

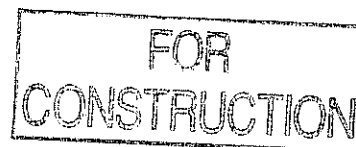
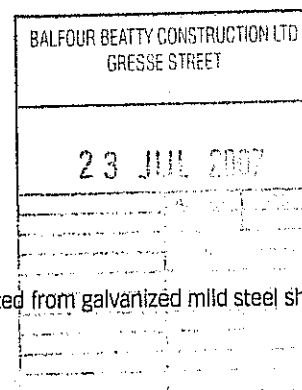
K10 PLASTERBOARD DRY LININGS/ PARTITIONS/ CEILINGS

To be read with Preliminaries/ General conditions.

TYPES OF DRY LINING

125 METAL STUD PARTITION SYSTEM (2 HOUR FIRE RESISTING)

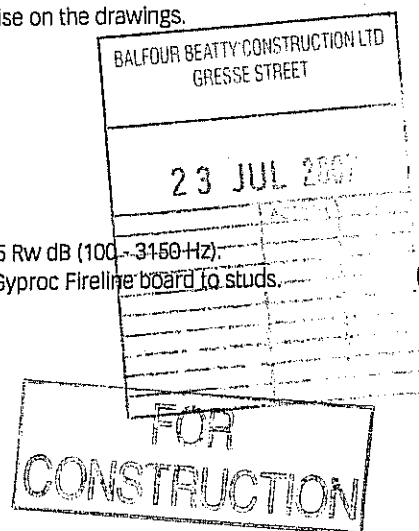
- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
- Product reference: Gyproc Gypwall
- Studs:
 - Types: As recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C.
 - Centres: Max 600 mm, 300mm to tiled walls.
- Nominal thickness (including linings): 125mm.
- Head condition: to underside of compartment structure unless shown otherwise on the drawings.
 - Head deflection allowance: 15mm
- Strength to BS 5234-2:
- Grade: SD (Severe).
- Maximum air pressure: 600 N/sq m.
- Maximum deflection: Height ÷ 360 mm.
- Fire resistance of complete partition assembly to BS 476-20 and -22:
 - Integrity/insulation (minutes): 120
- Sound insulation of complete partition assembly to BS 2750-3: not less than 45 Rw dB (100 - 3150 Hz).
- Lining(s): Inner layer 12.5mm Gyproc Fireline board and outer layer 12.5mm Gyproc Fireline board to each side of studs.
- Curved partitions less than 3.600m radius to utilise Gyproc Gypwall Curve and be faced with 2 layers 6mm GRG Multi-Board,
- Fixing: As clause 590.
- Cavity insulation: min 25mm mineral fibre quilt as clause 420.
- Sealant: As clauses 510, 555.
- Finishing: Skim coat as clause 680.
- Access units: As shown on the drawings and as clause 435.
- Accessories: As shown on the drawings, and clause 690.



130 METAL STUD PARTITION SYSTEM (2 HOUR FIRE RESISTING) JUMBO STUD

- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
- Product reference: Gyproc Gypwall
- Studs:
 - Types: As recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C.
 - Centres: Max 600 mm, 300mm to tiled walls.
- Nominal thickness (including linings): 190mm.
- Head condition: to underside of compartment structure unless shown otherwise on the drawings.
 - Head deflection allowance: 15mm
- Strength to BS 5234-2:
- Grade: SD (Severe).
- Maximum air pressure: 600 N/sq m.
- Maximum deflection: Height ÷ 360 mm.
- Fire resistance of complete partition assembly to BS 476-20 and -22:
 - Integrity/insulation (minutes): 120
- Sound insulation of complete partition assembly to BS 2750-3: not less than 45 Rw dB (100 - 3150 Hz).
- Lining(s): Inner layer 12.5mm Gyproc Fireline board and outer layer 12.5mm Gyproc Fireline board to each side of studs.
- Curved partitions less than 3.600m radius to utilise Gyproc Gypwall Curve and be faced with 2 layers 6mm GRG Multi-Board,
- Fixing: As clause 590.
- Cavity insulation: min 25mm mineral fibre quilt as clause 420.
- Sealant: As clauses 510, 555.
- Finishing: Skim coat as clause 680.
- Access units: As shown on the drawings and as clause 435.
- Accessories: As shown on the drawings, and clause 690.

