NTWFS.01

Donald Insall Associates

National Trust

NT Wales Fire Safety Project

EH-02

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C20
Demolition

Clauses

25 Location of services

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

30 Services disconnection arranged by contractor

1. Responsibility: Before starting deconstruction/ demolition arrange with the appropriate authorities for disconnection of services owned by those authorities and removal of associated fittings and equipment.

35 Live foul and surface water drains

1. General: Protect drains and fittings still in use. Keep free of debris and ensure normal flow during deconstruction/ demolition work.
2. Damage: Make good damage arising from deconstruction/ demolition work. Leave clean and in working order at completion of deconstruction/ demolition work.

40 Service bypass connections

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. Notice: Give adequate notice to adjoining owners and all affected occupiers if shutdown is necessary.

45 Services to be retained

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

1. Standard: Demolish structures in accordance with BS 6187.
2. Operatives: Appropriately skilled and experienced for the type of work. 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

1. Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.
2. Dust: Reduce by periodically spraying with an appropriate wetting agent, or contain.
   2.1. Lead dust: Submit method statement for control, containment and clean-up regimes.
3. Site operatives and general public: Protect from vibration, dangerous fumes and dust arising during the course of the Works.

65 Structures to be retained

1. Parts which are to be kept in place: Protect.

2. Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

70 Partly deconstructed/ demolished structures

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

71 Dangerous openings

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

76D Asbestos Containing Materials

1. Discovery: Give notice immediately of suspected asbestos containing materials discovered. Avoid disturbing such materials and submit details of methods for safe removal and statutory risk assessments.
2. Removal: Submit statutory risk assessments and details of proposed methods for safe removal.
3. Removal: By a Contractor licensed by the Health and Safety Executive and prior to other work starting in these locations.

78 Unforeseen hazards

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.

85 Site condition at completion

1. Debris: Clear away and leave the site tidy on completion.

90 Contractor's property

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

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.

Ω End of Section

C51 DIA
Repairing/ renovating/ conserving timber

General

10 Environmental policy

1. Obtain all new timber from a sustainable source, and submit suitable documentary evidence to demonstrate this and obtain the CA's approval before placing orders. Preference will be given to suppliers who have adopted the Environmental Policy agreed by Forests Forever and the Timber Trade Federation, or another comparable policy, and who can provide evidence of their commitment to that Policy.

11A Repairs to timber ceilings of cellar

1. Timber: To match existing- assume european oak.
2. Supplier: Contractors choice- FSC approved.
3. Moisture content: Suitable for application
4. Finish: lime wash as per clause XXX/XXX
5. Fixing: Discrete, where possible suitable wood joints should be used and the timber resin fixed - method of fixing to be reviewed and agreed onsite with Contractor

12A Opening-up at commencement

1. Location/Scope: As scheduled below.
2. Purpose: to reveal previously concealed areas of structure or fabric not recorded during initial surveys.
3. Timeline: Contractor to include this as a distinct work stage in his submitted Method Statement and Timeline Chart. The opening-up is to be undertaken as far as possible in one stage for the whole site to enable the Architects and Engineer’s inspections to comprehend the necessary repair work in one go and as early as possible. It is to be undertaken following the Condition Survey for Insurance Purposes.
4. Scope & Extent: as scheduled below:
    4.1. Lift floorboards above areas identified on drawing 05-2001.
5. Timing: Give notice before lifting floorboards and allow to review identified locations onsite with CA and Client. It may not be possible to lift floorboards in certain areas for practical reasons or due to the historical significance of the intended location. In such instances, all repair work will need to be carried out from below in the Cellar.
    5.1. Period of notice: 10 days
6. Contractor is to organize the Opening Up to be completed as a single stage for the whole building, ready for a single inspection.
7. Retained building structure/ fabric: do not damage or destabilize.
8. Cleaning for inspection: voids in floors and ceilings exposed by opening-up to be cleaned with a vacuum cleaner to the most extent practicable, ready for inspection.

12B Inspection after opening-up

1. Location: All parts of all buildings to be retained
2. Purpose: to confirm nature and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.
3. Parties involved:
    3.1. Architect
    3.2. Structural Engineer

3.3. Owners' Representative (at discretion of Owners)

3.4. Contractors Representative including Site Agent

4. Timing: following Opening-Up specified below.
   4.1. Opening up is not to commence until after the Condition Survey for Insurance Purposes has been completed
   4.2. Contractor is to organize the Opening Up to be completed as a single stage for the whole building, ready for a single inspection.
   4.3. Further inspection visits if further Opening-Up is instructed.
5. Instructions to be issued during inspection - by Architects Instruction
6. Attendance requirements for inspection:
   6.1. Adequate inspection lighting, including lighting for roof voids
   6.2. Electric drill with 12mm bit for examining joist ends and wall plates under Architects direction.
   6.3. Provision of worker for positioning and fastening ladders, general attendance.
   6.4. Crawl boards if requested for examining roof spaces, ladders, supports.

12C Review of scope of repair work upon close inspection

1. Provide artificial lighting to all areas where timber repair is to be made to enable the CA to make a close inspection.
2. Provide attendance and inspect the work with the CA to confirm the nature and extent of the cutting out and removal of timbers as identified on drawings.
3. Make a record of instructions given during inspections, which may either confirm or vary scope of work, and measure and record relevant details.
4. Prepare and submit details of instructions for confirmation.
5. Prepare schedules and drawings for use as basis of implementation of work.

13 Recording to the approval of the CA

1. Clearly mark by appropriate means, the defective timbers or parts of timbers to be removed.
2. Record by photograph or other approved method, timbers to be cut out and/or missing timbers to be reinstated, and the relationship of surrounding work.
3. Cross-reference identified and marked timbers to drawings or photographs.

16 Timber repairs

1. It is not intended to renew or straighten old and crooked structure but rather to set it in sound and healthy repair.
2. Repair timbers individually, as far as possible in position, with a minimum of replacement and renewal.
3. Resolve all "live" structural movement, and correct design of physical weaknesses.
4. Retain irregularities that are not unsound or unsafe.
5. Finish joints to ensure close contact of mating surfaces.

17 Re-use of timber

1. Agree extent to which existing timber is to be retained for re use in other than its existing location. Remove all such timber; clean, overhaul, protect and store on site until required. Remove all such components: clean, overhaul, protect and store on site until required. Subsequently adapt as required and reinstate in agreed locations.
2. Sound offcuts from salvaged timber may be re used with the approval of the CA.

18 Samples

1. Submit samples of timber and obtain approval before proceeding with manufacture or repair.
2. Retain and protect approved samples on site until Practical Completion and ensure work matches.

20 Basic workmanship

1. Comply with the clauses of BS 8000:Part 5 that are relevant to this section, unless otherwise specified or shown on drawings.

21 Accuracy

1. Not withstanding BS 8000:Part 5, clause 3.2.1, comply with Preliminaries clause A33/340 and any required critical dimensions given in the Specification or on the drawings.

22 Sequence of repair work

1. Remove unwanted timbers.
2. Carry out de-frassing and preservative treatment.
3. Repair existing and introduce new timbers.

23 Cross section dimensions of timber

1. Cross section dimensions of timber shown on drawings are basic sizes unless stated otherwise.
2. Maximum permitted deviations from basic sizes to be as stated in BS EN 1313-1 1997 for softwoods and BS EN 1313-2 1999 for hardwoods.
3. "Unwrot" timber is to be left from the saw and full to the dimensions stated.

24 Reduction to finished sizes

1. Reduction to finished sizes of planed/regularised timber to be to BS EN 1313-1 1997 for softwoods and BS EN 1313-2 1999 for hardwoods.

25 Warping of timber

1. The limits set down in BS 4978: 2007 for the amount of bow, spring, twist and cup in a piece of timber must not be exceeded.

26 Selection and use of timber

1. Do not use timber members that are damaged, crushed or split beyond the limits permitted by their grading.
2. Ensure that notches and holes are not so positioned in relation to knots or other defects that the strength of members will be reduced.
3. Do not use scarf joints, finger joints or splice plates without approval.
4. Select timber with due regard to the particular purpose for which is to be used.

27 Temporary removal

1. Mark and set aside any timber to be temporarily removed and subsequently reinstate in its original position.
2. Adapt existing timbers only where essential to accommodate necessary new work.

28 Cutting existing timber

1. Avoid where possible.
2. Obtain approval of dimensions and locations before cutting.

29 Making good

1. Where local decoration remains, and whole area is not to be stripped of paint, rub back locally to reveal timber face. Where lead paint is to be removed abrade surface using water and waterproof sandpaper.
2. Cut out timber that is to be replaced and piece in new, flush with timber finished faces.
3. Reproduce exactly all features of adjacent existing work.

30 Retained timbers

1. Clean off superficial dirt and debris. De-nail and remove redundant fixings, etc. Adapt or renew as required to accommodate new timbers.
2. Set aside removed metal items for the CA.

34 Moisture content

1. Moisture content of timber at time of erection to be not more than:
   1.1. Under cover in generally unheated spaces: 19%
   1.2. Under cover in generally heated spaces: 16%
   1.3. Internal in continuously heated spaces: 14%

35 Moisture content

1. When instructed by CA, test timber sections with an approved electrical moisture meter used in accordance with manufacturer's recommendations. Test 5 % but not fewer than 10 lengths of each cross section in the centre of the length. 90% of values obtained to be within the specified range.
2. Provide CA with records of all tests.

36 Protection

1. Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
2. Store timber and components under cover, clear of the ground and with good ventilation.
3. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
4. Arrange sequence of construction and cover timber as necessary during and after erection to ensure that specified moisture content is not exceeded.

40 Jointing/fixing generally

1. Where not specified otherwise, select fixing and jointing methods and types, sizes and spacings of fastenings in compliance with section Z20. Fastenings to comply with relevant British Standards.

41 End joints

1. Do not use without approval.

42 Scarf joints

1. Where approved:
   1.1. Angle of slope to be not more than 1 in 6 and length of scarf not less than 500mm. Fix with mechanical fastenings so that permissible local timber stresses and capacity of fastenings are not exceeded.
   1.2. Arrange to provide a maximum gluing surface and ensure that direction of mating surfaces is matched.

43 Pre-boring

1. In addition to drilling pilot holes for screws; in fragile material, also drill pilot holes 1/5 diameter of nails.

47 Washers

1. Plain to BS 4320, spring to BS 4464.
2. Material and finish to match bolts.
3. Dimensions when seated directly on timber surfaces, unless specified otherwise:
   3.1. Diameter/side length: not less than 3 times bolt diameter.
   3.2. Thickness: not less than 0.25 times bolt diameter.

48 Bolted joints

1. Locate holes accurately and drill to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger.
2. Place washers under all bolt heads and nuts that bear directly on timber. Use spring washers in locations that will be hidden or inaccessible in the completed building.
3. Tighten bolts so that washers just bite the surface of the timber and at least one complete thread protrudes from the nut.
4. Check at agreed regular intervals up to Practical Completion and tighten as necessary to prevent slackening of joints.

50 Glued joints

1. Adhesive: Submit details
2. Obtain manufacturer's confirmation that adhesive is compatible with preservative/fire retardant treatment.
3. Fabricate glued structural components to BS 6446: 1997 in clean, controlled workshop conditions.
4. Anticipated equilibrium moisture content of timber in service: To suit location

52 Anti-corrosive finish(es)

1. Anti- corrosive finishes specified for fastenings to be:
   1.1. Galvanising to BS EN ISO 1461: 2009, or
   1.2. Sherardising to BS 4921: 1988, or
   1.3. Zinc plating to BS 7371 2010 for threaded components up to 18 mm diameter.
2. Passivated after treatment and internal threads tapped (unless sherardised).

60 Temporary bracing

1. Provide as necessary to maintain structural timber components in position and to ensure complete stability during construction.

61 Additional supports

1. Where not shown on drawings, position and fix additional studs, noggings or battens for appliances, fixtures, edges of sheets, etc., in accordance with manufacturers' recommendations.
2. All additional studs, noggings or battens to be of adequate size and have the same treatment, if any, as adjacent timber supports.

62 Bearings

1. Timber surfaces that are to transmit loads to be finished to ensure close contact over the whole of the designed bearing area.

2. Packings, where necessary, to cover the whole of the designed bearing area, to have a crushing strength not less than the timber being supported and, in external locations, to be rot and corrosion proof.

69 Ceiling joist renewal

1. Renew ceiling joists as following Schedule in treated softwood, 100mm x 50mm.
2. Set joists at levels appropriate to receive subsequently reinstated ceilings.
3. Prepare supporting timbers as required and support joists with metal hangers as shown, adapted and/or fabricated to suit locations.

70 Floor joist additions

1. Insert additional floor joists alongside existing as following Schedule in treated softwood, 125mm x 50mm.
2. Set joists so that wherever possible they support boarding over.
3. Fix joists to existing to give full and sound support with 75mm x 10mm dia. galvanised coach screws set in pre-drilled holes. Choose sound contact points max. 150mm from ends and at max. 500mm centres. Pack and wedge as required at fixing points with treated softwood.

71 Damage

1. Report all damage to the CA in writing.
2. Obtain the approval of the CA before making good or replacing defective members or joints.

72 Inspection

1. Give CA reasonable opportunity to inspect structural timberwork before covering up.

73 Bolted joints

1. Inspect all accessible bolts at the end of the Rectification Period and tighten if necessary.

Structural repairs/ alterations - Not Used

Products - Not Used

Execution

600 Workmanship

1. Skill and experience of site operatives: Appropriate for types of work on which they are employed.
   1.1. Documentary evidence: Submit on request.

610 Temporary supports/ propping

1. General: Provide adequate temporary support at each stage of repair work to prevent damage, overstressing or uncontrolled collapse of any part of the structure.
2. Bearings for temporary supports/ propping: Suitable to carry loads throughout repair operations.

620 Protection of timber and wood components before and during installation

1. Storage: Keep dry, under cover, clear of the ground and with good ventilation. Support sections/ components on regularly spaced, level bearers on a dry, firm base.
2. Handling: Do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.

690 Processing treated timber

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

750 Cleaning dirty or stained wood

1. Generally: Scrub with neutral pH soap and clean, warm water.
2. Old varnish: Remove using mixture of turpentine (not turpentine substitute) and acetone in proportions determined by experiment, followed by washing down.

770 Repair of compression members – piecing in

1. Defective wood: Remove only decayed or defective wood. Finish cut-outs to clean, regular profiles.
2. Timber inserts: Cut accurately to fit. Glue and pin in place. Lie of grain to match as closely as possible that of parent timber.

