SW2207

Potter Raper Ltd

Physics Corridor Refurbishment

Trade Preamble's

27-03-2023

Refurbishment of the finishes and electrical services within the Physics building at the UCL Bloomsbury campus.

Contents

C10
Site survey

Surveys

125 Site survey

1. Description: Survey of existing spaces including review of services and positions
2. Area to be surveyed: All room included in works
3. Objectives
   3.1. General: Establish/ record positions, dimensions and levels including ceiling system.

Survey techniques

420 Unforeseen hazards

1. Unrecorded hazards and hazardous materials: Give notice when found. Do not disturb.

430 Survey instruments

1. Equipment calibration: In accordance with manufacturer's recommendations.
2. Site use calibration: To relevant parts of BS 7334-1, -3, -4, -5 and -8.
3. Calibration: Use only persons accredited by the United Kingdom Accreditation Service (UKAS).

Completion - Not Used

Ω End of Section

C20
Demolition

To be read with preliminaries/ general conditions.

5 Desk study/ survey

1. Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
   1.1. the structure or structures to be deconstructed/ demolished,
   1.2. the surrounding area.
2. Report and method statements: Submit, describing requirements for access and segregation
   2.1. Form, condition and details of the structure or structures, the site and the surrounding area.
   2.2. Proposed programme of work, including sequence and methods of deconstruction/ demolition.
   2.3. Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.

25 Location of services

1. Services affected by deconstruction/ demolition work: Locate and mark positions.
2. Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
   2.1. Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

30 Services disconnection arranged by contractor

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

76 Asbestos-containing materials – unknown occurrences

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

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.
2. Evidence of compliance: Submit full details and supporting documentation.
   2.1. Verification: Allow adequate time in programme for verification of compliance.

Ω End of Section

G20
Carpentry/ timber-framing/ first fixing

Clauses

2 Timber procurement

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

30 Selection and use of timber

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

32 Notches, holes and joints in timber

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

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.

40 Moisture content

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

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.

Ω End of Section

K10
Gypsum board dry linings/ partitions/ ceilings

To be read with preliminaries/ general conditions. - Not Used

Installation

65 Dry lining generally

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

67 Skim coat plaster finish

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

70 Additional supports

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

87 Sealing gaps and air paths

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

89 Cavity fire barriers within suspended ceilings

1. Type: As recommended by board manufacturer to meet specified performance
2. Fire resistance: To BS EN 13501-2, EI 30
3. Fixing at perimeters and joints: Secure, stable and continuous with no gaps, to provide a complete barrier to smoke and flame.
4. Service penetrations: Cut and pack to maintain barrier integrity. Sleeve flexible materials. Adequately support services passing through barrier.

5. Ceiling systems for fire protection: Do not impair fire-resisting performance of ceiling system.

90 Seamless jointing

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

Finishing

98 Repairs to existing gypsum board

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

Ω End of Section

K40
Demountable suspended ceilings

To be read with preliminaries/ general conditions.

10 Metal infill units Type A

1. Ceiling system manufacturer: Knauf Ceiling Solutions Ltd
   1.1. Contact details
      1.1.1. Address: Harman House
      George Street
      Uxbridge
      Middlesex
      United Kingdom
      UB8 1QQ
      1.1.2. Telephone: +44 (0)191 518 8600
      1.1.3. Web: http://www.knaufceilingsolutions.com/
      1.1.4. Email: info_KCS_uk@knauf.com
   1.2. Product reference: Knauf AMF Armstrong Metal Lay-In
2. Material: Metal.
3. Unit size: 600 x 600 mm.
4. Surface pattern: Micro perforation Rd 1522.
5. Factory finish
   5.1. Finish: Smooth.
   5.2. Colour: White
6. Edge profile: Manufacturer's standard.
7. Type: Metal Lay-In Board.
8. Acoustic infills: No Infill.
9. Light reflectance: Unperforated: 85%; Rg 0501: 83%; Rg 0701: 80%; Rg 2516: 70%; Rd 1522: 65%.
10. Grid: 15mm

Components - Not Used

Execution

40 Workmanship generally

1. Fixing: Secure. In accordance with manufacturers' recommendations and in accordance with BS EN 13964. Provide additional bracing and stiffening to give a stable ceiling system.
2. Setting out: Accurate. Provide level soffits free from undulations and lipping.
3. Infill and access units, integrated services: Fitted correctly and aligned.
4. Lines and joints: Straight and parallel to walls, unless specified otherwise.
5. Edge infill units size (minimum): Half standard width or length.
6. Corner infill units size (minimum): Half standard width and length.
7. Grid: Position to suit infill unit sizes. Allow for permitted deviations from nominal sizes of infill units.
8. Infill joints and exposed suspension members: Straight, aligned and parallel to walls, unless specified otherwise.
9. Suitability of construction: Give notice where building elements and features to which the ceiling systems relate are not square, straight or level.

