

1485



1485  
Scope of Works  
Pavilion  
Bishop's Itchington, Southam

**ATARCHITECTS** 

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This document has been prepared and checked in accordance with AT Architects Quality Management Policy.

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02				
03				
04				
05				

Comments

00 Draft/Preparation  
01 First Issue  
02  
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04  
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## **1.0 CONTRACTORS PROPOSALS**

The contractor's proposals are to provide a fixed sum tender in accordance with the tender and project requirements as identified within the ITT and contract preliminaries document.

The contractor will enter into a contract to design and construct the proposed works as set out in the tender documentation as being the employers requirements. It is the contractors responsibility to check and verify the Employers Requirements prior to entering into a contract.

### **1.01 Required Information on return**

The contractor is to comply fully with the requirements of the ITT.

## **2.0 SCOPE OF WORKS**

### **2.01 Site**

Sports Pavilion at Playing Fields,  
Chapel Street,  
Bishops Itchington  
CV 47 2 TG

### **2.02 The Works**

A new sports pavilion including changing rooms, W Cs and club meeting room to replace the existing building following its demolition. The proposal also includes additional parking to the front of the pavilion. Associated external works and drainage.

### **3.0 STATUTORY APPLICATION AND SUBMISSIONS**

#### **3.01 Planning Applications**

The employer has made an application for planning permission. It is the contractors responsibility to make applications and discharge all conditions of the planning permission. Also pay due regard to, and action as required the Notes and guidance attached to the application.

#### **3.01 Building Regulations**

The Contractor is to appoint the Local Authority to undertake the Building Regulations Application, submission of information and the application of required notices.

#### **3.02 CDM**

The contractor is to advise the employer of their obligations under the CDM (Construction, Design and Management) Regulations 2015.

The contractor will be appointed as 'Principal Contractor' and fore fill the requirements of the regulations as such. AT Architects Limited have been appointed by the employer to fore fill the role of 'Principal Designer'. The contractor is to advise the employer and Principal Designer if the works will meet the requirements for the project to be notifiable.

#### **3.03 Other Statutory Applications**

The contractor is to apply for all statutory applications and notices required to complete the works. Including incoming statutory services.

### **3.04 Surveys & Investigations**

The contractor is to undertake all survey and investigations as required and to be included as part of the contractor's proposals. The employer to make available to the contractor the any available Asbestos Reports, Ground Investigation reports and other such surveys and reports previously undertaken. A targeted demolition asbestos report has been completed. Any finds which require attention or removal are to be excluded from this tender and will be additional to the contract.

Contractor is to survey the existing drainage and ensure that all existing / proposed drainage is cleared and surveyed on completion.

### **4.0 SITE VISIT**

The contractor is to visit site and take into account all necessary items to fully implement the proposed works.

### **5.0 STANDARDS**

The design has been developed with due regard to the Design Information from Sport England for Pavilion Design Guidance. The design does not meet all elements of the design guidance and therefore the contractor should identify and provide a 'Derogation' schedule as part of the contractors design for approval of the Parish Council.

The schedule should refer to the Pavilion and not the surrounding parking or playing fields. The schedule should identify deviations from space standards and where facilities have not been provided. Also note any Mechanical and Electrical variances.

All materials are to be proved fit for incorporation in the works by conformity with the relevant provisions of an appropriate British Standard and/or conformity with the relevant standards set out in on agreement issued by the B.B.A. Workmanship shall be carried out in

accordance with the recommendations of an appropriate British Standard Code of Practice and/or with the recommendation for use contained in an appropriate Agrément Certificate.

All works to meet the requirements of the Approved Documents and the contractor should confirm with the Local Authority that, where not specified by reference to a particular manufacturer, materials, and workmanship are appropriate for the locality and that, where necessary, approval of such materials/workmanship obtained from the Local Authority Building Inspector. Electrical installation to be carried out by an approved contractor to IEE regulations.

The contractor must comply with any Local authority water management and contractor control procedures along with water by-laws in place. Ensure compliance with Water Fittings (Water Supply) Regulations.

BWIC: Include for all service penetrations and flashing as required to seal and maintain weather tightness, air permeability, U-values and fire resistance. Reinstate as required to areas of redundant services subsequently removed around the site.

## **6.0 DEMOLITION**

Demolish and strip back / reduce level of the area of works as required. Make good to all areas following demolition and strip out to receive works and finishes as required by employer.

Remove all redundant services and make good to surfaces and finishes. Cap services as required and identify on drawings along with hidden services for the Health and Safety File.

Construct enclosures, provide finishes, fixtures and fittings as described in the documents to complete the works.

## 7.0 CONTRACTORS DESIGN

The contractor's proposals to include for all elements of the design. In summary to include the following elements but not limited to:

Civil and Structural design.

Structural frame.

Envelope completion including brickwork, cladding, glazing and access doors.

Internal fit out.

External works.

Underground Services and Below Ground Drainage:

MEP:

Electrical Installation:

Layout, number and type of fittings all to be agreed with prior to installation. All services are to be hidden. Contractor to allow for all access panels requirements to walls and ceilings for services maintenance.

Fire Alarm & Emergency Lighting; Data - All data wiring and installation; containment for CCTV / Security.

Mechanical:

Contractor is to supply, install, connect and commission as indicated the Mechanical installations to include hot and cold water services, heating and Ventilation. All pipework MUST be concealed and if this is not possible then by pre-formed LST boxing. Contractor to allow for all access panels requirements to walls and ceilings for services maintenance.

Underground Services and Below Ground Drainage:

Underground Services and Drainage are approximate and shown indicatively. Contractor to confirm positions. All Levels taken from existing drawing information and to be confirmed

onsite before commencement of works on site. Contractor to co-ordinate survey information and existing building services locations prior to commencement. All below ground drainage in strict compliance with Part H of the Building Regulations. CCTV Survey undertaken of drainage prior to works and after commissioning.

The contractor MUST allow for all excavation and associated making good works to locate and connect to the existing drainage system. Contractor is to supply, install, connect and commission as indicated. Connecting to and amending the existing foul waste drainage. All covers and grilles to be screw down locking.

Above Ground Drainage:

Proposed new above ground drainage layout, the contractor is to allow for providing all required traps, connections and waste pipework to the specified diameter to serve the sanitaryware specified and ensure that all above ground drainage is provided in accordance with the layout identified and in full compliance with Part H of the Building Regulations.

The contractor is to ensure all waste pipework is of the same manufacture style/profile and of a white finish. All above ground drainage MUST be appropriate supported/fixed and concealed. Where this is not possible the contractor is to allow for contour casings / whiterock boxing (or similar approved) casings to conceal all pipework ensuring the relevant sections remain accessible for future maintenance.

## **8.0 DOCUMENTS AND EMPLOYERS REQUIREMENTS**

### **8.01 As identified within the ITT Documentation.**



## 9.0 LIMITED SPECIFICATION

At Architects Limited

Bishops Itchington Pavilion

# Bishops Itchington Pavilion

Bishops Itchington Pavilion

23-07-2021

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# B15

## Prefabricated framed constructions

### Clauses

#### 100 A TIMBER FRAMED STRUCTURES

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1. • EMPLOYERS REQUIREMENTS: Refer to Solo Timber Frame Limited The Old Dairy, Hodore Farm, Hartfield, East Sussex, TN7 4AR, Drawings and NBS specification.
  - Dimensions: Refer to Architects General Arrangement drawings.
  - Flooring/ Decking: As sub-contractor's design.
  - Frame: As sub-contractor's design.
  - Panels: As sub-contractor's design.
  - Roof: As sub-contractor's design.
  - Method of fixing to ground or base: As sub-contractor's design.
  - Services requirements: Provide all required services.

#### 105 A DESIGN

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1. Design responsibility: Design and detail for prefabrication off site and erection onsite.
  - Including: Fabric and structure, fixings between elements, anchorage to supporting structure and functionality.
2. Structural and fire requirement:
  - Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.
3. Design and production information: As Preliminaries sections. Timing of submissions: As Preliminaries section A31 .

#### 110 A ERECTION/ INSTALLATION GENERALLY

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1. Frameworks: Assemble and brace, including temporary members required for installation.
2. Contact between dissimilar metals: Avoid.
3. Temporary support: Do not subject members to non-design loadings.

#### 115 A ELECTRICAL AND DATA SERVICES

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1. Services connection required: Refer to M&E Specification and scope of works documents.
2. Standard: To BS 7671.
3. Coordinate with services trades.

#### 120 A SITE PAINTING AND STAINING

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1. Timing: Prepare surfaces and apply finishes as soon as possible after installing components

#### 125 A MAKING GOOD TREATED TIMBER

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1. Surfaces exposed by minor cutting and/ or drilling: Treat by immersion or apply two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.
2. Heavily worked sections: Re-treat.
3. Cutting and machining: Cut and machine timber as much as possible before treatment.
4. Extensively processed timber: Retreat timber sawn lengthways, planed, ploughed, etc.

#### 130 A DOCUMENTATION

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1. Contents:
  - General product information.

- Installation information.
  - Inspection and maintenance reports.
2. Number of copies: As Preliminaries.
  3. Submission: As Preliminaries.

Ω End of Section

## C20 Demolition

To be read with preliminaries/ general conditions.

### 5 Desk study/ survey

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1. **Scope:** Before starting deconstruction/ demolition work, examine available information, and carry out a survey of: the existing pavilion changing facility.
  - 1.1. the structure or structures to be deconstructed/ demolished,
  - 1.2. the site on which the structure or structures stand, and
  - 1.3. the surrounding area.
2. **Report and method statements:** Submit, describing: form, condition and details.
  - 2.1. Form, condition and details of the structure or structures, the site and the surrounding area.
    - 2.1.1. **Extent:** Existing Pavilion and car parking taking into account the area of new works and drainage connections.
  - 2.2. Type, location and condition of features of historical, archaeological, geological or ecological importance.
  - 2.3. Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures or by noise, vibration and/ or dust generated during deconstruction/ demolition.
  - 2.4. Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
  - 2.5. Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
  - 2.6. Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
  - 2.7. Proposed programme of work, including sequence and methods of deconstruction/ demolition.
  - 2.8. Details of specific pre-weakening required.
  - 2.9. Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
  - 2.10. Arrangements for control of site transport and traffic.
  - 2.11. **Special requirements:** Details of services supplied by the Statutory Authority Results of tests to determine the precise nature of hazardous materials
3. **Format of report:** Electronic submissions (including digital or analogue photographs).

### 10 Extent of deconstruction/ demolition

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

### 13 Groundworks

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1. **Old foundations, slabs and the like:** Break out in locations and to the extents stated.
2. **Contaminated material:** Remove, and carry out remediation required by the Enforcing Authority.

### 15 Bench marks

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

## 20 Features to be retained

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1. **General:** Keep in place and protect the following: Trees noted on drawings, protect in accordance with BS 5837 and hedge row.

## 25 Location of services

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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 National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

## 30 Services disconnection arranged by contractor

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

## 32 Disconnection of drains

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1. **General:** Locate, disconnect and seal disused foul and surface water drains.
2. **Sealing:** Permanent, and within the site.

## 35 Live foul and surface water drains

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

## 40 Service bypass connections

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1. **General:** Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/ properties.
2. **Minimum notice to adjoining owners and all affected occupiers:** 72 hours, if shutdown is necessary during changeover.

## 45 Services to be retained

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1. **Damage to services:** Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
2. **Repairs to services:** Complete as directed, and to the satisfaction of the service authority or owner.

## 50 Workmanship

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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 CITB Certificates of Competence.
3. **Site staff responsible for supervision and control of work:** Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

## 55 Site hazards

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1. **Precautions:** Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.



2. **Dust:** Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
  - 2.1. **Lead dust:** Submit method statement for control, containment and clean-up regimes.
3. **Site operatives and general public:** Protect from health hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

## **71 Dangerous openings**

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

## **76 Asbestos-containing materials – unknown occurrences**

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

## **78 Unforeseen hazards**

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

## **80 Open basements, etc.**

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1. **Temporary support:** Leave adequate buttress walls or provide temporary support to basement retaining walls up to ground level.
2. **Safety:** Make the remaining sections of retaining and buttress walls safe and secure.
3. **Water movement:** Make holes in basement floors to allow water drainage or penetration (depending on water table). Provide a hole for every 10 m<sup>2</sup>, not less than 600 mm in diameter.

## **81 Filling of basements, etc**

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1. **Temporary support:** Leave adequate buttress walls or provide temporary support to basement retaining walls up to ground level.
2. **Water movement:** Make holes in basement floors to allow water drainage or penetration (depending on water table). Provide a hole for every 10 m<sup>2</sup>, not less than 600 mm in diameter.
3. **Filling:** Remove organic material and soil from basements and other voids. Fill and consolidate with hardcore as section D20.

## **85 Site condition at completion**

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1. **Debris:** Clear away and leave the site in a tidy condition.
2. **Other requirements:** None

## **86 Site surface at completion**

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

## **90 Contractor's property**

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

## 95 Recycled materials

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1. **Materials arising from deconstruction/ demolition work:** Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
2. **Evidence of compliance:** Submit full details and supporting documentation.
  - 2.1. **Verification:** Allow adequate time in programme for verification of compliance.

Ω End of Section

# F10

## Brick/ block walling

### Clauses

#### 5 Facing brickwork

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1. Description: MATCHING ENGINEERING BRICKWORK BELOW DPC
2. Bricks: To BS EN 771-1.
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1.Product reference: Contractor's choice
  - 2.2. Recycled content: Contractor's choice
  - 2.3. Special shapes: As required to complete the design.
3. Mortar: As section Z21.
  - 3.1. Standard: To BS EN 998-2
  - 3.2. Mix: 1:3 masonry cement:sand
4. Bond: Half lap stretcher
5. Joints: To be Approved

#### 5 Facing brickwork Type A

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1. Description: RED BRICK TO EXTERNAL WALLS BETWEEN DPC BRICKWORK AND CAPPING / EAVES - MATCHING LOCAL BRICK TO BE APPROVED
2. Bricks: To BS EN 771-1.
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1.Product reference: Contractor's choice
  - 2.2. Recycled content: Contractor's choice
  - 2.3. Special shapes: As required to complete the design.
3. Mortar: As section Z21.
  - 3.1. Standard: To BS EN 998-2
  - 3.2. Mix: 1:6½ masonry cement:sand
4. Bond: Half lap stretcher
5. Joints: To be Approved

#### 18 Concrete facing blockwork

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1. Description: GENERAL
2. Blocks: To BS EN 771-3.
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1.Product reference: Contractor's choice
  - 2.2. Configuration: Group 1
  - 2.3. Compressive strength: 7.3 N/mm<sup>2</sup>
    - 2.3.1.Category: I
  - 2.4. Freeze/ thaw resistance: Frost resistant
  - 2.5. Recycled content: Contractor's choice
  - 2.6. Work sizes (length x width x height): As required
    - 2.6.1.Tolerance category: D2
3. Mortar: As section Z21.

- 3.1. Standard: To BS EN 998-2
- 3.2. Mix: 1:3 masonry cement:sand
- 4. Bond: Half lap stretcher
- 5. Joints: Bucket handle
- 6. Features: None

## 45 Engineering brickwork

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- 1. Description: IN MANHOLES
- 2. Bricks: To BS EN 771-1.
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1. Product reference: Contractor's choice
  - 2.2. Mean compressive strength: Greater than or equal to 125 N/mm<sup>2</sup>
  - 2.3. Category: I
  - 2.4. Water absorption: Equal to or less than 4.5%
  - 2.5. Freeze/ thaw category: F2.
  - 2.6. Active soluble salts content category: S2.
  - 2.7. Additional requirements: None
- 3. Mortar: As section Z21.
  - 3.1. Standard: Not applicable
  - 3.2. Mix: Site batched and mixed mortar: Select from: 1:¼:3 cement:lime:sand 1:½:4.5 cement:lime:sand
  - 3.3. Additional requirements: None
- 4. Bond: Half lap stretcher
- 5. Joints: Flush.