Completion - Not Used

Ω End of Section

F10 DIA
Brick/ block walling

Clauses

5D SITE STORAGE

1. Store bricks/blocks in stable stacks clear of the ground and clearly identified by type, strength, grade, etc. Protect from adverse weather and keep clean and dry

12E Engineering Bricks

1. Description: Class B Engineering Brick
2. Manufacturer: Contractor's choice
   2.1. Product reference: Contractor's choice
3. Block Density: 1900kg/m^3
4. Minimum acceptable compressive strength: 75 N/mm^2
5. Maximum Water Absorption: 7%
6. Blockwork Manufacturing Category: Category 1
7. Mortar Compressive Strength Class (Above DPC): M4
8. Mortar Compressive Strength Class (Below DPC): M12

36A Concrete common blockwork

1. Description: Solid aggregate concrete blocks
2. Blocks: To BS EN 771-3.
   2.1. Manufacturer: Contractor's choice
   2.2. Product reference: Contractor's choice
   2.3. Block density: 1500kg/m^3
   2.4. Compressive strength: 7.3 N/mm^2
   2.5. Blockwork manufacturing category: Category 1
   2.6. Additional requirements: Reaction to fire class: A1
   2.7. Mortar Compressive Strength Class (Above DPC): M4
   2.8. Mortar Compressive Strength Class (Below DPC): M12

51D BASIC WORKMANSHIP

1. Comply with the clauses of BS 8000- 3:2001 that are relevant to this section, unless otherwise specified or shown on drawings.
2. Bond where not specified: Half lap stretcher.
3. Mortar joints: Fill all vertical joints. Lay bricks, solid and cellular blocks on a full bed.
4. AAC block thin mortar adhesive and gypsum block adhesive joints: Fill vertical joints. Lay blocks on a full bed.
5. Clay block joints:
   5.1. Thin layer mortar: Lay blocks on a full bed.
   5.2. Interlocking perpends: Butted.
6. Quoins and advance work: Rack back.
7. Locations for equal levelling of cavity wall leaves:
   7.1. Every course containing vertical twist type ties or other rigid ties.
   7.2. Every third tie course for double triangle/ butterfly ties.

7.3. Courses in which lintels are to be bedded.

8. Lift height (maximum) for walling using cement gauged or hydraulic lime mortar: 1.2 m above any other part of work at any time.
9. Daily lift height (maximum) for walling using cement gauged or hydraulic lime mortar: 1.5 m for any one leaf.
10. Lift height (maximum) for walling using thin joint mortar glue: 1.3 m above any other part of work at any time
11. Comply with the clauses of BS 8000- 3:2001 that are relevant to this section, unless otherwise specified or shown on drawings.

52A Personnel

1. All work is to be carried out by appropriately trained and experienced personnel. Details of each person's qualifications and experience should be forwarded to the CA before commencement on site.
2. Pointing and repointing work in particular should be carried out by a consistent team of masons/conservators throughout the contract in order to ensure consistency., as work by a different 'hand' can be very obvious. Similar work on equivalent sections of the building should be carried out by the same person or team to avoid changes in effect. New masons/conservators joining the project after its commencement will be required to prepare a range of samples for the approval of the CA before commencing any of the main works.

53A Inclement Weather

1. No wet trades are to be carried out in frosty weather, when the temperature is below 5degress centigrade on a falling thermometer, or below 3 degrees centigrade on rising thermometer.

54A Protection

1. Provide all protection to the works as necessary to prevent any damage to completed works or from following trades.
2. Provide protection to all mortars to allow slow curing and complete carbonation prior to exposure to wind, rain, frost or direct sunlight. Protection for at least four weeks should always be provided. In winter protection should be allowed as long as possible. Ideally the works should be programmed so that no mortars are subjected to frost in their first season. The CA may require removal and reinstatement of any mortars where premature exposure to frost is suspected.

55 Facework

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

60 Alterations/ Extensions

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.

62D ACCURACY

1. Notwithstanding BS 8000- 3:2001 clause 3.1.2,and clause 60 above, comply with preliminaries clause A33/340 and any required critical dimensions given in the specification or on the drawings.

66 Fire stopping

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

70D BONDING OF BRICKWORK

1. In the absence of specific instructions build brickwork one brick thick and over in English bond, and half brick walls including half brick leaves of cavity walls in stretcher bond.

71D JOINTS

1. Finish mortar joints as the work proceeds

73D JOINTS IN EXISTING WORK

1. Rake out defective mortar by hand in defined areas to depth not less than twice joint width, leaving a clean square face to rear of recess.
2. Do not damage masonry arrises.
3. Finish mortar joints as the work proceeds.

74D POINTING

1. Press mortar of approved colour and texture well into joint.

75D REPOINTING EXISTING JOINTS

1. Working from top of wall:
   1.1. Remove all dust and loose material.
   1.2. Clean prepared joint face with bristle brush and thoroughly flush out joints with clean water.
2. Thoroughly dampen masonry before pointing and keep damp as work proceeds. Do not allow water to lie in joints.
3. Press approved mortar into joints and iron in firmly with tools, purpose-made if necessary to fit joint widths, to ensure uniform compaction. Use maximum pressure but minimum over-working
4. Finish: to match approved sample.

76D CHEMICALS

1. Do not use cleaning agents or fungicides without the express instruction of the CA.

77D SNAPPED HEADERS

1. In cavity work where snapped headers are used to maintain the appearance of a traditional bond to the external half brick leaf of a cavity construction the headers are to be cut accurately on a bench with a carborundum wheel to ensure that there are no projections into the cavity that might cause water running down the inner face of the outer leaf to splash across the cavity.

78D TOPS OF PARTITIONS

1. Unless otherwise specified finish partitions below soffits as follows:
   1.1. Load bearing: pin up to the soffit with dry-mix mortar well wedged and rammed into position/with slates in mortar.
   1.2. Non-load-bearing: fill solid at top with mortar.

80D JOINTS IN MASONRY TO BE PLASTERED OR RENDERED

1. Unless keyed units or metal lathing are used, rake out joints as work proceeds, to a depth of approximately 15 mm.

83D FIRE STOPPING

1. Fill joints around joist ends built into cavity walls with mortar to seal cavities from interior.

90 Cracked bricks in existing facework

1. Replacement: Prior to repointing adjacent cracked joints, cut out and replace with matching sound bricks to approval.
2. Jointing mortar: As section Z21.

96D REPOINTING

1. Remove any algae or vegetable growth carefully without damaging the masonry units.
2. Remove existing mortar carefully, with a purpose formed hand tool, without damaging masonry or widening joints, to form a neat square recess of 15-20 mm depth.
3. Remove dust and dampen joints to control suction as necessary.
4. Press mortar well into joints so that they are fully filled ensuring no mortar encroaches on the face of the masonry.
5. Neatly point to match existing profile in a continuous operation.
6. Mortar: As section Z21.
7. Mix: As approved sample, to match existing

100D GENERALLY

1. Perform all rough and fair cutting as required. Build in or cut and pin in all lintels, sills, thresholds, templates, bearers, hangers, ends of binders and joists.
2. Fix all holder bats and pipe clips, etc. Cut away, etc. for all other trades and make good.

Ω End of Section

G20 DIA
Carpentry/ timber framing/ first fixing

Clauses

1 Environmental policy

1. Obtain all new timber from a sustainable source, submit suitable documentary evidence to demonstrate this and obtain the CA's approval before placing orders. Preference will be given to suppliers who have adopted the Environmental Policy agreed by Forests Forever and the Timber Trade Federation, or another comparable policy, and who can provide evidence of their compliance with such policy.

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.

5A Structural Softwood

1. Grading standard: To BS 4978, BS EN 14081-1, or other national equivalent and so marked.
2. Timber of a target thickness less than 100 mm and not specified for wet exposure: Graded at an average moisture content not exceeding 19% with no reading being in excess of 20% and clearly marked as ‘DRY’ or ‘KD’ (kiln dried).
3. Timber graded undried (green) and specified for installation at higher moisture contents: Clearly marked as ‘WET’ or ‘GRN’.
4. Strength class to BS EN 338: Suitable for application.

7A Structural Hardwood (Strength class not specified)

1. Species and origin: Sustainably sourced European Oak.
2. Grading standard: To BS 5756 and so marked.
3. Grade: As required by Structural Engineer.
4. Surface finish: All oak to be air-dried. Any finishes to be confirmed, Client to confirm.
5. Treatment: All oak to be air-dried; not requiring treatment. Supplier to confirm.
6. Type/desired service life: 30 years.

25 Basic workmanship:

1. Comply with the clauses of BS 8000 Part 5:1990 which are relevant to this section.

27 Accuracy

1. Not withstanding BS 8000 Part 5:1990, clause 3.2.1, comply with Preliminaries clause A33/340 and any required critical dimensions given in the Specification or on the drawings.

30 Selection and use of timber

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

32 Notches, holes and joints in timber

1. Notches and holes: Position in relation to knots or other defects 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, thicknessed, planed, ploughed, etc.
3. Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

37 Protection

1. Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
2. Store timber and components under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
3. Arrange sequence of construction and cover timber as necessary during and after erection to ensure that specified moisture content is not exceeded.
4. Keep trussed rafters vertical during handling and storage.
5. Store timber after delivery in conditions that allow timber moisture content to remain stable. Timber that arrives on site wetter, or that dries excessively, will not be accepted.

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: 19%.
    1.2. Covered in generally heated spaces: 16%.
    1.3. Internal in continuously heated spaces: 14%.

42 Washers

1. Standard:: Plain to BS 4320, spring to BS 4464.
2. Material and finish:: To match bolts. Dimensions when seated directly on timber surfaces.
    2.1. Diameter/side length:: Not less than 3 times bolt diameter.
    2.2. Thickness:: Not less than 0.25 times bolt diameter.

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

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

95 Strutting to floor joists

1. Type: One of the following:
   1.1. Herringbone strutting: At least 38 x 38 mm softwood.
   1.2. Solid strutting: At least 38 mm thick softwood and at least three quarters of joist depth.
2. Fixing: Between joists as follows:
   2.1. Joist spans of 2.5 to 4.5 m: One row at centre span.
   2.2. Joist spans over 4.5 m: Two rows equally spaced.
   2.3. Not projecting beyond top and bottom edges of joists.
3. Outer joists: Blocked solidly to perimeter walls.

Ω End of Section

K10
Gypsum board dry linings/ partitions/ ceilings REVISED

Types of dry lining

72 Maximum permitted deviations

1. Notwithstanding dimensions given in BS 8212: 1995, when measure as described in the BS,
   1.1. the deviation band for the finished surface of a partition or lining is not to exceed 4 mm.
   1.2. the maximum increase at the crown of joint is not to exceed 3 mm.
   1.3. the maximum increase at an external angle is not to exceed 4 mm.
   1.4. the maximum increase at an internal angle is not to exceed 5-mm.

130 GypWall Shaft 30 Mins

1. Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
   1.1. Website: *www.british-gypsum.com,* Tel: *0115 945 6123,*E-Mail: *bgtechnical.enquiries@bpb.com.*
2. Product reference: **GypWall Shaft - A206002 (EN)**
   2.1. Nominal thickness (excluding finishes): 80mm.
3. Performance criteria:
   3.1. BS EN 1364-1, Fire resistance tests for non-loadbearing elements - Walls
      3.1.1. Fire integrity (mins): 30
      3.1.2. Fire Insulation (mins): 30
   3.2. BS 2750-3, Measurement of sound insulation in buildings and of building elements. Laboratory measurements of airborne sound insulation of building elements.
      3.2.1. Sound insulation (Airborne) Rw (dB): 36
   3.3. BS 5234-2, Specification for performance requirements for strength and robustness including methods of test.
      3.3.1. Duty rating: Medium
   3.4. The maximum heights quoted are limited by the fire state field of application or by limiting deflection of L/240 at 200 Pa, whichever is the lower of the two.
      3.4.1. Maximum height (mm): 2800
   3.5. Approx. weight (kg/m2): 22
4. Head design:
   4.1. Head channel: Gypframe 50 FEC 50 Folded Edge Standard Floor & Ceiling Channel
   4.2. Deflection allowance: Vertical deflection only. **To be determined by a Structural Engineer.**
   4.3. Dropped soffit: For principles of deflection head construction refer to detail ST□121□Z1L1□08.
5. Framework:
   5.1. Stud: Gypframe 48 S 50 'C' Stud
   5.2. Stud centres - Max (mm): 600
   5.3. Abutment channel: Gypframe 48 S 50 'C' Stud
   5.4. Base channel: Gypframe 50 FEC 50 Folded Edge Standard Floor & Ceiling Channel
6. Board and fixings:
   6.1. Board side 1, Layer 1: Gyproc WallBoard 15mm
      6.1.1. Screws side 1, Layer 1: British Gypsum Drywall Screws 25mm
   6.2. Board side 2, Layer 1: Gyproc WallBoard 15mm

6.2.1. Screws side 2, Layer 1: British Gypsum Drywall Screws 25mm

6.3. Board layers are fixed securely to Gypframe metal supports around the perimeter of the board and intermediate stud positions at maximum 300mm centres. External corners reduce fixings to 200mm. Drywall screws can be used for fixing boards to metal profiles with a thickness of 0.8mm or less (excluding 'I' studs). All joints staggered between layers. Fix working from the centre of each board. Position screws not less than 13mm from cut edged and 10mm from bound edges of boards . Set screw heads flush with plasterboard surface; do not break paper or gypsum core.

6.4. Fixing strap: Gypframe GFS1 Fixing Strap

6.5. Sealant: Gyproc Sealant

7. Finish coat

7.1. To achieve the specified performances, the system should be finished using British Gypsum, Thistle MultiFinish plaster - see Clause M20DIA / 50A

8. Other requirements:

8.1. *SpecSure® system performance warranty confirms that British Gypsum proprietary systems will perform as specified for the lifetime of the building. The SpecSure® warranty requires that all components are specified in full and constructed in accordance with British Gypsum's installation guidance. For more details see the British Gypsum website. Always check with the design team before making any changes to the chosen specification, ensuring appropriate substantiation is sought to confirm that the solution still meets all required project performances.*

131 GypWall Shaft 60 Mins

1. Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX

1.1. Website: *www.british-gypsum.com,* Tel: *0115 945 6123,*E-Mail: *bgtechnical.enquiries@bpb.com.*

2. Product reference: **GypWall Shaft - A306012 (A) (EN)**

2.1. Nominal thickness (excluding finishes): 87mm.

3. Performance criteria:

3.1. BS EN 1364-1, Fire resistance tests for non-loadbearing elements - Walls

3.1.1. Fire integrity (mins): 60

3.1.2. Fire Insulation (mins): 60

3.2. BS 2750-3, Measurement of sound insulation in buildings and of building elements. Laboratory measurements of airborne sound insulation of building elements.