50 Installing hangers

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

51 Installing perimeter trims

1. Jointing: Neat and accurate, without lipping or twisting.
   1.1. Intermediate butt joints: Minimize. Use longest available lengths of trim. Align adjacent lengths.
2. Fixing: Fix firmly to perimeter wall, edge battens or other building structure.

53 Openings in ceiling materials

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

66 Ceiling-mounted luminaires

1. Support: By ceiling system
   1.1. Ceiling supported luminaires: Modifications and/ or extra support required: To each luminaire.
   1.2. Independently supported luminaires: Suspension adjusted to line and level of ceiling.
2. Surface mounted luminaires: Units installed so that in the event of fire, the designed grid expansion provision is not affected.
3. Modular fluorescent recessed luminaires: Compatible with ceiling module. Extension boxes must not foul ceiling system.
4. Recessed rows of luminaires: Provide flanges for support of grid and infill units, unless mounted above grid flanges. Retain in position with lateral restraint.
5. Fire-protecting/ resisting ceiling systems: Luminaires must not diminish protection integrity of ceiling system.
6. Access: Provide access for maintenance of luminaires.

Completion - Not Used

Ω End of Section

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

Types of covering

110 Particle-based enhanced slip-resistant polyvinyl chloride (PVC) tiles TO CENTRAL SECTION OF FLOOR AS DRAWING

1. Tiles
   1.1. Manufacturer: Amtico International
      1.1.1. Contact details
         1.1.1.1. Address: Amtico UK & European Sales
         Solar Park Southside
         Solihull
         West Midlands
         United Kingdom
         B90 4SH
         1.1.1.2. Telephone: +44 (0)121 745 0800
         1.1.1.3. Web: www.amtico.com/commercial/
         1.1.1.4. Email: ukmarketing@amtico.com
      1.1.2. Product reference: Amtico Signature LVT
   1.2. Colours/ Finish: Oak (REF: AR0W8160)

110 B Particle-based enhanced slip-resistant polyvinyl chloride (PVC) tiles TO FLOOR BORDERS AS DRAWING

1. Tiles
   1.1. Manufacturer: Amtico International
      1.1.1. Contact details
         1.1.1.1. Address: Amtico UK & European Sales
         Solar Park Southside
         Solihull
         West Midlands
         United Kingdom
         B90 4SH
         1.1.1.2. Telephone: +44 (0)121 745 0800
         1.1.1.3. Web: www.amtico.com/commercial/
         1.1.1.4. Email: ukmarketing@amtico.com
      1.1.2. Product reference: Amtico Spacia LVT Tile – Stone (Stone - Standard Version)
   1.2. Standard: To EN ISO 10582.
   1.3. Thickness: 3.5 mm.
   1.4. Colour and pattern: TBC - Confirm before placing order
   1.5. Colour/ Finish: TBC - confirm before placing order
   1.6. Abrasion resistance: To EN 649, Group T.
   1.7. Dimensional stability: To EN 434, ≤0.25 mm.
   1.8. Flammability: To EN 13501-1, Bfl-s1.

General requirements

210 Workmanship generally

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

220 Samples

1. Covering samples: Before placing orders, submit representative sample of each type.

330 Commencement

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

340 Conditioning

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

350 Environment

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

Preparing bases

410 New bases

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

420 Existing bases

1. Notification: Before commencing work, confirm that existing bases will, after preparation, be suitable to receive coverings.
2. Suitability of bases and conditions within any area: Commencement of laying of coverings will be taken as acceptance of suitability.