## 51 Basic workmanship

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- 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 perpend: 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

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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.

## 60 Alterations/ Extensions

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1. Coursing: Line up with existing work.
2. Block bonding new walls to existing: Unless agreed otherwise cut pocket requirements as follows:
  - 2.1. Width: Full thickness of new wall.
  - 2.2. Depth (minimum): 100 mm.
  - 2.3. Vertical spacing: As follows:
  - 2.4. Brick to brick: 4 courses high at 8 course centres.
  - 2.5. Block to block: Every other course.
  - 2.6. Pocket joints: Fully filled with mortar.
3. New and existing facework in the same plane: Bonded together at every course to achieve continuity of bond and coursing.
4. Support of existing work: Fully consolidate joint above inserted lintel or masonry with semidry mortar to support existing structure.

## 66 Fire stopping

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

Ω End of Section

## **F30**

### **Accessories/ sundry items for brick/ block/ stone walling**

To be read with preliminaries/ general conditions.

#### **5 Cavities**

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1. Concrete fill to base of cavity:
2. Concrete generally: To BS EN 206 and BS 8500-2.
3. Concrete type: Designated GEN1
  - 3.1. Workability: High.
4. Extent: Maintain 75 mm between top of fill and external ground level and a minimum of 225 mm between top of fill and ground level dpc.
5. Placement: Compact to eliminate voids.
6. Cleanliness: Keep cavity faces, ties and dpcs free from mortar and debris.

#### **8 Perpend joint plastics weep holes**

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1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice
2. Locations: Through outer leaf, immediately above base of cavity at cavity trays, stepped dpcs and external openings. 75 mm above top of cavity fill at base of cavity.
3. Provision: At not greater than 1000 mm centres and not less than two over openings.

#### **15 Air bricks in external walling**

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1. Standard: To BS 493, class 1.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Contractor's choice
3. Apertures: Rectangular hole
4. Work sizes: 215 x 65 mm
5. Material/ colour: To match
6. Placement: Built in with no gaps at joints.

#### **17 Ventilation ducts in external walling**

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1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Submit proposals
2. Placement: Across cavity, sloping away from inner leaf. Full mortar joints to seal cavity.
3. Protection from water penetration to inner leaf: Where barrier is not integral to duct, form stepped dpc cavity tray with stop ends above duct, extending 150 mm on each side.

#### **18 Cavity closers**

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1. Description: Co-ordinate with Frame design.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Contractor's choice
3. Accessories: To include integral dpc To include integral fixing cramp To include integral insulation

## 24 Cavity wall ties

---

1. Description: FOR BRICKWORK FACING TO TIMBER FRAMES. Co-ordinate with timber frame design requirements.
2. Standard: To BS EN 845-1.
  - 2.1. Type: 2 (Masonry general purpose)
3. Manufacturer: Contractor's choice
  - 3.1. Product reference: Contractor's choice
4. Material/ finish: Austenitic stainless steel - material/ coating reference 3
5. Sizes: To suit requirements
6. End types: To suit requirements
7. Embedment length (minimum): 50 mm
8. Movement: Tolerant
9. Additional requirements: Refer to timber frame design requirements.

## 28 Fixing ties in masonry cavity walls

---

1. Embedment in mortar beds (minimum): 50 mm.
2. Placement: Sloping slightly downwards towards outer leaf without bending. Drip centred in the cavity and pointing downwards.
3. Spacing: Staggered in alternate courses.
4. Horizontal centres: 900 mm
5. Vertical centres: 450 mm
6. Provision of additional ties: Within 225 mm of reveals of unbonded openings and at the vertical reveals of unsupported masonry At the vertical edges of openings and at vertical unreturned or unbonded edges.
7. Spacing: At not more than 300 mm centres vertically

## 37 Fixing ties in masonry cladding to timber frames

---

1. Fixing ties to timber frame studs through sheathing: Securely with 50 mm x 11 gauge stainless steel annular ringed shank nails.
2. Embedment in mortar beds (minimum): 50 mm.
3. Placement: Slope downwards away from timber frame without bending.
4. Spacing
  - 4.1. Horizontal centres: To suit stud centres.
  - 4.2. Vertical centres: 375 mm or to suit frame design requirements
5. Provision of additional ties: Within 225 mm of reveals of openings and at not more than 300 mm centres vertically.

## 44 Damp-proof course – bitumen based

---

1. Standard: To BS EN 14967, BS 6398 and BS 743
2. Type: Bitumen polymer
3. Manufacturer: Contractor's choice
  - 3.1. Product reference: Contractor's choice

## 52 Site formed flexible sheet cavity trays

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice

## **54 Gas resistant dpcs/ cavity trays**

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice

## **56 Preformed cavity trays**

---

1. Manufacturer: Contractor's choice
  - 1.1. Product references and locations: Contractor's choice

## **58 Preformed dpc/ cavity tray junction cloaks/ stop ends**

---

1. Manufacturer: Contractor's choice
  - 1.1. Product references and locations: Contractor's choice
2. Placement: Seal all laps with dpcs and/ or cavity trays to provide a free draining and watertight installation.

## **66 Installation of horizontal dpcs**

---

1. Placement: In continuous lengths on full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.
2. Width: At least full width of masonry leaf. Edges of dpc not covered with mortar or projecting into cavity.
3. Overlying construction: Immediately cover with full even bed of mortar to receive next masonry course.
4. Overall finished joint thickness: As close to normal as practicable.
5. Ground level dpcs joint with damp-proof membrane: Continuous and effectively sealed.
6. Low level dpcs in external walls: Install not less than 150 mm above adjoining finished ground level.
7. Sill dpcs form and placement: In one piece and turned up at the back when the sill is in contact with inner leaf.
8. Dpcs crossing cavity: Provide support to prevent sagging.

## **68 Sealing of dpcs**

---

1. Description: GENERALLY
2. Overlaps and junctions: Seal with Adhesive recommended by dpc manufacturer .

## **72 Installation of gas resistant dpcs/ cavity trays**

---

1. Joint treatment: Use continuous length wherever possible, otherwise lap at least 150 mm and seal to form gas and watertight installation.
2. Joint with damp-proof membrane: Overlap dpc/ cavity tray not less than 150 mm.

## **74 Installation of vertical dpcs**

---

1. Form: In one piece wherever possible.
  - 1.1. Joints: Upper part overlapping lower not less than 100 mm.
2. Dpcs to jambs of openings: Fully lap behind cavity tray/ lintel at head and over horizontal dpc at sill. Project not less than 25 mm into cavity and maintain full contact with frames.
3. Fixing of jamb dpcs to back of built in timber frames: Secure using galvanized clout nails or staples.

## **75 Installation of site formed cavity trays**

---

1. Requirements to prevent downward ingress of water



- 1.1. Profiles: To match those shown on drawings. Firmly secured.
- 1.2. Joint treatment: Use continuous length wherever possible, otherwise lap at least 100 mm and seal to produce a free draining and watertight installation.
- 1.3. Horizontal cavity trays: Support using cavity closer.
- 1.4. Sloping cavity trays: Prevent sagging.
- 1.5. Cleanliness: Free from debris and mortar droppings.

## **76 Movement joints with sealant**

---

1. Joint preparation and sealant application: As section Z22.
2. Filler: Neoprene foam
  - 2.1. Placement: Build in as work proceeds ensuring no projections into cavities and to correct depth to receive sealant system.
3. Sealant: ISO 11600-F-20HM
  - 3.1. Colour: To match adjoining brickwork

## **78 Fire-resisting movement joints without sealant**

---

1. Description: TO EXTERNAL FACING BRICKWORK
2. Fire resistant filler
  - 2.1. Fire resistance period: 60 Minutes
  - 2.2. Manufacturer: Contractor's choice
    - 2.2.1. Product reference: Contractor's choice
  - 2.3. Placement: Compress and insert into place in open joint.
  - 2.4. Adhesives and accessories: Types recommended by filler manufacturer.

Ω End of Section

# G12

## Isolated structural metal members

### Clauses

#### 10 Steel sections and plate

---

1. Section properties and dimensions: To BS EN 10055, BS EN 10056, BS EN 10210-2 or BS EN 10365, as appropriate.
  - 1.1. Steel: To BS EN 10025-2 or BS EN 10210-1, as appropriate.
    - 1.1.1. Grade: S275JR S275J0
  - 1.2. Surface condition: Free from heavy pitting and rust, burrs, sharp edges and flame cutting dross.
2. Cuts and holes: Accurate and neat.
3. Welding: Metal arc method to BS EN 1011-2.
  - 3.1. Welded joints: Fully fused, with mechanical properties not less than those of the parent metal.
  - 3.2. Site welding: Obtain approval.

#### 20 Shop priming

---

1. Description: GENERALLY
2. Preparation: To BS EN ISO 12944-4. Remove fins, burrs, sharp edges and weld spatter, clean out crevices
  - 2.1. Surface finish: Manually cleaned to BS EN ISO 8501-1, grade St 2.
  - 2.2. Prepared surfaces: Keep in a dry atmosphere and apply first coating without delay.
3. Priming
  - 3.1. Primer: One coat zinc phosphate modified alkyd, minimum dry film thickness 40 micrometres.
  - 3.2. Application: To BS EN ISO 12944-7.

#### 40 Installation

---

1. Accuracy: Members positioned true to line and level using, if necessary, steel packs of sufficient area to allow full transfer of loads to bearing surfaces.
2. Fixing: Use washers under bolt heads and nuts.
  - 2.1. Tapered washers: Provide under bolt heads and nuts bearing on sloping surfaces. Match taper to slope angle and align correctly.

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: Contractor's choice in accordance with UK Government timber procurement policy (UKTPP), i.e. FSC, GiB or PEFC

#### 3 Contractors Design Structural A

---

1. Design responsibility:  
Design and detail limited areas of timber ceiling, floors and internal walls/framing.
2. Design:  
Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.  
Service class: 2.  
Additional requirements: None.
3. Design and production information:  
Drawings: Showing Drawings & calculations as required by Engineer / Building Control.

#### 5 Structural softwood

---

1. Description: FOR STRUCTURAL USE GENERALLY
2. Grading standard: To the appropriate BS EN 14081-1-compliant standard.
  - 2.1. Grade: SS to BS 4978 GS to BS 4978
3. Strength class to BS EN 338: C24
4. Treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8, Service life: 40 years Flame retardant impregnation to NBS section Z12 and Wood Protection Association Commodity Specification FR2, Type INT1

#### 30 Selection and use of timber

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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 such that the strength of members will not be reduced.
2. Scarf joints, finger joints and splice plates: Do not use without approval.

### **35 Processing treated timber**

---

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

### **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%.

### **43 Bolted joints**

---

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

### **50 Additional supports**

---

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

### **55 Joists generally**

---

1. **Centres:** Equal, and not exceeding designed spacing.
2. **Bowed joists:** Installed with positive camber.
3. **End joists:** Positioned about 50 mm from masonry walls.

### **60 Joists on hangers**

---

1. **Hangers:** Bedded directly on and hard against supporting construction. Do not use packs or bed on mortar.
2. **Joists:** Cut to leave not more than 6 mm gap at each end. Rebated to lie flush with underside of hangers.
3. **Fixing to hangers:** A nail in every hole.

### **70 Trimming openings**

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1. **Trimmers and trimming joists:** Not less than 25 mm wider than general joists.

### **75 Trussed rafter installation**

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1. **Erection:** To Trussed Rafter Association site installation guide.
2. **Trusses generally:** Do not modify without approval.
3. **Damaged trusses:** Do not use.

4. **Fixing:** With truss clips. Bottom chords of standard trusses and rafters of raised tie trusses bearing fully on wall plates.
5. **Bottom chords of standard trusses:** Do not fix to internal walls until roofing is complete and cisterns are installed and filled.

## **98 Eaves soffit ventilation**

---

1. **Soffit boards:** Fixed to leave a continuous ventilation opening not less than 10 mm wide for full length of eaves.
2. **Insect mesh:** 3-4 mm mesh screen fixed across the opening to prevent large insect entry.

## **99 Fascias/ barges/ soffits**

---

1. **Description:** ALUMINIUM
2. **Manufacturer:** Contractor's choice
  - 2.1. **Product reference:** Contractor's choice
3. **Material:** Pressed aluminium sheet
4. **Finish:** Polyester powder coated
5. **Colour:** Refer to drawings
6. **Nominal depth:** Refer to drawings
7. **Edge profile:** Square
8. **Accessories/ Other requirements:** External corner trims Internal corner trims Pre-formed ventilation slots Soffit end closures Stop end caps
9. **Support:** 50 x 38 mm preservative treated softwood at maximum 400 mm centres on WPB Ply backing
10. **Fixings:** As contractor design
11. **Installer:** A contractor approved by the system manufacturer.

Ω End of Section

## H31

# Metal profiled/ flat sheet cladding/ Standing seam roof covering

## Clauses - Not Used

## Performance requirements - Not Used

## Types of cladding system

### 110 Envelope completion

---

1. Contractor design: Envelope completion.
2. To include all cladding, glazing requirements and cold steel to complete the design. Where
3. applicable submit proposals for approval. Allow for all U-Values, air tightness requirements,
4. manufacturer's details, support structures, flashings, trims, finishes etc.

### 140 Flat panel over cladding

---

1. Support structure: Contractor to complete design, refer to Structural Engineer's details and timber frame design
2. Cladding/ covering system type: Concealed fix.
3. External : Steel Cassette system to contractors design
4. Colour: Refer to drawings
5. Accessories: As required to complete installation. To include all secondary support.
6. Breather membrane: Type 3 to BS 4016.
7. U-value : over all wall construction 0.2 W/m<sup>2</sup>K.
8. Thermal insulation: Refer to wall build up
9. Vapour control layer: Refer to wall build up Virgin polyethylene sheet.
10. Additional requirements: Refer to wall build up

### 145 A Standing Seam Roof Covering (A)

---

1. Support structure: Contractor to complete design, refer to Structural Engineer's details and timber frame design
2. Cladding/ covering system type: Concealed fix.
3. External : Steel upstand zip tray system to contractors design
4. Colour: Refer to drawings
5. Accessories: As required to complete installation. To include all secondary support.
6. Breather membrane: Type 3 to BS 4016.
7. U-value : over all roof construction 0.14 W/m<sup>2</sup>K.
8. Thermal insulation: Refer to roof build up
9. Vapour control layer: Refer to roof build up Virgin polyethylene sheet.
10. Additional requirements: Refer to roof build up

### 170 Completion of design

---

1. Description: To include all aspects of Envelope completion and internal/external use of Metal
2. Requirement: Complete the detailed design to satisfy specified performance criteria and coordinate with the detailed design of related and adjacent work.

3. Design:
  - 3.1. Design standard: In accordance with BS 5427-1.
4. Structural requirements: As section B50.
5. Additional requirements: Contractor is responsible for the completion of the design of the building envelope. To submit details of any amendments to primary supporting structure and for secondary supporting structure additional to that shown on preliminary design drawings.
6. Design and production information: As Preliminaries section A31.
7. Timing of submissions: As Preliminaries section A31.

---

### **175 Product samples**

1. General: Before commencing detailed design, submit labelled samples of the following: All elements

### **Fixing cladding/ covering**

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### **215 Painting structure**

1. Sequence: Paint outer surface of supporting structure before fixing cladding/ covering.

---

### **219 Fasteners**

1. Unspecified fasteners: Recommended for the purpose by the cladding/ covering manufacturer.

---

### **221 Fittings and accessories**

1. Unspecified fittings and accessories: Recommended for the purpose by the cladding/ covering manufacturer.

---

### **223 Prevention of electrolytic action**

1. Isolating tape: Type recommended by cladding/ covering manufacturer.
  - 1.1. Location: To contact surfaces of supports and sheets of dissimilar metals.