3.2.1. Sound insulation (Airborne) Rw (dB): 44

3.3. BS 5234-2, Specification for performance requirements for strength and robustness including methods of test.

3.3.1. Duty rating: Severe

3.4. The maximum heights quoted are limited by the fire state field of application or by limiting deflection of L/240 at 200 Pa, whichever is the lower of the two.

3.4.1. Maximum height (mm): 4200

3.5. Approx. weight (kg/m2): 39

4. Head design:

4.1. Head channel: Gypframe 62 JC 70 'J' Channel (Gypframe channel suitably fixed through fire stop in to soffit at 300mm centres)

4.2. Deflection allowance: Vertical deflection only. **To be determined by a Structural Engineer.**

4.3. Dropped soffit: For principles of deflection head construction refer to detail ST□129□Z2L2□07.

5. Framework:

5.1. Stud: Gypframe 60 I 70 'I' Stud

5.2. Stud centres - Max (mm): 600

5.3. Abutment channel: Gypframe 60 SC 55 Starter Channel (Gypframe starter channel suitably fixed wall at 600mm centres)

5.4. Base channel: Gypframe 62 FEC 50 Folded Edge Standard Floor & Ceiling Channel (Gypframe channel suitably fixed to floor at 600mm centres)

6. Core:

6.1. Core: Gyproc CoreBoard 19mm

6.2. Horizontal joint: Gypframe GA3 Steel Angle Gyproc CoreBoard 19mm (Horizontal board joints in core layer closed off by inserting steel angle between board joints and 122mm strip of core board fire stop with beads of sealant along both longer edges fixed to angle using three drywall screws.)

6.3. Retaining channel: Gypframe G102 Retaining Channel (Retaining channels inserted between the face of the coreboard and the flange of the stud / starter channel)

7. Insulation:

7.1. Insulation, Layer 1: 25mm Isover Acoustic Partition Roll (APR 1200)

8. Board and fixings:

8.1. Board side 1, Layer 1: Gyproc FireLine 12.5mm

8.1.1. Screws side 1, Layer 1: British Gypsum Jack-Point Screws 35mm

8.2. Board side 1, Layer 2: Gyproc FireLine 12.5mm

8.2.1. Screws side 1, Layer 2: British Gypsum Jack-Point Screws 41mm

8.3. Board layers are fixed securely to Gypframe metal supports around the perimeter of the board and intermediate stud positions at maximum 300mm centres. External corners reduce fixings to 200mm. Drywall screws can be used for fixing boards to metal profiles with a thickness of 0.8mm or less (excluding 'I' studs). All joints staggered between layers. Fix working from the centre of each board. Position screws not less than 13mm from cut edged and 10mm from bound edges of boards . Set screw heads flush with plasterboard surface; do not break paper or gypsum core.

8.4. Fixing strap: Gypframe GFS1 Fixing Strap (Used to support horizontal board joints in face layer of multiple layer board linings and enable board screw fixing at 300mm centres.)

8.5. Sealant: Gyproc Sealant (Locate sealant at junctions with adjoining structure and other air paths. Apply as a continuous bead to clean, dry, dust-free surfaces, leaving no gaps. After application of sealant, bulk fill gaps between floor and underside of plasterboard using Gyproc jointing compound. For pressurised airshafts and service ducts apply a continuous bead of sealant leaving no gaps to all framing members at perimeter junctions with walls, floors and ceilings, air gaps around openings, and other potential air leakage points. To frame members prior to fitting core boards and around fire stops cloaking horizontal core board joints. To all metal framing around board perimeters of first layer boarding and board perimeters when fixing outer layer board)

9. Finish coat

9.1. To achieve the specified performances, the system should be finished using British Gypsum, Thistle MultiFinish plaster - see Clause M20DIA / 50A

10. Other requirements:

10.1. *SpecSure® system performance warranty confirms that British Gypsum proprietary systems will perform as specified for the lifetime of the building. The SpecSure® warranty requires that all components are specified in full and constructed in accordance with British Gypsum's installation guidance. For more details see the British Gypsum website. Always check with the design team before making any changes to the chosen specification, ensuring appropriate substantiation is sought to confirm that the solution still meets all required project performances.*

132 Timber Stud Partitions 60 Mins ADDED

1. Manufacturer: British Gypsum, East Leake, Loughborough, Leicestershire LE12 6HX
   1.1. Website: *www.british-gypsum.com,* Tel: *0115 945 6123,*E-Mail: *bgtechnical.enquiries@bpb.com.*
2. Product reference: **Timber stud partitions A046005 (EN)**
   2.1. Nominal thickness (excluding finishes): 150mm.
3. Performance criteria:
   3.1. BS EN 1364-1, Fire resistance tests for non-loadbearing elements - Walls
      3.1.1. Fire integrity (mins): 60
      3.1.2. Fire Insulation (mins): 60
   3.2. BS 5234-2, Specification for performance requirements for strength and robustness including methods of test.
      3.2.1. Duty rating: Medium
   3.3. The maximum heights quoted are limited by the fire state field of application or by limiting deflection of L/240 at 200 Pa, whichever is the lower of the two.
      3.3.1. Maximum height (mm): 4000
4. Head design:
   4.1. Head channel: 75mm x 50mm Timber (CLS)
   4.2. Deflection allowance: Vertical deflection only. **To be determined by a Structural Engineer.**
   4.3. Dropped soffit: For principles of deflection head construction refer to detail ST□121□Z1L1□08.
5. Framework:
   5.1. Stud: 75 x 50mm Timber (CLS)
   5.2. Stud centres - Max (mm): 400
   5.3. Base and head plate: 75 x 50mm Timber (CLS)
6. Insulation:
   6.1. Insulation, Layer 1: 50mm Isover Acoustic Partition Roll (APR 1200)
7. Board and fixings:
   7.1. Board side 1, Linings: 2no. Gyproc SoundBloc 12.5mm with staggered joints
      7.1.1. Screws side 1:
      Layer 1: British Gypsum Drywall Screws 25mm
      Layer 2: British Gypsum Drywall Screws 35mm
   7.2. Board side 2, Linings: 2no. Gyproc SoundBloc 12.5mm with staggered joints
      7.2.1. Screws side 2:
      Layer 1: British Gypsum Drywall Screws 25mm
      Layer 2: British Gypsum Drywall Screws 35mm
   7.3. Board layers are fixed securely to studwood around the perimeter of the board and intermediate stud positions at maximum 300mm centres. External corners reduce fixings to 200mm. All joints staggered between layers. Position screws not less than 13mm from cut edged and 10mm from bound edges of boards . Set screw heads flush with plasterboard surface; do not break paper or gypsum core.
   7.4. Fixing strap: Gypframe GFS1 Fixing Strap
   7.5. Sealant: Gyproc Sealant
8. Finish coat
   8.1. Taped and jointed.
9. Other requirements:

9.1. *SpecSure® system performance warranty confirms that British Gypsum proprietary systems will perform as specified for the lifetime of the building. The SpecSure® warranty requires that all components are specified in full and constructed in accordance with British Gypsum's installation guidance. For more details see the British Gypsum website. Always check with the design team before making any changes to the chosen specification, ensuring appropriate substantiation is sought to confirm that the solution still meets all required project performances.*

133 Gypsum board partition systems 60 Mins (Type B) ADDED

1. Manufacturer: British Gypsum
2. Contact details
   2.1. Address: East Leake
   Loughborough
   Leicestershire
   United Kingdom
   LE12 6JU
   2.2. Telephone: +44 (0)844 800 1991
   2.3. Web: www.british-gypsum.com
   2.4. Email: bg.technical@saint-gobain.com
3. Product reference: GypWall Shaft - A306005 (B) (EN)
4. Framing: Base channel: Gypframe 94 DC 60 Deep Flange Floor & Ceiling Channel. Head channel: Gypframe 94 EDC 70 Extra Deep Flange Floor & Ceiling Channel. Stud: Gypframe 92 I 90 'I' Stud. Retaining channel: Gypframe G105 Retaining Channel.
5. Linings: Core: Gyproc CoreBoard 19mm. Board side 1, Layer 1: Gyproc FireLine 12.5mm. Board side 1, Layer 2: Gyproc FireLine 12.5mm.
6. Fasteners: Screws side 1, Layer 1: British Gypsum Jack-Point Screws 35mm. Screws side 1, Layer 2: British Gypsum Jack-Point Screws 41mm.
7. Joint treatment: Fixing strap: Gypframe GFS1 Fixing Strap. Horizontal joint: Gypframe GA3 Steel Angle & Gyproc CoreBoard 19mm.
8. Finish: To achieve the specified performances, the system should be finished using either one of our Thistle or ThistlePro plasters, or Gyproc jointing products. See the product range guides on the British Gypsum website for more information.
9. System accessories: Sealant: Gyproc Sealant.
10. Execution: Please review details on the British Gypsum website at: https://www.british-gypsum.com/Specification/White-Book-Specification-Selector/shaftwall/GypWall-Shaft/A306005-B-EN#details
11. Fire resistance: BS EN 1364-1, 60 / 60 Integrity / Insulation
12. Sound insulation: BS 2750-3, 45 Rw dB
13. Strength grade: BS 5234-2, Severe duty (SD)
14. Partition height: 6000mm
15. Partition thickness: 119mm
16. Board and fixings:
    16.1. Sealant: Gyproc Sealant (Locate sealant at junctions with adjoining structure and other air paths. Apply as a continuous bead to clean, dry, dust-free surfaces, leaving no gaps. After application of sealant, bulk fill gaps between floor and underside of plasterboard using Gyproc jointing compound. For pressurised airshafts and service ducts apply a continuous bead of sealant leaving no gaps to all framing members at perimeter junctions with walls, floors and ceilings, air gaps around openings, and other potential air leakage points. To frame members prior to fitting core boards and around fire stops cloaking horizontal core board joints. To all metal framing around board perimeters of first layer boarding and board perimeters when fixing outer layer board)

17. Finish coat
    17.1. To achieve the specified performances, the system should be finished using British Gypsum, Thistle MultiFinish plaster - see Clause M20DIA / 50A
18. Other requirements:
    18.1. *SpecSure® system performance warranty confirms that British Gypsum proprietary systems will perform as specified for the lifetime of the building. The SpecSure® warranty requires that all components are specified in full and constructed in accordance with British Gypsum's installation guidance. For more details see the British Gypsum website. Always check with the design team before making any changes to the chosen specification, ensuring appropriate substantiation is sought to confirm that the solution still meets all required project performances.*

205 Lining on timber REVISED

1. Description: NEW STUD PARTITIONS
2. Background: 100x50mm SW studs at 600mm centres generally
3. Metal resilient (acoustic) bars: Not required
4. Linings: 15 mm plasterboard as clause 401
    4.1. Fixing: Screws
5. Finishing: Skim coat plaster as section M20
    5.1. Primer/ Sealer: As recommended by board manufacturer for vapour control
    5.2. Accessories: Beads/ stops as clause 692
6. Other requirements: Not required

206 Lining on timber ADDED

1. Description: NEW FIRE RATED STUD PARTITIONS
2. Product reference:: British Gypsum
   A026036 (EN)
3. Background: 63x38mm SW studs at 600mm centres generally
4. Linings: 15 mm plasterboard as clause 404
    4.1. Fixing: Screws
5. Finishing: Skim coat plaster as section M20
    5.1. Primer/ Sealer: As recommended by board manufacturer for vapour control
    5.2. Accessories: Beads/ stops as clause 692
6. Other requirements: Fire stopping as section P12

General/ preparation

305 Compliance with performance requirements

1. Testing/ Assessment: Submit UKAS accredited laboratory reports for the following: Fire resistance: Partitions (including deflection heads and doorsets) and suspended ceilings (including access units)..
2. Materials, components and details: As used in testing/ assessment reports. If discrepancies arise, give notice.

325 Preparation of masonry to receive wall linings

1. General: Suitable to receive lining system. Redundant fixtures and services removed. Cutting, chasing and making good completed.
2. Holes, gaps, service penetrations, perimeter junctions and around openings: Seal.

3. Adhesive fixings: Prepare substrate to achieve effective bonding.
   3.1. Contaminants: Remove loose material, dirt, grease, oil, paper, etc.
   3.2. Absorption: Control by dampening, priming or applying bonding agents as necessary.

335 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.

Components

400 Gypsum boards generally

1. Standard
   1.1. Gypsum plasterboard to BS EN 520.
   1.2. Gypsum fibre board to BS EN 15283-2.
   1.3. Evidence of compliance: Submit Declaration of Performance (DoP).

401 Gypsum plasterboard

1. Type: To BS EN 520, type A
2. Core density (minimum): 650 kg/m³.
3. Reaction to fire: Manufacturer's standard
4. Water vapour resistance factor: Manufacturer's standard
5. Thermal conductivity: Manufacturer's standard
6. Other BS EN 520 characteristics: None
7. Recycled content: Submit proposals
8. Exposed surface and edge profiles: Clean and undamaged

404 Gypsum plasterboard (improved fire protection)

1. Type: British Gypsum - Gyproc FireLine 15mm Board
2. Core: Including fibres and/ or other additives for improved cohesion.
   2.1. Density (minimum): 800 kg/m³.
3. Reaction to fire: Manufacturer's standard
4. Water vapour resistance factor: Manufacturer's standard
5. Thermal conductivity: Manufacturer's standard
6. Other BS EN 520 characteristics: None
7. Recycled content:
8. Exposed surface and edge profiles: Suitable to receive specified finish. Clean and undamaged

Installation

435 Dry linings generally

1. General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
2. Cutting gypsum boards: Neatly and accurately without damaging core or tearing paper facing.

2.1. Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.

3. Fixings boards: Securely and firmly to suitably prepared and accurately levelled backgrounds.
4. Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.

445 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.

465 Staggered stud partitions

1. Horizontal frame members (noggins, bearers, etc.) and boards: Fix between alternate studs and not touching adjacent offset studs.

505 Installing 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: Sized accordingly.
   2.2. Ceilings: Cut insulation around electrical fittings, etc.

510 Sealing gaps and air paths

1. Location of sealant: To perimeter abutments and around openings.
   1.1. Pressurized shafts and ducts: At board-to-board and board-to-metal frame junctions.
   1.2. 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 6 mm between floor and underside of gypsum board: After sealing, fill with jointing compound.

530 Mineral wool wire-reinforced mattress cavity barriers

1. Manufacturer: ROCKWOOL Ltd
2. Product reference: ROCKWOOL® Fire Barrier System (50 mm thick)
3. Thickness (minimum): 50 mm.
4. Facing: Plain.
5. Fire performance: Euroclass A1 non-combustible.
6. Sound insulation rating: Up to 50 dB.
7. Length: To suit existing gap dimensions.
8. Width: 1000 mm.
9. Mesh: As required for fire performance. Fire performance as noted in Schedule of Work.
10. Accessories: As required for installation.
    Installation details to be agreed with Fire Engineer and Architect prior to installation.

