardcore
2. Membrane
   2.1. Manufacturer: Visqueen
      2.1.1. Contact details
         2.1.1.1. Address: Visqueen
         Heanor Gate Industrial Estate
         Heanor
         Derbyshire
         DE75 7RG
         2.1.1.2. Telephone: +44 (0) 333 202 6800
         2.1.1.3. Web: www.visqueen.com
         2.1.1.4. Email: enquiries@visqueen.com
      2.1.2. Product reference: Visqueen EcoMembrane®
   2.2. Material: Low-density polyethylene (PE-LD).
   2.3. Purpose: Damp-proof membrane. 1200 gauge.
   2.4. Standard: CE Mark EN 13967:2017.
   2.5. Performance characteristics
      2.5.1. Fire performance: Grade F.
   2.6. Third-party certification: British Board of Agrément (BBA) Certificate, 94/3009.
   2.7. Recycled content: Fully recycled.

50 Workmanship generally

1. Condition of substrate
   1.1. Clean and even textured, free from voids and sharp protrusions.
   1.2. Moisture content: Compatible with damp proofing/ tanking.
2. Air and surface temperature: Do not apply sheets if below minimum recommended by membrane manufacturer.
3. Condition of membrane at completion
   3.1. Neat, smooth and fully supported, dressed well into abutments and around intrusions.
   3.2. Completely impervious and continuous.
   3.3. Undamaged. Prevent puncturing during following work.
4. Permanent overlying construction: Cover membrane as soon as possible.

60 Junctions with projecting dpcs/ cavity trays

1. Adjoining surfaces: Clean and dry.
2. Dpcs/ cavity trays: Lap and fully bond/ seal with sheeting.
   2.1. Laps (minimum):
   2.2. Bonding/ Sealing:

Ω End of Section

K10
Gypsum board dry linings/ partitions/ ceilings

To be read with preliminaries/ general conditions.

15A Wall Lining Type A

1. Manufacturer: British Gypsum or other equal approved.
2. Product Reference: Gyproc WallBoard.
3. Substrate: Timber studs at 600mm centres generally.
4. Board Thickness: 12.5mm.
5. Fire performance
   5.1. Reaction to fire: A2-s1, d0.
6. Thermal conductivity: 0.19W/mK.
7. Finishing: Skim coat plaster. Thistle MultiFinish or other equal approved.
   7.1. Primer/ Sealer: Primer to painted areas.
8. Accessories: Metal beads/ stops recommended by board manufacturer.
9. Other requirements: Taped and jointed.

Installed and finished in line with all manufacturer's recommendations.

15B Wall Lining Type B

1. Manufacturer: British Gypsum or other equal approved.
2. Product Reference: Gyproc SoundBloc with Rockwool RWS 75mm acoustic quilt between studs.
3. Substrate: Timber studs at 600mm centres generally.
4. Board Thickness: 15mm.
5. Fire performance
   5.1. Reaction to fire: A2-s1, d0.
6. Thermal conductivity: 0.25W/mK.
7. Finishing: Skim coat plaster. Thistle MultiFinish or other equal approved.
   7.1. Primer/ Sealer: Primer to painted areas.
8. Accessories: Metal beads/ stops recommended by board manufacturer.
9. Other requirements: Taped and jointed.

Installed and finished in line with all manufacturer's recommendations.

15C Wall Lining Type C

1. Manufacturer: British Gypsum or other equal approved.
2. Product Reference: Gyproc Moisture Resistant.
3. Substrate: Timber studs at 600mm centres generally.
4. Board Thickness: 12.5mm.
5. Fire performance
   5.1. Reaction to fire: A2-s1, d0.
6. Thermal conductivity: 0.19W/mK.

7. Finishing: Skim coat plaster. Thistle MultiFinish or other equal approved.
   7.1. Primer/ Sealer: Primer to painted areas.
8. Accessories: Metal beads/ stops recommended by board manufacturer.
9. Other requirements: Taped and jointed.

Tiled areas to be prepared in line with manufacturer's recommendations.

Installed and finished in line with all manufacturer's recommendations.

25 lining on timber . . . . . .

1. Description: Lobby, toilets and chill-out
2. Substrate: Joists at 600 mm centres
3. Metal resilient (acoustic) bars: Not required
4. Fire performance
   4.1. Reaction to fire: To BS EN 13501-1, Class B-s3, d2 or better
   4.2. Fire resistance of complete ceiling assembly: Not required
5. Linings: 12.5 mm plasterboard
   5.1. Fixing: Screws at ??? mm centres
6. Finishing: Skim coat plaster
   6.1. Primer/ Sealer: Primer to painted areas
7. Accessories: Metal beads/ stops recommended by the board manufacturer
8. Other requirements:

Installation

60 Ceilings

1. Sequence: Fix boards to ceilings before installing dry lined walls and partitions.
2. Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
3. Two layer boarding: Stagger joints between layers.

67 Skim coat plaster finish

1. Plaster type: As recommended by board manufacturer.
   1.1. Thickness: 2-3 mm.
2. Joints: Fill and tape except where coincident with metal beads.
3. Finish: Tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

69 Installing beads/ stops

1. Cutting: Neatly using mitres at return angles.
2. Fixing: Securely using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
3. Finishing: After joint compounds/ plasters have been applied, remove surplus material while still wet from surfaces of beads exposed to view.

70 Additional supports

1. Framing: Accurately position and securely fix to give full support to:
   1.1. Partition heads running parallel with, but offset from main structural supports.
   1.2. Fixtures, fittings and service outlets. Mark framing positions clearly and accurately on linings.
   1.3. Board edges and lining perimeters, as recommended by board manufacturer to suit type and performance of lining.

85 mineral wool insulation

1. Fitting insulation: Closely butted joints and no gaps. Use fasteners to prevent slumping or displacement.
2. Services
   2.1. Electrical cables overlaid by insulation: Size accordingly.

87 Sealing gaps and air paths

1. Sealing: Apply sealant to perimeter abutments and around openings as a continuous bead with no gaps.
2. Application: To clean, dry and dust free surfaces as a continuous bead with no gaps.
   2.1. Gaps greater than 6mm between floor and underside of gypsum board: After sealing, fill with joint compound.

88 Fire-stopping at perimeters of dry lining systems

1. Material: Tightly packed mineral wool or intumescent mastic/ sealant.
2. Application: To perimeter abutments to provide a complete barrier to smoke and flame.

90 Seamless jointing

1. Cut edges of boards: Lightly sand to remove paper burrs.
2. Filling and taping: Fill joints, gaps and internal angles with jointing compound and cover with continuous lengths of tape, fully bedded.
3. Protection of edges/ corners: Reinforce external angles, stop ends, etc. with specified edge/ angle bead.
4. Finishing: Feather out jointing compound to give a flush, smooth, seamless surface.
5. Nail/ screw depressions and minor indents: Fill with jointing compound to give a flush surface.
6. Minor imperfections: Remove by light sanding.

91 Vertical joints

1. Joints: Centre on studs.
   1.1. Partitions: Stagger joints on opposite sides of studs.
   1.2. Two layer boarding: Stagger joints between layers.

92 Horizontal joints

1. Surfaces exposed to view: Horizontal joints not permitted. Seek instructions where height of partition/ lining exceeds maximum available length of board.
2. Two layer boarding: Stagger joints between layers by at least 600 mm.
3. Edges of boards: Support using additional framing.

3.1. Two layer boarding: Support edges of outer layer.

94 Fixing gypsum board to timber

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

Finishing

97 Level of dry lining across joints

1. Sudden irregularities: Not permitted.
2. Joint deviations: Measure from faces of adjacent boards using methods and straightedges (450 mm long with feet/ pads) to BS 8212, clause 3.3.5.
   2.1. Tapered edge joints
      2.1.1. Permissible deviation (maximum) across joints when measured with feet resting on boards: 3 mm.
   2.2. External angles
      2.2.1. Permissible deviation (maximum) for both faces: 4 mm.
   2.3. Internal angles
      2.3.1. Permissible deviation (maximum) for both faces: 5 mm.

Ω End of Section

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

To be read with preliminaries/ general conditions.

10 Wood-based sheets generally

1. Standard: To BS EN 13986.
    1.1. Evidence of compliance: All sheets to be UKCA/ UKNI/ CE marked. Submit Declaration of Performance (DoP).

39 Oriented strand board wall sheathing

1. Substrate:
    1.1. Additional supports:
2. Sheathing: Oriented strand board to BS EN 300, Type …….
    2.1. Thickness:
    2.2. Fire performance
        2.2.1. Reaction to fire:
        2.2.2. Resistance to fire:
    2.3. Other requirements:
3. Setting out: Long edges vertical and centred on supports.
    3.1. Expansion gap between adjacent boards (unless otherwise recommended by manufacturer): 2-3 mm.
4. Fixing to supports
    4.1. Fasteners:
    4.2. Fixing centres:
    4.3. Fixing distance from edges (minimum): 25 mm from bottom edge of board and 10 mm from other edges.

61 Plywood

1. Description: Birch faced ply cladding
2. Substrate: Timber battens
    2.1. Additional supports:
3. Plywood: Manufactured to an approved national standard.
    3.1. Manufacturer/ Supplier: Contractor's choice
        3.1.1. Product reference:
    3.2. Face veneer species:
    3.3. Face grain direction:
    3.4. Bonding quality to BS EN 314-2:
    3.5. Appearance class to BS EN 635: Class …….
    3.6. Finish:
    3.7. Thickness:

3.8. Fire performance
3.8.1. Reaction to fire:
3.8.2. Resistance to fire:
3.9. Edges:
3.10. Treatment:
3.11. Other requirements:
4. Setting out: Long edges running …….
4.1. Gap between adjacent boards:
5. Fixing to supports
5.1. Fasteners:
5.2. Fixing centres:
5.3. Fixing distance from edges (minimum):
6. Joint treatment:
7. Accessories:

61 Structural veneer plywoods Type A

1. Description:
2. Substrate:
2.1. Additional supports:
3. Plywood: Manufactured to an approved national standard.
3.1. Manufacturer/ Supplier: Hanson Plywood Ltd
3.1.1. Contact details
3.1.1.1. Address: Drakes Industrial Estate,
Shay Lane
Halifax
Yorkshire
HX3 6RL
3.1.1.2. Telephone: +44 (0)1422 330 444
3.1.1.3. Web: www.hanson-plywood.co.uk
3.1.1.4. Email: sales@hanson-plywood.co.uk
3.1.2. Product reference:
3.2. Face veneer species: European birch
3.3. Face grain direction:
3.4. Bonding quality to BS EN 314-2:
3.5. Appearance class to BS EN 635: Class …….
3.6. Finish: Sanded
3.7. Thickness: 12mm
3.8. Fire performance
3.8.1. Reaction to fire:
3.8.2. Resistance to fire:
3.9. Edges:
3.10. Treatment: Fire-retardant impregnation

3.11. Other requirements:

4. Setting out: Long edges running …….
   4.1. Gap between adjacent boards: 6mm
5. Fixing to supports
   5.1. Fasteners: •
   5.2. Fixing centres:
   5.3. Fixing distance from edges (minimum):
6. Accessories:

72 Board moisture content and conditioning

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

85 Fixing generally

1. Timing: Building to be weathertight before fixing boards internally.
2. Moisture content of timber supports (maximum): 18%.
3. Boards/ sheets: Fixed securely to each support without distortion and true to line and level.
4. Joints between boards: Accurately aligned, of constant width and parallel to perimeter edges.
5. Methods of fixing, and fasteners: As section Z20 where not specified otherwise.
6. Fasteners: Evenly spaced in straight lines and in pairs across joints.
   6.1. Distance from edge of board: Sufficient to prevent damage.
7. Surplus adhesive: Removed as the work proceeds.

Ω End of Section

K20
Timber board flooring/ sarking/ linings/ casings

To be read with preliminaries/ general conditions.

30 Timber board

1. Description: Lining at Chill-Out area
2. Substrate: Battens
3. Boards
   - 3.1. Fire performance
     - 3.1.1. Reaction to fire classification: Class A2-s3, d2 or better
     - 3.1.2. Fire resistance: To BS EN 13501-2, REI ???
   - 3.2. Wood species: Reclaimed boards or Yorkshire boarding
   - 3.3. Edge profile: Square edge
   - 3.4. Finished face width (exposed width after fixing): TBC
   - 3.5. Finished thickness: TBC
   - 3.6. Moisture content at time of fixing: 12-19 %
4. Treatment
   - 4.1. Standard: To section Z12 and Wood Protection Association Commodity Specification:
   - 4.2. Preservative treatment: Not required
     - 4.2.1. Fire-retardant treatment: FR1
   - 4.3. Type:
     - 4.3.1. For preservative treatment: Not required
     - 4.3.2. For fire-retardant treatment: INT 1 (interior)
5. Fixing: Screwed

Workmanship - Not Used

Ω End of Section

K32
Panel cubicles/ duct and wall linings/ screens

To be read with preliminaries/ general conditions.