---

### **410 Fixing sheets generally**

1. Cut edges: Clean true lines.
2. Penetrations: Openings to minimum size necessary.
  - 2.1. Edge reinforcement: Angles
3. Sheet orientation: Exposed joints of side laps away from prevailing wind unless shown otherwise on drawings.
4. Sheet ends, laps and raking cut edges: Fully supported and with fixings at top of lap.
5. Fasteners: Drill holes. Position at regular intervals in straight lines, centred on support bearings.
  - 5.1. Position of fasteners in oversized drilled holes: Central.
  - 5.2. Fasteners torque: Sufficient to correctly compress washers.
6. Debris: Remove dust and other foreign matter before finally fixing sheets.
7. Completion: Check fixings to ensure watertightness and that sheets are secure.
8. Cut edges: Paint to match face finish.

---

### **460 Accommodation of thermal movement**

1. Sheet type/ location: Generally
2. Method: Sliding fixings and fixed points

## **470 Structural movement joints**

---

1. Type: Cover flashing fixed on one side over gap between sheets.
2. Location: Coincident with structural movement joint.
3. Width of gap: To match structural movement joint requirements.
4. Requirement: Weathertight.

## **480 Flashings/ trims generally**

---

1. Lap joint treatment:
  - 1.1. Vertical and sloping flashings/ trims: End laps to be same as for adjacent sheeting.
  - 1.2. Horizontal flashings/ trims: End laps to be 150 mm, sealed and where possible arranged with laps away from prevailing wind.
2. Method of fixing: To structure in conjunction with adjacent sheeting. Otherwise to sheeting.
  - 2.1. Fasteners: As manufacturers requirements

## **550 Sealing laps on external sheets**

---

1. Sealant tape: Types recommended by sheet manufacturer.
  - 1.1. Position: Below fixing positions in straight unbroken lines, parallel to and slightly back from edge of sheet.
2. Seal quality: Effective, continuous and not overcompressed.
3. End laps: Sealant tape positions:
  - 3.1. Single line tape: Immediately below line of fasteners.
  - 3.2. Second line tape (where specified): Slightly set back from edge of external sheet.
4. Side laps: Sealant tape positions:
  - 4.1. Single line tape: Outside line of fasteners.
  - 4.2. Second line tape (where specified): On other side of fasteners.

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
  - 1.2. Finish on completion: Smooth, consolidated bed free of sharp projections.

## 20 Loose laid plastics or rubber sheet damp proofing Type A DPM Layer

---

1. Membrane
  - 1.1. Manufacturer: [Visqueen](#) Or Equal approved
    - 1.1.1. Contact details
      - 1.1.1.1. Address: Visqueen  
Heanor Gate Industrial Estate  
Heanor  
Derbyshire  
DE75 7RG
      - 1.1.1.2. Telephone: +44 (0) 333 202 6800
      - 1.1.1.3. Web: [www.visqueen.com](http://www.visqueen.com)
      - 1.1.1.4. Email: <mailto:?subject=NBS%20Chorus%20product%20enquiry>
    - 1.1.2. Product reference: [Visqueen EcoMembrane®](#) 300 µm (1200 gauge)
  - 1.2. Material: Low-density polyethylene (PE-LD).
  - 1.3. Purpose: Damp-proof membrane.
  - 1.4. Standard: CE Mark EN 13967:2017.
  - 1.5. Performance characteristics
    - 1.5.1. Elongation to break: 400%.
    - 1.5.2. Water vapour resistance (minimum): 586 MN·s/g.
    - 1.5.3. Fire performance: Grade F.
  - 1.6. Third-party certification: British Board of Agrément (BBA) Certificate, 94/3009.
  - 1.7. Form: Centre folded rolls.
  - 1.8. Physical properties
    - 1.8.1. Colour: Black.
    - 1.8.2. Dimensions
      - 1.8.2.1. Thickness (minimum): 300 µm (1200 gauge)
      - 1.8.2.2. Width (minimum): 4000 mm.
      - 1.8.2.3. Roll length (minimum):
  - 1.9. Recycled content: Fully recycled.
  - 1.10. Accessories: Double Sided Jointing Tape. Heavy Duty Protection Boards.
  - 1.11. Joint strength: 169 N.
  - 1.12. Impact resistance: 200 mm.

## 20 Loose laid plastics or rubber sheet damp proofing Type B Separating Layer

---

1. Membrane
  - 1.1. Manufacturer: [Visqueen](#) Or Equal approved

1.1.1. Contact details

1.1.1.1. Address: Visqueen  
Heanor Gate Industrial Estate  
Heanor  
Derbyshire  
DE75 7RG

1.1.1.2. Telephone: +44 (0) 333 202 6800

1.1.1.3. Web: [www.visqueen.com](http://www.visqueen.com)

1.1.1.4. Email: <mailto:?subject=NBS%20Chorus%20product%20enquiry>

1.1.2. Product reference: [Visqueen EcoMembrane®](#) 125 µm (500 gauge).

1.2. Material: Low-density polyethylene (PE-LD).

1.3. Purpose: Damp-proof membrane.

1.4. Standard: CE Mark EN 13967:2017.

1.5. Performance characteristics

1.5.1. Elongation to break: 400%.

1.5.2. Water vapour resistance (minimum): 586 MN·s/g.

1.5.3. Fire performance: Grade F.

1.6. Third-party certification: British Board of Agrément (BBA) Certificate, 94/3009.

1.7. Form: Centre folded rolls.

1.8. Physical properties

1.8.1. Colour: Black.

1.8.2. Dimensions

1.8.2.1. Thickness (minimum): 125 µm (500 gauge).

1.8.2.2. Width (minimum): 4000 mm.

1.8.2.3. Roll length (minimum):

1.9. Recycled content: Fully recycled.

1.10. Accessories: Double Sided Jointing Tape. Heavy Duty Protection Boards.

1.11. Joint strength: 169 N.

1.12. Impact resistance: 200 mm.

1.13. Water vapour transmission:

1.14. Application temperature:

## 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.

## 55 Angles in bonded damp proofing/ tanking

---

1. Preformed rot proof fillet to internal angles

- 1.1. Size (minimum): 50 x 50 mm splay faced.
- 1.2. Bedding: Bitumen mastic or bonding compound.
2. Reinforcing strip to all angles
  - 2.1. Material: As damp proofing/ tanking.
  - 2.2. Width (minimum): 300 mm.
  - 2.3. Timing: Apply before main sheeting.
3. Dressing of main sheeting onto adjacent surfaces (minimum): 100 mm.

## **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): 150 mm
  - 2.2. Bonding/ Sealing: Double-side tape

## **65 Junctions with flush dpcs/ cavity trays**

---

1. Adjoining surfaces: Clean and dry.
2. Preparation of adjacent dpcs/ cavity trays
  - 2.1. Expose edge where concealed.
  - 2.2. Lap and fully bond/ seal sheeting to wall.
  - 2.3. Dressing of sheeting beyond dpc/ cavity tray (minimum): 50 mm.
  - 2.4. Bonding/ Sealing: Bonding compound

## **70 Protection boards for damp proofing/ tanking**

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice
2. Thickness: 12 mm
3. Application
  - 3.1. Membrane surface: Clean and free from contaminants.
  - 3.2. Bonding: Not required
  - 3.3. Board joints: Butted
4. Board contact with membrane: Secure and continuous.
5. Backfilling: Carry out when tanking, loading and protection are complete

Ω End of Section

## J42 Single layer polymeric sheet roof coverings

To be read with preliminaries/ general conditions.

### 10 Warm deck roof covering Type A

---

1. Roof covering system: Single Ply Flat roof areas - Or equal approved
  - 1.1. Manufacturer: [Sika-Trocal](#)
    - 1.1.1. Contact details
      - 1.1.1.1. Address: Sika-Trocal Roofing  
Watchmead  
Welwyn Garden City  
Hertfordshire  
AL7 1BQ
      - 1.1.1.2. Telephone: +44 (0)1707 394444
      - 1.1.1.3. Web: [www.sikatrocal.co.uk](http://www.sikatrocal.co.uk)
      - 1.1.1.4. Email: [sika-trocal@uk.sika.com](mailto:sika-trocal@uk.sika.com)
    - 1.1.2. Product reference: [Sika-Trocal SGK Adhered Roof System S-Vap 5000E SA](#)
  - 1.2. Waterproof membrane
    - 1.2.1. Type: Sika-Trocal SGK
    - 1.2.2. Colour: Slate grey
  - 1.3. Insulation: Polyisocyanurate foam board
  - 1.4. Vapour control layer: S-Vap 5000E SA
  - 1.5. Accessories: As required by manufacturer to complete the system.

### 15 Roofing generally

---

1. Surfaces to be covered: Secure, clean, dry, smooth, free from frost, contaminants, voids and protrusions.
2. Preliminary work: Complete, including:
  - 2.1. Grading to correct falls.
  - 2.2. Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
  - 2.3. Fixing of battens, fillets and anchoring plugs/ strips.
3. Moisture content and stability of substrate: Must not impair integrity of roof.
4. Adverse weather: Do not lay membrane at temperatures below 5°C, in high winds, wet or damp conditions unless effective temporary cover is provided over working area.
5. Unfinished areas of roof: Keep dry and protect edges of laid membrane from wind action.
6. Completed coverings: Firmly attached, fully sealed, smooth, weatherproof and free draining.

### 30 Joints in rigid board substrates

---

1. Cover strip: Lay centrally over substrate joints before laying air and vapour control layers or coverings. Adhere to substrate with bonding compound along edges only.

Ω End of Section

## K10

# Gypsum board dry linings/ partitions/ ceilings

To be read with preliminaries/ general conditions.

## 15 Lining on timber

---

1. Description: STUD PARTITIONS
2. Substrate: Studs at minimum 400 mm centres
3. Fire performance
  - 3.1. Fire resistance of complete lining assembly: To BS EN 13501-2, REI 30 or better
4. Linings: Gyproc Sound Bloc moisture resistant boarding - fire line as required to meet compartmentation and steel lining. Throughout all areas or equal & approved.
  - 4.1. Fixing: Screws at minimum 400 mm centres
5. Finishing: Skim coat plaster
  - 5.1. Primer/ Sealer: As recommended by board manufacturer for vapour control - Primer to painted areas
6. Accessories: Metal beads/ stops recommended by board manufacturer
7. Other requirements: Fire-stopping around service penetrations as section P12  
Ply pattressing to all areas for fixing fixtures and fittings.

## 15 Lining on timber to ceilings Type A

---

1. Description: CEILINGS
2. Substrate: Timber Rafters
3. Fire performance
  - 3.1. Fire resistance of complete lining assembly: To BS EN 13501-2, REI 30 or better, To BS EN 13501-2, EI 60 or better where 1hr encasement is required for supporting structure and boundary conditions.
4. Linings: Gyproc Sound Bloc moisture resistant boarding - fire line as required to meet compartmentation and steel lining. Throughout all areas or equal & approved.
  - 4.1. Fixing: Screws at minimum 400 mm centres
5. Finishing: Skim coat plaster
  - 5.1. Primer/ Sealer: As recommended by board manufacturer for vapour control - Primer to painted areas
6. Accessories: Metal beads/ stops recommended by board manufacturer
7. Other requirements: Fire-stopping around service penetrations as section P12  
Ply pattressing to all areas for fixing fixtures and fittings.

## 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.

### 65 Dry lining generally

---

1. General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.

2. Standard:
3. Gypsum plasterboard to BS EN 520.
4. Gypsum fibre board to BS EN 15283-2.
5. Evidence of compliance: All sheets to be CE marked. Submit Declaration of Performance (DoP).
6. Cutting gypsum boards: Neatly and accurately without damaging core or tearing paper facing.
7. Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
8. Two layer boarding: Stagger joints between layers.
9. Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.

## **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.

## **75 New wet laid bases**

---

1. Dpcs: Install under full width of partitions/ freestanding wall linings.
  - 1.1. Material: Bituminous sheet or plastics.

## **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.
  - 2.2. Ceilings: Cut insulation around electrical fittings, etc.

## **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.

## **89 Cavity fire barriers within suspended ceilings**

---

1. Type: As recommended by board manufacturer to meet specified performance
2. Fire resistance: To BS EN 13501-2, EI 30
3. Ceiling void subdivision: Fix barriers not more than 20 m apart in any direction.
4. Fixing at perimeters and joints: Secure, stable and continuous with no gaps, to provide a complete barrier to smoke and flame.
5. Service penetrations: Cut and pack to maintain barrier integrity. Sleeve flexible materials. Adequately support services passing through barrier.
6. Ceiling systems for fire protection: Do not impair fire-resisting performance of ceiling system.

## **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.

## 95 Fixing gypsum board with adhesive dabs

---

1. Setting out boards: Accurately aligned and plumb.
2. Fixing to substrates: Securely using adhesive dabs.
3. Adhesive dab spacings for each board
  - 3.1. Horizontally: One row along top edge and one continuous dab along bottom edge.
  - 3.2. Vertically: One row along each edge and thereafter at intermediate spacings to suit size of board:
    - 3.2.1. 9.5 mm thick board, 1200 mm wide to have dab centres at 400 mm (min).
    - 3.2.2. 9.5 or 12.5 mm thick board, 900 mm wide to have dab centres at 450 mm (min).
    - 3.2.3. 12.5 mm thick board, 1200 mm wide to have dab centres at 600 mm (min).
4. Adhesive dab dimensions (width x length): At least 50-75 mm x 250 mm.
  - 4.1. Position of dabs from edges/ ends of boards (minimum): 25 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.

### 98 Repairs to existing gypsum board

---

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

Ω End of Section



## K32

# Panel cubicles/ duct and wall linings/ screens

To be read with preliminaries/ general conditions.

### 11 Fully framed panel cubicles

---

1. Description: Cubicles to include divider panels between cubicles, and pilaster panels between cubicle doors or frame system. Supported on adjustable legs (pedestals). To include all framing, hinges locks.
2. Manufacturer: Contractors Choice to be approved
  - 2.1. Product reference: Submit Proposals
3. Frame
  - 3.1. Type: Manufacturer's standard
  - 3.2. Material/ finish: Manufacturer's standard
4. Panels
  - 4.1. Core material: Heavy-duty range, using compact (solid) grade laminates. Being extremely robust and impervious to moisture, suitable for high-use areas and subject to wet service conditions.
  - 4.2. Edge treatment: Polished Manufacturer's standard
5. Accessories: Refer to N13
6. Other requirements: Reaction to fire rating To BS EN 13501-1, Class A2. Joint sealant as per Z22

### 15 Duct/ wall lining panels

---

1. Description: IPS lining panels to cubicle/ W.C.'s. Duct panels are fixed or hung on proprietary metal framing system. Panels are pre-cut for fixing of sanitary fittings and to give access to pipework and cisterns to be hinged lockable access panels.
2. Manufacturer: Contractors Choice to be Approved
  - 2.1. Product reference: Submit proposals
3. Panels
  - 3.1. Type: Heavy-duty range, using compact (solid) grade laminates. Being extremely robust and impervious to moisture, suitable for high-use areas and subject to wet service conditions.
4. Width (coordinating): Refer to drawings.
5. Core material: Solid-grade laminate
6. Facings:
7. Edge treatment: Polished Manufacturer's standard
8. Reaction to fire (minimum classification, finished panel): Manufacturer's standard
9. Fasteners: Hinges, reference Manufacturer's standard
10. Flashgap panels: Manufacturer's standard
11. Skirting: Coved PVC - see section M50
12. Other requirements: Joint sealant as per Z22 all access panels lockable.

### 18 Samples

---

1. General: Before placing orders submit representative samples of the following: Panel and door material and colours, ironmongery.
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:** Two complete cubicles, as clause 11 Duct panels to sample cubicles, as clause 11
  - 2.1. **Locations:** Obtain instructions

## 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.

Ω End of Section

## L10

# Windows/ rooflights/ screens/ louvres

To be read with preliminaries/ general conditions.