430 New wet laid bases

1. Base drying aids: Not used for at least four days prior to moisture content testing.

2. Base moisture content test: Carry out in accordance with BS 5325, Annexe A or BS 8203, Annexe A.
   2.1. Locations for readings: In all corners, along edges, and at various points over area being tested.
3. Commencement of laying coverings: Not until all readings show 75% relative humidity or less.

440 Substrates to receive thin coverings

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

460 Smoothing/ levelling underlayment compound

1. Type: As recommended by covering manufacturer

470 Bases from which existing floor coverings have been removed

1. Substrate: Clear of covering and as much adhesive as possible. Skim with smoothing underlayment compound to give smooth, even surface.

Laying coverings

610 Setting out tiles

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

620 Colour consistency

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

640 Adhesive fixing generally

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

720 Doorways

1. Joint location: On centre line of door leaf.

Completion

880 Waste

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

Ω End of Section

M60
Painting/clear finishing

Coating systems

105 Water-based finishing coats - TO WALLS

1. Manufacturer: Dulux Trade, brand of AkzoNobel
   1.1. Contact details
      1.1.1. Address: AkzoNobel Decorative Paints
      Wexham Road
      Slough
      Berkshire
      SL2 5DS
      1.1.2. Telephone: +44 (0)333 222 7070
      1.1.3. Web: www.duluxtradepaintexpert.co.uk
      1.1.4. Email: project.support@akzonobel.com
   1.2. Product reference: Dulux Trade Diamond Matt
2. Composition: Acrylic copolymer.
3. Sheen: Matt.
4. Colour: TBC
5. Form: Liquid.
6. Initial coats: As recommended by manufacturer
7. Number of coats: 1
8. Finishing coats: DIAMOND MATT
   8.1. Number of coats: 2

110A Water-based finishing coats TO INTERNAL CEILINGS

1. Manufacturer: Dulux Trade, brand of AkzoNobel
   1.1. Contact details
      1.1.1. Address: AkzoNobel Decorative Paints
      Wexham Road
      Slough
      Berkshire
      SL2 5DS
      1.1.2. Telephone: +44 (0)333 222 7070
      1.1.3. Web: www.duluxtradepaintexpert.co.uk
      1.1.4. Email: project.support@akzonobel.com
   1.2. Product reference: Dulux Trade Airsure Vinyl Matt
2. Composition: Vinyl copolymer.
3. Sheen: Vinyl matt.
4. Colour: White.
5. Coverage: Up to 17 m²/L.
6. Drying time: Recoatable after two to four hours.
7. Volume solids: Medium (33%).
8. VOC content: Minimal.
9. Application method: Brush, roller or airless spray.
10. Form: Liquid.

11. Initial coats: As recommended by manufacturer
12. Number of coats: 1
13. Finishing coats: Matt vinyl
    13.1. Number of coats: 2

130A Satin Gloss Paint (Internal Use)

1. Description: TO INTERNAL EXPOSED SOFTWOOD
2. Manufacturer: Dulux Trade
    2.1. Product reference: Satin Gloss
3. Surfaces: Uncoated
    3.1. Preparation: Degrease and provide key, Ensure surfaces are clean and dry, Remove all loose and defective coatings.
4. Initial coats: As recommended by manufacturer / where primer and knotting solution is required on any bare wood.
    4.1. Number of coats: One
5. Undercoats: Dulux undercoat (internal use). As recommended by manufacturer.
    5.1. Number of coats: One
6. Finishing coats: Full gloss
    6.1. Number of coats: Two

195 B Metal Paint

1. Description: TO PREVIOUSLY PAINTED METALWORK
2. Manufacturer: Hammerite, brand of ICI Paints/AkzoNobel
    2.1. Contact details
        2.1.1. Address: Wexham Road
        Slough
        Berkshire
        SL2 5DS
        2.1.2. Telephone: +44 (0)333 222 7070
        2.1.3. Web: www.hammerite.co.uk
        2.1.4. Email: project.support@akzonobel.com
    2.2. Product reference: DULUX METALSHIELD SATIN
3. Surfaces: Previously decorated metal surfaces
    3.1. Preparation: Ensure surfaces are clean and dry, Remove all loose and defective coatings, wash down and degrease.
4. Initial coats: As recommended by manufacturer
    4.1. Number of coats: One
5. Finishing coats: As recommended by manufacturer
    5.1. Number of coats: Two

Generally

215 Handling and storage

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

220 Compatibility

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

240 Surfaces not to be coated

1. None existing pre-painted surfaces, ironmongery, brickwork, floors, floor coverings. No other surfaces, except the windows and doors .