555 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.

590 Fixing gypsum board to metal framing/ Furrings

1. Partitions/ Wall linings: Fix securely and firmly at the following centres (maximum):
   1.1. Single layer boarding: To all framing at 300 mm centres. Reduce to 200 mm centres at external angles.
   1.2. Multi-layer boarding: Face layer at 300 mm centres, and previous layers around perimeters at 300 mm centres.
2. Ceilings: 230 mm. Reduce to 150 mm at board ends and at lining perimeters.
3. Position of screws from edges of boards (minimum): 10 mm.
   3.1. Screw heads: Set in a depression. Do not break paper or gypsum core.

610 Fixing gypsum board to timber

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

Finishing

670 Seamless jointing to gypsum boards

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 paper tape, fully bedded.
3. Protection of edges/ corners: Reinforce external angles, stop ends, etc. with specified edge/ angle bead.
4. Finishing: Apply jointing compound. Feather out each application beyond previous application to give a flush, smooth, seamless surface.
5. Nail/ screw depressions: Fill with jointing compound to give a flush surface.
6. Minor imperfections: Remove by light sanding.

680 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.

692 Rigid beads/stops

1. Internal: To BS EN 13658-1.
2. External: To BS EN 13658-2.

695 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.

725 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.

726 Cementitious Filler REVISED

1. Performance of repairs must match original specified performances.
2. Manufacturer: British Gypsum
3. Product Reference: Gyproc Joint Filler
4. Standard: EN 13963:2005,Jointing materials for gypsum boards. Definitions, requirements and test methods
5. Filling small areas with broken cores: Cut away paper facing, remove loose core material and fill with jointing compound.
   5.1. Finish: Flush, smooth surface suitable for redecoration.
6. Large patch repairs: Cut out damaged area and form neat hole with rectangular sides. Replace with matching gypsum board.
   6.1. Fixing: Use methods to suit type of dry lining, ensuring full support to all edges of existing and new gypsum board.
   6.2. Finishing: Fill joints, tape and apply jointing compound to give a flush, smooth surface suitable for redecoration.

Ω End of Section

L20
Doors/ shutters/ hatches REVISED

General

110 Evidence of performance

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

112 Timber procurement

1. Timber (including timber for wood-based products): Obtain 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 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.

113 Moisture content

1. During delivery, storage, fixing and thereafter to Practical Completion maintain conditions of temperature and humidity to suit specified moisture content(s) of timber components. When instructed by CA, test components with an approved electrical moisture meter used in accordance with manufacturer's recommendations

115 Fire-resisting and smoke control pedestrian doors/ door assemblies/ doorsets

1. UKCA/ UKNI/ CE marked fire-resisting and smoke control pedestrian doorsets: To BS EN 16034 and in conjunction with BS EN 13241, BS EN 14351-1 and BS EN 14351-2.
2. Door products: As defined in BS EN 12519.
3. Evidence of fire performance: Provide certified evidence, in the form of a product conformity certificate, directly relevant fire test report or engineering assessment, that each door/ door assembly/ doorset supplied will comply with the specified requirements for fire-resisting and/ or smoke control if tested to BS 476-22, BS EN 1634-1, BS EN 1634-3 or is UKCA/ UKNI/ CE marked to BS EN 16034. Specified values should not be a combination of both standards. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
4. Components, assemblies or sets will be marked to the relevant UKCA/ UKNI/ CE marking European product standard (hEN), national product standard and/ or third-party certification rating.

120 Non-fire-resisting pedestrian doors/ door assemblies/ doorsets

1. Provide certified evidence, in the form of a product conformity certificate or engineering assessment, that each pedestrian door/ doorset/ assembly supplied will comply with the specified requirements to BS EN 14351-1. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
2. Components and assemblies will be marked to the relevant UKCA/ UKNI/ CEI marking European product standard (hEN), national product standard and/ or third-party certification rating.

150 Site dimensions

1. Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
2. Designated items: Refer drawings and schedules for locations

170 Control samples

1. Procedure
   1.1. Finalize component details.
   1.2. Fabricate one of each of the following designated items as part of the quantity required for the project.
   1.3. Obtain approval of appearance and quality before proceeding with manufacture of the remaining quantity.

Products

230 Wood flush internal doors

1. Description: Flush internal FD30s door
2. Manufacturer: Premdor or equivalent approved
   2.1. Product reference: Popular Paint Grade FD30s Fireshield Solid Core Flush Door Lipped
3. Facings: unlacquered ply veneer
4. Lippings: 6mm hardwood lipping to long edges
5. Preservative treatment: Not required
6. Finish as delivered: Prepared and primed, as section M60
7. Thermal performance (U-value maximum): Manufacturer's standard
8. Other requirements: New hardwood threshold to width of opening.

231 Wood flush internal doors - with vision panels

1. Description: Flush internal FD30s door - with Vision Panels
2. Manufacturer: Premdor or equivalent approved
   2.1. Product reference: Popular Paint Grade FD30s Fireshield Solid Core Flush Door Lipped
3. Facings: unlacquered ply veneer
4. Lippings: 6mm hardwood lipping to long edges
5. Preservative treatment: Not required
6. Finish as delivered: Prepared and primed, as section M60
7. Glazing/ Infill details: single vision panel 250mm wide x 1400mm high, fire rated, clear safety glass fitted by door manufacturer
   7.1. Manifestation: Not applicable
   7.2. Beading: Not required
8. Thermal performance (U-value maximum): Manufacturer's standard
9. Other requirements: New hardwood threshold to width of opening.

232 FD60s Wood flush internal doors - with vision panels ADDED

1. Description: Flush internal FD60s door - with Vision Panels
2. Manufacturer: Premdor or equivalent approved
   2.1. Product reference: Paint Grade FD60s Solid Core Flush Door Lipped, Firemaster 54mm thick leaf

3. Facings: unlacquered ply veneer
4. Lippings: 6mm hardwood lipping to long edges
5. Preservative treatment: Not required
6. Finish as delivered: Prepared and primed, as section M60
7. Glazing/ Infill details: single vision panel 250mm wide x 1400mm high, fire rated, clear safety glass fitted by door manufacturer
   7.1. Manifestation: Not applicable
   7.2. Beading: Not required
8. Thermal performance (U-value maximum): Manufacturer's standard
9. Other requirements: New hardwood threshold to width of opening.

250 Wood-panelled doors

1. Description: 6 Panel FD30s door [hardwood stained]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
   Unit 5, Whinbank Park
   Bradbury Road
   Newton Aycliffe, Co. Durham
   DL5 6AY, UK
   2.1. Product reference: Chelsea configuration (6 panels).
   Stepped Ovolo stiles and rails
   Chippendale (raised and fielded panels)
3. Wood species: Oak
4. Preservative treatment: Not required
5. Finish as delivered: Manufacturers undercoat stain.
   Trial of stain finish to match adjacent doors TBA.
   Top coats applied on site as M60/xxx
   Stain finish to be confirmed following production of samples.
6. Glazing/ infill details: Not applicable
   6.1. Manifestation: Not applicable
   6.2. Beading: Not required
7. Fire performance
   7.1. Fire resistance: To BS EN 13501-2, EIW 30S
   7.2. Smoke leakage: S200
   7.3. Reaction to fire: To BS EN 13501-1, Class B or better
8. Thermal performance (U-value maximum): Manufacturer's standard
9. Other requirements: Refer to ironmongery schedule

255 Wood-panelled doors

1. Description: 6 panelled FD30s door [painted]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
   Unit 5, Whinbank Park
   Bradbury Road
   Newton Aycliffe, Co. Durham
   DL5 6AY, UK
   2.1. Product reference: Chelsea configuration (6 panels).
   Stepped Ovolo stiles and rails (or bespoke to match existing)
   Chippendale (raised and fielded panels)
3. Wood species: Tulipwood
4. Preservative treatment: Required

5. Finish as delivered: Manufacturers 2no. coats primer.
   Top coats applied on site as M60/14
6. Glazing/ infill details: Not applicable
7. Fire performance
   7.1. Fire resistance: To BS EN 13501-2, EIW 30S
   7.2. Smoke leakage: S200
   7.3. Reaction to fire: To BS EN 13501-1, Class B or better
8. Thermal performance (U-value maximum): Manufacturer's standard (N/A Internal)
9. Other requirements: Refer to Schedule for dimensions & details including ironmongery.
   Ironmongery to be agreed with manufacturer prior to procurement & installation.
   Ironmongery to be certified to equivalent rating to door.
   Refer Ironmongery Specification for details.
   Certification from manufacturer to be provided.
   Combined intumescent and smoke seals in colour to match door decoration to be provided, colour to be agreed with architect prior to manufacture.

256 Wood-panelled doors

1. Description: 2 panelled FD30s door [Hardwood Stained]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
   Unit 5, Whinbank Park
   Bradbury Road
   Newton Aycliffe, Co. Durham
   DL5 6AY, UK
   2.1. Product reference: Sheraton Panelled Door (Flat Panels)
   Dorchester configuration (2 panels).
   Stepped Ovolo stiles and rails (or bespoke to match existing)
   Flat Panel
3. Wood species: Oak
4. Preservative treatment:
5. Finish as delivered: Manufacturers undercoat stain.
   Trial of stain finish to match adjacent doors TBA.
   Top coats applied on site as M60/xxx
   Stain finish to be confirmed following production of samples.
6. Glazing/ infill details: Not applicable
7. Fire performance
   7.1. Fire resistance: To BS EN 13501-2, EIW 30S
   7.2. Smoke leakage: S200
   7.3. Reaction to fire: To BS EN 13501-1, Class B or better
8. Thermal performance (U-value maximum): Manufacturer's standard (N/A Internal)
9. Other requirements: Refer to Schedule for dimensions & details including ironmongery.
   Ironmongery to be agreed with manufacturer prior to procurement & installation.
   Ironmongery to be certified to equivalent rating to door.
   Refer Ironmongery Specification for details.
   Certification from manufacturer to be provided.
   Combined intumescent and smoke seals in colour to match door decoration to be provided, colour to be agreed with architect prior to manufacture.

257 Wood-panelled doors

1. Description: 2 panelled FD30s door [Painted]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
   Unit 5, Whinbank Park

Bradbury Road
Newton Aycliffe, Co. Durham
DL5 6AY, UK

2.1. Product reference: Sheraton Panelled Door (Flat Panels)
Dorchester configuration (2 panels).
Stepped Ovolo stiles and rails (or bespoke to match existing)
Flat Panel

3. Wood species: Tulipwood
4. Preservative treatment: Required
5. Finish as delivered: Manufacturers 2no. coats primer.
Top coats applied on site as M60/14
6. Glazing/ infill details: Not applicable
7. Fire performance
   7.1. Fire resistance: To BS EN 13501-2, EIW 30S
   7.2. Smoke leakage: S200
   7.3. Reaction to fire: To BS EN 13501-1, Class B or better
8. Thermal performance (U-value maximum): Manufacturer's standard (N/A Internal)
9. Other requirements: Refer to Schedule for dimensions & details including ironmongery.
Ironmongery to be agreed with manufacturer prior to procurement & installation.
Ironmongery to be certified to equivalent rating to door.
Refer Ironmongery Specification for details.
Certification from manufacturer to be provided.
Combined intumescent and smoke seals in colour to match door decoration to be provided, colour to be agreed with architect prior to manufacture.

258 Wood-panelled doors REVISED

1. Description: 3 panelled FD30s door [Hardwood Stained]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
Unit 5, Whinbank Park
Bradbury Road
Newton Aycliffe, Co. Durham
DL5 6AY, UK
   2.1. Product reference: Chippendale Panelled Door (Raised and Fielded Panels)
   Boston configuration (3 panels).
   Square edge stiles and rails with BL5 bolection moulding
3. Wood species: European Oak
4. Preservative treatment: Specialist conservator
5. Finish as delivered: Manufacturers undercoat stain.
Trial of stain finish to match adjacent doors TBA.
Top coats applied on site as per specialist conservator requirements.
Stain finish to be confirmed following production of samples.
6. Glazing/ infill details: Not applicable
7. Fire performance
   7.1. Fire resistance: To BS EN 13501-2, EIW 30S
   7.2. Smoke leakage: S200
   7.3. Reaction to fire: To BS EN 13501-1, Class B or better
8. Thermal performance (U-value maximum): Manufacturer's standard (N/A Internal)
9. Other requirements: Refer to Schedule for dimensions & details including ironmongery.
Ironmongery to be agreed with manufacturer prior to procurement & installation.
Ironmongery to be certified to equivalent rating to door.

Refer Ironmongery Specification for details.
Certification from manufacturer to be provided.
Combined intumescent and smoke seals in colour to match door decoration to be provided, colour to be agreed with architect prior to manufacture.

259 Wood-panelled doors

1. Description: 1 panel FD30s door [Glazed & Stained]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
   Unit 5, Whinbank Park
   Bradbury Road
   Newton Aycliffe, Co. Durham
   DL5 6AY, UK
   2.1. Product reference: Rivelin (Fully glazed door)
   Stepped Ovolo stiles and rails (or bespoke to match existing)
3. Wood species: Tulipwood
4. Preservative treatment: Primed and painted as M60
5. Finish as delivered: Manufacturers undercoat stain.
   Trial of stain finish to match adjacent doors TBA.
   Top coats applied on site as M60/xxx
   Stain finish to be confirmed following production of samples.
6. Glazing/ infill details: Not applicable
7. Fire performance
   7.1. Fire resistance: To BS EN 13501-2, EIW 30S
   7.2. Smoke leakage: S200
   7.3. Reaction to fire: To BS EN 13501-1, Class B or better
8. Thermal performance (U-value maximum): Manufacturer's standard (N/A Internal)
9. Other requirements: Refer to Schedule for dimensions & details including ironmongery.
   Ironmongery to be agreed with manufacturer prior to procurement & installation.
   Ironmongery to be certified to equivalent rating to door.
   Refer Ironmongery Specification for details.
   Certification from manufacturer to be provided.
   Combined intumescent and smoke seals in colour to match door decoration to be provided, colour to be agreed with architect prior to manufacture.