17 Duct panel support framing– site-fabricated softwood

1. Description:
2. Framing: Softwood, free from decay and active insect attack and with no knots wider than half the width of the section.
   2.1. Finished size:
   2.2. Moisture content at time of fixing (maximum): 18%.
   2.3. Spacing (centres):
   2.4. Method of fixing:
3. Treatment:

18 Samples

1. General: Before placing orders submit representative samples of the following: …….
2. Delivered materials/ products: To match samples.

19 Control samples

1. General: Complete samples as part of finished work and obtain approval of appearance before proceeding.
2. Types:
   2.1. Locations:

20 Installation

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

112/01 FULLY FRAMED PANEL CUBICLES

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

- Product Reference: **HiZone For Schools SGL**

Description:

- Full Height cubicles with optional full height doors or over-panels. Unique partition full privacy skirting.

Panels / Doors / Partitions:

- Overall Height: Minimum 2250mm, Maximum 2780mm
- Floor Clearance: 5mm to Doors
- Core Material: 13mm Solid Grade Laminate
- Finish: Decorative facing to both sides
- Edge Treatment: Polished black radiused edges
- Colour: Refer to Bushboard standard colour range.

Ironmongery / Accessories:

- Headrail: Light Grey satin anodised.
- Pilaster Foot: Robust Satin Anodised Aluminium in Light Grey
- Indicator Bolt: DFE Compliant Stainless Steel Thumb Turn lock body and faceplate, with "Hex Key" emergency release function.
- Hinges: Satin anodised privacy hinges with 5mm clearance and adjustable cams to allow door to either fall in the open or closed position.
- Cubicle Fixings: Satin anodised wall continuous channels in Light Grey.
- Full Height Door privacy channels on each pilaster.
- 100mm high satin anodised privacy channel for cubicle partition.

K32 PANEL CUBICLES/DUCT AND WALL LININGS/SCREENS

To be read with Preliminaries/General conditions.

160/01 PREPLUMBED PANELS AND PROPRIETARY FRAMES TO ROOMS 10, 11, 12

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

- Product Reference: **Ready Plumbed Module (RPM) SGL Pre-plumbed Washroom System**

Panels

- Board / Panel Type: Solid grade laminate.
- Thickness: 13mm overall.
- Core Material: Solid grade laminate.
- Facing: Solid grade laminate.
- Edge Treatment: Polished black radiused edges.
- Colour: Refer to Bushboard standard colour range.

Flash-gaps:

- Board / Panel Type: Melamine faced moisture resistant 650kg/m³ grade chipboard.
- Thickness: 18mm nominal thickness.

- Core Material: Moisture resistant 650kg/m³ grade chipboard.
- Facing: Melamine.
- Edge Treatment: None
- Colour: Refer to Bushboard standard colour range.

Installation:

- Method of Fixing Panels: As drawing.

Included Features:

- Rigid lightweight "Ezeeduct" aluminium frame, access panels and sanitary-ware all preassembled with associated plumbing and brassware.

Accessories:

- Lift-off, push fit clips and all associated fixings and brackets.

Other Requirements:

- Duct locks.

- SGL Flash-gaps

N13 GENERAL FIXTURES / FURNISHINGS / EQUIPMENT

To be read with Preliminaries/General conditions.

520/01 PRE-PLUMBED COMBINATION WC BASIN UNITS TO ROOMS 13, 14, 15

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

- Product Reference: **Combination RPM WC Basin Unit (SRU) SGL**

Ezeevanity Frame

Material: 13mm thick solid grade laminate.

Underpanels:

- Material: 13mm thick solid grade laminate.
- Finish / Colour: Refer to Bushboard standard colour range.
- Edges: Polished black radiused edges.

Worktops:

- Material: 13mm thick solid grade laminate.
- Finish / Colour: Refer to Bushboard standard colour range.
- Exposed Edges: Polished black radiused edges.

Description

- Complete factory assembled "ezeevanity" frame comprising of a 1 piece frame with pre-fixed SGL panels over factory formed cut-outs.

Panels hung on push-fit clips and comes with a 2 piece worktop.

Other Requirements:

- Duct locks.

Ω End of Section

K40
Demountable suspended ceilings

To be read with preliminaries/ general conditions.

10A Unit/ modular suspended ceilings

1. Manufacturer: Zentia
2. Contact details
   2.1. Address: Zentia
   Kingsway South
   Team Valley
   Gateshead
   United Kingdom
   NE11 0SP
   2.2. Telephone: +44 (0)800 371849
   2.3. Web: www.zentia.com
   2.4. Email: ats@zentia.com
3. Product reference: Dune eVo MAX
4. Edge detail: Tegular.
5. Module size (w x l, nominal): 600 x 600 mm.
6. Description: Refer to D3A drawing for ceiling types and location.
7. Standard: To BS EN 13964.
8. Evidence of compliance: All ceilings kits to be CE marked. Submit Declaration of Performance (DoP).
9. Structural soffits: Steel purlins
10. Fire performance
    10.1. Reaction to fire: Euroclass A2-s1, d0.
11. Grid
    11.1. Suspension system: Install all hangers, fixings, primary supports, main runners, cross members, perimeter trims, splines, noggings, clips bracing, bridging, etc. necessary to complete the installation.
    11.2. Product reference: Prelude 24 XL2 / TLS.

Components - Not Used

Execution

40 Workmanship generally

1. Fixing: Secure. In accordance with manufacturers' recommendations and in accordance with BS EN 13964. Provide additional bracing and stiffening to give a stable ceiling system.
2. Setting out: Accurate. Provide level soffits free from undulations and lipping.
3. Infill and access units, integrated services: Fitted correctly and aligned.
4. Lines and joints: Straight and parallel to walls, unless specified otherwise.
5. Edge infill units size (minimum): Half standard width or length.
6. Corner infill units size (minimum): Half standard width and length.

7. Grid: Position to suit infill unit sizes. Allow for permitted deviations from nominal sizes of infill units.
8. Infill joints and exposed suspension members: Straight, aligned and parallel to walls, unless specified otherwise.
9. Suitability of construction: Give notice where building elements and features to which the ceiling systems relate are not square, straight or level.

50 Installing hangers

1. General: Straighten and tension before use.
2. Installation: Install vertical without bends or kinks. Do not allow hangers to press against fittings, services, or insulation covering ducts/ pipes.
3. Obstructions: Where obstructions prevent vertical installation, either brace diagonal hangers against lateral movement, or hang ceiling system on an appropriate rigid sub-grid bridging across obstructions and supported to prevent lateral movement.
4. Extra hangers: Provide as necessary to carry additional loads.
5. Fixing
    5.1. Wire hangers: Tie securely at top and bottom with tight bends to loops to prevent vertical movement.
    5.2. Angle/ Strap hangers: Do not use rivets for top fixing.

51 Installing perimeter trims

1. Jointing: Neat and accurate, without lipping or twisting. Mitre joints to corners.
    1.1. Intermediate butt joints: Minimize. Use longest available lengths of trim. Align adjacent lengths.
2. Fixing: Fix firmly to perimeter wall, edge battens or other building structure.
    2.1. Fasteners: As manufacturer's recommendation.
    2.2. Fixing centres: 600 mm.

53 Openings in ceiling materials

1. General: Neat and accurate. To suit sizes and edge details of fittings. Do not distort ceiling system.

65 Integrated services

1. General: Position services accurately, support adequately. Align and level in relation to the ceiling and suspension system. Do not diminish performance of ceiling system.
2. Small fittings: Support with rigid backing boards or other suitable means. Do not damage or distort the ceiling.
    2.1. Reaction to fire rating of additional supporting material: Not less than ceiling material.
3. Services outlets
    3.1. Supported by ceiling system: Provide additional hangers.
    3.2. Independently supported: Provide flanges to support ceiling system.

66 Ceiling-mounted luminaires

1. Support: By ceiling system. Additional supports as required.
    1.1. Independently supported luminaires: Suspension adjusted to line and level of ceiling.

2. Surface mounted luminaires: Units installed so that in the event of fire, the designed grid expansion provision is not affected.
3. Modular fluorescent recessed luminaires: Compatible with ceiling module. Extension boxes must not foul ceiling system.
4. Recessed rows of luminaires: Provide flanges for support of grid and infill units, unless mounted above grid flanges. Retain in position with lateral restraint.
5. Fire-protecting/ resisting ceiling systems: Luminaires must not diminish protection integrity of ceiling system.
6. Access: Provide access for maintenance of luminaires.

67 Mechanical services

1. Fan coil units
   1.1. Inlet and outlet grilles: Trim ceiling grid and infill units to suit.
   1.2. Space beneath: Sufficient for ceiling system components.
   1.3. Suspension and connections: Permit accurate setting out and levelling of fan coil units.
2. Air grilles and diffusers
   2.1. Setting out: Accurate and level.
   2.2. Linear air diffusers: Retain in place with lateral restraint. Provide flanges for support of grid and infill units.
   2.3. Grille/ diffuser ceiling joints: Provide smudge rings and edge seals.
3. Smoke detectors and PA speakers
   3.1. Ceiling infill units: Scribe and trim to suit.
   3.2. Flexible connections: Required.

115 SUSPENDED CEILING(S)

- Drawing reference(s):
- Structural soffit(s):
- Ceiling system: Vertical Hanging Baffle
- Manufacturer and reference:

Ecophon Limited, Old Brick Kiln,
Ramsdell, Tadley RG26 5PP.
Tel: 01256 855208
www.ecophon.com/uk

-
- Product reference: Vertical Hanging Baffle - Hook
-
- Suspension system: To include all hangers, fixings, main runners, cross members, primary channels, perimeter trims, splines, noggins, clips, bracing, bridging, etc., which are necessary to complete the installation and achieve the performance specified as recommended by the suspended ceiling/membrane manufacturer.
- Grid type: Main Runner T24 with space bar
- Hangers: Ecophon Connect adjustable hanger

- Protective finish to suspension systems: normal conditions
- Perimeter trims: Not applicable
- Membrane materials shall be Ecophon Solo Baffle Hook, high density resin bonded glasswool (up to 70% recycled glass for core material). Installed on T24 Connect Main Runner and adjustable hangers from the soffit as per installation method M580
  - T24 Connect Main Runner / Space bar / Adjustable Hanger / Baffle Clip
- Size(s): 1200x600x40mm or 1200x300x40mm or 1200x200x40mm or 1800x200x40mm or 1800x300x40mm or 1800x600x40mm
- Please note that all Baffles over 1200 have a third fixing in the middle.
- Finish/colour: Ecophon Akutex FT - White Frost, or Volcanic Ash or Silver Stone or Silk Slate or Ocean Storm or Moonlight Sky or Golden Field or Sunset Heat or Ruby Rock or Dark Diamond or Morning Drizzle or Cloudy Day or Highland Fog or Silent Steam or Scallop Shells or Peach Rose or Goji Berry or Sage Garden or Eucalyptus Leaf or Summer Forest or Fresh Clover or Wet Sand
  - Services fittings:
  - Junctions:
  - Accessories: Connect guiding pin
  - Other requirements:

Ω End of Section

L10
Windows/ rooflights/ screens/ louvres

To be read with preliminaries/ general conditions.

15 Wood windows Internal windows W05, W06

1. Standard: Non-fire and/ or smoke-rated window to BS EN 14351-1 and BS 644
2. Manufacturer: Contractor's choice
3. Timber: Generally to BS EN 942.
   - 3.1. Species: Softwood
   - 3.2. Moisture content on delivery: 12-19%.
4. Preservative treatment: Manufacturer's standard
5. Finish as delivered: Manufacturer's standard
6. Glazing details: See detail
   - 6.1. Beading: Manufacturer's standard
7. Fixing: Screwed to timber framing
   - 7.1. Fastener spacing: When not pre-drilled or specified otherwise, position fasteners not more than 150 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 450 mm centres.

25 Aluminium windows

1. Standard: Non-fire and/ or smoke-rated windows to BS EN 14351-1 and BS 4873
2. Manufacturer: Contractor's choice - submit details for approval
   - 2.1. Product reference: Contractor's choice Submit proposals
3. Finish as delivered: Polyester powder coating
4. Thermal performance (U-value maximum):
5. Acoustic performance rating: Not required
6. Fire performance
   - 6.1. Fire resistance: Not required
   - 6.2. Reaction to fire: Not required
   - 6.3. Fire egress: Not required
7. Glazing details: Insulating glass units incorporating low-emissivity glass, argon-filled
   - 7.1. Beading: Internal
8. Ironmongery/ accessories: Trickle ventilator
9. Fixing: Screwed to timber framing
   - 9.1. Fastener spacing: When not pre-drilled or specified otherwise, position fasteners not more than 250 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.