## 5 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.
3. Certification scheme:
  - 3.1. Other evidence:

## 33 Proprietary windows and doors

---

1. Description: Aluminum Windows, Auto Entrance Doors with fixed side lights and sliding doors to club room.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Finish as delivered: Manufacturer's standard Colour as drawings and
4. Thermal performance (U-value maximum): As Design SBEM
5. Glazing details: Insulating glass units incorporating low emissivity glass, argon filled refer to Design SBEM requirements.
  - 5.1. Beading: Internal
6. Ironmongery/ Accessories: to match NBS P21
7. Fixing: Manufacturer's standard
  - 7.1. Fastener spacing: Manufacturer's standard

## 45 Rooflights

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Submit proposals
2. Type: Rectangular
3. Frame: Manufacturer's standard
  - 3.1. Finish: Submit proposals
  - 3.2. Colour: Refer to schedules and drawings
4. Kerb: Timber by main contractor
5. Thermal performance (U-value maximum): Refer to design SBEM
6. Fire performance
  - 6.1. Fire resistance: Manufacturer's standard
  - 6.2. Reaction to fire: Manufacturer's standard
7. Glazing details: Manufacturer's standard

8. Other requirements: As required to suit location and operation
9. Fixing: Manufacturer's standard

### **65 Priming/ sealing**

---

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

### **70 Fire-resisting frames**

---

1. Gap between back of frame and reveal: Completely fill with intumescent mastic or tape.

### **75 Sealant joints**

---

1. Sealant
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Colour: TBC
  - 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.
3. Certification scheme: UK Timber procurement policy Category A evidence certification scheme.
4. Other evidence: None

### 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.

### 80 Sealant joints

---

1. Sealant
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Colour: White
  - 1.3. Application: As section Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile.

### 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.

### 96 Manifestation

---

1. **Description:** To club room exterior doors and glazed entrance doors
2. **Design:** TBC
  - 2.1. **Art work:** Supplied by client
    - 2.1.1. **Media:** Digital
3. **Technique:** Applied film

Ω End of Section

# M10

## Cement based levelling/ wearing screeds

To be read with preliminaries/ general conditions.

### 4 Cement:sand levelling screeds

---

1. Description: GROUND FLOOR
2. Substrate:
3. Screed construction: Unbonded on dpm
4. Thickness
  - 4.1. Nominal: 75 mm
  - 4.2. Minimum: 70 mm
5. Mix
  - 5.1. Proportions (cement:sand): To BS 8204-1
6. Finish: Smooth floated finish, as clause 70
  - 6.1. To receive: Sheet flooring
7. Other requirements: Pipe ducts, as section P31, Movement joints

### 21 Suitability of substrates

---

1. General
  - 1.1. Suitable for specified levels and flatness/ regularity of finished surfaces. Consider permissible minimum and maximum thicknesses of screeds.
  - 1.2. Sound and free from significant cracks and gaps.
2. Concrete strength: In accordance with BS 8204-1, Table 2.
3. Cleanliness: Remove plaster, debris and dirt.
4. Moisture content: To suit screed type. New concrete slabs to receive fully or partially bonded construction must be dried out by exposure to the air for minimum six weeks.

### 37 Unbonded construction

---

1. Separation: Lay screed over a suitable sheet dpm or a separating layer.
  - 1.1. Type: Polyethylene sheet, minimum 125 micrometres thick (500 gauge) as section J40
2. Installation of separating layer: Lay on clean substrate. Turn up for full depth of screed at abutments with walls, columns, etc. 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.

### 47 Admixtures

---

1. Standards; In accordance with BS 8204-1, Table 1.

2. Calcium chloride: Do not use in admixtures.

## 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.

## 53 General reinforcement

---

1. **Steel fabric:** In accordance with BS 4483.
  - 1.1. **Type:**
2. **Installation:** In accordance with BS 8204-1.

## 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.

## 60 Joints in polymer modified wearing screeds

---

1. **Bay sizes (maximum):**
2. **Location of bay joints:** Over construction/ movement joints in base slab.

## 65 Strip movement joints

---

1. **Description:**
2. **Manufacturer:**
  - 2.1. **Product reference:**
  - 2.2. **Size:**
3. **Installation:** Set securely into screed to exact finished level of floor. Extend joints through to substrate.
  - 3.1. **Secure fixing to substrate:** To manufacturer's recommendation.

## 70 Smooth floated finish

---

1. **Finish:** Even texture with no ridges or steps.

## 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.



## **80 Trowelled finish to wearing screeds**

---

1. **Floating:** To an even texture with no ridges or steps.
2. **Trowelling:** Successively trowel at intervals, applying sufficient pressure to close surface and give a uniform, smooth finish free from trowel marks and other blemishes.

## **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 seven days.
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.

## 5 A DESIGN

---

1. The contractor as part of their proposals may provide equal and approved alternative Manufacturers and products.
2. The design requirements are fit for purpose of the intended use of studded footwear and wet areas.
3. The contractor is to advise on all floor finish and submit colour samples for approval.

## 20 Sheeting Type A

---

1. Flooring roll
  - 1.1. Manufacturer: [Polyflor Ltd](#)
    - 1.1.1. Contact details
      - 1.1.1.1. Address: PO Box 3  
Radcliffe New Road  
Whitefield  
Manchester  
M45 7NR
      - 1.1.1.2. Telephone: +44 (0)161 767 1122
      - 1.1.1.3. Web: [www.polyflor.com](http://www.polyflor.com)
      - 1.1.1.4. Email: [info@polyflor.com](mailto:info@polyflor.com)
    - 1.1.2. Product reference: [Polysafe Hydro Evolve Safety Floor](#)
  - 1.2. Standard: To BS EN 13845.
  - 1.3. Use class: To BS EN ISO 10874, class 23, 34 and 43.
  - 1.4. Slip potential
    - 1.4.1. Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): R10.
    - 1.4.2. Surface roughness (Rz) (minimum):  $\geq 20 \mu\text{m}$ .
  - 1.5. Width: 2000 mm.
  - 1.6. Thickness: 2.0 mm.
  - 1.7. Colour and pattern:
  - 1.8. Acoustic underlay:

## 20 Sheeting Type B

---

1. Flooring roll
  - 1.1. Manufacturer: [Polyflor Ltd](#)
    - 1.1.1. Contact details
      - 1.1.1.1. Address: PO Box 3  
Radcliffe New Road  
Whitefield  
Manchester  
M45 7NR
      - 1.1.1.2. Telephone: +44 (0)161 767 1122
      - 1.1.1.3. Web: [www.polyflor.com](http://www.polyflor.com)
      - 1.1.1.4. Email: [info@polyflor.com](mailto:info@polyflor.com)

- 1.1.2. Product reference: [Polysafe Quattro PUR](#)
- 1.2. Standard: To BS EN 13845.
- 1.3. Use class: To BS EN ISO 10874, class 23, 34 and 43.
- 1.4. Slip potential
  - 1.4.1. Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): R11.
- 1.5. Width: 2000 mm.
- 1.6. Thickness: 2.0 mm.
- 1.7. Colour and pattern: TBC
- 1.8. Acoustic underlay: Not required.

## 20 Sheeting Type C

---

- 1. Flooring roll
  - 1.1. Manufacturer: [Polyflor Ltd](#)
    - 1.1.1. Contact details
      - 1.1.1.1. Address: PO Box 3  
Radcliffe New Road  
Whitefield  
Manchester  
M45 7NR
      - 1.1.1.2. Telephone: [+44 \(0\)161 767 1122](tel:+44(0)1617671122)
      - 1.1.1.3. Web: [www.polyflor.com](http://www.polyflor.com)
      - 1.1.1.4. Email: [info@polyflor.com](mailto:info@polyflor.com)
    - 1.1.2. Product reference: **Polyflor Expona Control Stone/Wood PUR**
  - 1.2. Standard: To BS EN 13845.
  - 1.3. Use class: To BS EN ISO 10874, class 23, 34 and 43.
  - 1.4. Slip potential
    - 1.4.1. Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum): R11.
  - 1.5. Width: 2000 mm.
  - 1.6. Thickness: 2.0 mm.
  - 1.7. Colour and pattern: TBC
  - 1.8. Acoustic underlay: Not required.

## 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 or BS 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.

## **80 Skirtings**

---

1. **Types:** Matching Coved skirting to all changing room, kitchen and corridor areas
2. **Manufacturer:** As floor finish
  - 2.1. **Product reference:** Submit proposals
3. **Fixing:** Securely bond with mitred corners. Top capping and cove former
  - 3.1. **Corners:** Mitre joints.

## **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.

### 10 Emulsion paint

---

1. Description: TO INTERNAL PLASTERED SURFACES
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Surfaces:
  - 3.1. Preparation: Remove all loose and defective coatings, Ensure surfaces are clean and dry
4. Initial coats: As recommended by manufacturer
5. Undercoats: As recommended by manufacturer
6. Finishing coats: Matt vinyl
  - 6.1. Number of coats: 2

### 12 Gloss paint

---

1. Description: TO INTERNAL EXPOSED SOFTWOOD
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Surfaces: Preprimed and sealed
  - 3.1. Preparation: Remove all loose and defective coatings, Degrease and provide key, Ensure surfaces are clean and dry
4. Initial coats: As recommended by manufacturer
5. Undercoats: As recommended by manufacturer
6. Finishing coats: Full gloss
  - 6.1. Number of coats: 2

### 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.

### **35 Fixtures and fittings**

---

1. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
2. Removal: Before commencing work: Ironmongery, cover plates, grilles, wall clocks, and other surface mounted fixtures.
3. Replacement: Refurbish as necessary, refit when coating is dry.

### **36 Ironmongery**

---

1. Removal: Before commencing work remove ironmongery from surfaces to be coated.
2. Hinges: Remove
3. Replacement: Refurbish as necessary; refit when coating is dry.

### **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.

## **41 Masonry and rendering preparation**

---

1. Loose and flaking material: Remove.

## **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.

## **52 Sealing of internal movement joints**

---

1. General: To junctions of walls and ceilings with architraves, skirtings and other trims.
2. Sealant: Water-borne acrylic.
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1. Product reference: Submit proposals
  - 2.2. Preparation and application: As section Z22.

## **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.

## **65 Concealed joinery surfaces**

---

1. General: After priming, apply additional coatings to surfaces that will be concealed when component is fixed in place.

Ω End of Section

## N10

### General fixtures/ furnishings/ equipment

To be read with preliminaries/ general conditions.

#### 10 Purpose-made Benching Type A

---

1. Description: Timber bench seating to 2no. Officials Changing
2. Manufacturer: Contractor's choice
3. Standard: Not applicable
4. Timber: To BS EN 942.
  - 4.1. Species: Contractor's choice
  - 4.2. Appearance class: J2
  - 4.3. Moisture content on delivery: 6 to 10%
5. Finishes: As manufactured
6. Joinery workmanship: As section Z10.
7. Metalwork workmanship: As section Z11.

#### 10 Purpose-made Benching Type B

---

1. Description: Timber bench seating to 1no. GF03 External W.C.
2. Manufacturer: Contractor's choice
3. Standard: Not applicable
4. Timber: To BS EN 942.
  - 4.1. Species: Contractor's choice
  - 4.2. Appearance class: J2
  - 4.3. Moisture content on delivery: 6 to 10%
5. Finishes: As manufactured
6. Joinery workmanship: As section Z10.
7. Metalwork workmanship: As section Z11.
8. Other requirements: This benching is to be fold up / drop down to allow for wheel chair access requirements.

#### 10 Purpose-made Benching Type C

---

1. Description: Timber bench seating to 2No. Changing Rooms; 25 No. positions to each changing room.
2. Manufacturer: Contractor's choice
3. Standard: Not applicable
4. Timber: To BS EN 942.
  - 4.1. Species: Contractor's choice
  - 4.2. Appearance class: J2
  - 4.3. Moisture content on delivery: 6 to 10%
5. Finishes: As manufactured
6. Joinery workmanship: As section Z10.
7. Metalwork workmanship: As section Z11.
8. Other requirements: Pull out Key lockable under bench storage to each position.



## **15 A Coat / Clothes Hooks and Racks**

---

1. **Description:** Contractor to provide coat/clothes hooks or rack to both Home and away changing rooms and the official changing rooms.
2. **Item:** Provide 3 per space allocated
3. **Manufacturer:** Contractor's choice
4. **Product reference:** Submit proposals

## **16 A Coat Hooks**

---

1. **Description:** Contractor to provide a single coat hook to all W.C. and shower cubicle doors. To official changing room provide one outside of shower curtain.
2. **Item:** Single to match ironmongery
3. **Manufacturer:** Contractor's choice
4. **Product reference:** Submit proposals

## **17 A Hooks and Racks**

---

1. **Description:** Contractor to provide hooks or rack to Cleaners store and kitchen
2. **Item:** Provide a minimum of 4 per room
3. **Manufacturer:** Contractor's choice
4. **Product reference:** Submit proposals

## **80 Sealant**

---

1. **Description:** TO FIXED FURNITURE
2. **Standard:** To BS EN ISO 11600, class F20 HM
3. **Type:** One part silicone
4. **Manufacturer:** Contractor's choice
  - 4.1. **Product reference:** Contractor's choice
  - 4.2. **Cure:** Neutral cure
  - 4.3. **Colour:** TBC
5. **Other requirements:** Fire resistant as required and Fungicidal
6. **Application:** As section Z22.

## **96 Mailboxes**

---

1. **Standard:** To BS EN 13724.
2. **Manufacturer:** Contractor's choice
  - 2.1. **Product reference:** Submit proposals
3. **Size:** Confirm requirements with employer
4. **Material:** Powder-coated steel
5. **Aperture**
  - 5.1. **Type of aperture:** For external use
  - 5.2. **Aperture size:** 25-40 mm x 325-400 mm

Ω End of Section

## N11

# Domestic kitchen fittings, furnishings and equipment

### Clauses - Not Used

### Products

#### 310 Fitted base units

---

1. Description: Generally
2. Standard: To BS 6222-2 and -3, and BS EN 14749.
3. Manufacturer: Howdens Joinery Ltd
  - 3.1. Product reference: Greenwich
4. Structural performance: To BS 6222-2, test level: H
5. Dimensions: To BS EN 1116.
6. Surface finishes: To BS 6222-3.
7. Doors and drawer fronts:
  - 7.1. Material: Plastics laminate
  - 7.2. Finish and colour: White Gloss'
  - 7.3. Edges: manufacturer's standard.
  - 7.4. Other requirements: None
8. Side panels, plinths and shelves:
  - 8.1. Material: Plastics laminate
  - 8.2. Finish and colour: Brilliant white
  - 8.3. Edges: Plastics strip
9. Accessories: matching filler pieces as required, plinths, cornice and bin units. Concealed pipework behind removable panels affording access for maintenance, mastic seal at wall junctions

#### 320 Fitted wall units

---

1. Description: Generally
2. Standard: To BS 6222-2 and -3, and BS EN 14749.
3. Manufacturer: Howdens Joinery Ltd
  - 3.1. Product reference: Greenwich
4. Structural performance: To BS 6222-2, test level: H
5. Dimensions: To BS EN 1116.
6. Surface finishes: To BS 6222-3.
7. Doors and drawer fronts:
  - 7.1. Material: Plastics laminate
  - 7.2. Finish and colour: White Gloss
  - 7.3. Edges: manufacturer's standard
  - 7.4. Other requirements: None
8. Side panels and shelves:
  - 8.1. Material: Plastics laminate
  - 8.2. Finish and colour: White Gloss
  - 8.3. Edges: manufacturer's standard

9. **Accessories:** Other requirements: matching filler pieces as required, plinths, cornice and concealed pipework behind removable panels affording access for maintenance, mastic seal at wall junctions

### **340A Worktops**

---

1. Description: Generally
2. Standard: To BS 6222-3
3. Manufacturer: Howdens Joinery Ltd
  - 3.1. Product reference: Black Granite Effect
4. Material: Laminate covered particle board type
5. Dimensions: 38mm
6. Exposed edges: Post formed

### **350A Sinks, taps, traps and wastes**

---

1. Description: Generally
2. " Standards:
  - 2.1. Manufacture: To BS EN 13310.
  - 2.2. Design, installation, testing and maintenance: To BS 6700.
3. " Manufacturer: Armitage Shanks S0748(MY) Sandringham
4. 1000mm stainless steel kitchen
5. sink pack 1 1/2 bowl and drainer
6. with single lever kitchen mixer.
  - 6.1. Product reference: Windermere.
7. " Configuration: 1.5 Sink with single drainer.
8. " Overall size: 1025 x 510mm .
9. " Material: Stainless steel.
  - 9.1. Colour/ Finish: bright/polished.
10. " Tap/ Chainstay/ Overflow holes: one tap hole, chainstay hole, overflow hole.
11. " Taps: single CP monbloc pillar mixer.
  - 11.1. Manufacturer: Armitage Shanks.
12. Product reference: As sink pack.
  - 12.1. Operation: tap head.
13. " Wastes: Plug and chain.
  - 13.1. Standard: To BS EN 274-1, -2 and -3.
  - 13.2. Manufacturer: to match sink manufacturer.
14. Product reference: TBA.
  - 14.1. Size: 38mm to suit sink manufacturer's waste opening.
  - 14.2. Material: chromed steel.
  - 14.3. Tail: Slotted.
15. " Traps: deep seal bottle.
  - 15.1. Standard: To BS EN 274-1, -2 and -3.
  - 15.2. Manufacturer: Contractor's choice.
  - 15.3. Product reference: TBA.
  - 15.4. Size: 38mm.
  - 15.5. Material: pvc, self colour.