260 Wood-panelled doors ADDED

1. Description: 4 panelled FD30s door [Painted]
2. Manufacturer: Longden Doors UK Ltd or equal and approved.
   Unit 5, Whinbank Park
   Bradbury Road
   Newton Aycliffe, Co. Durham
   DL5 6AY, UK
   2.1. Product reference: Sheraton Panelled Door (Flat Panels)
   Sussex configuration (4 panels).
   Stepped Ovolo stiles and rails with additional bed moulding to match existing)
   Flat Panel
3. Wood species: Tulipwood
4. Preservative treatment: Required
5. Finish as delivered: Manufacturers 2no. coats primer.
   Top coats applied on site as M60/14
6. Glazing/ infill details: Not applicable
7. Fire performance

7.1. Fire resistance: To BS EN 13501-2, EIW 30S

7.2. Smoke leakage: S200

7.3. Reaction to fire: To BS EN 13501-1, Class B or better

8. Thermal performance (U-value maximum): Manufacturer's standard (N/A Internal)
9. Other requirements: Refer to Schedule for dimensions & details including ironmongery.
Ironmongery to be agreed with manufacturer prior to procurement & installation.
Ironmongery to be certified to equivalent rating to door.
Refer Ironmongery Specification for details.
Certification from manufacturer to be provided.
Combined intumescent and smoke seals in colour to match door decoration to be provided, colour to be agreed with architect prior to manufacture.

480 Annealed glass sheets 30 Mins - Integrity Only

1. Description: Internal Fire Resisting Glass - 30 Mins - Integrity Only
2. Manufacturer: Pilkington United Kingdom Limited

2.1. Product reference: Pilkington Pyrodur® Clear Fire Resistant (Pyrodur® 30-104 (Internal applications))

3. Laminate glass type: Fire and safety.
4. Thickness: 10 mm.
5. Body colour: Clear.
6. Coating

6.1. Type: Pyrodur®, intumescent, laminated.

7. Performance requirements

7.1. Fire resistance

7.1.1. Integrity: 30minutes

7.1.2. Insulation: Not Required

7.1.3. Radiation: Not Required

8. Size:: Refer Schedule and Drawings
9. Reaction to fire: B-s1,d0.
10. TemperatureRange: -40C to 50C.
11. Glazing composition: Optifloat clear.

610 Vertical active fire curtain barriers

1. Description: Fire Curtain - 60mins insulation & radiation
2. Manufacturer: Coopers Fire Ltd

2.1. Product reference: FireMaster® Plus² - Vertical Active Fire Curtain

3. Standards: BS 8524-1, BS EN 1634-1, BS EN 1634-3, BS EN 1363-1, BS EN 1363-2, BS EN 13501-2 +A1, BS EN 14600, BS 476-6:1989+A1, BS 476-7, BS EN ISO 14184-1, BS 6323-5:1982, BS EN ISO 9001:2008, BS EN ISO 14001:2004, ISO Guide 65, BS EN ISO 17065, BS EN 1634-3, BS 8524-1, BS 5234-2, BS EN 14600.

3.1. Barrier assemblies: To BS 8524-1.

3.2. Test standards: Vertical, horizontal and angled to BS EN 1634-1.

4. Size: Refer Drawings & Take confirmation dimensions on site
5. Performance

5.1. Durability class: C0.

5.2. Fire resistance: Min 60mins E/I

6. Barrier units: Flexible metallic fabric.

7. Deployment: Full.
8. Activation: Curtain to lower on local detection in passage.
   Not activation of the fire alarm system generally or power cut.
9. Accessories:
10. Classification: E180 EW90 C0 (single).
11. Frame colour/ finish: Primed for decoration on site.
12. Other requirements: Refer drgs for fixing to structure & location and boxing in of head box and control panel.

630 Hatches

1. Description: Maintenance Access Hatch
2. Manufacturer: Submit proposals
   2.1. Product reference: Access hatch for maintenance
3. Performance: To match adjacent construction fire performance if applicable
4. Operation: To be locked shut generally, only openable by staff.
5. Other requirements: Plastered over flush & decorated to match adjacent plastered wall surface.

631 Access panels

1. Description:: Distribution Board Access Panel
2. Manufacturer: Profab Access Ltd
3. Product reference:: VEGA 1500 FR Series
4. Fire resistance: : One hour fire rated (1FR).
5. Position: : Wall mounted
6. Size: : Refer to drawings & schedules
7. Frame: : Beaded frame (BF)
8. Panel
   8.1. Material: Electro-galvanized mild steel door leaf with Rockwool core.
   8.2. Integral finish: Powder coated, matt.
9. Latch or lock type: : Three-point high security lock (3HS)
10. Operation: : Pivot hinge.
11. Integral accessories: : Acoustic, intumescent and smoke seal to frame.
12. Colour: : Special order.
13. Configuration: : Refer to drawings & schedules

632 Hatches

1. Description: Access hatch into floor void
2. Product: Hatch formed of existing floor boards cut and used as boards for hatch.
   Form ledged and braced hatch.
3. New Item: Concealed ironmongery, submit proposals
4. Performance: To match adjacent floor boards, hatch to be aligned to boards.
5. Operation: To be locked shut generally, only openable by staff.
6. Other requirements: No protruding ironmongery to form trip hazard. Fixed access ladder below for access into void.

Execution

710 Protection of components

1. General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.
2. Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

730 Priming/ sealing

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

790 Fixing of wood frames

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

809 Fire-resisting and smoke control doors/ door assemblies/ doorsets/ roller shutters and curtains – accredited installer

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

830 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.

840 Fixing ironmongery to fire-resisting door assemblies

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

Ω End of Section

L30
Stairs/ ladders/ walkways/ handrails/ balustrades REVISED

Preliminary information/ requirements

115 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 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: In accordance with UK Government Timber procurement policy (UKTPP), i.e. FSC, GiB or PEFC
   3.1. Other evidence: UK Government Timber procurement policy Category B

130 Site dimensions

1. Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
   1.1. Designated items: Internal staircase

Components

230 Internal wood stairs

1. Description: NEW STAIRCASE
   Multi-Turn or equal and approved.
   Multi-Turn | Leading Timber Staircase Supplier | South England (multiturn.co.uk)
   Unit 30
   Moorside Road
   Winchester
   SO23 7RX
   01962712299
2. Components
   2.1. Treads: 26mm (Bullnosed) redwood
   2.2. Risers: 9 mm moisture-resistant birch plywood, painted
   2.3. Strings: 240 x 32mm redwood
   2.4. Newels: Square 90 x 90mm redwood with
   Pyramid Cap, Oak
   2.5. Guarding: Square 32 x 32mm redwood balusters, maximum 100mm gap between.
   2.6. Handrails: JHR 70 x 57mm oak.
      2.6.1. Lower handrail: Base rail: Standard 62 x 28mm redwood
3. Timber: Generally to BS EN 942.
   3.1. Appearance class: Generally J30; balusters J10
   3.2. Moisture content at time of installation: 9-13%

4. Adhesive: PVAC to BS EN 204, Class D4
5. Finish as delivered: Prepared and sealed, as section M60
   5.1. Slip resistance value of integral tread - water wet (minimum): PTV of 45 to BS 7976
   5.2. Slip resistance value of integral nosing - water wet (minimum): PTV of 45 to BS 7976
   5.3. Colour of integral nosing: LRV to BS 8493 contrast of 30 (minimum) with tread. Submit proposals
6. Reaction to fire: Manufacturer's standard
7. Workmanship: To section Z10.
8. Other requirements: Timber landing as per section G20

270 Stairs ADDED

1. Description: PURPOSE MADE SMALL STEPS
2. Component material, grade, finish as delivered
   2.1. Treads: 26mm (bullnosed) redwood
      2.1.1. Slip resistance value of integral tread - water wet (minimum): PTV of 45 to BS 7976
      2.1.2. Slip resistance value of integral nosing - water wet (minimum): PTV of 45 to BS 7976
      2.1.3. Colour of integral nosing: Not applicable
   2.2. Risers: 20mm moisture resistant plywood
   2.3. Strings: 38mm closed wall strings redwood
   2.4. Finish:: Sand down and leave unfinished
3. Workmanship
   3.1. Joinery: To section Z10
4. Other requirements: Triangular fillets

Installation

610 Moisture content

1. Temperature and humidity: Monitor and control internal conditions to achieve specified moisture content in wood components at time of installation.

620 Priming/ Sealing/ Painting

1. Surfaces inaccessible after assembly/installation: Before fixing components, apply full protective/decorative treatment/coating system.

630 Corrosion protection of dissimilar materials

1. Components/ substrates/ fasteners of dissimilar materials: Isolate using washers/ sleeves or other suitable means to separate materials to avoid corrosion and/ or staining.

640 Installation generally

1. Fasteners and methods of fixing: To section Z20.
2. Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
3. Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.
4. Applied finishes: Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as finish manufacturer’s recommendation before application.

Completion - Not Used

Ω End of Section

M20
Plastered/ rendered/ roughcast coatings

To be read with preliminaries/ general conditions.

1 SAMPLES

1. General: Provide representative samples of each type of plaster / render specified in location
2. Obtain approval before starting work.

50 Skim Coat Plaster Finish

1. Manufacturer and reference: British Gypsum, Thistle MultiFinish
   1.1. Thickness: 2mm.
2. Pre-Treatment: Thistle Bond-it (Glasroc H TileBacker & Gyproc Moisture resistant grade plasterboards), Thistle GypPrime (required for Rigidur H boards to control suction).
3. Reinforcement:
   3.1. Joints/gaps/internal corners: Any gaps exceeding 3mm should be pre-filled, joints reinforced using Gyproc Joint Tape or alternatively Thistle ProTape FT50 or FT100 may be used.
   3.2. External corners: Thistle Thin Coat Angle Bead or Thin Coat Mini Mesh Bead.
   3.3. Edges: Thistle Thin Coat Plaster Stop Bead to all door and window surrounds.
4. Fill and tape all joints except where coincident with metal beads.
5. Trowel/float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.
6. Lighting design considerations:
   6.1. General lighting can have a critical effect on the appearance of the final finished surface. Refer to Annex A – 'Design considerations for work and acceptance of smooth plaster finishes under aspects of lighting' – BS EN 13914-2-2016.

50 Gypsum plaster skim coat on blockwork

1. Preparation of Background: Clean water should be applied 5-10 mins before plaster application. If a very smooth surface then Thistle Bond-it bonding agent maybe required.
2. Plaster Undercoat:
   2.1. Manufacturer: British Gypsum
   2.2. Product reference: Thistle- Bondingcoat
   2.3. Thickness: 11mm
   2.4. Finish: Keyed, as manufacturer requirements.
3. Plaster Topcoat:
   3.1. Manufacturer: British Gypsum
   3.2. Product reference: Thistle- Multifinish
   3.3. Thickness: 3-4mm
   3.4. Finish: Smooth

51 Lime Green plaster

1. Surface preparation:
   1.1. Remove dust, surface contaminants and loose or friable coatings. Apply Beeks Fungicide if necessary. On dense, smooth masonry backgrounds or high suction backgrounds apply Lime Green Natural Stipple for improved bond. Other primers are available for difficult substrates - contact manufacturer for further details.

1.2. Sample trials should always be carried out to assess compatibility with substrate.

1.2.1. Lime green plaster should be applied to uniformly flat walls. Uneven walls should dubbed out using lime green Duro first

2. Mixing

2.1. Ultra: Ultra can be mixed using a drum mixer, or in a tub using a plasterer's paddle mixer. Mix with approximately 4 to 4.5 litres of clean water per bag; do not add anything else. Use eye protection and dust masks and avoid creating excessive dust.

2.2. Lime Green Solo: Mix with clean water only for 3 to 5 mins. Add approx 5-7 litres of water to a 25kg sack, do not use below 5°C or above 30°C. Re-working is not possible.

2.2.1. Required thickness:

2.2.1.1. Insulation boards typically 8 to 12mm.

2.2.1.2. Plaster boards typically 3 to 5mm.

2.2.1.3. Masonry typically 10-12mm.

3. Application:

3.1. Only use above 5°C and below 30°C.

3.2. Ultra:

3.2.1. Ultra should be applied to a straight, flat, dampened surface in a uniform thickness of between 10 and 30mm, make sure this coat is keyed. After 2 to 7 days and the coat has stiffened/hardened, but is still 'green' more coats may be added. Make sure that curing is carried out between each coat.

3.2.2. Careful consideration must be given to detailing of areas such as cills and drips, especially on sites exposed to high levels of wind and rain. Reinforcement mesh (Lime Green 910 mesh) to be applied to the final coat of Ultra when Ultra is used externally. Each section of mesh should overlap the next by 100mm.

3.2.3. For application to lath, please refer to Lime Green.

3.3. Solo:

3.3.1. For masonry and plasterboard: Apply the plaster in one pass, levelling off with a straight edge. Leave for at least 1½ hours before sponge floating to give a light texture to the surface. If required, leave for another few minutes before closing in with a steel trowel to produce a smooth finish. Do not over-work the surface as this may lead to fine cracking. Allow at least 2 weeks drying time, during which time it should be protected from rapid or forced drying.

3.3.2. On Insulation Boards: Apply Lime Green Solo in two passes of approximate equal thickness, the second to be applied within 24 hours of the first. Lime Green 454 reinforcing mesh is pushed into the first pass immediately while the plaster is still tacky. Overlap joints in the mesh by 100mm. The mesh should be doubled up at the stress points around windows and doors with diagonal pieces of at least 200mm x 400mm in size. The second pass is applied over the top to completely embed the mesh in the plaster. Finish as for masonry.

4. Curing: The prevention of drying out too quickly is the key to the success of the application. Lightly spray the Ultra in hot weather if it is drying out too quickly. In addition, protect from harsh weather conditions, for example, frosts, rain and direct sunlight. The use of damp hessian, fixed to the wall can slow down the drying out process and provide protection from adverse weather conditions.

5. Finishing Coats: Applied once the Ultra has set. Finishing coats should be applied in a uniform 3 to 6 mm thick layer with a trowel.

6. Coats:

6.1. 2.no scratch coats Ultra Lime

6.2. 1.no finishing coat Solo Lime

7. Overall thickness (not including laths or plaster nibs): No less than 25mm

8. Other requirements: Trials should be undertaken on old surfaces & backgrounds to ensure compatibility. Lime plasters do not set or perform like gypsum or cement based materials

59 HAIR REINFORCEMENT

1. Use goat or cattle hair.
2. Hair to be clean and free from grease and other impurities.
3. Length of chopped fibres: 50-75 mm and well teased before adding to the mix.
4. Mix thoroughly into lime:sand mix during final mixing or knocking-up stage as appropriate for the type of lime. Ensure that hair is well distributed throughout the mix.
5. Do not add hair to lime:sand mix which is to be stored for more than six weeks.

65 Mixing

1. Render mortars (site-made)
   1.1. Batching: By volume using gauge boxes or buckets.
   1.2. Mix proportions: Based on damp sand. Adjust for dry sand.
   1.3. Lime:sand: Mix thoroughly. Allow to stand, without drying out, for at least 16 hours before using.
2. Mixes: Of uniform consistence and free from lumps.
3. Contamination: Prevent intermixing with other materials.