280 Protection

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

321 Inspection of work stages

1. Programme for inspections: Submit as follows:
2. Types of coating Inspection at completion of
3. M60/ Painting and varnishing. primer, undercoat and finishing coats.
4. Inspection: Give prior notice when each stage is ready for inspection.

Preparation

400 Preparation generally

1. Standard: In accordance with BS 6150.
2. Refer to any pre-existing CDM Health and Safety File.
3. Refer to CDM Construction Phase Plan where applicable.
4. Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
5. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
6. Substrates: Sufficiently dry in depth to suit coating.
7. Efflorescence salts: Remove.
8. Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
9. Surface irregularities: Remove.
10. Joints, cracks, holes and other depressions: Fill flush with surface, to provide smooth finish.
11. Dust, particles and residues from preparation: Remove and dispose of safely.
12. Water based stoppers and fillers
    12.1. Apply before priming unless recommended otherwise by manufacturer.
    12.2. If applied after priming: Patch prime.
13. Oil based stoppers and fillers: Apply after priming.
14. Doors, opening windows and other moving parts
    14.1. Ease, if necessary, before coating.
    14.2. Prime resulting bare areas.

420 Fixtures and fittings

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

425 Ironmongery

1. Removal: Before commencing work: Remove ironmongery from surfaces to be coated.
2. Hinges: Do not remove
3. Replacement: Refurbishment as necessary; refit when coating is dry.

430 Existing ironmongery

1. Refurbishment: Remove old coating marks. Clean and polish.

440 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. Suspected existing hazardous materials: Prepare risk assessments and method statements covering 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 to remove dirt, grease and contaminants.
   7.2. Gloss-coated surfaces: Provide key.
8. Partly removed coatings
   8.1. Additional preparatory coats: Apply to restore original coating thicknesses.
   8.2. Junctions: Provide flush surface.
9. Completely stripped surfaces: Prepare as for uncoated surfaces.

461 Previously coated wood

1. Degraded or weathered surface wood: Take back to provide suitable substrate.
2. Degraded substrate wood: Repair with sound material of same species.
3. Exposed resinous areas and knots: Apply two coats of knotting.

471 Preprimed wood

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

481 Uncoated wood

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

611 Wall coverings

1. Retained wall coverings: Check that they are in good condition and well adhered to substrate.
2. Previously covered walls: Wash down to remove paper residues, adhesive and size.

622 Organic growths

1. Dead and loose growths and infected coatings: Scrape off and remove from site.
2. Treatment biocide: Apply appropriate solution to growth areas and surrounding surfaces.
3. Residual effect biocide: Apply appropriate solution to inhibit re-establishment of growths.

Application

711 Coating generally

1. Application standard: In accordance with BS 6150, clause 9.
2. Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
3. Surfaces: Clean and dry at time of application.
4. Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
5. Overpainting: Do not paint over intumescent strips or silicone mastics.
6. Priming coats
   - 6.1. Thickness: To suit surface porosity.
   - 6.2. Application: As soon as possible on same day as preparation is completed.
7. Finish
   - 7.1. Even, smooth and of uniform colour.
   - 7.2. Free from brush marks, sags, runs and other defects.
   - 7.3. Cut in neatly.
8. Doors, opening windows and other moving parts: Ease before coating and between coats.

720 Priming joinery

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

730 Workshop coating of concealed joinery surfaces

1. General: Apply coatings to all surfaces of components.

731 Site-coating of concealed joinery surfaces

1. General: After priming, apply additional coatings to surfaces that will be concealed when fixed in place.
   - 1.1. Components: External door frames and Built in window frames
   - 1.2. Additional coatings: One undercoat