45 Rooflights

1. Manufacturer: Saris Extensions Ltd or equivalent
   - 1.1. Product reference:
2. Type: Triple glazed framed skylight 800x1500mm

3. Frame:
   3.1. Finish:
   3.2. Colour:
4. Kerb: Manufacturer's standard
5. Thermal performance (U-value maximum): 0.5
6. Fire performance
   6.1. Fire resistance: Manufacturer's standard
   6.2. Reaction to fire: Manufacturer's standard
7. Glazing details: Triple-skin
8. Other requirements: Manufacturer's standard
9. Fixing:

54 Louvres

1. Description: METAL - see Mechanical Specification
2. Manufacturer:
   2.1. Product reference:
3. Material: Aluminium
4. Finish as delivered: Manufacturer's standard

75 Sealant joints

1. Sealant
   1.1. Manufacturer:
      1.1.1. Product reference:
   1.2. Colour:
   1.3. Application: As section Z22 to prepared joints. Finish triangular fillets to a flat or slightly convex profile.

80 Ironmongery

1. Fixing: In accordance with any third party certification conditions applicable. Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
2. Checking/ adjusting/ lubricating: Carry out at completion and ensure correct functioning.

Ω End of Section

L20
Doors/ shutters/ hatches

To be read with preliminaries/ general conditions.

10 Timber procurement

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

20A Internal Doors D 08

1. Description: Paint finish flush double doors with birch ply cladding
2. Manufacturer: Contractor's choice
   2.1. Product reference: Solid core painted/clad internal doors and ironmongery as schedule
3. Facings: Interior grade plywood
4. Lippings: 10mm hardwood exposed lippings to long edges.
5. Finish as delivered: Prepared and primed, as section M60
6. Ironmongery: Refer to ironmongery schedule.

7. Other requirements: Allow for softwood frames and stops for hanging doors and installing all ironmongery.

   Flush external door handles

   Lloyd Worrall to provide door and ironmongery schedule, to be agreed, ahead of placing any orders.

20B Internal Doors D07, D09, D18

1. Description: Flush glazed single door
2. Manufacturer: Lloyd Worrall Architectural Solutions.
   01902 866 564
   www.lloydworrall.co.uk/doorsets
   enquiries@lloydworrall.co.uk
   2.1. Product reference: Solid core coloured aminate veneered internal doors and ironmongery as schedule
3. Facings: High Pressure Laminate
4. Lippings: 10mm hardwood exposed lippings to long edges.
5. Finish as delivered: Full factory finish.

6. Glazing/ Infill details: Toughened clear single glazing.
   6.1. Manifestation: Not required.
   6.2. Beading: Oak beading.
7. Architraves: TBC
8. Ironmongery: Refer to ironmongery schedule.
9. Other requirements: Allow for softwood frames, stops, architraves etc and for hanging doors and installing all ironmongery.

   Lever handles to be 19mm return to door round bar, matte stainless steel finish.

   Lloyd Worrall to provide door and ironmongery schedule, to be agreed, ahead of placing any orders.

20C Internal Doors D10, D12, D16, D17

1. Description: Flush single.
2. Manufacturer: Lloyd Worrall Architectural Solutions.
   01902 866 564
   www.lloydworrall.co.uk/doorsets
   enquiries@lloydworrall.co.uk
   2.1. Product reference: Solid core colour laminate veneered internal doors and ironmongery as schedule
3. Facings: High Pressure Laminate
4. Lippings: 10mm hardwood exposed lippings to long edges.
5. Finish as delivered: Full factory finish.
6. Glazing/ Infill details: Not applicable
   6.1. Manifestation: Not required.
   6.2. Beading: Not required
7. Fire resistance: FD30S to doors D10, D16
8. Architraves: MDF, 69x18, Ogee moulded and primed.
9. Ironmongery: Refer to ironmongery schedule.
10. Other requirements: Allow for softwood frames, stops, architraves etc and for hanging doors and installing all ironmongery.

    Lever handles to be 19mm return to door round bar, matte stainless steel finish.

    Lloyd Worrall to provide door and ironmongery schedule, to be agreed, ahead of placing any orders.

45A External Doors D01

1. Description: Entrance single with glazed side panels.
2. Manufacturer: Contractor's choice to suit preferred supply chain. Submit proposals for approval.
   2.1. Product reference: Contractor's choice to suit preferred supply chain. Sub-contractor to produce detail drawings and schedules for review and to be agreed with client.
3. Finish as delivered: Polyester powder coated, colour RAL 7016 to be agreed.
4. Glazing/ Infill details: Clear double glazed. Safety glazing required.
   4.1. Manifestation: As schedule. In accordance with approved doc K and BS 8300-2.

5. Ironmongery: Refer to ironmongery schedule.

   Ensure door is also lockable with key externally.
6. Thermal performance (U-value maximum): 1.4 W/m²K.
7. Other requirements: Powered opening, break out

45B External Doors D03, D04, D05, D11

1. Description: External steel single
2. Manufacturer: Contractor's choice to suit preferred supply chain. Submit proposals for approval.
   2.1. Product reference: Contractor's choice to suit preferred supply chain. Sub-contractor to produce detail drawings and schedules for review and to be agreed with client.
3. Finish as delivered: Polyester powder coated, colour RAL 7016 to be agreed.
4. Glazing/ Infill details: Not applicable.
   4.1. Manifestation: Not required
   4.2. Beading: Not required.
5. Ironmongery: Refer to ironmongery schedule.
6. Thermal performance (U-value maximum): 1.4 W/m²K.
7. Other requirements: As schedule

45D External Doors D06

1. Description: Internal single with glazed side panel
2. Manufacturer: Contractor's choice to suit preferred supply chain. Submit proposals for approval.
   2.1. Product reference: Contractor's choice to suit preferred supply chain. Sub-contractor to produce detail drawings and schedules for review and to be agreed with client.
3. Finish as delivered: Polyester powder coated, colour RAL 7016 to be agreed.
4. Glazing/ Infill details: Clear double glazed. Safety glazing required.
   4.1. Manifestation: As schedule. In accordance with approved doc K and BS 8300-2.
5. Ironmongery: Refer to ironmongery schedule.
6. Thermal performance (U-value maximum): 1.4 W/m²K.
7. Other requirements: As schedule.

45E External Doors D02

1. Description: Glazed aluminium sliding door to hall with glazed side panels.
2. Manufacturer: Contractor's choice to suit preferred supply chain. Submit proposals for approval.
   2.1. Product reference: Contractor's choice to suit preferred supply chain. Sub-contractor to produce detail drawings and schedules for review and to be agreed with client.
3. Finish as delivered: Polyester powder coated, colour RAL 7016 to be agreed.
4. Glazing/ Infill details: Clear double glazed. Safety glazing required.
   4.1. Manifestation: As schedule. In accordance with approved doc K and BS 8300-2.
5. Ironmongery: Refer to ironmongery schedule.
6. Thermal performance (U-value maximum): 1.4 W/m²K.
7. Other requirements: See schedule

60 Shutter Type A

1. Description: To kitchen servery counter
2. Manufacturer: Armourpost Limited
   East Gateshead Industrial Estate
   Saltmeadows Road NE8 3AH
   Tel: 0191 4787878

   www.armourpost.com

   2.1. Product reference: Roller Shutter Doors.
3. Size: 1800mm wide x1200mm high.
4. Finish: Perforated aluminium colour to be agreed.

60 Shutter Type B

1. Description: To main entrance
2. Manufacturer: Armourpost Limited
   East Gateshead Industrial Estate
   Saltmeadows Road NE8 3AH
   Tel: 0191 4787878

   www.armourpost.com

   2.1. Product reference: Single Phase Electrically Operated ‘Defender’ Rolling Shutters constructed from 76mm deep Solid curved steel interlocking lath sections with ‘T’ or ‘L’ section bottom rail sliding within our standard steel side guide channels, to be wired into fuse spur provided by others. The fused spur is to be provided to within 1 metre of the shutter motor at high level. Each shutter to come complete with a Safety Brake. Operation of the shutters is via internal or external low voltage keyswitch control to stop any risk of electric shock. The key switches provided by Armourpost must be installed 1m of the fused spur, to each shutter. The shutter motor will be mounted within the shutter barrel and will be 240v rated. In the event of power failure all shutters are provided with a manual override facility.
3. Size: 2100mm wide x3000mm high.
4. Finish: Polyester powder coated colour to be agreed.

60 Shutter Type C

1. Description: To Hall glazing
2. Manufacturer: Armourpost Limited
   East Gateshead Industrial Estate
   Saltmeadows Road NE8 3AH
   Tel: 0191 4787878

   www.armourpost.com

   2.1. Product reference: Single Phase Electrically Operated ‘Defender’ Rolling Shutters constructed from 76mm deep Solid curved steel interlocking lath sections with ‘T’ or ‘L’ section bottom rail sliding within our standard steel side guide channels, to be wired into fuse spur provided by others. The fused spur is to be provided to within 1 metre of the shutter motor at high level. Each shutter to come complete with a Safety Brake. Operation of the shutters is via internal or external low voltage keyswitch control to stop any risk of electric shock. The key switches provided by Armourpost must be installed 1m of the fused spur, to each shutter. The shutter motor will be mounted within the shutter barrel and will be

240v rated. In the event of power failure all shutters are provided with a manual override facility.

3. Size: 3600mm wide x3000mm high.
4. Finish: Polyester powder coated colour to be agreed.

70 Fire and smoke resistance

1. Requirement: Specified performance to be the minimum period attained when tested for integrity in accordance with BS 476-22, BS EN 1634-1 or BS EN 1634-3.
2. Components and assemblies will be marked to the relevant product standard and/ or third party certification rating.

75 Fire-resisting/ smoke control doors/ doorsets

1. Gaps between frames and supporting construction: Filled as necessary in accordance with door/ doorset manufacturer's instructions.

85 Fixing ironmongery generally

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

Ω End of Section

L40
General glazing

To be read with preliminaries/ general conditions.

10 Workmanship and positioning generally

1. Glazing
   1.1. Generally: In accordance with BS 6262 series.
   1.2. Integrity: Wind and watertight under all conditions. Make full allowance for deflections and other movements.
2. Glass
   2.1. Standards: Generally to BS 952 and to the relevant parts of:
      2.1.1. BS EN 572 for basic soda lime silicate glass.
      2.1.2. BS EN 1096 for coated glass.
      2.1.3. BS EN 12150-2 for thermally toughened soda lime silicate glass.
      2.1.4. BS EN ISO 12543 for laminated glass.
   2.2. Quality: Free from scratches, bubbles and other defects.
   2.3. Dimensional tolerances: Panes/ sheets to be accurately sized.
   2.4. Material compatibility: Glass/ plastics, surround materials, sealers primers and paints/ clear finishes to be compatible. Comply with glazing/ sealant manufacturers' recommendations.
   2.5. Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

30 Preparation

1. Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing; ensure compliance with any certified installation requirements.

91 Glass mirrors

1. Description: To WCs 01-05.
2. Standard: BS EN 1036-2.
3. Mirror material: Free from tarnishing, discoloration, scratches and other defects visible in the designed viewing conditions. Reflection undistorted.
   3.1. Thickness: 6 mm.
   3.2. Backing: Safety backed glass (EN 12600-2(Class B)2).
   3.3. Edge treatment: Polished, arrised edge.
4. Background: Softwood battens.
5. Fixing method: Concealed fixings, number and location as per manufacturer's recommendations. Pattress and sub-battens to be installed behind mirror.
6. Installation: Fixed accurately with sides vertical. Fixed securely without overtightening fasteners, to provide a flat surface giving a distortion free reflection.

95 Window manifestation

1. Description: To external windows and doors in locations identified on drawing 6201, for protection against impact in line with Approved Document K.

2. Manufacturer: Contractor's choice.
3. Colour: To be agreed with client.
4. Design: To be agreed with client.
5. Application: Carried out by a firm approved by the film manufacturer in accordance with manufacturer's recommendations.
6. Technique: Applied film.
7. Installed film: Fully adhered to the glass with no peeling, and free from bubbles, wrinkles, cracks or tears.
8. Cleaning and maintenance instructions: Submit copies.

Ω End of Section

M10
Cement based levelling/ wearing screeds

To be read with preliminaries/ general conditions.

4 Cement:sand levelling screeds

1. Substrate: Beam and block suspended floor.
2. Screed construction: Floating, as clause 40.
3. Thickness
   - 3.1. Nominal: 65mm, adjusted in individual rooms to suit finish thickness and maintain finished floor level.
   - 3.2. Minimum: 65mm.
4. Mix
   - 4.1. Proportions (cement:sand): To BS 8204-1.
5. Finish: Trowelled, as clause 75.
   - 5.1. To receive: Refer to floor finishes drawing and NBS specifications.
6. Other requirements: Include 25mm vertical insulation board at perimeter screed edge.

   Underfloor heating pipes laid in screed.

   Include movement joints in screed as required by BS 8204:1:2000.

   Include for self levelling screed as required under vinyl flooring.

   In assisted WC / Shower room 12, allow for dressing screed to fall to shower floor outlet.

   Allow for fully recessed double socket floor service boxes:
   - 2no. in room 06 Hall
   - 1no. in room 09 Multi-purpose.

40 Floating construction

1. Insulation
   - 1.1. Type: 70mm Rigid Insulation, Kingspan K103 Floor Board for suspended beam and block floors, or other equal approved.
   - 1.2. Installation: Lay with tight butt joints. Continue up at perimeter abutments for full depth of screed.
2. Separating layer
   - 2.1. Type: Polyethylene sheet.
   - 2.2. Installation: Lay over insulation and turn up at perimeter abutments. Lap 100 mm at joints.