66 INITIAL SET

1. Do not use mixes after initial set has taken place. Do not re-temper or reconstitute mixes, unless permitted by manufacturer of proprietary mixes.

67 Cold weather

1. General: Do not use frozen materials or apply coatings on frozen or frost bound substrates.
2. Internal work: Take precautions to prevent damage to internal coatings when air temperature is below 3°C.
3. External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising.

69 SCAFFOLDING

1. Use independent scaffolding to avoid put log holes and other breaks in coatings.
2. Turn back scaffold boards close to building at night and during heavy rain.

70 WORK TO HISTORIC PLASTER/RENDERS GENERALLY

1. Materials and methods of working for the repair and replacement of plasterwork (decorative and plain) must match that of the original work as closely as possible, unless specified otherwise.
2. Before commencing work, agree mixes, preparation and application methods with the CA.
3. Use plasterers who are skilled and experienced in the repair and replacement of historic plasterwork

71 Suitability of substrates

1. General: Suitable to receive coatings. Sound, free from contamination and loose areas.
2. Cutting, chasing, making good, fixing of conduits and services outlets and the like: Completed.
3. Tolerances: Permitting specified flatness/ regularity of finished coatings.
4. Cleanliness: Free from dirt, dust, efflorescence and mould, and other contaminants incompatible with coatings.

73 PROTECTION OF HISTORIC PLASTERWORK

1. Prevent damage and disfigurement to plain and decorative plasterwork during the course of the works:

2. Provide or ensure provision of protection and/or temporary support to all vulnerable areas of plasterwork using methods agreed with the CA.
3. Adopt careful working methods when working alongside or above plasterwork to prevent disturbance from vibration and impact.
4. Do not make temporary fixings into decorative plasterwork or apply adhesive tape to plaster surfaces.
5. Do not allow rigid boards, battens, etc. to touch plasterwork directly. Sandwich an isolating layer of mineral wool or other approved soft material between the boards and plaster face. Ensure that the isolating layer is firmly pressed against the plaster face.

75 REPAIRING EXISTING PLASTER

1. Remove plaster that is loose, soft, friable, badly cracked or affected by efflorescence, using a sharp knife to give a square cut edge and the minimum impact necessary. Gently tap all remaining intact surfaces and remove hollow sounding areas of plaster, unless otherwise agreed with the CA.
2. Remove stained plaster to 300 mm beyond last point of visible staining, unless otherwise agreed with the CA.
3. Advise CA if any built-in timbers, structural deficiencies or sources of damp are revealed.
4. Thoroughly dry brush the background and edges to remove dust, loose material and efflorescence.

76 Removing defective existing plaster

1. Plaster for removal: Loose, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
2. Removing defective plaster: Cut back to a square, sound edge.
3. Dust and loose material: Remove from exposed substrates and edges.

79 REPAIRING TIMBER LATHS TO WALLS

1. Remove area(s) of defective plaster and laths, being careful not to disturb adjacent sound plaster. Cut defective laths back to supporting timbers. Prevent plaster and laths from falling into voids.
2. Ensure supports for laths are sound and firmly fixed. Where necessary provide or ensure provision of additional fixings, timber battens, etc.
3. Fix new timber laths as clause 86.

80 Plasterboard backings

1. Additional framing supports
   1.1. Fixtures, fittings and service outlets: Accurately position to suit fasteners.
   1.2. Board edges and perimeters: To suit type and performance of board.
2. Joints
   2.1. Joint widths (maximum): 3 mm.
   2.2. End joints: Stagger between rows.
   2.3. Two layer boarding: Stagger joints between layers.
3. Joint reinforcement tape: Apply to joints and angles except where coincident with metal beads.

81 REPAIRING TIMBER LATH TO CEILINGS

1. Fully support area(s) of plasterwork to be repaired. Repair areas to be not more than 1 metre long x width of trough between joists. Ensure that each repair is dry and effective before commencing repairs to immediately adjacent areas.
2. Cut through defective laths carefully along the sides of joists or, where laths are sound, cut through alternate laths. Remove cut laths. Carefully vacuum surface of plaster to remove debris and dust.

3. Ensure supports for laths are sound and firmly fixed. Where necessary provide or ensure provision of additional fixings, timber battens, etc.
4. Fix new timber laths as clause 86D.

82 BEADS/ STOPS

1. Manufacturer: Contractor's choice, suitable for use.
2. Location: External angles and stop ends.
3. Materials:
   3.1. External render: Stainless steel.
   3.2. Internal plaster/ render: Galvanized steel.
4. Powdercoated to BS 13438 : 2005 by bead/stop manufacturer.
5. Fixing: Secure and true to line and level.
   5.1. Beads/ stops to external render: Fix mechanically.

86 TIMBER LATHS

1. Riven 32 x 6 mm oak
2. Free from decay, insect attack (except pinhole borers), splits, shakes and with no knots wider than half the width of the section.
3. Preservative treatment as section Z12 and BWPDA Commodity Specification C8.
4. Moisture content at time of installation not exceeding 16%.
5. Space laths 8 -10 mm apart in straight lines with 3 mm wide butt joints centred accurately over supports. Stagger butt joints at not more than every eighth lath.
6. Nails: 25 mm long galvanised blunt clout nails at every support.

87 Application of coatings

1. General: Apply coatings firmly and achieve good adhesion.
2. Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
   2.1. Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.
3. Drying out: Prevent excessively rapid or localized drying out.
4. Keying undercoats: Cross scratch plaster coatings and comb render coatings. Do not penetrate undercoat.

88 LIME PLASTER REPAIRS

1. Ensure plaster is compatible with the original mix(es).
2. Agree mix(es) to be used for each coat of the works with the CA before commencing repairs.
3. Agree with the CA the time to elapse between coats, which is to be not less than 2 weeks and may extend to 1 month in cold weather.
4. Dampen earlier coat before applying fresh plaster, and prevent rapid drying.
5. Complete moulded and modelled work before finishing coat is applied.

89 REPAIRING HOLES AND CRACKS IN PLASTER ON TIMBER LATHS

1. Repair areas with missing or unsound laths as clause 79D.
2. Carefully cut away any loose plaster from around edges of holes or along lines of cracks. Do not disturb adjacent sound plaster.
3. Remove all loose plaster and dust by brushing and vacuuming. Dampen laths and edges of plaster to control suction before applying approved plaster.

90 REPAIRING MINOR CRACKS IN PLASTERWORK

1. Thoroughly brush cracks clean. Where necessary, carefully cut back edges of plaster either side of cracks to produce a firm edge. Lightly dampen cracks to control suction, fill with approved plaster, and finish flush with surrounding plaster.
2. For decorative plasterwork, ensure that surface profiles/patterns are continued accurately

94 Flatness/ surface regularity

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

115 FINISH

1. With a wood or other suitably faced float to give an even texture. Do not apply water to final coat while working up. Do not draw excessive laitance to surface (either by overworking or by use of steel trowel).

120 PREPARATION FOR REPAIR OF PLASTER ON SOLID BACKGROUND

1. Prior to commencing repair, clean out cracks and voids with vacuum cleaner, and wash away any remaining dust.

122 NON-ORIGINAL WORK

1. Where plaster work is found not to be historic carry out repairs in matching materials.

125 AREAS OF HISTORIC MODELLED OR MOULDED PLASTERWORK AT RISK

1. Have due regard to the fragility of this type of finish and when working on or close to such areas take all necessary steps to record and protect the items at risk. Progressively fix back all loose edges to substrate either directly or with softwood noggings. The maximum permitted unsecured length of finish of background plaster edge is to be 120mm.
2. Stop work immediately if the finish or background plaster shows signs of movement, and introduce temporary supports until loose area can be secured.

Ω End of Section

M60
Painting/ clear finishing REVISED

Clauses

10 Water-based finishing coats Type A ADDED

1. Description: TO INTERNAL MODERN PLASTERED SURFACES, REFER TO DRAWINGS.
2. Manufacturer: Dulux Trade, brand of AkzoNobel
   - 2.1. Contact details
     - 2.1.1. Address: AkzoNobel Decorative Paints
       Wexham Road
       Slough
       Berkshire
       SL2 5DS
     - 2.1.2. Telephone: +44 (0)333 222 7070
     - 2.1.3. Web: www.duluxtradepaintexpert.co.uk
     - 2.1.4. Email: project.support@akzonobel.com
   - 2.2. Product reference: Heritage Velvet Matt
3. Sheen: Low sheen matt.
4. Colour: TBC
5. Execution: Applying coating.
6. Unit size: To suit application area
7. Application method: Roller.
8. Application temperature: do not apply at temperatures below 7'C (as recommended by British Standard BS 6150).
9. Drying time: Recoat: 2-4 hours.
10. CoverageArea: 13 m² per litre.
11. Thinning: Seal new or bare surfaces: A thinned first coat (up to 10% water) of Dulux Heritage.
12. Storage: Always store in an upright position and to prevent spillage transport in a secure and upright position.
13. Minimum storage temperature: Do not use or store in extremes of temperature and protect from frost.
14. Chemical resistance: Not suitable
15. Maximum temperature: Not suitable on heated surfaces
16. Water resistance: Will tolerate the levels of atmospheric humidity present in normal interior environments.
17. Surfaces: Plasterboard and jointing compound
    - 17.1. Preparation: Clean and free of loose material.
      Primer to reduce suction.

11 Water-based finishing coats Type C ADDED

1. Description: TO INTERNAL PLASTERED SURFACES
2. Manufacturer: The Little Greene Paint Company
   - 2.1. Contact details
     - 2.1.1. Telephone: (44) 0161 230 0889
     - 2.1.2. Web: Little Greene - Buy Luxury Paint and Wallpaper Online
     - 2.1.3. Email: export.orders@thelittlegreene.com

2.2. Product reference: Absolute Matt Emulsion

3. Sheen: Low sheen matt.
4. Colour: Refer to finishes schedule
5. Execution: Applying coating.
6. Application method: Contractor's choice
7. Application temperature: Refer to manufacturer's data sheets
8. Drying time: 1-4 hours
9. CoverageArea: 13 m² per litre.
10. Storage: Store unused paint in a cool, dry, frost free area away from direct sunlight. Ensure tin lids are securely and correctly replaced after use. When unopened and stored under the conditions above, this product is stable for a minimum period of two years
11. Minimum storage temperature: 8°C
12. Surfaces: New plaster walls
    12.1. Preparation: Allow at least four weeks for the plaster to thoroughly dry.
13. Initial coats: Absolute Matt Emulsion: Primer coat by thinning the paint with a 5 to 25% (v/v) addition of clean water
14. Finishing coats: Absolute Matt Emulsion
    14.1. Number of coats: 2

12 Water-based finishing coats Type D ADDED

1. Manufacturer: Dulux Trade, brand of AkzoNobel
   1.1. Contact details
      1.1.1. Address: AkzoNobel Decorative Paints
      Wexham Road
      Slough
      Berkshire
      United Kingdom
      SL2 5DS
      1.1.2. Telephone: +44 (0)333 222 7070
      1.1.3. Web: https://www.duluxtradepaintexpert.co.uk/en
      1.1.4. Email: project.support@akzonobel.com
   1.2. Product reference: Dulux Trade Diamond Matt
2. Composition: Lightfast pigments (pigment), acrylic copolymer emulsion (binder), water (solvent).
3. Sheen: Matt.
4. Colour: Refer to finishes schedule
5. Form: Liquid.
6. Certification: BREEAM, LEED, IAC Gold, EPD, Fire Testing report.
7. Coverage: 16 m²/L.
8. Drying time: Touch dry: dependent on temperature and humidity. Recoat: 4–6 hours.
9. Thinning: Sealing new or bare surfaces: add up to one part clean water to ten parts paint. Normal use (not to be exceeded): thinning is not usually required. Airless spray application: thinning is not usually required but can be thinned by adding up to one part clean water to ten parts paint.
10. Volume solids: White: 49% (nominal). Other colours will vary.
11. Chemical resistance: Not suitable.
12. Water resistance: Resistant to the levels of atmospheric humidity present in normal interior environments and will withstand repeated washing.
13. Application method: Manufacturer's standard (restricted).

14. VOC: Ready mixed: maximum 1 g/L VOC. Tinted colour: maximum 1 g/L VOC.
15. VOC emissions: Considered to have "Trace" elements for emissions.
16. Storage: Do not use or store in extremes of temperature and protect from frost.
17. Surface preparation: Ensure surfaces to be painted are sound, clean and dry.

14 Eggshell/ satin paint

1. Description: New Internal joinery
2. Manufacturer: Farrow and Ball
   www.farrow-ball.com
   - 2.1. Product reference: Colour TBC
     Estate Eggshell
3. Surfaces: Pre-primed and sealed
   - 3.1. Preparation: Ensure surfaces are clean and dry
4. Initial coats: As recommended by manufacturer
   - 4.1. Number of coats: 2
5. Finishing coats
   - 5.1. Number of coats: 2

15 Eggshell/ satin paint Type B ADDED

1. Description: New Internal joinery
2. Manufacturer: The Little Greene Paint Company
   Little Greene - Buy Luxury Paint and Wallpaper Online
   - 2.1. Product reference: Intelligent Eggshell
   - 2.2. Colour:: Refer to finishes schedule
3. Surfaces: Pre-primed and sealed
   - 3.1. Preparation: For soft woods, knots should be sealed with knotting compound to prevent staining and then primed with Little Greene Intelligent ASP Resinous hardwoods require cleaning and treatment with Little Greene Aluminium Wood Primer (consult the relevant product data sheets for further details) prior to undercoating.
4. Initial coats: As recommended by manufacturer.
   Primer: Little Greene Intelligent ASP Resinous
   - 4.1. Number of coats: 2
5. Undercoats: As recommended by manufacturer
   - 5.1. Number of coats: 2
6. Finishing coats
   - 6.1. Number of coats: 2

21 Handling and storage

1. Coating materials must be delivered in sealed containers, each clearly labelled to show:
   - 1.1. Maker's name, initials or recognised trade mark.
   - 1.2. Title and specification number.
   - 1.3. Whether primer, undercoat or finishing coat.
   - 1.4. Whether for internal or external use, where appropriate.
   - 1.5. Colour reference, from BS 4800, BS 3811 or RAL colour system as appropriate.
   - 1.6. Method of application.
   - 1.7. Batch number and date of despatch or re-test.
   - 1.8. Detailed instruction for storage and use if highly flammable or toxic.

1.9. Statutory markings.

2. Wherever possible materials must be from one manufacturing batch. Inform the CA if materials from more than one batch are to be used, store separately and allocate to distinct parts or areas of the work.
3. Store materials in accordance with manufacturer's recommendations. Use in order of delivery and before expiry of any shelf life date.