740 Concealed metal surfaces

1. General: Apply additional coatings to surfaces that will be concealed when component is fixed in place.

Ω End of Section

N10
General fixtures/ furnishings/ equipment

Products

300 Entrance mats Type A

1. Manufacturer: Forbo Flooring Systems
   1.1. Contact details
      1.1.1. Address: PO Box 1
      High Holborn Road
      Ripley
      Derbyshire
      DE5 3NT
      1.1.2. Telephone: +44 (0)800 093 5258
      1.1.3. Web: www.forbo-flooring.co.uk
      1.1.4. Email: info.flooring.uk@forbo.com
   1.2. Product reference: Nuway Tuftiguard Single Open (Tuftiguard Classic)
2. Arrangement: Inset external.
3. Dimensions: Made to order
4. Material: Non-Reflective Aluminium.
5. Colour: Black.
6. Integral accessories: Not required.
7. Thickness: 12 mm.
8. Type: Single Open
9. Maximum width per module: 2500 mm.
10. Pile: 100% Polyamide BCF.
11. Number of wiper strips: Single.
12. Colour: Buffed.

Execution

770 Trims

1. Lengths: Wherever possible, unjointed between angles or ends of runs.
2. Running joints: Where unavoidable, obtain approval of location and method of jointing.
3. Angle joints: Mitred.

Completion - Not Used

Ω End of Section

N14
General internal signage systems

General - Not Used

System performance

210 General requirements

1. Signage system: Complete to BS 559, including facing information, components, inserts, accessories and fixings necessary to complete the system.
   1.1. Comply with the requirements of: UCL
2. Geometric shapes, colours and layout: In accordance with BS ISO 7001.
3. Design standard for disabled people: In accordance with BS 8300-2.
4. Proposals: Submit drawings, schedules, technical information, calculations and manufacturer's literature.

290 Signage samples

1. Sign type: Signage where required.
   1.1. Action: Submit labelled samples.
   1.2. Conformity: Retain samples on site for the duration of the contract, or until instructed to remove them.
   1.3. Delivered product: To conform with labelled samples.

Products - Not Used

Execution

610 Fixing signs generally

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

Completion

910 Documentation

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

Ω End of Section

P20
Unframed isolated trims/ skirtings/ sundry items

To be read with preliminaries/ general conditions.

10 Softwood

1. Description: SKIRTINGS GENERALLY
2. Quality of wood and fixing: To BS 1186-3.
   2.1. Species: Contractor's choice
3. Profile: To match existing
   3.1. Finished size: To match existing
4. Fixing: Plugged, and screwed

Ω End of Section

P21
Door/ window ironmongery

To be read with preliminaries/ general conditions. - Not Used

Ω End of Section

S90
Hot and cold water supply systems

General - Not Used

System performance - Not Used

Products - Not Used

Execution

710 Stripping out

1. Extent of stripping out: Complete installation

715 Installation generally

1. Installation: To BS EN 806-4.
2. Performance: Free from leaks and the audible effects of expansion, vibration and water hammer.
3. Fixing of equipment, components and accessories: Fix securely, parallel or perpendicular to the structure of the building.
4. Preparation: Immediately before installing tanks and cisterns on a floor or platform, clear the surface completely of debris and projections.
5. Corrosion resistance: In locations where moisture is present or may occur, provide corrosion-resistant fittings/ fixings and avoid contact between dissimilar metals by use of suitable washers, gaskets, etc.

790 Pipelines installation

1. Appearance: Install pipes straight, and parallel or perpendicular to walls, floors, ceilings, and other building elements.
2. Pipelines finish: Smooth, consistent bore, clean, free from defects, e.g. external scratching, toolmarks, distortion, wrinkling, and cracks.
3. Concealment: Generally conceal pipelines within floor, ceiling and/ or roof voids.
4. Access: Locate runs to facilitate installation of equipment, accessories and insulation and allow access for maintenance.
5. Arrangement of hot and cold pipelines: Run hot pipelines above cold where routed together horizontally. Do not run cold water pipelines near to heating pipelines or through heated spaces.
6. Electrical equipment: Install pipelines clear of electrical equipment. Do not run pipelines through electrical enclosures or above switch gear distribution boards or the like.
7. Insulation allowance: Provide space around pipelines to fit insulation without compression.

800 Pipelines fixing

1. Fixing: Secure and neat.
2. Joints, bends and offsets: Minimize.
3. Pipeline support: Prevent strain, e.g. from the operation of taps or valves.
4. Drains and vents: Fix pipelines to falls. Fit draining taps at low points and vents at high points.
5. Thermal expansion and contraction: Allow for thermal movement of pipelines. Isolate from structure. Prevent noise or abrasion of pipelines caused by movement. Sleeve pipelines passing through walls, floors or other building elements.
6. Dirt, insects or rodents: Prevent ingress.