45 Aggregates and cements

1. Sand: To BS EN 13139.
   - 1.1. Grading limits: In accordance with BS 8204-1, Table B.1.
2. Coarse aggregates
   - 2.1. Standard: To BS EN 12620.

2.2. Lightweight aggregates: In accordance with BS 8204-1, Annex A.

2.3. Designation 4/10.

3. Cement

3.1. Cement types: In accordance with BS 8204-1, clause 5.1.3.

50 Mixing

1. Water content: Minimum necessary to achieve full compaction, low enough to prevent excessive water being brought to surface during compaction..
2. Mixing: Mix materials thoroughly to uniform consistency in a suitable forced action mechanical mixer. Do not use a free fall drum type mixer.
3. Consistency: Use while sufficiently plastic for full compaction.
4. Ready-mixed retarded screed mortar: Use within working time and site temperatures recommended by manufacturer. Do not retemper.

52 Compaction

1. General: Compact thoroughly over entire area.
2. Screeds over 50 mm thick: Lay in two layers of equal thickness. Roughen surface of compacted lower layer then immediately lay upper layer.

55 Joints in levelling screeds

1. Laying screeds: Lay continuously using 'wet screeds' between strips or bays. Minimize defined joints.
2. Daywork joints: Form with vertical edge.

65 Strip movement joints

1. Manufacturer: Sike or other equal approved.

1.1. Product reference: Contractor's choice.

2. Installation: Set securely into screed to exact finished level of floor. Extend joints through to substrate.

2.1. Secure fixing to substrate: To manufacturer's recommendation.

75 Trowelled finish to levelling screeds

1. Floating: To an even texture with no ridges or steps.
2. Trowelling: To a uniform smooth surface, free from trowel marks and other blemishes, and suitable to receive specified flooring material.

85 Finishing generally

1. Timing: Carry out all finishing operations at optimum times in relation to setting and hardening of screed material.
2. Prohibited treatments to screed surfaces

2.1. Wetting to assist surface working.

2.2. Sprinkling cement.

90 Curing

1. General: Prevent premature drying. Immediately after laying, protect surface from wind, draughts and strong sunlight. As soon as screed has set sufficiently, closely cover with polyethylene sheeting.
2. Curing period (minimum): As soon as screed has set sufficiently, closely cover with polyethylene sheeting for period recommended by screed manufacturer..
3. Drying after curing: Allow screeds to dry gradually. Do not subject screeds to artificial drying conditions that will cause cracking or other shrinkage related problems.

Ω End of Section

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

To be read with preliminaries/ general conditions.

15 Carpet tiling Type

1. Carpet tiles to BS EN 14041 and BS EN 1307
   1.1. Manufacturer: Tarkett Ltd
      1.1.1. Contact details
         1.1.1.1. Address: 4th Floor - Connect 38
         1 Dover Place
         Ashford
         Kent
         United Kingdom
         TN23 1FB
         1.1.1.2. Telephone: +44 (0)1233 746020
         1.1.1.3. Web: www.tarkett.co.uk
         1.1.1.4. Email: marketing@tarkett.com
      1.1.2. Product reference: Desso Essence Carpet Tiles
   1.2. Style: Tufted loop pile.
   1.3. Material: Polyamide, polyester fleece.
   1.4. Classification
      1.4.1. Standard: To BS EN 1307.
      1.4.2. Third-party certification: ISO 9001, ISO 14001.
      1.4.3. Level of use class: To BS EN 1307, class 33.
   1.5. Size: 500 x 500 mm.
   1.6. Colour and pattern: AA90 9507, to be agreed.
   1.7. Primary backing: Polyester fleece.
   1.8. Secondary backing: DESSO ProBase Polyver.
   1.9. Backing: Standard.
   1.10. Total thickness: 5.5 mm.
   1.11. Impact sound reduction: 24 dB.
   1.12. Flammability: Bfl-s1 (loose laid tested).

20A Multi-Use Vinyl

1. Flooring roll
   1.1. Material: Heterogeneous vinyl.
   1.2. Manufacturer: Tarkett Ltd
      1.2.1. Contact details
         1.2.1.1. Address: 4th Floor - Connect 38
         1 Dover Place
         Ashford
         Kent
         United Kingdom
         TN23 1FB

1.2.1.2. Telephone: +44 (0)1233 746020

1.2.1.3. Web: www.tarkett.co.uk

1.2.1.4. Email: marketing@tarkett.com

1.2.2. Product reference: Omnisport Reference

1.3. Colour: To be agreed with client.

1.4. Width: 2m roll. 23m roll length.

1.5. Thickness: 6.5mm.

20B Safety Vinyl

1. Flooring roll

1.1. Manufacturer: Forbo Flooring Systems UK Ltd

1.1.1. Contact details

1.1.1.1. Address: PO Box 1
High Holborn Road
Ripley
Derbyshire
DE5 3NT

1.1.1.2. Telephone: +44 (0)800 093 5258

1.1.1.3. Web: www.forbo-flooring.co.uk

1.1.1.4. Email: info.flooring.uk@forbo.com

1.1.2. Product reference: Safestep R12 Safety Vinyl

1.2. Standard: Heterogeneous PVC to BS EN ISO 10582 and BS EN 13845 and 14041.

1.3. Use class: Class 34 Commercial very heavy, Class 43 light industrial.

1.4. Slip potential

1.4.1. Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): DIN 51130, R12; BS EN 13893, DS ≥0.30.; PTV Wet slider 96: ≥50.

1.5. Width: 2000 mm.

1.6. Thickness: Total: 2.0 mm; Wear layer: 0.7 mm

1.7. Colour and pattern: 175922 concrete, to be agreed.

1.8. Use in wet areas (to EN 13553): Yes.

1.9. Finish:: PUR pearl surface finish.

1.10. Adhesive: As per manufacturer's recommendations.

1.11. Fabricated underlay: As per manufacturer's recommendations.

2. Other requirements: Cover formers for coved skirting to kitchen, WCs 01-05, shower and accessible WC/Shower room.

Gradus CF32P cover former.

Gradus PCS40 capping seal to suit 2mm vinyl thickness. Colour to match vinyl.

25 Entrance Matting

1. Carpet underlay to BS 5808 and BS EN 14499

1.1. Manufacturer: Heckmondwike FB

1.1.1. Contact details

1.1.1.1. Address: Wellington Mills
Huddersfield Road
Liversedge
West Yorkshire
WF15 7FH

1.1.1.2. Telephone: +44 (0)1924 410544

1.1.1.3. Web: www.heckmondwike-fb.co.uk

1.1.1.4. Email: sales@heckmondwike-fb.co.uk

1.1.2. Product reference: Battleship - Carpet

1.2. Level of use class: To BS EN 1307, class 33.

1.3. Recycled content: 10%.

1.4. Width: 2000 mm.

1.5. Colour and pattern: Slate, to be agreed.

1.6. Thickness: 10.5mm.

40 Laying coverings on new wet laid bases

1. Base drying aids: Not used for at least four days prior to moisture content test.
2. Base moisture content test: Carry out in accordance with BS 5325, Annexe A orBS 8203, Annexe A.
3. Commencement of laying coverings: Not until all readings show 75% relative humidity or less.

60 Setting out tiles

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

65 Laying coverings

1. Base/ substrate condition: Rigid, dry, smooth, free from grease, dirt and other contaminants.
2. Use a primer where recommended by adhesive manufacturer. Allow to dry thoroughly.
3. Adhesive: As specified, as recommended by covering manufacturer or, as approved.
4. Conditioning of materials prior to laying: As recommended by manufacturer.
5. Environment: Before, during and after laying, provide adequate ventilation and maintain temperature and humidity approximately at levels which will prevail after building is occupied.
6. Finished coverings: Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks, stains, trowel ridges and high spots.

70 Edgings and cover strips Type A

1. Description: To be used between:

   Multi-use vinyl (M50/20A) and carpet tile (M50/15).
   Multi-use vinyl (M50/20A) thresholds.
2. Manufacturer: Gradus
   2.1. Contact details
      2.1.1. Address: Chapel Mill
      Park Green

Macclesfield
Cheshire
SK11 7LZ

2.1.2. Telephone: +44 (0)1625 428922

2.1.3. Web: www.gradus.com

2.1.4. Email: imail@gradus.com

2.2. Product reference: Threshold Trim

3. Profile: TH382. To be agreed.
4. Material: Aluminium.
5. Colour: Silver anodized.

70 Edgings and cover strips Type B

1. Description: To be used between:

   Multi-use vinyl (M50/20A) and safety vinyl (M50/20B).
2. Manufacturer: Gradus
   2.1. Contact details
      2.1.1. Address: Chapel Mill
      Park Green
      Macclesfield
      Cheshire
      SK11 7LZ
      2.1.2. Telephone: +44 (0)1625 428922
      2.1.3. Web: www.gradus.com
      2.1.4. Email: imail@gradus.com
   2.2. Product reference: Design Clip
3. Base section
   3.1. Material: Aluminium.
   3.2. Size: 2.70 m.
4. Top insert
   4.1. Profile: KA576. To be agreed.
   4.2. Material: Aluminium.
   4.3. Finish: F4 Silver Anodised.
   4.4. Size: 2.70 m.

70 Edgings and cover strips Type C

1. Description: To be used between:

   Multi-use vinyl (M50/20A) and matting (M50/25).
2. Manufacturer: Gradus
   2.1. Contact details
      2.1.1. Address: Chapel Mill
      Park Green
      Macclesfield

Cheshire
SK11 7LZ

2.1.2. Telephone: +44 (0)1625 428922

2.1.3. Web: www.gradus.com

2.1.4. Email: imail@gradus.com

2.2. Product reference: Threshold Trim

3. Profile: TH383. To be agreed.
4. Material: Aluminium.
5. Colour: Silver anodized.

70 Edgings and cover strips Type D

1. Description: To be used at:

   Multi-use vinyl (M50/20A) edge to screed.
   Carpet tile (M50/15) edge to screed.
2. Manufacturer: Gradus
   2.1. Contact details
      2.1.1. Address: Chapel Mill
      Park Green
      Macclesfield
      Cheshire
      SK11 7LZ
      2.1.2. Telephone: +44 (0)1625 428922
      2.1.3. Web: www.gradus.com
      2.1.4. Email: imail@gradus.com
   2.2. Product reference: Finishing Trim
3. Material: Aluminium.
4. Finish: Silver anodized.
5. Type: ACT81. To be agreed.

70 Plastics skirtings Type E

1. Manufacturer: Gradus
   1.1. Contact details
      1.1.1. Address: Chapel Mill
      Park Green
      Macclesfield
      Cheshire
      SK11 7LZ
      1.1.2. Telephone: +44 (0)1625 428922
      1.1.3. Web: www.gradus.com
      1.1.4. Email: imail@gradus.com
   1.2. Product reference: Pvc Skirtings (CSI100502)
2. Material: PVC.
3. Profile: Set-in coiled.
4. Colour: Granite.

5. Length: 2 m: coils, 15 m.
6. Height: 3.2 mm gauge, 100 mm high.

85 Waste

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

Ω End of Section

M60
Painting/ clear finishing

To be read with preliminaries/ general conditions.

10A Emulsion paint Type A

1. Description: To plasterboard and skim.
2. Manufacturer: Dulux Trade, brand of AkzoNobel
   2.1. Contact details
      2.1.1. Address: AkzoNobel Decorative Paints
      Wexham Road
      Slough
      Berkshire
      SL2 5DS
      2.1.2. Telephone: +44 (0)333 222 7070
      2.1.3. Web: www.duluxtradepaintexpert.co.uk
      2.1.4. Email: project.support@akzonobel.com
   2.2. Product reference: Dulux Trade Diamond Matt
3. Composition: Acrylic copolymer.
4. Sheen: Matt.
5. Colour: To be agreed.
6. System code: D282 - New plaster/ plasterboard.
7. Form: Liquid.
8. Surfaces: Generally.
   8.1. Preparation: Thoroughly clean down the surfaces to remove all dirt grease and surface contaminants. Ensure surfaces are clean and dry.
9. Initial coats: As recommended by manufacturer, prime with 1 coat of Dulux Trade Diamond Matt of appropriate shade thinned up to 1 part clean water to 10 parts of product as appropriate.
   9.1. Number of coats: 1.
10. Finishing coats: Dulux Trade Diamond Matt of selected shade.
    10.1. Number of coats: 2 or 3, dependent on colour.

10D Satin paint Type D - To timber slats

1. Description: To birch ply wall panelling throughout and interior timber boarding
2. Manufacturer: Thermoguard UK
   Units B1, B2 Enterprise Park, Wigwam Lane, Hucknall, NG15 7SZ.
   01142 768008
   www.thermoguard.co.uk
   technical@thermoguard.co.uk
   2.1. Product reference: Contractor's choice.
3. Initial coats: Thermoguard fireproofing for interior wood (class 0).
   3.1. Number of coats: 1.
4. Finishing coats: Thermoguard satin finish for interior wood.
   4.1. Number of coats: 1.