22 Application or removal of lead paint

1. Complete part 1 of the Declaration on Intended Supply and Use of Lead Carbonate or Lead Sulphate in Paint, and before removing or applying any such paint ensure that three weeks have elapsed following the service of the completed Declaration to the competent regulating authority.
2. Comply with the relevant health and safety regulations referred to in the notes relating to the Declaration when removing or applying lead paint.

27 Protection

1. Adequately protect internal and external surfaces, fixtures and fittings that are not to be coated, by covering with dust sheets, masking or other suitable materials.
2. Exhibit 'Wet paint' signs and provide barriers where necessary to protect other operatives and the general public, and to prevent damage to freshly applied coatings.

28 Unsuitable conditions

1. Take all necessary precautions including restrictions on working hours, providing temporary protection and allowing extra drying time, to ensure that coatings are not adversely affected by climatic conditions during and after application.
2. Prevent or control exposure of operatives to solvent vapour levels exceeding occupational exposure standards set in the current Health and Safety Executive (HSE) document EH40.
3. Apply coatings only where it is specifically permitted by the coating manufacturer: to surfaces affected by moisture, frost or airborne dust.
4. When the air or substrate temperature is below 5°C.
5. When the relative humidity is above 80%.
6. When heat is likely to cause blistering or wrinkling.

30 Preparation generally

1. Standard: In accordance with BS 6150 - unless otherwise specified or shown on drawings.
2. Materials:: Materials used in preparation must be types recommended by their manufacturers and the
coating manufacturer for the situation and surfaces being prepared.
3. Exposure:: Prevent or control exposure of operatives to dust, vapour and fumes exceeding occupational exposure standards set in the current Health and Safety Executive (HSE) document EH40.
4. Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
5. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
6. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
7. Substrates: Substrates must be sufficiently dry in depth to suit the coating to be applied.
8. Efflorescence salts, dirt, grease and oil: Remove efflorescence salts from surfaces. Repeat removal if efflorescence recurs.
9. Dirt, grease & oil:: Clean off dirt, grease and oil from surfaces. If contamination of surfaces/substrates has occurred, obtain instructions before proceeding.

10. Surface irregularities: Smooth surface irregularities. Fill joints, cracks, holes and other depressions with stoppers/fillers worked well in and finished off flush with surface. Abrade to a smooth finish.
11. Organic growths and infected coatings
    11.1. Remove with assistance of biocidal solution.
    11.2. Apply residual effect biocidal solution to inhibit regrowth.
12. Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
13. Priming:: Apply oil based stoppers/fillers after priming. Apply water based stoppers/fillers before priming unless recommended otherwise by manufacturer. Patch prime water based stoppers/fillers when applied after priming.
14. Dust, particles and residues from preparation: Remove dust and particles from dry abrasive preparation of surfaces with vacuum cleaner. Remove residues from wet preparation of surfaces by rinsing with clean water and wiping
dry.
15. Doors, opening windows and other moving parts:: As per door schedule
16. Protection:: Provide sufficient clean dust sheets and coverings to protect floors and all other surfaces. Exhibit 'Wet Paint' signs and provide protective barriers as required.
17. Brushes:: Use only non-ferrous bristle brushes to clean surfaces.
18. Completion:: Remove all dry dust by vacuum. Remove wet abrasion dust by washing with clean water.

32 Preparing limewash

1. Add freshly burnt lump lime to water in a metal container, in proportion 1 kg lime to 3 litres of water.
2. After mixture has boiled add a little more water and stir well. Leave for a few minutes then, when all lime has slaked, add more water to make up to 8 litres.
3. Reject mix if lime does not boil in water during slaking process.

32 Previously coated surfaces generally

1. Preparation: In accordance with BS 6150, clause 11.5.
2. Contaminated or hazardous surfaces: Give notice of:
    2.1. Coatings suspected of containing lead.
    2.2. Substrates suspected of containing asbestos or other hazardous materials.
    2.3. Significant rot, corrosion or other degradation of substrates.
3. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
5. Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
6. Alkali affected coatings: Completely remove.
7. Retained coatings
    7.1. Thoroughly clean.
    7.2. Gloss coated surfaces: Provide key.
8. Partly removed coatings: Apply additional preparatory coats.
9. Completely stripped surfaces: Prepare as for uncoated surfaces.

33 Overpainting lime/distemper surfaces

1. Brush surface with stiff bristle brush to remove as much as possible of lime coat/distemper.

2. Ensure that overpaint material is compatible with underlying coatings.
3. Seal surface before applying finishing coats.

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.

40 Coated/uncoated steel - hand cleaning

1. Oil and grease: remove.
2. Corrosion, loose scale, welding slag and spatter: remove.
3. Residual rust: treat with a proprietary removal solution.
4. Primer: apply as soon as possible.

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.

44 Suitability of surfaces and conditions

1. Application of coatings will be taken as joint acceptance by the Main Contractor and the Painting Contractor of the suitability of surfaces and conditions within any given area to receive the specified coatings.

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: Submit proposals
        2.1.1. Product reference: Submit proposals
    2.2. Preparation and application: As section Z22.

59 Coating equipment

1. All coatings shall be applied by good quality brushes of suitable width for the surfaces to be coated unless otherwise specified or agreed in writing.

61 Coating generally

1. Application standard: In accordance with BS 6150, clause 9.
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. Priming coats: Apply as soon as possible on same day as preparation is completed.
6. Finish

6.1. Even, smooth and of uniform colour.

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

6.3. Cut in neatly.

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

63 Unsound timber

1. Inform CA on discovery of rotten or infested timber. Stop work on affected areas pending instruction.

64 Porosity

1. Advise CA and seek further instructions if adequacy of primers to suit porosity of surfaces is doubted, or if one full coat of sealer or emulsion paint is insufficient to satisfy porosity of the surface, or to seal-in materials harmful to subsequent coatings.

71 Do not paint

1. Do not paint radiator valves, sprinkler heads or fusible links.

75 Bead glazing to coated wood

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

85 Completion

1. Ensure that opening lights, doors and other moving parts move freely without binding. Remove all masking tape and temporary coverings.
2. Remove all splashes and make good any damage resulting from decoration.

Ω End of Section

P10
Sundry insulation/ proofing work REVISED

Types of insulation

140 Mineral wool slab insulation

1. Manufacturer: ROCKWOOL Ltd
   1.1. Product reference: ROCKWOOL® Roll / Twin Roll / Rollbatt (ROCKWOOL Roll)
2. General requirements: Insulation products generally.
3. Standard: To BS EN 13162, ISO 14001.
4. Thickness:
5. Edges: Square.
6. Thermal conductivity (maximum): 0.044 W/mK.
7. Fire performance: To 13501-1, Euroclass A1.
8. Vapour resistivity: 5.9 MN·s/gm.
9. U-value: Manufacturer's standard.
10. Dimensions: Compressed mineral wool is used where the edges cannot be reached such as under lead aprons in the roof. In these areas the holes are sealed by stuffing them with loose mineral wool until it becomes compressed

441 Mineral wool wire-reinforced mattress cavity barriers REVISED

1. Manufacturer: ROCKWOOL Ltd
   1.1. Product reference: ROCKWOOL® Fire Barrier System (50 mm thick)
2. Thickness (minimum): 50 mm.
3. Facing: Plain.
4. Fire performance: Euroclass A1 non-combustible.
5. Sound insulation rating: Up to 50 dB.
6. Length: To suit existing structure void.
7. Width: 1000 mm.
8. Mesh: Two sides.
9. Accessories: As required.

Ω End of Section

P12
Fire stopping systems REVISED

General - Not Used

System performance

240 Fire performance

1. Description: As per Fire Safety Report and Schedule or Work
2. Resistance to fire: As per Fire Safety Report and Schedule or Work
3. Reaction to fire: As per Fire Safety Report and Schedule or Work
4. Smoke resistance
   4.1. Air leakage rate (maximum): As per Fire Safety Report and Schedule or Work

Products

300 Membrane Intumescent Coating

1. Description: FireFace Plus is a 3-layer membrane, 1.8mm thick overall, comprising a reinforced base layer, a high density intumescent layer and a Birch Ply surface to accept finishes or veneers.
   1.1. Application:: To manufacturers requirements.
   To the fielded parts only of the panels of existing panelled doors.
2. Manufacturer: Sealmaster
   2.1. Product reference: FireFace Plus
3. Finishes: Timber Veneer Stained to match existing door material.
   Veneer NBS xxxx
   Staining NBS xxxx

   Or standard birch ply decorated to match adjacent door as NBS xxx.

305 Product certification

1. Certification: For products specified generically, submit evidence of compliance with the specification.
2. Acceptable evidence: Third-party certification

310 Fibre-reinforced calcium silicate fire protection boards

1. Manufacturer: Promat UK
   1.1. Product reference: MASTERBOARD®
2. Standard: To BS 476-20, BS 476-22.
3. Fire rating: Non-combustible with a reaction to fire Classification of A1 according to BS EN 13501-1.
4. Density: 975 kg/ m³.
5. Thickness: 9 mm.
6. Edges:
7. Colour: Off-white.
8. Execution:
9. Weather resistance:: Semi-exposed/ resistant to the effects of moisture.
10. Finish as delivered: Smooth finish on one face with a sanded reverse face.
11. Board size: 2440 x 1220 mm.

12. Sealant: PROMASEAL® intumescent sealant.
13. Accessories:

335 Polyurethane (PUR) expanding foam fillers

1. Manufacturer: Astroflame
   1.1. Product reference: BLUE 60
2. Material: Mixture composed of polyurethane in solvents.
3. Colour: Blue
4. Standard: BS-EN 1634-1 & BS476-22

346 Intumescent pillows ADDED

1. Manufacturer: ROCKWOOL Ltd
   1.1. Contact details
      1.1.1. Address: ROCKWOOL Ltd
      Wern Tarw
      Pencoed
      Bridgend
      United Kingdom
      CF35 6NY
      1.1.2. Telephone: +44 (0)1656 862621
      1.1.3. Web: https://www.rockwool.com/uk/
      1.1.4. Email: customersupportcentre@rockwool.com
   1.2. Product reference: FirePro® Intumescent Pillow CE (330 x 50 x 20 mm) (or size to suit opening)
2. General requirements: Insulation products generally.
3. Size: 330 x 50 x 20 mm. (or size to suit opening)
4. Fire performance: Up to EI 120 fire resistance.
5. Acoustical Performance: Rw (C,Ctr) = 33 (0,-2).
6. Air permeability: Tested to EN 1026.

360 Mineral wool slab insulation

1. Manufacturer: ROCKWOOL Ltd
   1.1. Product reference: ROCKWOOL® FIREPRO® Ablative Coated Batt
2. General requirements: Insulation products generally.
3. Thickness: 60 mm.
4. Facing: Ablative coated.
5. Density: 160 kg/m³.
6. Fire performance: Euroclass fire rating A1.
7. Width: 600 mm.
8. Accessories: ROCKWOOL Acoustic Intumescent Sealant.
   ROCKWOOL Ablative Coating
9. Air leakage: 0.8 m³/h/m².
10. Other requirements: For seals over 1200mm x 1200mm Batt to Batt joints are to be fully coated with ROCKWOOL FIREPRO Glue.

390 Intumescent Sealant

1. Manufacturer: ROCKWOOL Ltd

2. Product reference: ROCKWOOL FIREPRO Acoustic Intumescent Sealant
3. Sealant type: Water based acrylic intumescent
4. Colour: White
5. Fire performance: Up to four hours.
6. Execution: Applying joint sealants.
7. Type: Acoustic intumescent.

Execution

610 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: UKAS Accreditation Certificate

620 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 filler, sealant or mortar on to finished surfaces.
3. Installation: All products and systems should be installed strictly in accordance with the manufacturer's guidance

710 Installing mineral wool batts

1. Installing batts: Fit tight into void between the penetrating services and the surrounding construction to form a solid barrier.
2. Gaps between services and barrier: Seal with fire resisting sealant.

Completion

910 Cleaning

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

920 Inspection

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

Ω End of Section

P20
Unframed isolated trims/ skirtings/ sundry items ADDED

To be read with preliminaries/ general conditions

110 Softwood ADDED

1. Description: ARCHITRAVES TO NEW FLUSH DOORS.
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: 9-13%
4. Preservative treatment: Water-based microemulsion as section Z12, service life 30 years
5. Reaction to fire rating: To BS EN 13501-1, Class A2
6. Profile: Bullnosed
   6.1. Finished size: As drawings
7. Finish as delivered: Prepared and primed, as section M60
8. Fixing: Plugged, screwed and pelleted at 400 centres

Execution

510 Installation generally ADDED

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: Mitre, unless shown otherwise
7. Position and level: To be agreed where not detailed.

Ω End of Section

P21
Door/ window ironmongery REVISED

Pre-tender

10 Quantities and locations

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

General

140 Samples

1. General: Before placing orders with suppliers submit labelled samples of the following: Hinges & Handles .
   1.1. Conformity: Retain samples on site for the duration of the Contract. Ensure conformity of ironmongery as delivered with labelled samples.

170 Ironmongery for fire doors

1. Generally: Products specified have been selected in co-ordination with the fire engineer. Any proposals other than those specified will need to be agreed with fire engineer, architect and client and documentation provided to demonstrate test data is comparable to specification.
2. Relevant products: Ironmongery fixed to, or morticed into, the component parts of a fire resisting door assembly.
3. Compliance: Ironmongery included in successful tests to BS 476-22 or BS EN 1634-1 on door assemblies similar to those proposed.
   3.1. Certification: Submit evidence of successful testing by UKAS accredited laboratory
4. Melting point of components (except decorative non-functional parts): 800°C minimum.

Door hanging devices

320 Door hinges ADDED

1. Description: Replica Hinges
2. Manufacturer: Simonswerk
   2.1. Product reference:
3. Type:
4. Size:
5. Material/ finish:
6. Other requirements:

Window hanging devices - Not Used

Door operating devices

410 Overhead door closers

1. Description: Freedor SmartSound
2. Standard: To BS EN 1154.
3. Manufacturer: Fireco
   3.1. Product reference: Freedor SmartSound

4. Type: Surface mounted wireless door closer / hold open device
5. Power size: Minimum 3 - where mounted on existing doors the weight is to be assessed.
6. Other functions: As schedule
7. Casing finish: Brass
8. Operational adjustment
    8.1. Variable power: Matched to size, weight and location of doors.
    8.2. Latched doors: Override latches and/ or door seals when fitted.
    8.3. Closing against smoke seals of fire doors: Positive. No gaps.