15.6. Depth of seal (minimum): 75 mm.

16. " Accessories: none.

### **360 Appliances**

---

1. Item: integrated microwave, dishwasher and fridge
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Contractor's choice
3. Colour and finish: Intergrated
4. Service connections: As required for appliance

### **390 Sealant**

---

1. Standard: To BS EN ISO 11600, class F20 HM
2. Type: One part silicone
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1. Product reference: Contractor's choice
3. Colour: generally white

## **Execution**

### **610 Moisture content of wood and wood based boards**

---

1. Control and monitoring:
  - 1.1. Method statement: Submit.

### **620 Installation generally**

---

1. Fixings and adhesives: As section Z20.
2. Services: As Engineering Services specification

### **630 Installing units and worktops**

---

1. General: Well fitting, stable and secure.

### **640 Installing appliances**

---

1. Connections: Provide to electric, gas, and hot and cold water services.

### **650 Installing sinks, taps and wastes**

---

1. Water supply: To BS EN 806-2 and -4.
2. Taps:
  - 2.1. Fixing: Secure, watertight seal with the appliance.
  - 2.2. Positioning: Hot tap to left of cold tap as viewed by the user of the appliance.
3. Wastes:
  - 3.1. Bedding: Waterproof jointing compound.
  - 3.2. Fixing: With resilient washer between appliance and backnut.

### **660 Sealant bedding and pointing**

---

1. Application: As section Z22.
2. Bedding: Sink to top of worktop
3. Pointing: Between units and splash backs plus units and floor

## **670 Installing trims and mouldings**

---

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

## **Completion**

### **910 General**

---

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

### **920 Appliance commissioning**

---

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

Ω End of Section

# N13

## Sanitary appliances and fittings

To be read with preliminaries/ general conditions.

### 10 WC pans and flushing arrangements

---

1. Standard: To Defra WC suite performance specification or equivalent approved by the relevant water company.
2. Type: Back to wall, concealed cistern
  - 2.1. Material: Vitreous china
  - 2.2. Colour: White
3. Pan:
  - 3.1. Standards: To BS EN 33 and BS EN 997, class 2
  - 3.2. Manufacturer: Contractor's choice
    - 3.2.1. Product reference: Submit proposals
4. Seat: To BS 1254 and Kitemarked, colour to match pan
5. Pan connector: To BS 5627, colour to match pan
6. Flushing arrangement: Cistern manufacturer's standard
  - 6.1. Manufacturer: Contractor's choice
    - 6.1.1. Product reference: Submit proposals
  - 6.2. Operating control: Proximity sensor to be confirmed by employer
  - 6.3. Flush volume: Dual flush 4 or 2 L refer to M&E specification
7. Accessories: All accessories and fitting to complete the installation is required.

### 12 Unisex accessible WC equipment packages (Document M)

---

1. Description: To be suitable for the use in a public environment.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Type approval certificate: Submit.
4. Finish/ colour
  - 4.1. Pan: Vitreous china, white
  - 4.2. Cistern: Manufacturer's standard
  - 4.3. Seat: Manufacturer's standard
  - 4.4. Basin: Vitreous china, white
  - 4.5. Handrails and grab bars: Stainless steel to be confirmed by employer
5. Transfer handing: As general arrangement drawing
6. Water supply fittings (basin): Lever-operated thermostatic basin mixer tap
7. Water supply temperature (maximum): Refer to M7E specification
8. Accessories: All accessories and fitting to complete the installation is required.

### 14 Unisex accessible shower room equipment packages (Document M)

---

1. Description: To be suitable for the use in a public environment.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Type approval certificate: Submit.

4. Finish/ colour
  - 4.1. Seat, folding: Manufacturer's standard
  - 4.2. Back support: Manufacturer's standard
  - 4.3. Shower curtain rail: Manufacturer's standard
  - 4.4. Shower curtain: Submit proposals
  - 4.5. Handrails and grab bars: Stainless steel
5. Shower fittings: Thermostatic shower mixer, lever-operated
  - 5.1. Finish: Chrome-plated
  - 5.2. Operating control: Manual
  - 5.3. Water supply temperature (maximum): Refer to M&E specification
  - 5.4. Flow rate: Refer to M&E specification
6. Accessories: All accessories and fitting to complete the installation is required.

## 24 Bib taps:

---

1. Description: External Tap
2. Type: Bib tap
3. Manufacturer: Contractor's choice
  - 3.1. Product reference: Submit proposals
4. Material: Contractor's choice
5. Size: Submit proposals

## 25 Sinks Type A

---

1. Manufacturer: [Twyford Bathrooms](#) or equal to be approved
  - 1.1. Contact details
    - 1.1.1. Address: Lawton Road  
Alsager  
Stoke-on-Trent  
Staffordshire  
ST7 2DF
    - 1.1.2. Telephone: [+44 \(0\) 1926 516 800](tel:+44(0)1926516800)
    - 1.1.3. Web: [www.twyfordbathrooms.com](http://www.twyfordbathrooms.com)
    - 1.1.4. Email: [enquiries@geberit.co.uk](mailto:enquiries@geberit.co.uk)
  - 1.2. Product reference: [PS8801SS - Stainless Steel Janitorial Unit JU](#)

## 30 Washbasins

---

1. Type: To be suitable for the use in a public environment.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Material: Vitreous china to BS EN 14688
4. Colour: White
5. Size: Submit proposals
6. Tap holes: One tap hole
7. Taps:
  - 7.1. Type: Thermostatic basin mixer
  - 7.2. Material: Chromium plated
  - 7.3. Size: As required

- 7.4. Water supply temperature (maximum): Refer to M&E Specification
8. Wastes: Pop Up
9. Traps: DN 30 bottle trap, 75 mm seal
10. Accessories: All accessories and fitting to complete the installation is required.

## **42 Shower Heads and mixer valves**

---

1. Requirements: Refer to M&E Performance Specification
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Type: Thermostatic shower mixer for flush mounting

## **45 Wet room showers**

---

1. Description: Form shower areas to Changing room and Official Changing.
2. Wet room floor former tray
  - 2.1. Substrate: New screeded floor
  - 2.2. Manufacturer: Contractor's choice
    - 2.2.1. Product reference: Contractor's choice
  - 2.3. Accessories: None
3. Waterproofing/ Tanking: To contractors design
4. Drainage: To contractors Design

## **59 Paper towel dispensers**

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Submit proposals
2. Material: Brushed Stainless Steel
3. Design Requirements: To be suitable for the use in a public environment.

## **60 Toilet paper holders**

---

1. Description: To be suitable for the use in a public environment.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Type: Toilet roll holder, wall mounted
4. Material: Brushed Stainless steel
5. Colour: Self-coloured

## **62 Soap dispensers**

---

1. Description: To be suitable for the use in a public environment.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Material: Brushed Stainless steel
4. Colour: Self-coloured

## **63 Glass mirrors**

---

1. Description: To be suitable for the use in a public environment.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals



3. Type: Submit proposals
4. Size: To all W.C.'s sized to fit above WHB, in each changing rooms and officials changing provide one full length, one full length where not part of the doc m pack to each accessible W.C.
5. Protective backing: Polypropylene safety film

## 64 Hand dryers

---

1. Description: To be suitable for the use in a public environment.
2. Standard: To BS EN 60335-2-23.
3. Type: High-velocity air
4. Manufacturer: Refer to M&E specification
5. Heater power rating: Refer to M&E specification
6. Controls: Automatic
7. Enclosure: Brushed Stainless steel
  - 7.1. Colour: Self-coloured

## 68 Sealant for pointing

---

1. Standard: To BS EN ISO 11600
  - 1.1. Class: F20 HM
2. Type: Silicone
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1. Product reference: Contractor's choice
3. Colour: Submit proposals

## 70 Installation generally

---

1. Standards: In accordance with BS 6465-1, -2 and -3.
2. Assembly and fixing: Fix appliances securely to structure, without taking support from pipelines, level and plumb and so that surfaces designed to fall drain as intended.
3. Fasteners: Nonferrous or stainless steel.
4. Jointing and bedding compounds: Recommended by manufacturers of appliances, accessories and pipes, to form watertight joints between appliances and backgrounds (except cisterns) and between appliances and discharge pipes.
5. Supply and discharge pipework: Fix before appliances.
6. Timing: Tiled backgrounds, other than splashbacks, complete before fixing appliances. Do not overstress tiles when fixing appliances.
7. On completion: Components and accessories working correctly with no leaks.
8. Labels and stickers: Remove.

## 75 Installing cisterns

---

1. Cistern operating components: Obtain from cistern manufacturer.
2. Inlet and flushing valves: Match to pressure of water supply.
3. Internal overflows: Into pan, to give visible warning of discharge.
4. External overflows: Fix pipes to falls, and locate to give visible warning of discharge. Agree position.

## 76 Installing taps

---

1. Fixing: Secure against twisting.
2. Seal with appliance: Watertight.

3. Positioning: Hot tap to left of cold tap as viewed by user of appliance.

## **77 Installing wastes and overflows**

---

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

## **78 Installing hand dryers**

---

1. Fused connection units
  - 1.1. Type: Switched
  - 1.2. Engraving: With 'HAND DRYER'.
  - 1.3. Location: Refer to M7E specification
2. Final connection: Concealed.
  - 2.1. Containment: Refer to M&E specification

## **81 Sealant bedding and pointing**

---

1. Pointing: Joints between appliances and splashbacks, Joints between appliances and walls Joints between appliances and floors

Ω End of Section

# N15

## Internal fire and safety signage systems

### General

#### 110 Fire and safety signage systems

---

1. Description: FOR ESCAPE ROUTE, FOR FIRE EQUIPMENT
2. System manufacturer: Contractor's choice
  - 2.1. System reference: Submit proposals
3. Location and layout: Submit proposals
  - 3.1. Language: English.
4. Material: Submit proposals
  - 4.1. Other properties: Manufacturer's standard Submit proposals

### System performance

#### 205 Design of internal signage systems

---

1. Description: For all non-statutory signage i.e. changing room names, clubroom name and general signage.
2. Design: Complete detailed design and submit before commencing work.
3. Content: Signs including facing information, components, inserts, accessories and fixings necessary to complete the system.
4. Proposals: Submit drawings, schedules, technical information, calculations and manufacturer's literature before commencing work.

#### 210 General requirements

---

1. Signage and way guiding system design:
  - 1.1. For fire escape and evacuation signage: In accordance with: BS 5499-4 or BS ISO 16069.
  - 1.2. For way guiding systems: In accordance with BS ISO 16069.
  - 1.3. For safety signs other than escape route signage: In accordance with: BS 5499-10.
2. Comply with the requirements of: Fire Strategy Report

#### 220 Sign design and format

---

1. Description:
2. Format: In accordance with BS EN ISO 7010
3. Geometric shapes, colours and layout: In accordance with BS ISO 3864-1.
4. Design principles for graphical symbols: In accordance with BS ISO 3864-3.
5. Colorimetric and photometric properties of safety sign materials: In accordance with BS ISO 3864-4.
6. Water safety: In accordance with BS ISO 20712-1.

#### 270 Fire reaction

---

1. Description: OF FIRE ESCAPE SIGNAGE SYSTEM
2. Non-flammable surface
  - 2.1. Standard: To Building Regulations Approved Document B

## Products - Not Used

### Execution

#### 610 Fixing signs generally

---

1. Installation:
2. Secure, plumb and level.
3. Fasteners and adhesives: As section Z20.
4. Strength of fasteners: Sufficient to support live and dead loads.
5. Fixings showing on surface of sign: Must not detract from the message being displayed.

### Completion

#### 910 Documentation

---

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

Ω End of Section

# N17

## Portable and mobile firefighting systems

### General - Not Used

### System performance

#### 21 Design

---

1. Design: Complete the design of the portable firefighting system.
  - 1.1. Basis: In accordance with BS 5306-0
2. Proposals: Submit drawings, technical information, calculations and manufacturers' literature

#### 22 Colour coding

---

1. Portable fire extinguishers: Colour code in accordance with BS 7863.

### Products - Not Used

### Execution

#### 61 Installing portable fire extinguishers

---

1. Mounting height above finished floor level: Submit proposals

#### 65 Installing fire blankets

---

1. Mounting height above finished floor level: Submit proposals

### Completion

#### 91 Cleaning

---

1. Protective wrappings: Remove
2. Cleaning: Clean off and wipe down container finishes

#### 92 Testing

---

1. Test standard: To BS 5603-0.
2. Test times: At completion
3. Notice for testing (minimum): 5 days

#### 93 Training

---

1. Training: Submit instruction manuals or supply other appropriate resources to train the users of the building in the safe and appropriate use of the fire extinguishers and fire blankets
2. Fire brigade: Submit contact details

#### 94 Maintenance

---

1. Servicing: Arrange the first annual service of the portable firefighting systems
2. Maintenance standard: To BS 5603-0.

Ω End of Section

## N25

# Permanent access and safety equipment

To be read with preliminaries/ general conditions.

## 10 Personal fall protection equipment

---

1. Description: Complete system design, installation and provide equipment.
2. Manufacturer: Contractor's choice
  - 2.1. System reference: Contractor's choice
3. Type: Guided type fall arrest
4. Anchorage device: Horizontal stainless steel cable
5. Installation: In accordance with BS 7883 by the system manufacturer or a contractor approved by the system manufacturer.
6. Structural anchors: Type recommended by the system manufacturer to suit the structure/ fabric into which they will be fixed.

## General requirements

### 50 Safety

---

1. General: The equipment as installed must have no irregularities/ projections capable of inflicting personal injury.
2. Finished surfaces and edges of all accessible parts: Regular and smooth.

### 60 Fixing anchor installation

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1. Site drilling or cutting into structure/ fabric: Permitted only in approved locations.
2. Distance between all fixing devices and edges of supporting material: Not less than recommended by fixing manufacturer.