10E Eggshell paint Type E

1. Description: To exposed pipework internally, external galvanised tubular handrails and steel handrails to changing room stairs.
2. Manufacturer: Dulux Trade, brand of AkzoNobel
3. Colour: To be agreed.
4. Surfaces: Generally.
   4.1. Preparation: Scrub the surfaces with soap and water, detergent solution or suitable solvent to remove all dirt, oil, grease etc. Rinse off with clean water and allow to dry.
5. Initial coats: Dulux Trade Metalshield Zinc Phosphate Primer applied to give a minimum wet film thickness of 80 microns giving a minimum dry film thickness of 40 microns.
   5.1. Number of coats: 1.
6. Undercoats: Dulux Trade Undercoat applied to give a minimum wet film thickness of 45 microns giving a minimum dry film thickness of 25 microns.
   6.1. Number of coats: 1.
7. Finishing coats: Dulux Trade Diamond Eggshell applied to give a minimum wet film thickness of 45 microns giving a minimum dry film thickness of 25 microns.
   7.1. Number of coats: 1.

22 Handling and storage

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

28 Protection

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

30 Preparation generally

1. Standard: In accordance with BS 6150.
2. Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
3. Risk assessments and method statements for suspected hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
5. Substrates: Sufficiently dry in depth to suit coating.
6. Efflorescence salts, dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
7. Surface irregularities: Provide smooth finish.
8. Organic growths and infected coatings
   8.1. Remove with assistance of biocidal solution.
   8.2. Apply residual effect biocidal solution to inhibit regrowth.
9. Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.

10. Dust, particles and residues from preparation: Remove and dispose of safely.
11. Water-based stoppers and fillers
    11.1. Apply before priming unless recommended otherwise by manufacturer.
    11.2. If applied after priming: Patch prime.
12. Doors, opening windows and other moving parts
    12.1. Ease, if necessary, before coating.
    12.2. Prime resulting bare areas.

37 Wood preparation

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

39 Steel preparation

1. Areas of defective primer, corrosion and loose scale: Take back to bare metal. Reprime as soon as possible.
2. Defective paintwork: Remove to leave a firm edge and clean bright metal.
3. Sound paintwork: Provide key for subsequent coats.
4. Corrosion and loose scale: Take back to bare metal.
5. Residual rust: Treat with a proprietary removal solution.
6. Bare metal: Apply primer as soon as possible.
7. Remaining areas: Degrease.

43 Plaster preparation

1. Nibs, trowel marks and plaster splashes: Scrape off.
2. Overtrowelled 'polished' areas: Provide suitable key.
3. Depressions around fixings: Fill with stopper/ filler.

61 Coating generally

1. Application: In accordance with BS 6150.
2. Conditions: Maintain suitable temperature, humidity and air quality.
3. Surfaces: Clean and dry at time of application.
4. Thinning and intermixing: Not permitted unless recommended by manufacturer.
5. Overpainting: Do not paint over intumescent strips or silicone mastics.
6. Priming coats: Apply as soon as possible on same day as preparation is completed.
7. Finish
    7.1. Even, smooth and of uniform colour.
    7.2. Free from brush marks, sags, runs and other defects.
    7.3. Cut in neatly.
8. Doors, opening windows and other moving parts: Ease before coating and between coats.

Ω End of Section

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/General conditions.

300/01 PRE-PLUMBED WCS AND CISTERNS TO ROOMS 13, 14, 15

Type: Back to wall, concealed cistern

Pan:

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

IPS Panel System: As clause 160/01. Sanitary appliances pre-fixed and sealed to RPM unit by Bushboard Washroom Systems.

WC:

Manufacturer: Armitage Shanks

- Product reference: Contour 21 + standard height standard projection rimless BTW WC ref: S0439

Material: Vitreous china, white.

Seat and Cover:

- Standard: BS1254
- Manufacturer: Armitage Shanks
- Product Reference: Contour 21 seat no cover, top fixing brackets and retaining buffers ref: S4066
- Material: Plastic, white

Pan Connector:

- Standard: To BS 5627
- Manufacturer: client choice
- Product Reference: client choice
- Colour: White.

Cistern:

- Product Reference: 6ltr pneumatic single flush cistern
- Material: Plastic
- Colour and finish: Not applicable

Flushing Arrangement:

- Product Reference: Vandal Resistant Push Button ref: CIST106
- Operating control: Push button
- Water supply connection: As recommended by manufacturer
- Flush volume: 6ltr

Flush pipe: Concealed

- Manufacturer: As cistern manufacturer

- Product Reference: As cistern manufacturer
- Material: Plastic

Accessories: Floor fixing kit supplied by manufacturer

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/General conditions.

300/02 PRE-PLUMBED WCS TO ROOM 11

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

- Product Reference: **High Secure Disabled Height Back to Wall WC**
- Panel System: As clause 160/01. Sanitary appliances pre-fixed and sealed to RPM unit by Bushboard Washroom Systems.

Pan:

- Manufacturer: Dart Valley Systems.
- Product Reference: High Secure BTW WC pan ref: VR01-035(Blue Top)
- Material: Anti-shatter moulded resin.

Pan Connector:

- Product Reference: P trap outlet connector

Cistern:

- Product Reference: 6ltr pneumatic single flush cistern
- Material: Plastic
- Colour and finish: Not applicable

Flushing Arrangement:

- Product Reference: Vandal Resistant Push Button ref: CIST106
- Operating control: Push button
- Water supply connection: As recommended by manufacturer
- Flush volume: Adjustable

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/General conditions.

300/03 PRE-PLUMBED WCS TO ROOM 12

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

IPS Panel System: As clause 160/01. Sanitary appliances pre-fixed and sealed to RPM unit by Bushboard Washroom Systems.

Pan:

- Manufacturer: Dart Valley Systems.
- Product Reference: High Secure BTW WC pan ref: VR01-034 (Blue Top)
- Material: Anti-shatter moulded resin.

Pan Connector:

- Product Reference: P trap outlet connector

Cistern:

- Product Reference: 6ltr pneumatic single flush cistern
- Material: Plastic
- Colour and finish: Not applicable

Flushing Arrangement:

- Product Reference: Vandal Resistant Push Button ref: CIST106
- Operating control: Push button
- Water supply connection: As recommended by manufacturer
- Flush volume: Adjustable

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/General conditions.

311/01 BACK TO WALL DOC M PACK TO ROOM 10

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

- Product Reference: **Doc M Contour 21+ BTW Pack**
- Panel System: As clause 160/01. Sanitary appliances pre-fixed and sealed to RPM unit by Bushboard Washroom Systems.
- Product Description: Doc M contour 21 BTW pack, rimless WC pan, delay fill cistern with spatula lever, grab rails, hinged support rail with toilet roll holder, seat no cover with retaining buffers, Contour 21 A6697 Thermostatic mixer tap

Material: Vitreous China

- Product Codes
- Blue left/right hand: ref: S0685LI
- White left/right hand: ref: S0685AC
- Stainless Steel left/right hand: ref: S0685MY
- Grey left/right hand: ref: S0685LJ
- Charcoal left/right hand ref: S0685RN

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/General conditions.

335/01 PREPLUMBED WASHBASINS TO ROOMS 11, 12

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

- Product Reference: **High Security Wash Basin with Integral Back-plate**
- Panel System: As clause 160/01. Sanitary appliances pre-fixed and sealed to RPM unit by Bushboard Washroom Systems.

Basin:

- Manufacturer: Dart Valley Systems.
- Product Reference: High security basin with integrated back plate ref: VR01-039
- Material: Anti-Shatter Molded Resin.
- Size: 450mm Height x 374mm Width x 300mm Depth.

Tap(s):

- Manufacturer: Dart Valley Systems
  Product Reference: Single Station mains kit ref: AT00-002

Accessories:

- Manufacturer: Dart Valley Systems
- Product Reference: Single sensor ref: AT02-017

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/General conditions.

341/01 PRE-PLUMBED WASH BASINS

Manufacturer: Bushboard Washroom Systems, Unit 1400, 1st Floor Montagu Court, Kettering Parkway, Kettering Venture Park, Kettering, Northants, NN15 6XR, Tel: 01536 533620

www.bushboard-washrooms.co.uk

Vanity Unit: As clause 520/01. Sanitary appliances pre-fixed and sealed to RPM unit by Bushboard Washroom Systems.

- Product reference: Profile 21 50cm semi-recessed basin 1 tap- hole ref: S2492
  Size - 500mm x 410mm

Material: Vitreous china, white

Tap/Chainstay/Overflow holes:

Water supply fittings:

- Manufacturer: Armitage Shanks

Product reference: Avon 21 self-closing basin mixer with variable temperature control ref: B8263

- Operation: Press action

Waste:

- Standards: To BS EN 274-1, 2 & 3
- Manufacturer: SanCeram
- Product Reference: Strainer waste ref: TSWC101
- Size 1 ¼"
- Material: Chrome plated
- Tail: Slotted

Traps:

- Standards: To BS EN 274-1, 2 & 3
- Manufacturer: McAlpine
- Product Reference: Resealing bottle trap ref A10R
- Size: 1 ¼"
- Material: Plastic
- Depth of seal: 75mm:

P20
Unframed isolated trims/ skirtings/ sundry items

To be read with preliminaries/ general conditions.

35A Medium-density fibreboard Skirtings Rooms 5, 8

1. Description: SKIRTING BOARDS
2. Manufacturer: Contractor's choice.
3. Standard: To BS EN 622-5.
   3.1. Type: MDF.
   3.2. Formaldehyde class: To BS EN 622-1, Class E1.
4. Height: 100mm.
5. Thickness: 18mm.
6. Edges: Pencil round.
7. Finish: 1 coat primer, 1 coat undercoat and 1 coat eggshell. White painted.

35B Medium-density fibreboard Sills

1. Description: WINDOW SILL BOARDS
2. Manufacturer: Contractor's choice.
3. Standard: To BS EN 622-5.
   3.1. Type: MDF.
   3.2. Formaldehyde class: To BS EN 622-1, Class E1.
4. Height: 144mm.
5. Thickness: 15mm.

6. Edges: Bullnose
7. Finish: 1 coat primer, 1 coat undercoat and 1 coat eggshell. White painted.

50 Pinboard

1. Manufacturer: Contractor's choice
   1.1. Product reference:
2. Reaction to fire rating: To BS EN 13501-1, Class A2
3. Thickness: 15 mm
4. Size: As drawing Section DD
5. Edges:
6. Fixing: To softwood grounds with brass cups and screws
7. Decorative facing: Prepared and painted, M60

80 Installation generally

1. Joinery workmanship: As section Z10.
2. Methods of fixing and fasteners: As section Z20 where not specified.
3. Straight runs: To be in one piece, or in long lengths with as few joints as possible.
4. Running joints: Location and method of forming to be agreed where not detailed.
5. Joints at angles: Mitre, unless shown otherwise.
6. Position and level: To be agreed where not detailed.

Ω End of Section

P31
Holes, chases, covers and supports for services

Clauses

20 Notches and holes in structural timber

1. General: Avoid if possible.
2. Sizes: Minimum needed to accommodate services.
3. Position: Do not locate near knots or other defects.
4. Notches and holes in same joist: Minimum 100 mm apart horizontally.
5. Notches in joists
   - 5.1. Position: Locate at top. Form by sawing down to a drilled hole.
   - 5.2. Depth (maximum): 0.15 x joist depth.
   - 5.3. Distance from supports: Between 0.1 and 0.2 x span.
6. Holes in joists
   - 6.1. Position: Locate on neutral axis.
   - 6.2. Diameter (maximum): 0.25 x joist depth.
   - 6.3. Centres (minimum): 3 x diameter of largest hole.
   - 6.4. Distance from supports: Between 0.25 and 0.4 of span.
7. Notches in roof rafters, struts and truss members: Not permitted.
8. Holes in struts and columns: Locate on neutral axis.
   - 8.1. Diameter (maximum): 0.25 x minimum width of member.
   - 8.2. Centres (minimum): 3 x diameter of largest hole.
   - 8.3. Distance from ends: Between 0.25 and 0.4 of span.

30 Pipe sleeves

1. Material: Match pipeline.
2. Sleeves: Extend through full thickness of wall or floor. Position accurately.
   - 2.1. Clearance around service (maximum): 20 mm or diameter of service, whichever is the lesser.
   - 2.2. Installation: Bed solid.

40 Sealing around services

1. Sealing material: Expanding foam or Intumescent sealant dependent on location. Refer to D3A fire strategy.
2. Method: .Completely fill gaps with sealant and finish neatly.
3. Requirements: Moisture vapour and airtight, fire resistance where required.

Ω End of Section

Q10
Kerbs/ edgings/ channels/ paving accessories

To be read with preliminaries/ general conditions.