471 Audio Activated hold open/ swing free devices ADDED

1. Description: Audioactivated wireless floor magnet
2. Standard: To BS EN 1155.
3. Manufacturer: Fireco
    3.1. Product reference: DorMag SmartSound
4. Type: Refer schedule for wall, skirting, floor mounting
5. Material/ finish:
6. Means of release: Audio Activated
7. Test switch: Located in a convenient position adjacent to door.
8. Operational adjustment of integral closer
    8.1. Variable power: Matched to size, weight and location of doors.
    8.2. Latched doors: Override latches and/ or door seals when fitted.
    8.3. Unlatched doors: Hold shut under normal working conditions.

490 Uncontrolled door closers ADDED

1. Description: Mid-rail, surface mounted closer
2. Manufacturer:
    2.1. Product reference:
3. Type:
4. Material/ finish: Polished brass faceplate
5. Action:
6. Operation
    6.1. Power: To suit the size and weight of doors to which they are fitted.
    6.2. Unlatched doors: Hold closed under normal conditions.

Door securing devices - Not Used

Window securing devices - Not Used

Door furniture

860 Door and window weatherstrips and seals

1. Description: Intumescent Seal (Only)
2. Manufacturer: Lorient
    2.1. Product reference: Fire Seal / intumescent strip (Intumescent Fire Seal Ref: LP1004)
3. Functions: Fire seals.
4. Seal type: Intumescent strip in carrier.

5. Size: 10 x 4 mm.
6. Materials
   6.1. Seals: PVC encased sodium silicate.
7. Length: To suit dimensions of doors
8. Fire performance: 30 minutes.
9. Standard range: White. (Painted Doors)
   Dark brown. (Stained Timber Doors)

861 Door and window weatherstrips and seals

1. Description: Intumescent and cold smoke seal
2. Manufacturer: Lorient
   2.1. Product reference: Finesse™ Fire, Smoke and Acoustic Seal (Finesse™ Acoustic, Smoke and Fire Seal Ref: LP1504)
3. Functions: Acoustic, smoke and fire seals.
4. Size: 15 x 4 mm.
5. Materials
   5.1. Seals: Translucent fins.
6. Length: To suit dimensions of door.
7. Functions: Fire seals.
8. Seal type: Intumescent strip in carrier.
9. Size: 10 x 4 mm.
10. Materials
    10.1. Seals: PVC encased sodium silicate.
11. Length: To suit dimensions of doors
12. Fire performance: 30 minutes.
13. Standard range: White. (Painted Doors)
    Dark brown. (Stained Timber Doors)

862 Door and window weatherstrips and seals

1. Description: Surface mounted perimeter seal
2. Manufacturer: Lorient
   2.1. Product reference: Batwing Perimeter Seal LAS1212
3. Functions: Acoustic and smoke seals.
4. Size: 12 x 12
5. Materials
   5.1. Seals: Flexible elastomeric fin
6. Length: To suit dimensions of door.
7. Standard range: White. (Painted Doors)
   Dark brown. (Stained Timber Doors)

897 Fire-resisting air transfer grilles with smoke shutters ADDED

1. Manufacturer: Lorient
   1.1. Product reference: LVN20S Fire Plus Smoke Resistant Air Transfer Grille
2. Standard: To BS 476-20 and BS 476-22 (fire) and BS 476-31.1:1983 (smoke).
3. Third party certification: Certifire CF 564.
4. Category: Intumescent with smoke resistant air transfer grille.

5. Size:
6. Fire resistance (minimum): 60 minutes.
7. Colour: Silver.
8. Electrical connection: Required.
9. Thickness: 20 mm.
10. Free area: 30% free area (approximately).
11. Accessories:

Window furniture - Not Used

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 mm².
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.

Ω End of Section

Z10 DIA
Purpose made joinery REVISED

To be read with preliminaries/ general conditions.

100D BASIC WORKMANSHIP

1. Comply with the clauses of BS 8000 Part 5: 2014 that are relevant to this section, unless otherwise specified or shown on drawings.

103D ENVIRONMENTAL POLICY

1. Obtain all new timber from a sustainable source, submit suitable documentary evidence to demonstrate this and obtain the CA's approval before placing orders.
2. Preference will be given to suppliers who have adopted the Environmental Policy agreed by Forests Forever and the Timber Trade Federation or another comparable policy and who can provide evidence of their commitment to that Policy.

107D PROCEDURE

1. Prepare full size drawings to show setting out, geometry, jointing and all details. State proposed timber species, grades and sizes.
2. Submit drawings of each element for comment four weeks before proposed fabrication.

110D FABRICATION

1. Standard: To BS 1186-2. Sections: Accurate in profile and length, and free from twist and bowing.
2. Formed out of solid unless shown otherwise.
3. Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
4. Joints: Tight and close fitting.
5. Assembled components: Rigid. Free from distortion.
6. Screws: Provide pilot holes for screws of 8 gauge (4 mm diameter) or more.
7. Screws into hardwood: provide clearance holes.
8. Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.
9. Adhesives: Compatible with wood preservatives applied and end uses of timber.
10. Restrict site work to fixings and other operations that cannot be done in the workshop.

112D HUMIDITY CONTROL

1. Make as much joinery as possible in a workshop or other space with humidity controlled to match that of the environment in which the joinery is to be installed.

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:-
   - 2.2. Hardwood sections: To BS EN 1313-2:-

130 Preservative treated wood

1. Cutting and machining: Completed as far as possible before treatment.
2. Extensively processed timber: Retreat timber sawn lengthways, thicknessed, 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.

150D REPLICATING EXISTING JOINERY

1. Replicate original material in every respect in new joinery.
2. Take dimensions from the original building or from stripped profiles of original joinery and not from contract drawings nor from painted mouldings.
3. Sizes of timber are to match material being replicated.
4. Joinery to be constructed using components matching the original work in profile, species and overall dimensions, using similar techniques employed in each different location and/or as shown on the contract drawings.
5. Where no examples of joinery to be replicated survive, agree details with the CA.

170D CONTRACTORS' DRAWINGS FOR NEW OR REPLICATED JOINERY

1. Before starting fabrication of new or replicated joinery give at least four weeks notice to the CA, submit detailed drawings, including full size setting out drawings and other details to show the geometry of the structures, the timber species sizes and grades and the methods of jointing and obtain approval in writing.

250D FINISHING

1. Joinery surfaces: Smooth, even and suitable to receive finishes.
   1.1. Arrises: Eased unless shown otherwise on drawings.
2. End grain in external components: Seal with primer or sealer as section M60 and allow to dry before assembly.
3. Apply two coats of primer to backs of all built in joinery set against masonry.
4. Do not assume that primer or first undercoats provide protection against weather

260D JOINERY INSPECTION

1. Allow the CA to inspect the joinery before any priming or decoration is applied.

320D FINISHED APPEARANCE ADDED

1. Joinery to receive decoration: a fine smooth surface free from any imperfections that might be apparent after decoration.
2. Joinery with clear finishes: finely finished to remove cutter or sanding marks, raised grain, stains or other blemishes.
3. The timber, including veneers, in adjacent places shall be matched or uniform symmetrical in colour and grain.
4. Angles and edges slightly rounded: exposed edges and vulnerable angles to be pencil rounded unless otherwise detailed.

330D SEALING AND PRIMING ADDED

1. Seal exposed end grain of the following joinery before sealer or primer is applied, where possible before general sealer or primer is applied, where possible before delivery to the site: windows, doors, frames to both.
2. Prime built in surfaces with two coats of priming paint.

3. Apply two coats of primer to back of all built-in joinery set against masonry etc and isolate by installing damp proof material as specified in section C45.

340D JOINTING

1. The arrangement, jointing and fixing of all joinery works shall be such that shrinkage in any part and in any direction shall not cause damage to any contiguous materials or structures. All works necessary for the proper construction of all framings, linings etc and for their support and fixing in the building to be included.
2. Replicated joinery to be constructed to match exactly the original work or be as shown on the contract drawings. Where joints are not specifically indicated, they shall be recognised forms of joints for each position. The joints shall be made so as to comply with BS1186, part 2.
3. Loose joints to be used where provision must be made for shrinkage or other movements in the connections and where sealed joints are required. All glued joints to be cross-tongued or otherwise reinforced. All nails, springs etc to be punched and puttied.
4. Surfaces in contact are to have a good sawn or planed finish. The surface of plywood to be glued to be lightly dressed with sand or glass paper. The sand or glass paper must not be allowed to clog and cause burnishing.

350D TOLERANCES

1. Reasonable tolerance to be provided at all connections between joinery works and the building carcass, whether of masonry or frame construction, so that any irregularities, settlements or other movements will be adequately compensated.

360D GROUNDS

1. Grounds, battens, bearers and packings as necessary for fixing joinery to be provided.

370D FIXINGS

1. Securely fix sections together and to substrates using jointing methods and types and spacing of fastenings as shown on the drawings or that are suitable having regard to:
    1.1. Nature of substrate
    1.2. Materials and loads to be supported.
    1.3. Conditions expected in use
2. Construct groundwork required to provide a suitable base and fixing for the joinery works Vertical junctions shall be solidly secured.
3. Timber frames, when not specified otherwise, to be fixed at 600mm maximum centres with at least one fixing 150mm from each end of jambs and one adjacent to each hanging point of opening element.

371D FIXING PLUGS

1. Locate specified plugs accurately. Use proprietary plugs in accordance with the manufacturer's instructions recommendation. When plugging through applied finishes, ensure that plugs and fastenings have adequate penetration into the structural backing.

372D NAILING

1. Nails that would be visible in completed work to be punched below timber surfaces.

390D SCRIBING

1. All skirtings, architraves, plates and other joinery works to be accurately scribed to fit the contour of any irregular surface against which they may be requires to form a close butt connection.

410D PROTECTION

1. Provide all necessary protection to joinery items to prevent any damage after fabrication, either on or off site.
2. Prevent damage to and distortion of joinery during transit, handling, storage and fixing.
3. Keep joinery clean and dry.
4. Prevent marking of surfaces which will be visible in completed work.

Ω End of Section

Z20
Fixings and adhesives

Clauses

10 Fixings and fasteners generally

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

25 Fastener durability

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.

30 Fixings through finishes

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

35 Packings

1. Materials: Noncompressible, corrosion proof.
2. Area of packings: Sufficient to transfer loads.
3. Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer

45D Screw Fixing

1. Finished level of countersunk screw heads:
    1.1. Exposed: Flush with timber surface.
    1.2. Concealed (holes filled or stopped): Sink minimum 2 mm below surface
2. All screws to have clearance holes. Screws of 8 gauge or more and all screws into hardwood to have pilot holes about half the diameter of the shank.
3. Before using brass, aluminium or other soft metal wood screws pre-cut the thread with a matching steel wood screw.
4. Do not hammer screws unless specifically designed to be hammered.
5. Drive countersunk heads flush with timber surface, or not less than 2 mm below it if they are to be stopped.
6. Washers and screw cups, where specified, to be of the same material as the screw.
7. Brass and BMA finished screws are to have slot (not Phillips) heads.

50 Pelleted countersunk screw fixings

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

60D Applying Adhesive

1. Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
2. Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
3. Finished adhesive joints: Fully bonded. Free of surplus adhesive
4. Surfaces to receive adhesive to be sound, unfrozen, free from dust, grease and any other contamination likely to affect bond. Where necessary, clean surfaces using methods and materials recommended by adhesive manufacturer.
5. Adjust surface regularity and texture as necessary to suit bonding and gap filling characteristics of adhesive
6. Where necessary seal friable or dusty surface using methods and material recommended by adhesive manufacturer.
7. Ensure that operatives observe manufacturer's and statutory requirements for storage and safe usage of adhesives
8. Do not use adhesives in unsuitable environmental conditions or beyond the storage period recommended by the manufacturer
9. Apply adhesives using recommended spreaders/applicators to ensure correct coverage. Bring surfaces together within recommended time period and apply pressure evenly over full area of contact to ensure full bonding.

Ω End of Section

Z21
Mortars ADDED

Cement gauged mortars

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

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.

135 Site made lime:sand for cement gauged masonry mortars ADDED

1. Permitted use: Where a special colour is not required and in lieu of factory made ready-mixed material.
2. Lime: Nonhydraulic to BS EN 459-1.
   2.1. Type: CL 90S.
3. Mixing: Thoroughly mix lime with sand, in the dry state. Add water and mix again. Allow to stand, without drying out, for at least 16 hours before using.

190 Retarded ready to use cement gauged mortar ADDED

1. Standard: To 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.

200 Storage of cement gauged mortar materials ADDED

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

210 Making cement gauged mortars ADDED

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

310 Lime:sand mortar mixes ADDED

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

320 Sand for lime:sand masonry mortars ADDED

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

330 Ready prepared lime putty ADDED

1. Type: Slaked directly from CL 90 quicklime to BS 890, using an excess of water.
   1.1. Maturation: In pits/ containers that allow excess water to drain away.
   1.2. Density of matured lime putty: 1.3 - 1.4 kg/litre.
2. Maturation period before use (minimum): As recommended by manufacturer

335 Ready prepared lime putty ADDED

1. Manufacturer: Ty-Mawr or equal and approved
   1.1. Product reference: Lime Putty (Non-Hydraulic)
2. Maturation period before use (minimum): As recommended by manufacturer

345 Admixtures for hydraulic lime:sand mortars ADDED

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

350 Storage of lime:sand mortar materials ADDED

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

360 Making lime:sand mortars generally ADDED

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

380 Ready to use nonhydraulic lime:sand mortars ADDED

1. Manufacturer: Ty-Mawr or equal and approved
   1.1. Product reference: NHL 3.5
2. Materials: Select from:
   2.1. Lime putty slaked directly from quicklime to BS EN 459-1 and mixed thoroughly with sand.

2.2. Quicklime to BS EN 459-1 slaked directly with sand.

3. Maturation period before use (maximum): As manufacturer's recommendations

390 Knocking up nonhydraulic lime:sand mortars ADDED

1. Knocking up before and during use: Achieve and maintain a workable consistency by compressing, beating and chopping. Do not add water.

1.1. Equipment: Roller pan mixer or submit proposals.

400 Making hydraulic lime:sand mortars ADDED

1. Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix.

1.1. Water quantity: Only sufficient to produce a workable mix.

2. Working time: Within limits recommended by the hydraulic lime manufacturer.

Ω End of Section

Z22
Sealants ADDED

Products

310 Joints ADDED

1. Description: Generally
2. Manufacturer: Submit proposals
   2.1. Product reference: Submit proposals
3. Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.
4. Fire performance
   4.1. Fire resistance: To BS EN 13501-2, EI 30 or better
   4.2. Reaction to fire: To BS EN 13501-1, Class F or better

Execution

610 Suitability of joints ADDED

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 ADDED

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 ADDED

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



Specification created using NBS Chorus