### 70 Marking of anchor devices

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1. Provision: Provide on or near each anchor device a label or other clear marking giving:
  - 1.1. Manufacturer's name and telephone number.
  - 1.2. Serial number and year of manufacture of device.
  - 1.3. Maximum number of personnel that may be attached to the device at any one time.
  - 1.4. Requirements for energy absorbers, ground clearance, etc.
2. Anchor devices intended solely for use with personal protective equipment: Indicate restriction of use by pictogram or other suitable marking on or near the device.

Ω End of Section

## P12 Fire-stopping systems

### General - Not Used

### Products

#### 30 Product certification

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1. Certification: For products specified generically, submit evidence of compliance with the specification
2. Acceptable evidence: Agrément certificate Listing in CERTIFIRE Register Listing in LPCB Register

#### 34 Intumescent mastic

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1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice

#### 35 Flexible intumescent gap sealer

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice
2. Strip width: As required

#### 40 Mineral wool rigid batts

---

1. Standard: To BS EN 13162.
2. Surface treatment: Unfaced
3. Manufacturer: Contractor's choice
  - 3.1. Product reference: Contractor's choice
4. Recycled content: Submit proposals

#### 43 Pipe collar

---

1. Type: Concealed intumescent pipe collar
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Contractor's choice

#### 46 Sealant backing material

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice

#### 47 Sealant

---

1. Type: Fire-resisting silicone
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals

### Execution

#### 61 Third-party-certified installer

---

1. Certification: For the technical competency of the installer of the evidence of compliance with a third-party installation certification scheme

2. Acceptable evidence: LPCB Certification UKAS Accreditation Certificate

## **62 Workmanship generally**

---

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

## **66 Installing mineral wool batts**

---

1. Installing batts: Fit tight into void between the penetrating services and the surrounding construction to form a solid barrier..
  - 1.1. Brackets: Impale batts on proprietary pressed steel brackets at 500 mm maximum centres and not greater than 250 mm from ends of batts
2. Face of batts: Flush with the surface of wall, floor or soffit
3. Joints between batts: Closed butt joints; seal with acoustic intumescent sealant
4. Gaps between services and barrier: Seal with fire-resisting sealant

## **68 Fixing pipe collars**

---

1. Collar fixing: Contractor's choice
2. Gap around collar: Seal with gap filler and sealant
3. Length of wraps: Project 50 mm from each side of the element

## **71 Inserting sealant backing material**

---

1. Preparation: Removed debris from service penetration
2. Installation: Insert joint filler to full depth of joint leaving sufficient depth to apply sealant

## **73 Applying sealants generally**

---

1. Application: As section Z22

## **74 Applying capping sealant**

---

1. Preparation: De-grease using cleaner recommended by sealant manufacturer
2. Priming: Primer recommended by sealant manufacturer
3. Depth of sealant: Minimum 10 mm
4. Temperature: Do not apply water-based sealants when they could be damaged by frost

## **Completion**

### **91 Cleaning**

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

### **92 Inspection**

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1. Notice for inspection (minimum): Five working days

Ω End of Section



## P20

### Unframed isolated trims/ skirtings/ sundry items

To be read with preliminaries/ general conditions.

#### 10 Softwood

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1. Description: ARCHITRAVES TO DOORS / SKIRTING
2. Quality of wood and fixing: To BS 1186-3.
  - 2.1. Species: Contractor's choice
  - 2.2. Class: 1
3. Moisture content at time of fixing: 6 -10%
4. Preservative treatment: WPA Commodity Specification C5, service life 60 years
5. Reaction to fire rating: To BS EN 13501-1, Class A2
6. Profile: Bevelled
  - 6.1. Finished size: 19 x 70 mm, 19 x 120 mm
7. Finish as delivered: Prepared and primed, as section M60
8. Fixing: Plugged, and screwed at ??? centres

#### 35 Medium-density fibreboard

---

1. Description:
2. Manufacturer:
  - 2.1. Product reference:
3. Standard: To BS EN 622-5.
  - 3.1. Type:
  - 3.2. Formaldehyde class: To BS EN 622-1, Class E1.
4. Reaction to fire rating:
5. Thickness:
6. Edges:
7. Finish:
8. Recycled content:
9. Support/ Fixing:

#### 40 Plywood

---

1. Description: Pattressing and linings in walls for fixings
2. Face ply species: Selected by contractor
3. Appearance class to BS EN 635: Class E/I visible, Class II/III hidden
4. Bond quality to BS EN 314-2: Class 1
5. Reaction to fire rating: To BS EN 13501-1, Class B
6. Thickness: 19 mm
7. Edges: Visible - Hardwood lipping to match facing

#### 80 Installation generally

---

1. Joinery workmanship: As section Z10.
2. Metal workmanship: As section Z11.
3. Methods of fixing and fasteners: As section Z20 where not specified.

4. Straight runs: To be in one piece, or in long lengths with as few joints as possible.
5. Running joints: Location and method of forming to be agreed where not detailed.
6. Joints at angles:
7. Position and level: To be agreed where not detailed.

Ω End of Section

## **P21**

### **Door/ window ironmongery**

To be read with preliminaries/ general conditions.

#### **3 Quantities and locations**

---

1. Quantities and locations of ironmongery are in the ironmongery schedule .
2. Fixing: As sections L10 and L20.

#### **4 Ironmongery range selected by contractor**

---

1. Source: Single coordinated range.
2. Notification: Submit details of selected range, manufacturer and/ or supplier.
3. Principal material/ finish: Satin stainless steel, grade 1.4401 (316)
4. Items unavailable within selected range: Submit proposals.

#### **6 Samples**

---

1. General: Before placing orders with suppliers submit labelled samples of the following: all separate items. i.e. one lever, one pull handle etc..
  - 1.1. Conformity: Retain samples on-site for the duration of the Contract. Ensure conformity of ironmongery as delivered with labelled samples.

Ω End of Section

## **P30**

# **Trenches, pipeways and pits for buried engineering services**

To be read with preliminaries/ general conditions.

### **10 Routes of services below ground**

---

1. Locations of existing service runs and pipeducts: Known services noted on drawings.
2. Site survey: To verify location of existing services.
  - 2.1. Submit: Copy of survey, highlighting discrepancies.
3. Locations of new service runs and pipeducts: Submit proposals
4. Temporary marking: Indicate new service runs and pipeducts with 75 x 75 mm softwood posts painted white and projecting not less than 600 mm above ground level, or with clearly visible waterproof markings on hard surfaces.

### **20 Trenches**

---

1. Trench width: As small as practicable.
2. Trench bottoms: Remove mud, rock projections, boulders and hard spots. Trim level.
3. Give notice: To inspect trench for each section of the work.

### **35 Selected as-dug material**

---

1. Material: Selected, free from vegetable matter, rubbish, frozen soil and excluding lumps and stones retained on a 40 mm sieve.

### **40 Granular material**

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1. Material: Granular: To Department for Transport (DfT) 'Specification for the reinstatement of openings in highways: code of practice' 3rd Edition.

### **45 Pipeduct bedding and surround – selected as-dug material**

---

1. As-dug bed: Trimmed by hand, level or to accurate gradient. Replace overdig with compacted spoil.
2. Bedding: Selected as-dug material thoroughly compacted by hand in 150 mm maximum layers.
  - 2.1. Thickness (minimum): 150 mm
3. Surround: Selected as-dug material. Lay and compact to 150 mm (minimum) above pipeduct crown.

### **47 Pipeduct bedding and surround – granular material**

---

1. Bedding: Granular material thoroughly compacted by hand in 150 mm maximum layers.
  - 1.1. Thickness (minimum): 150 mm
2. Surround: Granular material. Lay and compact to 150 mm (minimum) above pipeduct crown.

### **50 Existing roads and pavings**

---

1. Excavation and backfilling: To Department for Transport (DfT) 'Specification for the reinstatement of openings in highways: code of practice' 3rd Edition

### **55 Laying pipeducts**

---

1. General: Lay straight to line, true to gradient or level on an even continuous bed.
2. Clearance between pipeducts where they cross (minimum): 50 mm.

3. **Drawlines:** During laying, thread through pipeducts. Leave in place for future pulling through of services
  - 3.1. **Length:** Length of pipeduct plus 500 m or As specified by service undertaker
4. **Seal:** Ends of pipeducts terminating inside buildings.
  - 4.1. **Material:** Mortar
5. **Protection:** Protect from ingress of debris. During construction, temporarily seal all exposed ends.

## **60 Backfilling generally**

---

1. **Backfill from top of pipeduct surround:** Material excavated from the trench.
2. **Backfilling:** Lay and compact in 300 mm maximum layers. Do not use heavy compactors before backfill is 600 mm deep.

## **75 Warning marker boards, tapes and tiles**

---

1. **Installation:** During backfilling.
2. **Depth:** Continuously, 200-300 mm above service pipe or cable or to requirements of service undertaker if different.
  - 2.1. Pipelines deeper than 2 m lay additional marker 600 mm above the top of the pipeline or to requirements of service undertaker if different.

## **80 Inspection**

---

1. **Inspection of pipeducts:** Before backfilling.
  - 1.1. **Inspection by:** Resident engineer and Service undertakers representative

Ω End of Section

## P31

# Holes, chases, covers and supports for services

## Clauses

### 10 Holes, recesses and chases in masonry

---

1. Locations: To maintain integrity of strength, stability and sound resistance of construction.
2. Sizes: Minimum needed to accommodate services.
  - 2.1. Holes (maximum): 300 mm<sup>2</sup>.
3. Walls of hollow or cellular blocks: Do not chase.
4. Walls of other materials
  - 4.1. Vertical chases: No deeper than one third of single leaf thickness, excluding finishes.
  - 4.2. Horizontal or raking chases: No longer than 1 m. No deeper than one sixth of the single leaf thickness, excluding finishes.
5. Chases and recesses: Do not set back to back. Offset by a clear distance at least equal to the wall thickness.
6. Cutting: Do not cut until mortar is fully set. Cut carefully and neatly. Avoid spalling, cracking and other damage to surrounding structure.

### 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. **Service:** Electrical cabling and fittings Hot and cold water pipes Soil vent pipes  
Telecommunications and network cabling Warning/Overflow/Vent pipes Waste pipes Electrical  
conduits
2. **Location:** Walls and ceilings
3. **Sealing material:** Intumescent sealant & Silicone sealant
4. **Method:** Completely fill gaps with sealant and finish neatly
5. **Requirements:** Moisture vapour and airtight, Fire resistance as required in compartment walls.

Ω End of Section

## Q10

### Kerbs/ edgings/ channels/ paving accessories

To be read with preliminaries/ general conditions.

#### 40 Laying kerbs, edgings and channels

---

1. Standard: To BS 7533-6.
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.

#### 41 Concrete for foundations, races and haunching

---

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

#### 42 Cement mortar bedding

---

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

#### 44 Drainage channel systems

---

1. Installation: To an even gradient, without ponding or backfall. Commence laying from outlets.
2. Silt and debris: Removed from entire system immediately before handover.
3. Washing and detritus: Safely disposed without discharging into sewers or watercourses.

#### 45 Accuracy

---

1. Deviations (maximum)
  - 1.1. Level:  $\pm 6$  mm.
  - 1.2. Horizontal and vertical alignment: 3 mm in 3 m.

#### 50 Tooled mortar joints

---

1. Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and tooled to a neat flush profile.
  - 1.1. Joint width: 6 mm.

#### 51 Tooled coloured mortar joints

---

1. Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and raked out to a depth of 10 mm for pointing.
  - 1.1. Joint width: 6 mm.



2. Pointing: Joints refilled and tooled to a neat flush profile.
  - 2.1. Pointing mortar: 1:3 cement:sand.
  - 2.2. Colour:

## **60 Sealant movement joints**

---

1. Joint filler: Compressible cellular rubber or plastics compatible with specified sealant.
2. Filler installation: Built in as work proceeds, extending through haunching and foundation. Filler positioned accurately to fully support sealant at the recommended depth below exposed faces of units.
3. Joint width .....
4. Sealant:
  - 4.1. Colour:
5. Sealant application: As section Z22.

## **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

## Q23

# Gravel/ hoggin/ woodchip roads/ pavings

To be read with preliminaries/ general conditions.

## 20 Resin bound aggregate surfaces

---

1. Subgrade improvement layer:
2. Geomembrane:
  - 2.1. Manufacturer: • Manufacturer: SureSet Permeable Paving.
    - Web: [www.sureset.co.uk](http://www.sureset.co.uk).
    - Email: [direct@sureset.co.uk](mailto:direct@sureset.co.uk).
    - Product reference: Resin Bound Natural Aggregate Paving
  - Aggregate:
    - Size: 10.0 mm.
    - Depth: 40 mm.
    - Colour: Barley beach.
  - 2.1.1. Product reference:
3. Granular sub-base:
4. Surface course
  - 4.1. Manufacturer: Similar approved - submit proposals  
SureSet Permeable Paving.
    - Web: [www.sureset.co.uk](http://www.sureset.co.uk).
    - Email: [direct@sureset.co.uk](mailto:direct@sureset.co.uk).
  - 4.1.1. Product reference: Aggregate Paving Resin Bound Natural
  - 4.2. Slip/ skid resistance: Submit proposals
  - 4.3. Chippings:
    - 4.3.1. Colour: Barley beach.
    - 4.3.2. Aggregate size: 10.0 mm.
5. Application
  - 5.1. Application: Thoroughly mixed and uniformly spread.
  - 5.2. Thickness: 40mm
  - 5.3. Compaction to all layers: By heavy roller or other appropriate means, adequate to resist subsidence or deformation of the completed roads/ pavings when in use.

## 32 Laying generally

---

1. Channels, gullies, etc: Keep clear.
2. Finished surfaces
  - 2.1. Lines and levels: To prevent ponding.
  - 2.2. Overall texture: Even.
  - 2.3. State at completion: Clean.

## 35 Cold weather working

---

1. Frozen materials: Do not use.
2. Freezing conditions: Do not lay pavings.
3. Cold bituminous surface dressings: Do not apply when ambient temperature is below 10°C.
4. Other dressings or overlays: As manufacturers' recommendations.

## **40 Drainage falls**

---

1. Sealed surfaces
  - 1.1. Falls and cross falls (minimum): 1:40.
  - 1.2. Camber (minimum): 1:50.
2. Unsealed surfaces (minimum): 1:30.

## **45 Laying granular surfaces in vehicular areas**

---

1. Permissible deviation from required levels, falls and cambers (maximum):  $\pm 20$  mm.
2. General: Spread and level in 150 mm maximum layers. As soon as possible compact each layer.
3. Dry weather: Lightly water layers during compaction.

## **50 Laying granular surfaces in pedestrian areas and cycle tracks**

---

1. Permissible deviation from required levels, falls and cambers (maximum):  $\pm 12$  mm.
2. General: Spread and level in 100 mm maximum layers. As soon as possible compact each layer.
3. Dry weather: Lightly water layers during compaction.

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:  $\pm 6$  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:
  - 4.1. Pedestrian traffic (minimum): 2 days
  - 4.2. Vehicular traffic (minimum): 10 days
5. Access: Restrict access to paved areas to prevent damage from site traffic and plant.

## **66 Sand/ fine aggregate for unbound laying course and jointing of concrete flag paving**

---

1. Description: As drawings
2. Standard: To BS 7533-4, unbound construction laying course and jointing material.
3. Purity: Free from deleterious salts, contaminants, lime and cement.
4. Procurement: Obtain from one source and ensure consistent grading.

## **68 Sealant/ stabilizer solution for blocks and setts**

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Contractor's choice

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

---

1. Standard: In accordance with BS 7533-4.
2. Flag installation and cutting: To Interpave 'Concrete flag paving'.
3. Laying course
  - 3.1. Nominal thickness after compaction: 50 mm
4. Joint width: 2-5 mm.