10 Precast concrete

1. Description: Kerbs
2. Standard: To BS EN 1340.
3. Manufacturer:
   3.1. Product reference:
4. Recycled content:
5. Designations:
6. Size (width x height x length):
7. Special shapes:
8. Finish:
9. Colour:
10. Bedding:
11. Joints:
12. Sealant movement joints:
13. Accessories:

10 Concrete kerbs Type A

1. Description:
2. Manufacturer: Marshalls plc
   2.1. Contact details
      2.1.1. Address: Landscape House
      Lowfields Business Park
      Elland
      West Yorkshire
      HX5 9HT
      2.1.2. Telephone: +44 (0)330 0574472
      2.1.3. Web: www.marshalls.co.uk
      2.1.4. Email: info@marshalls.co.uk
   2.2. Product reference: Bullnosed Kerb
3. Standard: To BS EN 1340:2003.
4. Physical properties
   4.1. Colour: Natural grey.
   4.2. Finish: Textured.
   4.3. Profile
      4.3.1. Designation:
   4.4. Dimensions:
   4.5. Radial units
      4.5.1. Radial face:

4.5.2. Radius:

4.6. Weathering resistance: ≤1.0 kg/m² as a mean with no individual value >1.5 kg/m² (freeze thaw durability).

4.7. Bending strength: Characteristic bending strength of 3.5 MPa with no individual result less than 2.8 MPa.

4.8. Unpolished Slip Resistance Value (USRV) (minimum): >45.

5. Special shapes:

35 Drainage channel systems with gratings

1. Manufacturer: ACO Technologies plc
   1.1. Contact details
      1.1.1. Address: ACO Technologies plc
      ACO Business Park
      Hitchin Road
      Shefford
      Bedfordshire
      SG17 5TE
      1.1.2. Telephone: +44 (0)1462 816666
      1.1.3. Web: www.aco.co.uk
      1.1.4. Email: technical@aco.co.uk
   1.2. Product reference: MonoDrain
2. Channel: Contractor's choice from Aco range to complete design.
3. Grating: Heelsafe channel grating to suit system. Galvanised. Load class C400. As drawing
4. Accessories: As drawing
5. Size:
6. Type of fall: Integral continuous fall
7. Finish: Standard
8. Cover gratings: Galvanized steel, slotted
   8.1. Loading grade to BS EN 124-1: D400

40 Laying kerbs, edgings and channels

1. Standard: To BS 7533-101.
2. Cutting: Neat and accurate and without spalling. Form neat junctions.
   2.1. Long units' (450 mm and over) minimum length after cutting: 300 mm.
   2.2. Short units' minimum length after cutting: The lower of one third of their original length or 50 mm.
3. 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.
4. 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.

80 Regularity of paved surfaces

1. Maximum undulation of (non-tactile) paving surface: 3 mm.
   1.1. Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).

2. Difference in level between adjacent units (maximum)
   2.1. Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
   2.2. Recessed, filled joints: 2 mm.
      2.2.1. Recess depth (maximum): 5 mm.
   2.3. Unfilled joints: 2 mm.
3. Sudden irregularities: Not permitted.

Ω End of Section

Q25
Slab/ brick/ sett/ cobble pavings

To be read with preliminaries/ general conditions

11 Laying pavings – general

1. Appearance: Smooth and even with regular joints and accurate to line, level and profile.
2. Falls: To prevent ponding.
3. Bedding of paving units: Firm so that rocking or subsidence does not occur or develop.
   3.1. Bedding/ Laying course: Consistently and accurately graded, spread and compacted to produce uniform thickness and support for paving units.
4. Slopes: Lay paving units upwards from the bottom of slopes.
5. Paving units: Free of mortar and sand stains.
6. Cutting: Cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.

16 Levels of paving

1. Permissible deviation from specified levels (generally)
   1.1. Generally: ±6 mm.
2. Height of finished paving above features
   2.1. At gullies: +6 to +10 mm.
   2.2. At drainage channels and kerbs: +3 to +6 mm.

18 Regularity of paved surfaces

1. Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
2. Joints between paving units or utility access covers
   2.1. Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5mm max difference in level).
   2.2. Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
   2.3. Unfilled joints: difference in level between adjacent units to be no greater than 2 mm.
3. Sudden irregularities: Not permitted.

21 Protection

1. Cleanliness: Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
2. Materials storage: Do not overload pavings with stacks of materials.
3. Handling: Do not damage paving unit corners, arrises, or previously laid paving.
4. Mortar bedded pavings: Keep free from traffic after laying:
5. Access: Restrict access to paved areas to prevent damage from site traffic and plant.

52 Concrete flags

1. Standard: To BS EN 1339.
    1.1. Manufacturer: Marshalls
    Landscape House
    Premier way
    Lowfields Business Park
    Premier way
    Elland, West Yorkshire
    HX5 9HT
        1.1.1. Product reference: Saxon Paving Flags.
    1.2. Physical properties
        1.2.1. Colour: Natural. To be agreed.
        1.2.2. Dimensions and associated tolerances
            1.2.2.1. Nominal sizes: 600 x 600 x 35 mm.

74 Laying flag and slab paving – sand/ fine aggregate laying course and jointing

1. Standard: In accordance with BS 7533-4.
2. Laying course
    2.1. Nominal thickness after compaction: 70mm. Refer to BDN drawing 200.
3. Joint width: 2-5 mm.

Ω End of Section

Q30
Seeding/ turfing

Clauses

100 New clause

Ω End of Section

Q40
Fencing

Fencing

10 Wooden post and rail fencing

1. Manufacturer:
   1.1. Product reference:
2. Standard: To BS 1722-7, type …….
3. Height:
4. Wood:
   4.1. Treatment:
   4.2. Finish:
5. Maximum centres of posts:
6. Method of setting posts:
7. Accessories:
8. Conformity: Submit manufacturer's and installer's certificates, to BS 1722-7.

27 Open mesh steel panel general purpose fencing

1. Manufacturer:
   1.1. Product reference:
2. Standard: To BS 1722-14, category 1.
3. Height:
4. Mesh and wire:
5. Posts:
6. Maximum centres of posts:
7. Method of setting posts:
8. Bottom of fencing:
9. Accessories:
10. Conformity: Submit manufacturer's and installer's certificates, to BS 1722-14.

28 Open mesh steel panel security fencing

Description:	Perimeter security fencing panel system
Standard:	BS1722-14: 2017 BS EN ISO 1461:2009 BS EN 13438:2013
Manufacturer:	CLD Fencing Systems Info@cld-systems.com Tel. 01270 764751 www.cld-systems.com
Product Reference:	**CLD Exempla Profiled Panel System**
Panel type:	Profiled mesh panel system. Number of profiles varies according to height. Galvanised and powder coated to minimum 60 microns dft.

Panel width:	2485mm
Wire diameter:	5mm nominal
Mesh size:	200 x 55mm
Available heights Select as required	2 profiles: 630mm, 830mm, 1030mm, 1230mm 3 profiles: 1530mm, 1730mm, 1930mm 4 profiles: 2330mm, 2530mm, 2730mm 5 profiles: 3030mm only
Nominal heights:	0.6m to 3.0m
Finish:	Polyester powder-coated to minimum 60 microns. Available in any RAL colour including marine grade and metallics.
Top edge projection:	30mm
Panel installation:	Bottom of panel minimum 50mm above final ground level
Security toppingn/a options:	
Posts:	RHS, galvanised after manufacture and polyester powder-coated to match fencing.
Post dimensions:	60mm x 40mm up to 2.7m high, 80mm x 40mm for 3m high panels only
Maximum post Centres:	2515mm
Fixings: system	41mm x 21mm clamping channels and CLD SafeTFix hidden fixing
Foundations:	Set posts in holes minimum 300mm diameter x 800mm deep. Note: Contractor/client is responsible for the foundation size suitable for the ground conditions and fence height.
Warranty:	Minimum of 15 years against manufacturing defects.
Notes:	All dimensions are nominal, for further information please contact CLD Fencing Systems. Information is correct at time of production. As part of our policy of continuous improvement, we reserve the right to alter product specification without notice.

30 Proprietary fencing

1. Description:

2. Manufacturer:
   2.1. Product reference:
3. Height:
4. Materials:
   4.1. Treatment:
   4.2. Finish:
5. Centres of posts (maximum):
6. Method of setting posts:
7. Accessories:

35 Wood

1. Description:
2. Manufacturer:
3. Standard: To BS 5709.
4. Wood:
   4.1. Treatment: As section Z12 and Wood Protection Association Commodity Specification C3.
   4.2. Type:
   4.3. Finish:
5. Adhesive: Synthetic resin to BS EN 301, type 1.
6. Joinery workmanship: As section Z10.
7. Fittings:
   7.1. Finish:
8. Method of fixing:
9. Accessories:

40 Steel

1. Description:
2. Manufacturer:
3. Standard
   3.1. Domestic gates: To BS 4092-1.
   3.2. Steel palisade gates: To BS 1722-12.
4. Materials and workmanship: As section Z11.
5. Finish:
   5.1. Colour:
6. Jointing: Welded.
7. Fittings:
   7.1. Finish:
8. Method of fixing:
9. Accessories:

45 Gates

1. Manufacturer:

1.1. Product reference:

2. Sizes:
3. Posts:
4. Finish:
5. Fittings:
   5.1. Finish:
6. Method of fixing:
7. Accessories:

60 Installation generally

1. Set out and erect
   1.1. Alignment: Straight lines or smoothly flowing curves.
   1.2. Tops of posts: Following profile of the ground.
   1.3. Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
   1.4. Fixings: All components securely fixed.

70 Setting posts in concrete

1. Standard: To BS 8500-2.
2. Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
3. Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
4. Admixtures: Do not use.
5. Holes: Excavate neatly and with vertical sides.
6. Filling: Position post/ strut and fill hole with concrete to not less than half the depth, well rammed as filling proceeds and consolidated.
7. Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

72 Setting posts in earth

1. Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
2. Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

75 Driven posts

1. Damage to heads: Minimize.
   1.1. Repair: Neatly finish post tops after installation.

80 Nailed wood rails

1. Length (minimum): Two bays, with joints in adjacent rails staggered.
2. Fixing: Nail each length of rail to each post with two 100 mm galvanized nails.
3. Rails with split ends: Replace.

81 Cleft wood rails

1. Length (maximum): 3.05 m.

2. Fixing: Rail end section shaped to adequately fill the post mortice. Nail each rail to each prick post with two galvanized nails.
3. Rails with split ends: Replace.

82 Arris rails

1. Fixing
   1.1. Rail end section: Shaped to adequately fill the post mortice or recess.
   1.2. Recessed posts: Rails bolted to each post.
   1.3. Top rails: Fixed at both ends using …….
2. Rails with split ends: Replace.

85 Site cutting of wood

1. General: Kept to a minimum.
2. Below or near ground level: Cutting prohibited.
3. Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

90 Making good galvanized surfaces

1. Treatment of minor damage (including on fasteners and fittings): Low melting point zinc alloy repair rods or powders made for this purpose, or at least two coats of zinc-rich paint to BS 4652.
2. Thickness: Apply sufficient material to provide a zinc coating at least equal in thickness to the original layer.

Ω End of Section

R10
Rainwater drainage systems

To be read with preliminaries/ general conditions.

11 Aluminium gutters

1. Standard:
2. Manufacturer:
    2.1. Product reference:
3. Profile:
4. Type/ Thickness:
5. Nominal size:
6. Finish:
7. Colour:
8. Brackets:
9. Rafter type
10. Strap type
    10.1. Fixings:
        10.1.1. Size:
11. Accessories:
12. Jointing:
13. Fixing:

12 Cast iron gutters

1. Standard:
2. Manufacturer:
    2.1. Product reference:
3. Profile:
4. Jointing type:
5. Nominal size:
6. Finish as supplied:
7. Brackets:
    7.1. Fixings:
        7.1.1.Size:
8. Accessories:
9. Fixing:
10. Jointing:

13 Combined fascia, soffit and gutter

1. Manufacturer:
    1.1. Product reference:
2. Material:

3. Profile:
4. Size
   4.1. Fascia:
   4.2. Soffit:
   4.3. Gutter:
5. Gauge
   5.1. Fascia:
   5.2. Soffit:
   5.3. Gutter:
6. Finish:
   6.1. Colour:
7. Fixings:
8. Ventilation:
9. Accessories:
10. Fixing:
11. Jointing:

14 Continuously hot dip coated steel gutters

1. Standard:
2. Manufacturer:
   2.1. Product reference:
3. Profile:
4. Gauge:
5. Size:
6. Finish:
7. Colour:
8. Brackets:
   8.1. Fixings:
      8.1.1. Size:
9. Accessories:
10. Fixing:
11. Jointing:

16 PVC-U gutters

1. Standard: To the relevant parts of BS EN 607 and BS EN 1462, Kitemark certified.
2. Manufacturer:
   2.1. Product reference:
3. Recycled content:
4. Profile:
5. Nominal size:
6. Colour:
7. Brackets:

7.1. Fixings:
7.1.1. Size:
8. Accessories:
9. Fixing:
10. Jointing:

26 Proprietary rainwater outlets

1. Manufacturer:
1.1. Product reference:
2. Roof construction:
2.1. Roof insulation thickness:
3. Type of grate/ Fittings:
4. Outlet: Type and direction to suit pipework, with suitable adaptors and connections.
5. Accessories:
6. Fixing:

30 Aluminium pipework

1. Standard:
2. Manufacturer:
2.1. Product reference:
3. Type/ Thickness:
4. Section:
5. Nominal sizes:
6. Finish:
7. Colour:
8. Brackets:
8.1. Fixings:
8.1.1. Size:
9. Accessories:
10. Fixing:
11. Jointing:

32 Cast iron pipework - flexible couplings

1. Standard: To BS EN 877, Agrément certified.
2. Manufacturer:
2.1. Product reference:
3. Coupling type:
4. Nominal size:
5. Finish as supplied:
6. Brackets:
6.1. Fixings:
6.1.1. Size:

7. Accessories:
8. Fixing:
9. Jointing:

33 Continuously hot dip coated steel pipework - pressed

1. Manufacturer:
   1.1. Product reference:
2. Finish:
3. Colour:
4. Jointing:
5. Brackets:
   5.1. Fixings:
      5.1.1. Size:
6. Accessories:
7. Fixing:
8. Jointing:

35 PVC-U pipework

1. Standard:
2. Manufacturer:
   2.1. Product reference:
3. Recycled content:
4. Section:
5. Nominal sizes:
6. Colour:
7. Brackets:
   7.1. Fixings:
      7.1.1. Size:
8. Accessories:
9. Fixing:
10. Jointing:

38 Insulation to internal gutters

1. Material:
2. Thermal conductivity (maximum):
3. Manufacturer:
   3.1. Product reference:
4. Recycled content:
5. Thickness:
6. Fire performance:
   6.1. Fire resistance:
   6.2. Reaction to fire:

39 Insulation to internal pipelines

1. Material:
2. Thermal conductivity (maximum):
3. Manufacturer:
   3.1. Product reference:
4. Recycled content:
5. Thickness:
6. Fire performance:
   6.1. Fire resistance:
   6.2. Reaction to fire:

40 Masking plates

1. Manufacturer:
   1.1. Product reference:
2. Material and finish:
3. Fixing:

50 Installation generally

1. Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
2. Discharge of rainwater: Complete, and without leakage or noise nuisance.
3. Components: Obtain from same manufacturer for each type of pipework and guttering.
4. Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
5. Fixings and fasteners: As section Z20.
6. Protection
   6.1. Fit purpose made temporary caps to prevent ingress of debris.
   6.2. Fit access covers, cleaning eyes and blanking plates as the work proceeds.

60 Gutters laid to fall

1. 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.
2. Joints: Watertight.
3. Roofing underlay: Dressed into gutter.

65 Gutters laid level

1. Setting out: Level and as close as practical to roof.
2. Joints: Watertight.
3. Roofing underlay: Dressed into gutter.

70 Pipework

1. Fixing: Securely, plumb and/ or true to line with additional supports as necessary to support pipe collars, particularly at changes in direction.
2. Cut ends of pipes and gutters: Clean and square with burrs and swarf removed.

75 Fixing insulation to internal pipelines and gutters

1. Fixing: Secure and neat. Provide continuity at supports and leave no gaps. Fix split pipe insulation with the split on 'blind' side of pipeline.
    1.1. Method:
2. Timing: Do not fit insulation until completion of pipe airtightness or leakage testing.

80 Internal pipework test –England,Wales,IrelandandNorthern Ireland

1. Preparation: Temporarily seal open ends of pipework with plugs.
2. Test apparatus: Connect a 'U' tube water gauge and air pump to pipework via a plug.
3. Testing: Pump air into pipework until gauge registers 38 mm.
4. Required performance
    4.1. Allow a period for temperature stabilization, after which the pressure of 38 mm is to be maintained without loss for not less than 3 minutes.

81 Internal pipework test –Scotland

1. Standard: To BS EN 12056-2, National annex NG.

92 Gutter test

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

325 Composite gutters

4. Manufacturer: Kingspan Limited
    4.1. Product reference: Insulated Membrane Gutter system for standard internal & external non-corrosive, inland environments
5. Profile: Insulated membrane lined gutter.
6. Construction: Upper steel sheet PVC membrane lined, internal steel coated sheet, with PIR insulation core.
7. Insulation thickness: 50mm (0.41 W/m²K)
8. Nominal size: Girth size to contractors' drawings,
9. Upper layer finish:
    2. Material: DX51D + Z275 hot-dip zinc coated steel to BS EN10143.
    3. Thickness: 0.6mm
    4. Finish: 1.2mm IKO Armourplan PVC membrane (delete as appropriate).
10. Underside finish:
    7. Material: S220GD+ZA hot dip zinc alloy coated steel to BS EN10346.
    8. Thickness: 0.7mm
    9. Finsih: CleanSafe 15.
11. Fixings:
    5. Fasten gutter at maximum 1500mm centres to roof purlin with two number stainless steel Stavex rivets (grip range 1.5mm to 9mm) per gutter wing.
    6. Fixing along lap using stainless steel Stavex rivets (grip range 1.5mm to 9mm) at 75mm maximum centers. The membrane is sealed using a strip of 1.5mm PVC x 200mm wide material heat sealed over the joint once the gutters are in place.

12. Method of jointing: Lap joints 50mm long.
13. Accessories:
    7. Outlets: Site fitted unless otherwise stated. All standard outlets supplied with sealing membrane. Standard outlet diameters 100mm or 150mm (ext pipe dimensions).
    8. Weir Overflow: Size and location to contractors' drawings. Factory fitted unless otherwise stated.

Custom made products - Not Used

Execution - Not Used

Completion - Not Used

Ω End of Section

Ω End of Section

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R11
Above ground foul drainage systems

To be read with preliminaries/ general conditions.

4 Floor channels

1. Description:
2. Manufacturer:
   2.1. Product reference:
3. Floor finish:
4. Body type:
   4.1. Material:
5. Sizes:
6. Type of fall:
7. Grating/ cover
   7.1. Loading:
   7.2. Material:
8. Accessories:

5 Floor drains

1. Description:
2. Manufacturer:
   2.1. Product reference:
3. Floor finish:
4. Body type:
   4.1. Material:
5. Grating/ cover
   5.1. Type:
   5.2. Material:
6. Outlet: Type and direction to suit pipework.
7. Accessories:

11 Plastics branch pipework

1. Description:
2. Materials and standards:
3. Manufacturer:
   3.1. Product reference:
4. Nominal sizes:
5. Colour:
6. Jointing:
7. Fixing:
8. Accessories:

21 PVC-U soil/ vent pipework and wc branches

1. Description:
2. Standard
   2.1. To BS EN 1329-1, Kitemark certified; or
   2.2. To BS 4514, Kitemark certified.
3. Manufacturer:
   3.1. Product reference:
4. Nominal sizes:
5. Colour:
6. Jointing:
7. Fixing:
8. Accessories:

31 Cast iron pipework – flexible couplings

1. Description:
2. Standard: To BS EN 877.
3. Manufacturer:
   3.1. Product reference:
4. Coupling type:
5. Nominal sizes:
6. Finish:
7. Fixing:
8. Accessories:

45 Air admittance valves

1. Standard: To BS EN 12380 or Agrément certified.
2. Minimum air flow rate: To BS EN 12056-2.
3. Manufacturer:
   3.1. Product reference:
4. Position: Vertical.
5. Unheated locations: Fit manufacturer's insulating cover.

46 Grease traps and converters

1. Standards: In accordance with BS EN 1825-1 and to BS EN 1825-2 and Kitemark or Agrément certified
2. Manufacturer:
   2.1. Product reference:
3. Accessories:

50 Installation generally

1. Standards: To BS EN 12056-5.
2. Components: From same manufacturer for each type of pipework.
3. Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
4. Plastics and galvanized steel pipes: Do not bend.

5. Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
6. Concealed or inaccessible surfaces: Decorate before starting work specified in this section.
7. Protection
   7.1. Purpose made temporary caps: Fit to prevent ingress of debris.
   7.2. Access covers, cleaning eyes and blanking plates: Fit as the work proceeds.
8. Drainage from appliances: Quick, quiet and complete, without blockage, crossflow, backfall, leakage, odours, noise nuisance or risk to health.
9. Access: Provide access fittings in convenient locations to permit cleaning and testing of pipework.

60 Fixing pipework

1. Pipework: Fix securely plumb and/ or true to line. Fix discharge stack pipes at or just below socket collar or coupling.
2. Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
3. Externally socketed pipes and fittings: Fix with sockets facing upstream.
4. Additional supports: Provide as necessary at junctions and changes in direction.
5. Vertical pipes: Provide a load bearing support not less than every storey level. Tighten fixings as work proceeds so that every storey is self-supporting.
6. Wall and floor penetrations: Isolate pipework from structure, e.g. with pipe sleeves.
   6.1. Masking plates: Fix at penetrations if visible in the finished work.
7. Expansion joint sockets: Fix rigidly to the building.
8. Fixings: Allow the pipe to slide.
9. Cut ends of pipes: Clean and square with burrs and swarf removed.

65 Electrical continuity

1. Joints in metal pipes with flexible couplings: Make with clips (or suitable standard pipe couplings) supplied for earth bonding by pipework manufacturer to ensure electrical continuity.

66 Identification of internal foul drainage pipework

1. Markings: To BS 1710.
   1.1. Type:
   1.2. Wording:
2. Type: Integral lettering on pipe wall, self-adhesive bands or identification clips.
3. Locations: At 500 mm centres, junctions and both sides of slabs, valves, appliances, bulkheads and wall penetrations.

69 Installing air admittance valves

1. Position: Vertical, above flood level of highest appliance served and clear of insulation materials (other than the manufacturer's insulating cover).
2. Connection to discharge stack: Allow removal for rodding, e.g. ring seal.
3. Roof spaces and other unheated locations: Fit manufacturer's insulating cover.

70 Pipework airtightness test

1. Preparation
   1.1. Open ends of pipework: Temporarily seal using plugs.

1.2. Test apparatus: Connect a 'U' tube water gauge and air pump to pipework via a plug or through trap of an appliance.

2. Testing: Pump air into pipework until gauge registers 38 mm.
3. Required performance: Pressure of 38 mm is to be maintained without loss for at least three minutes.

72 Pre-handover checks

1. Temporary caps: Remove.
2. Permanent blanking caps, access covers, rodding eyes, floor gratings and the like: Secure complete with fixings.

74 Submittals

1. Manufacturer's instructions for grease traps: Handover at completion.

Ω End of Section

R12
Below ground drainage systems

To be read with preliminaries/ general conditions.

3 Existing drains

1. Setting out: Before starting work, check invert levels and positions of existing drains, sewers, inspection chambers and manholes against drawings. Report discrepancies.
2. Protection: Protect existing drains to be retained and maintain normal operation if in use.

4 Concrete

1. Description:
2. Standard: To BS 8500-2
3. Concrete: Designated, GEN1, as section E10

14 Pipes, bends and junctions – PVC-U – solid wall

1. Description:
2. Standard: To BS EN 1401-1, with flexible joints.
3. Class:
4. Manufacturer:
   4.1. Product reference:
5. Recycled content:
6. Sizes:
7. Application area code: UD.

14 Unplasticized polyvinyl chloride (PVC-U) solid wall below-ground drainage pipes and fittings Type A

1. Description:
2. Standard: To BS EN 1401-1, with flexible joints.
3. Class:
4. Manufacturer: Wavin Ltd
   4.1. Contact details
      4.1.1. Address: Wavin Registered Office
      Edlington Lane
      Edlington
      Doncaster
      South Yorkshire
      DN12 1BY
      4.1.2. Telephone: +44 1709 856300
      4.1.3. Web: www.wavin.co.uk
      4.1.4. Email: info@wavin.co.uk
   4.2. Product reference:
5. Recycled content:
6. Sizes:
7. Application area code: UD.

17 Lower part of trench – general

1. Trench up to 300 mm above crown of pipe: Vertical sides, width as small as practicable.
   1.1. Width (minimum): External diameter of pipe plus 300 mm.

18 Type of subsoil

1. General: Where type of subsoil at level of crown of pipe differs from that stated for the type of bedding, surround or support, give notice.

19 Formation for beddings

1. Timing: Excavate to formation immediately before laying beddings or pipes.
2. Mud, rock projections, boulders and hard spots: Remove. Replace with consolidated bedding material.
3. Local soft spots: Harden by tamping in bedding material.
4. Inspection of excavated formations: Give notice.

21 Laying pipelines

1. Laying pipes: To true line and regular gradient on even bed for full length of barrel with sockets (if any) facing up the gradient.
2. Ingress of debris: Seal exposed ends during construction.
3. Timing: Minimize time between laying and testing.

22 Jointing pipelines

1. Connections: Durable, effective and free from leakage.
2. Junctions, including to differing pipework systems: With adaptors intended for the purpose.
3. Cut ends of pipes: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.
4. Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.
5. Allowance for movement: Provide and maintain appropriate clearance at ends of spigots as fixing and jointing proceeds.
6. Jointing material: Do not allow to project into bore of pipes and fittings.