Completion

910 Flushing and filling

1. Standard: To BS EN 806-4.

920 System disinfection

1. Disinfection: To BS EN 806-4.

930 Testing

1. Standard: To BS EN 806-4.
2. Notice (minimum): Three days.
3. Preparation: Secure and clean pipework and equipment. Fit cistern and tank covers.
4. Leak testing: Start boiler and run the system until all parts are at normal operating temperatures and then allow them to cool down to cold condition for a period of three hours.
5. Pressure testing: At both hot and cold conditions joints, fittings and components must be free from leaks and signs of physical distress when tested for at least one hour as follows:
   5.1. Systems fed directly from the mains, and systems downstream of a booster pump: Apply a test pressure equal to 1.5 times the maximum pressure to which the installation or relevant part is designed to be subjected in operation.
   5.2. Systems fed from storage: Apply a test pressure equal to the pressure produced when the storage cistern is filled to its normal maximum operating level.
   5.3. Inaccessible or buried pipelines: Carry out hydraulic pressure test to twice the working pressure.

940 Commissioning

1. Standard: To BS EN 806-4.
2. Equipment: Check and adjust operation of equipment, controls and safety devices.
3. Outlets: Check operation of outlets for satisfactory rate of flow and temperature.

950 Testing service pipelines

1. Test method: Disconnect from the mains, fill with potable water, exclude air, and apply at least twice the working pressure for one hour.
2. Test criterion: No leakage.

960 Documentation

1. Manufacturers' operating and maintenance instructions: Submit for equipment and controls.
2. System operating and maintenance instructions: Submit for the system as a whole giving optimum settings for controls.
3. Record drawings: Submit drawings showing the location of circuits and operating controls.

980 Labels

1. Valve labels: Provide labels on isolating and regulating valves on primary circuits, stating their function.

Ω End of Section

T90
Heating systems

General - Not Used

System performance - Not Used

Products - Not Used

Execution - Not Used

Completion

810 Testing

1. Standard: To BS EN 14336.
2. Notice (minimum): 3 days.
3. Preparation: Secure and clean pipework and equipment. Fit cistern/ tank covers.
4. Leak testing: Start boiler and run the system until parts are at normal operating temperatures and then allow to cool to cold condition for a period of 3 h.
5. Pressure testing: At both hot and cold conditions joints, fittings and components must be free from leaks and signs of physical distress when tested for at least 1 h as follows:
    - 5.1. Systems fed directly from the mains and systems downstream of a booster pump: Apply a test pressure equal to 1.5 times the maximum pressure to which the installation or relevant part is designed to be subjected in operation.
    - 5.2. Systems fed from storage: Apply a test pressure equal to the pressure produced when the storage cistern is filled to its normal maximum operating level.
    - 5.3. Inaccessible or buried pipelines: Carry out hydraulic pressure test to twice the working pressure.

820 Setting to work and commissioning

1. Equipment: Check and adjust operation of equipment, controls and safety devices.
2. Outlets: Check operation of outlets for satisfactory rate of flow and temperature.

Ω End of Section

V90
Electrical systems

General - Not Used

System performance

240 Design of general lighting system

1. Purpose: To illuminate the corridor and reception entrance areas
2. Design and detailing: Complete for the general lighting system.
3. Standard: To SLL 'Code for lighting'.
4. Maintenance: Submit proposals for the maintenance/ relamping regime.

250 Design of emergency lighting system

1. Purpose: As designed and specified by Ridi Group
2. Design and detailing: Complete for the emergency lighting system.
3. Standards
   3.1. Emergency escape lighting: In accordance with BS 5266-1.

275 Small power system design

1. Purpose: All rooms where works required
2. Small power outlets: Provide to serve the building and its equipment.
3. Fixed equipment: Provide supplies.