## **76 Laying flag and slab paving – mortar laying course and jointing**

---

1. Standard generally: In accordance with BS 7533-4.
2. Flag installation and cutting: To Interpave 'Concrete flag paving'.
3. Laying course
  - 3.1. Nominal thickness: 30 mm before laying paving slabs
4. Laying and jointing: Contractors Choice
5. Joint width (nominal): 5-10 mm

## **82 Tooled joints in mortar-bedded units**

---

1. Joints: Completely filled with bedding mortar as work proceeds.
  - 1.1. Joint width: 10 mm
  - 1.2. Finish: Neat flush profile.

## **90 Completion of paving with dry sand or fine aggregate filled joints**

---

1. Sand dressing: Leave a thin layer of dry jointing sand/ fine aggregate over the paving until opened to public access Leave a thin layer of dry jointing sand/ fine aggregate over the paving, sweep clean before practical completion
2. Final compaction of the surface course: In accordance with BS 7533-3.
3. Vacuum cleaning machines: Not allowed.

Ω End of Section

## **Q30**

### **Seeding/ turfing**

#### **Clauses - Not Used**

#### **General information/requirements**

##### **115 Seeded and turfed areas**

---

1. **Growth and development:** Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.
2. **Appearance:** A closely knit, continuous ground cover of even density, height and colour.

##### **120 Climatic conditions**

---

1. **General:** Carry out the work while soil and weather conditions are suitable.

##### **145 Watering**

---

1. **Quantity:** Wet full depth of topsoil.
2. **Application:** Even and without displacing seed, seedlings or soil.
3. **Frequency:** As necessary to ensure the establishment and continued thriving of all seeding/turfing.

##### **146 Watering**

---

1. **Quantity:** Wet full depth of topsoil.
2. **Application:** Even and without displacing seed, seedlings or soil.
3. **Frequency:** Every second day

##### **150 Water restrictions**

---

1. **Timing:** If water supply is or is likely to be restricted by emergency legislation do not carry out seeding/turfing until instructed. If seeding/turfing has been carried out, obtain instructions on watering.

#### **Preparation**

##### **212 Seed bed cleaning before sowing**

---

1. **Description:** All grassed areas
2. **Operations:** Remove weeds by hand weeding and hoeing

##### **250 Soil requirements**

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1. **Type:**
  - 1.1. **Seeded areas:** Existing topsoil
  - 1.2. **Turfed areas:** Existing topsoil
  - 1.3. **Reinforced grass areas:** Existing topsoil

#### **Seeding**

##### **311 Grass seed**

---

1. **Description:** For all grassed areas
2. **Supplier:** Contractor's choice

- 2.1. Mixture reference: Contractor's choice
- 3. Application rate: 20-35 g/m<sup>2</sup>

### **319 Quality of seed**

---

- 1. Description: For all grassed areas
- 2. Freshness: Produced for the current growing season.
- 3. Certification: Blue label certified varieties.
  - 3.1. Standard: EC purity and germination regulations.
  - 3.2. Official Seed Testing Station certificate of germination, purity and composition: Submit when requested.
- 4. Samples of mixtures: Submit when requested.

### **330 Sowing**

---

- 1. General: Establish good seed contact with the root zone.
- 2. Method: To suit soil type, proposed usage, location and weather conditions during and after sowing
  - 2.1. Distribution: 2 equal sowings at right angles to each other and diagonally to main axis

### **335 Grass sowing season**

---

- 1. Grass seed generally: April to June or August to October

## **Turfing**

### **400 Cultivated turf**

---

- 1. Description: For all grassed areas
- 2. Supplier: Contractor's choice
  - 2.1. Product reference: Contractor's choice
- 3. Properties of soil used for turf production: Peat-free, well drained sandy loam

### **420 Delivery and storage**

---

- 1. Timing: Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist.
- 2. Frosty weather or waterlogged ground: Do not lift turf.
- 3. Delivery: Arrange to avoid need for excessive stacking.
- 4. Stacking height (maximum): 1 m.
- 5. Dried out or deteriorated turf: Do not use.
- 6. Certification:
  - 6.1. Standard: To BS 3969.
  - 6.2. Declaration: Species mix, including percentage of specified species

### **430 Turfing generally**

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- 1. Time of year: To be agreed
- 2. Timing of laying:
  - 2.1. Spring and summer: within 18 hours of delivery.
  - 2.2. Autumn and winter: within 24 hours of delivery.
- 3. Weather conditions: Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry.

4. Working access: Planks laid on previously laid turf. Do not walk on prepared bed or newly laid turf.
5. Jointing: Laid with broken joints, well butted up. Do not stretch turf.
6. Edges: Whole turfs, trimmed to a true line.
7. Adjusting levels: Remove high spots and fill hollows with fine soil.
8. Consolidating: Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers.
9. Dressing, brushed well in to completely fill all joints: None
10. Watering: Thoroughly water completed turf immediately after laying. Check that water has penetrated to the soil below.

## Cutting maintenance

### 530 First cut of grassed areas

---

1. Timing: When grass is reasonably dry.
  - 1.1. Height of initial growth: 40-75 mm
2. Preparation:
  - 2.1. Debris and litter: Remove.
  - 2.2. Stones and earth clods larger than 25 mm in any dimension: Remove
3. Height of first cut: 40 mm
4. Mower type: Contractor's choice
5. Arisings: Remove from site

### 610 Failures of seeding/turfing

---

1. Duration: Carry out the following operations from completion of seeding/ turfing until: the end of the rectification period
2. Defective materials or workmanship: Areas that have failed to thrive.
  - 2.1. Exclusions: Theft or malicious damage.
3. Method of making good: Recultivation and reseeding/ returfing.
4. Timing of making good: The next suitable planting season

### 620 Maintaining

---

1. Description: General grassed areas
2. Duration: Carry out the following operations from completion of seeding/ turfing until: practical completion
3. Maximum height of growth at any time: 50 mm
4. Preparation: Before each cut remove all litter and debris.
5. Cutting: As and when necessary to a height of: 35 mm
  - 5.1. Arisings: Remove
6. Bulb planting areas: Do not cut until bulb foliage has died down.
7. Trimming: All edges.
  - 7.1. Arisings: Remove.
8. Weed control: Substantially free of broad leaved weeds.
  - 8.1. Method: Application of a suitable selective herbicide.
9. Stones brought to the surface: Remove regularly.
  - 9.1. Size: Exceeding 25 mm in any dimension.
10. Areas of settlement: Make good.



11. Watering: Contractor's choice

Ω End of Section

# Q31

## External planting

### Clauses - Not Used

### General information/ requirements

#### 112 Site clearance generally

---

1. General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
2. Stones: Remove those with any dimension exceeding: 50 mm
3. Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.
4. Vegetation: Clear scrub to ground level by flail mowing and remove arisings
5. Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.
6. Additional requirements: Remove remnants of old fence posts and mesh

#### 120 Climatic conditions

---

1. General: Carry out the work while soil and weather conditions are suitable.
  - 1.1. Strong winds: Do not plant.

#### 125 Times of year for planting

---

1. Deciduous trees and shrubs: Late October to late March.
2. Conifers and evergreens: September/ October or April/ May.
3. Herbaceous plants (including marginal): September/ October or March/ April.
4. Container grown plants: At any time if ground and weather conditions are favourable.
  - 4.1. Watering and weed control: Provide as necessary.
5. Dried bulbs, corms and tubers: September/ October.
6. Colchicum (crocus): July/ August.
7. Green bulbs: After flowering in spring.
8. Wildflower plugs: Late August to mid November or March/ April.
9. Aquatic plants: May/ June or September/ October.

#### 145 Watering

---

1. Quantity: Wet full depth of topsoil.
2. Application: Even and without damaging or displacing plants or soil.
3. Frequency: As necessary to ensure establishment and continued thriving of planting.

#### 150 Water restrictions

---

1. General: If water supply is or is likely to be restricted by emergency legislation, do not carry out planting until instructed. If planting has been carried out, obtain instructions on watering.

#### 170 Soil requirements

---

1. Type:
  - 1.1. Planted beds: Existing topsoil
  - 1.2. Tree pits, shrub pits and other backfilling: Existing topsoil
  - 1.3. External container planting: N/A

1.4. Mulch applied after planting: Mulching and top dressing system

### **200 Plants/ trees - general**

---

1. Condition: Materially undamaged, sturdy, healthy and vigorous.
2. Appearance: Of good shape and without elongated shoots.
3. Hardiness: Grown in a suitable environment and hardened off.
4. Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
5. Budded or grafted plants: Bottom worked.
6. Root system and condition: Balanced with branch system.
  - 6.1. Standard: The National Plant Specification
7. Species: True to name.
8. Origin/ Provenance: Local provenance
  - 8.1. Definition: Origin and Provenance have the meaning given in the National Plant Specification.

### **215 Plants/ trees - specification criteria**

---

1. Name, forms, dimensions, provenance and other criteria: As scheduled and defined in the National Plant Specification (available on CS Design Software Limited's website).

### **216 Plants/ trees - specification criteria**

---

1. Name, forms, dimensions and other criteria: To the relevant part of BS 3936.

### **225 Bulbs/ corms/ tubers**

---

1. Condition: Firm, entire, not dried out or shrivelled.
2. Health: Free from pests, diseases and fungus.
3. Handling: Remove from packaging immediately.
4. Storage: Permitted only when necessary.
  - 4.1. Location: Well ventilated, dark, covered, rodent proof container, away from exhausts and fruit.
  - 4.2. Duration: Minimum period.
  - 4.3. Temperature.

### **235 Container grown plants/ trees**

---

1. Growing medium: With adequate nutrients for plants to thrive until permanently planted.
2. Plants: Centred in containers, firmed and well watered.
3. Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
4. Hardiness: Grown in the open for at least two months before being supplied.
5. Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

### **260 Plant/ tree substitution**

---

1. Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering: Submit alternatives, stating:
  - 1.1. Price.
  - 1.2. Difference from specified plants/ trees.
2. Approval: Obtain before making any substitution.

## **265 Plant handling storage transport and planting**

---

1. Standard: To CPSE 'Handling and establishing landscape plants'.
2. Frost: Protect plants from frost.
3. Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
4. Plant packaging: Coextruded polyethylene bags with black interior and white exterior
5. Packaging of bulk quantities: Pallets or bins sealed with polyethylene and shrink wrapped
6. Planting: Upright or well balanced with best side to front.

## **280 Treatment of tree wounds**

---

1. Cutting: Keep wounds as small as possible.
  - 1.1. Cut cleanly back to sound wood using sharp, clean tools.
  - 1.2. Leave branch collars. Do not cut flush with stem or trunk.
  - 1.3. Set cuts so that water will not collect on cut area.
2. Fungicide/ Sealant: Do not apply unless instructed.

## **285 Protection of existing grass**

---

1. General: Protect areas affected by planting operations using boards/ tarpaulins.
  - 1.1. Excavated or important material: Do not place directly on grass.
  - 1.2. Duration: Minimum period.

## **290 Surplus material**

---

1. Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, prunings and other arisings: Remove.

## **Preparation of planting beds/ planting materials**

### **375 Cultivation**

---

1. Compacted topsoil: Break up to full depth.
2. Cultivation: Loosen, aerate and break up soil into particles of 2-8 mm.
  - 2.1. Depth: 250 mm
  - 2.2. Timing: Within a few days before planting.
  - 2.3. Weather and ground conditions: Suitably dry.
3. Surface: Leave regular and even.
4. Levels: 25 mm above adjoining paving or kerbs
5. Undesirable material brought to the surface: Remove visible weeds, roots and large stones with any dimension exceeding: 50 mm
6. Soil within root spread of trees and shrubs to be retained: Do not dig or cultivate.

## **Planting shrubs/ herbaceous plants/ bulbs**

### **405 Shrub planting pits**

---

1. Timing: Excavate: 1-2days (maximum) before planting.
2. Sizes: Wide enough to accommodate roots when fully spread and 75 mm deeper than root system
3. Pit bottom improvement: Break up to a depth of 150 mm, incorporating 25 g of slow release fertilizer per planting pit

## **445 Planting bulbs/ corms/ tubers**

---

1. **Depth:** Top of bulb/ corm/ tuber at a depth of approximately twice its height, base in contact with bottom of hole.
2. **Backfilling:** Finely broken soil. Lightly firm to existing ground level.
3. **Naturalized planting in existing grassed areas:**
  - 3.1. **Scattering:** Random. Plant bulbs/ corms/ tubers where they fall.
  - 3.2. **Planting:** Neatly remove a plug of turf and replace after planting.

## **480 After planting**

---

1. **Watering:** Immediately after planting, thoroughly and without damaging or displacing plants or soil.
2. **Firming:** Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
3. **Top dressing:** Mulching and top dressing system
  - 3.1. **Depth:** 35 mm

## **486A Shrub protection**

---

1. **Manufacturer:** Contractor's choice
  - 1.1. **Product reference:** Contractor's choice
2. **General:** Ensure that protection methods do not impede natural movement of shrubs or restrict growth.

## **Planting trees**

### **505 Tree pits**

---

1. **Sizes:** 75 mm deeper than root system and wide enough to accommodate roots when fully spread.
2. **Sloping ground:** Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
3. **Pit bottoms:** : With slightly raised centre. Break up to a depth of 200 mm.
4. **Sloping Ground::** Maintain horizontal bases and vertical sides with no less than minimum depth throughout.
5. **Treatment:** Soil ameliorant worked into pit bottoms
6. **Pit sides:** Scarify.
7. **Backfilling material:** Plant pit backfilling soil system, as section Q28.
8. **Accessories:** Perforated plastics irrigation/ ventilation pipe and root barrier

### **535 Tree stakes**

---

1. **Stakes:** Softwood, peeled chestnut, larch or oak, straight, free from projections and large or edge knots and with pointed lower end.
  - 1.1. **Preservative treatment:** To provide a 20 year service life.
2. **Stake sizes (minimum):** 50 mm diameter
3. **Stake length (minimum):** appropriate height above ground level for tree

## Protecting/ maintaining/ making good defects

### 710 Maintenance

---

1. Duration: Carry out the operations in the following clauses from completion of planting until: practical completion
2. Frequency of maintenance visits: Contractor's choice

### 720 Failures of planting

---

1. Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
  - 1.1. Exclusions: Theft or malicious damage after completion.
  - 1.2. Rectification: Replace with equivalent plants/ trees/ shrubs.
2. Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
3. Timing of making good: During the next suitable planting season

### 730 Protective fencing

---

1. Fencing type: Contractor's choice
2. Erection: On completion of planting.
3. Removal: After planting is well established

### 740 Cleanliness

---

1. Soil and arisings: Remove from hard surfaces and grassed areas.
2. General: Leave the works in a clean tidy condition at completion and after any maintenance operations.

### 750 Planting maintenance generally

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1. Weed control: Maintain weed free area around each tree and shrub.
  - 1.1. Diameter (minimum): The larger of 1 m or the surface of original planting pit.
  - 1.2. Keep planting beds clear of weeds: By maintaining full thickness of mulch
2. Planted areas: Fork over beds as necessary to keep soil loose, with gentle cambers and no hollows. Take care not to reduce depth or effect of mulch.
3. Precautions: Ensure that trees and shrubs are not damaged by use of mowers, nylon filament rotary cutters and similar powered tools.
4. Firming up: Gently firm loosened soil around trees/ shrubs. Straighten leaning trees/ shrubs.
5. Trees: Spray crown when in leaf during warm weather.
  - 5.1. Timing: After dusk.
6. Tree accessories: Check condition of stakes, ties, guys, guards and irrigation and ventilation systems.
  - 6.1. Broken or missing items: Replace.
  - 6.2. Loose stakes: Re-firm in the ground or replace as necessary to provide support to the tree.
  - 6.3. Loose guys: Re-firm anchor points and adjust as necessary to provide support to the tree.
  - 6.4. Ties: Adjust to accommodate growth and prevent constriction or abrasion.
  - 6.5. Damage to bark: Cut back neatly with sharp knife. Prevent further damage.
  - 6.6. Frequency of checks: Contractor's choice
7. Watering: As required for healthy establishment, depending on weather conditions

## **760 Planting maintenance - pruning**

---

1. General: Prune to promote healthy growth and natural shape.
2. Dead, dying, diseased wood and suckers: Remove.
3. Timing: As appropriate to the species
  - 3.1. Trees: Favour a single central leading shoot.
4. Arisings: Remove.