27 Class P support

1. Description: *TO PIPES, BENDS AND JUNCTIONS – PVC-U – SOLID WALL*
2. Type of subsoil: Clay, sandy clay - stiff
3. Granular material: Contractor's choice
   3.1. Sizes: To Water Industry Specification WIS 4-08-02 (as amended by WIS 4-08-02A, 2008).
4. Bedding
   4.1. Material: Granular, compacted over full width of trench.
   4.2. Thickness (minimum): 100 mm.
5. Pipes: Dig slightly into bedding, rest uniformly on barrels and adjust to line and gradient.
6. Initial testing before placing support:
7. Support
   7.1. Material: Granular.
   7.2. Depth: To slightly above crown of pipe.
   7.3. Compaction: By hand.

8. Backfilling
    8.1. Material and depth
        8.1.1. Protective cushion of selected fill to 300 mm above crown of pipe; or
        8.1.2. Additional granular material, to 100 mm above crown of pipe.
    8.2. Compaction: By hand in 100 mm layers.

39 Class Z surround

1. Description: Below floor slab
2. Type of subsoil: Clay
3. Blinding
    3.1. Material: Concrete.
    3.2. Thickness (minimum): 25 mm.
    3.3. Width: Full width of trench.
    3.4. Allow to set before proceeding.
4. Pipes
    4.1. Temporary support: Folding wedges of compressible board. Prevent flotation.
    4.2. Clearance under pipes (minimum): 100 mm.
    4.3. Adjust pipes to line and gradient.
5. Initial testing before placing surround:
6. Surround
    6.1. Material: Concrete.
    6.2. Depth: To 150 mm above crown of pipe.
    6.3. Width: Full width of trench.
7. Vertical construction joints
    7.1. Location: At face of flexible pipe joints.
    7.2. Material: 18 mm thick compressible board precut to profile of pipe.
    7.3. Socketed pipes: Fill gaps between spigots and sockets with resilient material to prevent entry of concrete.

41 Concrete surround for pipe runs near foundations

1. Class Z surround: Provide in locations where bottom of trench is lower than bottom of foundation and as follows (horizontal clear distance between nearest edges of foundations and pipe trenches):
    1.1. Trenches less than 1 m from foundations: Top of concrete surround not lower than bottom of foundation.
    1.2. Trenches more than 1 m from foundations: Top of concrete surround not lower than D mm below bottom of foundation, where D mm is horizontal distance of trench from foundation, less 150 mm.

44 Bends at base of soil stacks

1. Type:
2. Radius to centreline of the pipe (minimum):
3. Height of invert of horizontal drain at base of stack below centreline of lowest branch pipe (minimum):
4. Bedding: Do not impair flexibility of pipe couplings.

4.1. Material: Concrete.

47 Direct connection of ground floor wcs to drains

1. Drop from crown of WC trap to invert of drain (maximum): 1.3 m
2. Horizontal distance from the drop to a ventilated drain (maximum): 6 m.

50 One piece gullies and covers

1. Description:
2. Standards: To BS EN 1253-1, -2, -3, -4 and -5; or
   2.1. Cast iron: To BS 437 and Kitemark-certified, or Agrément-certified.
   2.2. Clay: To BS EN 295-1 and Kitemark-certified, or Agrément-certified.
   2.3. Concrete: To BS 5911-6 and Kitemark-certified, or Agrément-certified.
   2.4. Plastics: To BS 4660 and Kitemark-certified, or Agrément-certified.
   2.5. Polypropylene: To BS EN 1852-1.
3. Material:
4. Manufacturer:
   4.1. Product reference:
5. Sizes:
6. Outlet sizes:
7. Covers:
   7.1. Product reference:
   7.2. Type:
   7.3. Material:
   7.4. Sizes:
   7.5. Loading grade to BS EN 124:
8. Silt buckets:
   8.1. Product reference:

54 Access points – plastics

1. Description:
2. Standard: To BS 4660 and Kitemark-certified, to BS EN 13589-1, or Agrément-certified.
3. Manufacturer:
4. Nominal diameter:
5. Bases
   5.1. Product reference:
6. Raising pieces
   6.1. Product reference:
   6.2. Heights:
7. Access covers and frames
   7.1. Product reference:
   7.2. Loading grades to BS EN 124:

58 Installation of access covers and frames

1. Seating:

2. Bedding and haunching of frames: Continuously.
   2.1. Material:
   2.2. Top of haunching: 30 mm below surrounding surfaces.
3. Horizontal positioning of frames
   3.1. Centred over openings.
   3.2. Square with joints in surrounding paving.
4. Vertical positioning of frames
   4.1. Level; or
   4.2. Marry in with levels of surrounding paving.
5. Permissible deviation in level of external covers and frames:: +0 to -6 mm.

64 Inspection chambers – plastics

1. Description:
2. Standard: To BS EN 13598-1, BS EN 13598-2 or Agrément-certified.
3. Diameter:
4. Manufacturer:
   4.1. Bases
      4.1.1. Product reference:
   4.2. Shaft units
      4.2.1. Product reference:
5. Access covers and frames
   5.1. Product reference:
   5.2. Loading grades to BS EN 124:

64 Plastics access chambers Type A

1. Description:
2. Manufacturer: Wavin Ltd
   2.1. Contact details
      2.1.1. Address: Wavin Registered Office
      Edlington Lane
      Edlington
      Doncaster
      South Yorkshire
      DN12 1BY
      2.1.2. Telephone: +44 1709 856300
      2.1.3. Web: www.wavin.co.uk
      2.1.4. Email: info@wavin.co.uk
   2.2. Bases
      2.2.1. Product reference: Wavin Inspection Chambers (DN 450 range)
   2.3. Shaft units
3. Standard:
4. Material: Polypropylene (PP).
5. Sizes (nominal): 450 mm.
6. Preformed bases:
7. Integral accessories:

8. Access covers and frames

64 Plastics access chambers Type B

1. Manufacturer: Wavin Ltd
   1.1. Contact details
      1.1.1. Address: Wavin Registered Office
      Edlington Lane
      Edlington
      Doncaster
      South Yorkshire
      DN12 1BY
      1.1.2. Telephone: +44 1709 856300
      1.1.3. Web: www.wavin.co.uk
      1.1.4. Email: info@wavin.co.uk
   1.2. Bases
      1.2.1. Product reference: Wavin Inspection Chambers (DN 200 range)
2. Standard:
3. Material: Polypropylene (PP).
4. Sizes (nominal):
5. Preformed bases:
6. Integral accessories:

66 Soakaway system – Granular fill

1. Description:
2. Rainwater drainage sources:
3. Foul drainage sources:
4. Soakaways:
   4.1. Accessories:
5. Pipes, bends and junctions:

67 Design – Soakaway systems

1. Design: Complete the design of the soakaway system in accordance with BRE Digest 365.
2. Ground conditions:
3. Required percolation rate:
4. Design life of system:
5. Proposals: Submit drawings, technical information, calculations and manufacturers' literature.
6. Maintenance requirements: Submit details.

79 Access covers and frames

1. Description: All inspection chambers
2. Standard: To BS EN 124.
3. Types:
4. Manufacturer: Contractor's choice
   4.1. Product reference:
5. Material: Ductile cast iron

6. Finishes:
7. Sizes: 600 x 450 mm
8. Loading grades to BS EN 124: B125

84 Testing and inspection

1. Dates for testing and inspection: Give notice.
   1.1. Period of notice:

85 Initial testing of pipelines

1. Before testing
   1.1. Cement mortar jointing: Leave 24 h.
   1.2. Solvent welded pipelines: Leave 1 h.
2. Method: Block open ends of pipelines to be tested and pressurise. Air test short lengths to BS EN 1610.

88 Final testing of private gravity drains and sewers up to dn 300

1. Before testing
   1.1. Cement mortar jointing: Leave 24 h.
   1.2. Solvent welded pipelines: Leave 1 h.
2. Standard: To Building Regulations.
3. Method:

89 Water testing of manholes and inspection chambers

1. Timing: Before backfilling.
2. Standard
   2.1. Exfiltration: To BS EN 1610.
   2.2. Method: Testing with water (method W).
   2.3. Infiltration: No identifiable flow of water penetrating the chamber.

91 Backfilling to pipelines

1. Backfilling above top of surround or protective cushion: Material excavated from trench, compacted in layers 300 mm (maximum) thick.
2. Heavy compactors: Do not use before there is 600 mm (total) of material over pipes.

94 Backfilling under roads and pavings

1. Backfilling from top of surround or protective cushion up to formation level: Granular sub-base material, laid and compacted in 150 mm layers.

97 Removal of debris and cleaning

1. Preparation: Lift covers to manholes, inspection chambers and access points. Remove mortar droppings, debris and loose wrappings.
   1.1. Timing: Before cleaning, final testing, CCTV inspection if specified, and immediately before handover.
2. Cleaning: Thoroughly flush pipelines with water to remove silt and check for blockages. Rod pipelines between access points if there is any indication that they may be obstructed.
3. Washings and detritus: Do not discharge into sewers or watercourses.

4. Covers: Securely replace after cleaning and testing.

Ω End of Section

Z12
Preservative/ flame-retardant treatment

To be read with preliminaries/ general conditions.

110 Treatment application

1. Timing: After cutting and machining timber, and before assembling components.
2. Processor: WPA Benchmark-accredited for the specified treated components.

120 Commodity specifications

1. Standard: In accordance with the Wood Protection Association (WPA) publication 'Code of practice: Industrial Wood Preservation'.

210 Flame-retardant treatment

1. Description: To birch-faced ply panelling
2. Standard: In accordance with the Wood Protection Association (WPA) publication 'Industrial flame retardant treatment of wood and wood-based panel products'.
3. Solution type: INT 1.
   - 3.1. Manufacturer: Thermoguard or other equal approved.
     - 3.1.1. Product reference: Thermoguard fireproofing (class 0) and 1 coat Thermoguard Satin Finish.
4. Moisture content of wood
   - 4.1. At time of treatment: As specified for the timber/ component at time of fixing.
   - 4.2. After treatment (INT 1 only): Timber to be re-dried slowly at temperatures not exceeding 60°C to minimize distortion and degradation.

620 Making good to flame-retardant treatment on site

1. Flame-retardant: Compatible with off-site treatment.
2. Application: In accordance with flame-retardant manufacturer's recommendations.

Ω End of Section

Z20
Fixings and adhesives

Products

310 Fasteners generally

1. Materials: To have:
   1.1. Bimetallic corrosion resistance appropriate to items being fixed.
   1.2. Atmospheric corrosion resistance appropriate to fixing location.
2. Appearance: Submit samples on request.

320 Packings

1. Materials: Non-compressible, corrosion proof.
2. Area of packings: Sufficient to transfer loads.

340 Masonry fixings

1. Light duty: Plugs and screws.
2. Heavy duty: Expansion anchors or chemical anchors.

350 Plugs

1. Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

390 Adhesives generally

1. Standards
   1.1. Hot-setting phenolic and aminoplastic: To BS 1203.
   1.2. Thermosetting wood adhesives: To BS EN 12765.
   1.3. Thermoplastic adhesives: To BS EN 204.

Execution

610 Fixing generally

1. Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
2. Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.
3. Appearance: Fixings to be in straight lines at regular centres.

620 Fixing through finishes

1. Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

630 Fixing packings

1. Function: To take up tolerances and prevent distortion of materials and components.
2. Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
3. Locations: Not within zones to be filled with sealant.

640 Fixing cramps

1. Cramp positions: Maximum 150 mm from each end of frame sections and at 600 mm maximum centres.
2. Fasteners: Fix cramps to frames with screws of same material as cramps.
3. Fixings in masonry work: Fully bed in mortar.

670 Pelleted countersunk screw fixing

1. Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
2. Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
3. Finished level of pellets: Flush with surface.

680 Plugged countersunk screw fixing

1. Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
2. Plugs: Glue in to full depth of hole.
3. Finished level of plugs: Projecting above surface.

700 Applying adhesives

1. Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
    1.1. Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
2. Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Ω End of Section

Z21
Mortars

Cement gauged mortars

160 Cements for mortars

1. Cement: To BS EN 197-1 and CE marked.
   1.1. Types: Portland cement, CEM I.
2. Portland limestone cement, CEM ll/A-L or CEM ll/A-LL.
3. Portland slag cement, CEM II/B-S.
4. Portland fly ash cement, CEM II/B-V.
   4.1. Strength class: 32.5, 42.5 or 52.5.
5. White cement: To BS EN 197-1 and CE marked.
   5.1. Type: Portland cement, CEM I.
   5.2. Strength class: 52.5.
6. Sulfate resisting Portland cement
   6.1. Types: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
7. To BS EN 197-1 fly ash cement, CEM ll/B-V and CE marked.
   7.1. Strength class: 32.5, 42.5 or 52.5.
8. Masonry cement: To BS EN 413-1 and CE marked.
   8.1. Class: MC 12.5.

180 Admixtures for site made cement gauged mortars

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

210 Making cement gauged mortars

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

Lime:sand mortars - Not Used

Ω End of Section

Specification created using NBS Chorus