Products

440 Standard socket outlets

1. Manufacturer: Submit proposals
2. Standard: To BS EN 1363-2.
3. Arrangement: As shown on drawings
4. Control
   4.1. Type: Double-pole, switched
5. Mounting: As shown on drawings
6. Cable termination: Contractor's choice Screwed
7. Plate
   7.1. Material: Plastic to match the existing surrounding
   7.2. Insert colour: White

455 Lighting switches

1. Manufacturer: Submit proposals
2. Standard: To BS EN 60669-1.
3. Current rating: Submit proposals
4. Arrangement: Submit proposals
5. Mounting: Submit proposals
6. Cable termination: Screwed
7. Plate

7.1. Material: Plastic to match the existing surrounding
7.2. Insert colour: White

580 Earthing and bonding equipment

1. Earth electrodes: In accordance with BS 7430.

585 Earth bars

1. Separate earth bar: Where required.
2. Size: Determine.
3. Material: Copper.

Execution

610 Electrical installation generally

1. Standard: In accordance with BS 7671.

680 Cable routes

1. Cables generally: Conceal wherever possible.
   1.1. Concealed cable runs to wall switches and outlets: Align vertically or horizontally with the accessory.
2. Exposed cable runs: Submit proposals.
   2.1. Orientation: Straight, vertical and/ or horizontal and parallel to walls.
3. Distance from other services running parallel: 150 mm minimum.
   3.1. Heating pipes: Position cables below.

685 Installing cables

1. General: Install cables neatly and securely. Protect against accidental damage, adverse environmental conditions, mechanical stress and deleterious substances.
2. Timing: Do not start internal cabling until building enclosure provides permanently dry conditions.
3. Jointing: At equipment and terminal fittings only.
4. Cables passing through walls: Sleeve with conduit bushed at both ends.
5. Cables surrounded or covered by thermal insulation: Derate accordingly.
6. Cable guards: Fit where cables are vulnerable to mechanical damage

690 Installing cables in plaster

1. Protection: Cover with galvanized steel cable capping nailed to substrate

695 Installing cables in vertical trunking/ ducts

1. Support: Pin racks or cleats at each floor level or at 5 m vertical centres, whichever is less.
2. Heat barrier centres (maximum): 5 m.
3. Heat barriers: Required except where fire resisting barriers are not provided.

725 Final connections

1. Size: Determine.
2. Cable: Heat resisting white flex.
3. Length: Allow for equipment removal and maintenance.

730 Installing multigang switches

1. General: Connect switches so that there is a logical relationship with luminaire positions. Fit blanks to unused switch spaces.
2. Segregation: Internally segregate each phase with phase barriers and warning plates.

760 Equipment labelling

1. Electrical equipment: Install labels indicating purpose. (where required for compliance)
2. Voltage warning notices
   2.1. Location: Apply to equipment in a position where it can be seen prior to gaining access to live parts when the voltage within exceeds 230 V.
   2.2. Format: To BS EN ISO 7010, functional reference number, W012, include warnings of the voltage present.

Completion

810 Final fix

1. Accessory faceplates, luminaires and other equipment: Fit after completion of building painting.

820 Cleaning

1. Electrical equipment: Clean immediately before handover.
2. Equipment not supplied but installed and electrically connected: Clean immediately before handover.

830 Inspection and testing generally

1. Standard: In accordance with BS 7671.
2. Notice before commencing tests (minimum): 24 hours.
3. Labels and signs: Fix securely before system is tested.
4. Certificates: Submit.

860 Inspection and testing of emergency lighting systems

1. Standard: In accordance with BS 5266-1.
2. Certificate of testing: Submit.
   2.1. Standard: Submit proposals
3. System log book: To BS 5266-1.

880 Documentation

1. Timing: Submit at practical completion.
2. Contents
   2.1. Full technical description of each system installed.
   2.2. Manufacturers' operating and maintenance instructions for fittings and apparatus including relamping instructions for luminaire types. Identify hazardous lamps that require specialist disposal.
   2.3. Recommended frequency of testing and inspection, both for electrical safety and for matters such as the corrosion and security of lighting columns and luminaire fixings.
   2.4. Manufacturers' guarantees and warranties.
   2.5. As-installed drawings showing circuits and their ratings and locations of fittings and apparatus.
   2.6. List of normal consumable items.

Ω End of Section

Z20
Fixings and adhesives

Products

350 Plugs

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

390 Adhesives generally

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

Execution

610 Fixing generally

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

620 Fixing through finishes

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

630 Fixing packings

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

680 Plugged countersunk screw fixing

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

700 Applying adhesives

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

Ω End of Section

Specification created using NBS Chorus