## **790 Final mulching**

---

1. Timing: At end of the maintenance period.
2. Watering: Ensure that soil is thoroughly moistened prior to remulching, applying water where necessary.
3. Planting beds: Remulch.
  - 3.1. Depth (minimum): 50 mm
4. Trees: Remulch.
  - 4.1. Depth (minimum): N/A

Ω End of Section

## Q40 Fencing

### Fencing

#### 30 Proprietary fencing

---

1. Description: To match gates forming site enclosure to front car park.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Height: 1100mm high.
4. Materials: Steel
  - 4.1. Treatment: Hot-dip galvanized to BS EN ISO 1461
  - 4.2. Finish: Submit proposals
5. Centres of posts (maximum): As manufacturer's recommendations
6. Method of setting posts: As manufacturer's recommendation
7. Accessories: Single leaf gate at pedestrian entrance

#### 35 Wood

---

1. Description: Timber hit and miss fencing to bin store.
2. Manufacturer: Submit proposals
3. Standard: To BS 5709.
4. Wood: Contractor's choice
  - 4.1. Treatment: As section Z12 and Wood Protection Association Commodity Specification C3.
  - 4.2. Type: To provide a 30-year service life
  - 4.3. Finish: Submit proposals
5. Adhesive: Synthetic resin to BS EN 301, type 1.
6. Joinery workmanship: As section Z10.
7. Fittings: as required to support a pair of matching doors and locking cylinder to match building
  - 7.1. Finish: Hot-dip galvanized to BS EN ISO 1461
8. Method of fixing: Contractor's choice
9. Accessories: Contractor's choice to complete design.

#### 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.

## **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

## Q50 Site/street furniture/equipment

To be read with preliminaries/ general conditions.

### 20 Gate

---

1. Description: Bi-parting cantilever sliding gate. with matching pedestrian gate and infill metal fencing to front of site.
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals
3. Size: As drawings / 1100mm high
4. Posts: Steel
  - 4.1. Treatment: Hot-dip galvanized to BS EN ISO 1461
5. Fittings and accessories: Provide key locking with cylinders to match building
6. Method of setting posts: As required by manufacture

### 31 Bollards

---

1. Manufacturer: 5 No. Removable
  - 1.1. Product reference: Submit proposals
2. Material: Steel
  - 2.1. Finish as delivered: Hot-dip galvanized to BS EN ISO 1461
  - 2.2. Colour: None
3. Height above ground: 900 mm
4. Sectional size: 120 x 120 mm square
5. Top: Flat
6. Special features: White reflective band, 150 mm high at top of bollard, key locking required.
7. Method of fixing: As manufacturers requirements

### 31 Bollards Type A

---

1. Manufacturer: 15No. or to suite design lux level requirements. Lighting Bollards
  - 1.1. Product reference: Submit proposals
2. Height above ground: 900 mm / manufacturers standard module.
3. Sectional size: 120 x 120 mm square
4. Special features: refer to ecology report to confirm compatibility
5. Method of fixing: As manufacturers requirements

### 32 Cycle stands

---

1. Manufacturer: Contractor's choice
  - 1.1. Product reference: Submit proposals
2. Type: 12 Cycle Eco Shelter including 6 hoop toast rack or similar approved
3. Material: Steel
  - 3.1. Finish: Hot-dip galvanized to BS EN ISO 1461
  - 3.2. Colour: None
4. Accessories: None

5. Method of fixing: As manufacturers standards

### **33 Benches**

---

1. Manufacturer: Provide 2no. lengths of wall mounted external benching
  - 1.1. Product reference: Contractor's choice
2. Material: Wood and Steel
  - 2.1. Finish: As manufactured
  - 2.2. Colour: TBC
3. Size: Refer to drawings
4. Accessories/ Special requirements: Anti-graffiti coating
5. Method of fixing: As manufacturers recommendations and details

### **35 Litter bins**

---

1. Manufacturer: 2No. external bins
  - 1.1. Product reference: Submit proposals
2. Material: Steel
  - 2.1. Finish: Polyester powder-coated
  - 2.2. Colour: TBC
3. Accessories/ Special requirements: Anti-graffiti coating Hinged, locking lid
4. Method of fixing: As manufacturers recommendations

### **40 Nesting boxes**

---

1. Description: Refer to Ecology Report and Planning conditions
2. Manufacturer: Contractor's choice
  - 2.1. Product reference: Submit proposals

### **70 Preservative treated timber**

---

1. Surfaces exposed by minor cutting and drilling: Treated by immersion or with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.
2. Heavily worked sections: Re-treat.

### **80 Concrete foundations generally**

---

1. Standard: To BS 8500-2.
2. Mix: Designated concrete not less than GEN 1 or standard prescribed concrete not less than ST2.
3. Admixtures: Do not use.
4. Foundation holes: Neat vertical sides.
5. Depth of foundations, bedding, haunching: Appropriate to provide adequate support and to receive overlying soft landscape or paving finishes.

### **85 Setting components in concrete**

---

1. Holes:
2. Components: Accurately positioned and securely supported.
3. Concrete fill: Fully compacted as filling proceeds.
4. Concrete foundations exposed to view: Compacted until air bubbles cease to appear on the upper surface, then weathered to shed water and trowelled smooth.
5. Temporary component support: Maintain undisturbed for minimum 48 hours.

## **90 Building in to masonry walls**

---

1. **Components being built in:** Accurately positioned and securely supported. Set in mortar and point neatly to match adjacent walling.
2. **Temporary support:** Maintain for 48 hours (minimum) and prevent disturbance.

Ω End of Section

## R10 Rainwater drainage systems

To be read with preliminaries/ general conditions.

### 48 SYSTEM PERFORMANCE DESIGN A

---

1. Design:  
Complete the design of the rainwater drainage system.
2. Standard:  
To BS EN 12056-3, clauses 3–7, Annex A and National Annexes.  
To BS EN 12056-5, clauses 3, 4, 6 and 11.
3. Proposals:  
Submit drawings, technical information, calculations and manufacturers' literature.

### 49 COLLECTION AND DISTRIBUTION OF RAINWATER A

---

1. General:  
Complete, and without leakage or noise nuisance.

### 50 Installation generally

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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.

### 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: Mechanical fasteners
2. Timing: Do not fit insulation until completion of pipe airtightness or leakage testing.

### 80 Internal pipework test –England,Wales,IrelandandNorthern Ireland

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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**

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

## **92 Gutter test**

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

Ω End of Section

# R11

## Above ground foul drainage systems

To be read with preliminaries/ general conditions.

### 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: Black, with arrows to indicate direction of flow
  - 1.2. Wording: White lettering 'FOUL DRAINAGE' on a black background
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**

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

Ω End of Section



## Z10 Purpose-made joinery

To be read with preliminaries/ general conditions.

### 110 Fabrication

---

1. Standard: To BS 1186-2.
2. Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
  - 2.1. Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
3. Joints: Tight and close fitting.
4. Assembled components: Rigid. Free from distortion.
5. Screws: Provide pilot holes.
  - 5.1. Screws of 8 gauge (4 mm diameter) or more and screws into hardwood: Provide clearance holes.
  - 5.2. Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.
  - 5.3. Adhesives: Compatible with wood preservatives applied and end uses of timber.

### 120 Cross section dimensions of timber

---

1. General: Dimensions on drawings are finished sizes.
2. Maximum permitted deviations from finished sizes
  - 2.1. Softwood sections: To BS EN 1313-1:-
    - 2.1.1. Clause 6 for sawn sections.
  - 2.2. Hardwood sections: To BS EN 1313-2:-
    - 2.2.1. Clause 6 for sawn sections.
    - 2.2.2. Clause NA.3 for further processed sections.

### 130 Preservative treated wood

---

1. Cutting and machining: Completed as far as possible before treatment.
2. Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
3. Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.

### 140 Moisture content

---

1. Wood and wood-based products: Maintained within range specified for the component during manufacture and storage.

### 250 Finishing

---

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

Ω End of Section

# Z11

## Purpose-made metalwork

### Products

#### 310 Materials generally

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1. Grades of metals, section dimensions and properties: To appropriate British Standards. When not specified, select grades and sections appropriate for the purpose.
2. Prefinished metal: May be used if methods of fabrication do not damage or alter appearance of finish, and finish is adequately protected.
3. Fasteners: To appropriate British Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.

### Fabrication

#### 515 Fabrication generally

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

#### 520 Cold formed work

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1. Profiles: Accurate, with straight arrises.

#### 527 Welding

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1. Welding procedures
  - 1.1. Method and standard: Metal arc welding to BS EN 1011-1 and -2.
  - 1.2. Welding Procedure Specification (WPS): Not required
2. Preparation
  - 2.1. Joint preparation: Clean thoroughly.
  - 2.2. Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
3. Jointing
  - 3.1. Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
  - 3.2. Dissimilar metals: Welding not permitted
  - 3.3. Strength requirements: Welds to achieve design loads.
  - 3.4. Heat straightening: Not permitted
  - 3.5. Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds.
  - 3.6. Tack welds: Use only for temporary attachment.
  - 3.7. Jigs: Provide to support and restrain members during welding.
  - 3.8. Filler plates: Not permitted
  - 3.9. Lap joints: Minimum 5 x metal thickness or 25 mm, whichever is greater.
  - 3.10. Weld terminations: Clean and sound.

## Finishing

### 710 Finishing welded and brazed joints visible in complete work

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1. Standard: To BS EN ISO 8501-3.
  - 1.1. Preparation grade: P3
2. Butt joints: Smooth, and flush with adjacent surfaces.
3. Fillet joints: Neat.
4. Grinding: Grind smooth where indicated on drawings.

### 745 Preparation for application of coatings

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

### 780 Galvanizing

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1. Standard: To BS EN ISO 1461.
2. Preparation
  - 2.1. Vent and drain holes: Provide in accordance with BS EN 14713-1 and -2. Seal after sections have been drained and cooled.
  - 2.2. Components subjected to cold working stresses: Heat treat to relieve stresses before galvanizing.
  - 2.3. Welding slag: Remove.
  - 2.4. Component cleaning: To BS EN ISO 8501-3.
  - 2.5. Grade: St 2½

Ω End of Section

## Z12

### Preservative/ flame-retardant treatment

To be read with preliminaries/ general conditions.

#### 110 Treatment application

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1. Timing: After cutting and machining timber, and before assembling components.
2. Processor: Licensed by manufacturer of specified treatment solution.
3. Operatives: WPA certified
4. Certification: For each batch of timber provide a certificate of assurance that treatment has been carried out as specified.

#### 120 Commodity specifications

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1. Standard: In accordance with the Wood Protection Association (WPA) publication 'Industrial wood preservation specification and practice'.

#### 130 Preservative treatment solution strengths/ treatment cycles

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1. General: Select to achieve specified service life and to suit treatability of specified wood species.

#### 140 Copper-organic preservative treatment

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1. Solution
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Colour: Contractor's choice
  - 1.3. Application: High-pressure impregnation.
2. Moisture content of wood
  - 2.1. At time of treatment: Not more than 28%.
  - 2.2. After treatment: Timber to be surface dry before using.

#### 150 Water-based organic preservative treatment

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1. Solution
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Application: High-pressure impregnation.
2. Moisture content of wood
  - 2.1. At time of treatment: Not more than 28%.
  - 2.2. After treatment: Timber to be surface dry before use.

#### 160 Organic solvent preservative treatment

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1. Solution
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Application: Double vacuum + low-pressure impregnation, or immersion.
2. Moisture content of wood
  - 2.1. At time of treatment: As specified for the timber/ component at time of fixing.
  - 2.2. After treatment: Timber to be surface dry before use.

## **165 Water-based microemulsion preservative treatment**

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1. Solution
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Application: Double vacuum + low-pressure impregnation.
2. Moisture content of wood
  - 2.1. At time of treatment: As specified for the timber/ component at time of fixing.
  - 2.2. After treatment: Timber to be surface dry before use.

## **167 Boron compound preservative treatment**

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1. Solution
  - 1.1. Manufacturer: Contractor's choice
    - 1.1.1. Product reference: Contractor's choice
  - 1.2. Application: High-pressure impregnation.
2. Moisture content of wood
  - 2.1. At time of treatment: Not more than 28%.
  - 2.2. After treatment: Timber to be surface dry before using.

## **210 Flame-retardant treatment**

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1. Standard: In accordance with the Wood Protection Association (WPA) publication 'Industrial flame retardant treatment of wood and wood-based panel products'.
2. Solution type: EXT
  - 2.1. Manufacturer: Contractor's choice
    - 2.1.1. Product reference: Contractor's choice
  - 2.2. Application: Vacuum + pressure impregnation.
3. Moisture content of wood
  - 3.1. At time of treatment: Not to exceed, 28% for large cross sectional timber, 22% for timber boarding and 15% for board material
  - 3.2. After treatment: Timber to be redried slowly at temperatures not exceeding 60°C to minimize distortion and degradation.

## **610 Making good to preservative treatment on site**

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1. Preservative solution: Compatible with off-site treatment.
2. Application: In accordance with preservative manufacturer's recommendations.

## **620 Making good to flame-retardant treatment on site**

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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

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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

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

#### 340 Masonry fixings

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

#### 350 Plugs

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

#### 390 Adhesives generally

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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.

#### 410 Powder actuated fixing systems

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1. Types of fastener, accessories and consumables: As recommended by tool manufacturer.

### Execution

#### 610 Fixing generally

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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

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

#### 630 Fixing packings

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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**

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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**

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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**

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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.

### **690 Using powder actuated fixing systems**

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1. Powder actuated fixing tools: To BS 4078-2 and Kitemark certified.
2. Operatives: Trained and certified as competent by tool manufacturer.

### **700 Applying adhesives**

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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

#### 110 Cement gauged mortar mixes

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

#### 120 Sand for site made cement gauged masonry mortars

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1. Standard: To BS EN 13139.
2. Grading: 0/2 (FP or MP).
  - 2.1. Fines content where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5-6):
    - 2.1.1. Lower proportion of sand: Use category 3 fines.
    - 2.1.2. Higher proportion of sand: Use category 2 fines.
3. Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.

#### 131 Ready-Mixed lime:sand for cement gauged masonry mortars

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1. Standard: To BS EN 998-2.
2. Lime: Nonhydraulic to BS EN 459-1.
  - 2.1. Type: CL 90S.
3. Pigments for coloured mortars: To BS EN 12878.

#### 160 Cements for mortars

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1. Cement: To BS EN 197-1 and CE marked.
  - 1.1. Types: Portland cement, CEM I.
2. Portland limestone cement, CEM II/A-L or CEM II/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 II/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

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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 glycol and any admixture containing calcium chloride.

### **190 Retarded ready to use cement gauged masonry mortars**

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1. Standard: BS EN 998-2.
2. Lime for cement:lime:sand mortars: Nonhydraulic to BS EN 459-1.
  - 2.1. Type: CL 90S.
3. Pigments for coloured mortars: To BS EN 12878.
4. Time and temperature limitations: Use within limits prescribed by mortar manufacturer.
  - 4.1. Retempering: Restore workability with water only within prescribed time limits.

### **210 Making cement gauged mortars**

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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

## Z22 Sealants

### Products

#### 310 Joints

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1. Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.

### Execution

#### 610 Suitability of joints

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

#### 620 Preparing joints

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

#### 630 Applying sealants

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

Ω End of Section