- Other requirements: provided corrosion protected structural steel framing to reception wall to support feature wall cladding.
- 135 METAL STUD PARTITION SYSTEM (2 HOUR FIRE RESISTING) SHAFTWALL
- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc ShaftWall
 - Studs:
 - Types: As recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C.
 - Centres: Max 600 mm, 300mm to tiled walls.
 - Nominal thickness (including linings): 120mm.
 - Head condition: to underside of compartment structure unless shown otherwise on the drawings.
 - Head deflection allowance: 15mm
 - Strength to BS 5234-2:
 - Grade: SD (Severe).
 - Maximum air pressure: 600 N/sq m.
 - Maximum deflection: Height ÷ 360 mm.
 - Fire resistance of complete partition assembly to BS 476-20 and -22:
 - Integrity/insulation (minutes): 120
 - Sound insulation of complete partition assembly to BS 2750-3: not less than 45 Rw dB (100 - 3150 Hz).
 - Lining(s): Inner layers 3 x 15mm Gyproc Fireline board and outer layer 15mm Gyproc Fireline board to studs.
 - Fixing: As clause 590.
 - Cavity insulation: min 25mm mineral fibre quilt as clause 420.
 - Sealant: As clauses 510, 555.
 - Finishing: Skim coat as clause 680.
 - Access units: As shown on the drawings and as clause 435.
 - Accessories: As shown on the drawings, and clause 690.
- 145 WALL LINING ON METAL STUDS
- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc GypLyner IWL
 - Stud configuration: single
 - Nominal thickness (including linings): 85mm
 - Head condition: to underside of compartment structure unless shown otherwise on the drawings.
 - Head deflection allowance: 15mm
 - Strength to BS 5234-2:
 - Grade: SD (Severe)
 - Maximum air pressure: 600 N/sq m.
 - Maximum deflection: Height ÷ 360 mm.
 - Framing: As recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C.
 - Framing centres: max 600 mm, 300mm to tiled walls
 - Lining(s): Inner layer 12.5mm Gyproc Wallboard and outer layer 12.5mm Gyproc Duraline XL.
 - Curved partitions less than 3.600m radius to utilise Gyproc Gypwall Curve and be faced with 2 layers 6mm GRG Multi-Board,
 - Fixing: As clause 590.
 - Cavity insulation: mineral fibre quilt as 420.
 - Sealant: As clauses 510, 555.
 - Finishing: Skim coated as clause 680.
 - Primer/sealer: One coat diluted joint sealer.
 - Accessories: As shown on the drawings and as clause 690.
- 165 WALL LINING SYSTEM (METAL FRAMING)
- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc GypLyner Universal
 - Background wall: New masonry / reinforced concrete
 - Cavity width: As shown on the drawings: Maximum 100mm.
 - Framing centres: Maximum 600mm, 300mm to tiled walls.
 - Bracket centres (maximum): 800mm.
 - Cavity insulation: Mineral fibre quilt as clause 420.
 - Linings: Inner layer 12.5mm Gyproc Wallboard and outer layer 13mm Gyproc Duraline XL.



Curved partitions less than 3.600m radius to utilise Gyproc Gypwall Curve and be faced with 2 layers 6mm GRG Multi-Board,

- Access units: As shown on the drawings and as clause 430.
- Finishing: Skim coated as clause 680.
 - Primer/ sealer: One coat diluted joint sealer.
- Accessories: As shown on the drawings and as clause 690.

175 WALL LINING SYSTEM (METAL FURRINGS)

- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc DriLyner MF.
- Background wall: New masonry F10 / Existing masonry.
Metal furrings: As recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C
Furring centres: Maximum 600mm, 300mm to tiled walls.
- Linings: Inner layer 12.5mm Gyproc Wallboard and outer layer 13mm Gyproc Duraline XL.
Curved partitions less than 3.600m radius to utilise Gyproc Gypwall Curve and be faced with 2 layers 6mm GRG Multi-Board,
- Finishing: Skim coated as clause 680.
 - Primer/ sealer: One coat diluted joint sealer.
- Accessories: As shown on the drawings and as clause 690.



225 SUSPENDED CEILING SYSTEM

- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc CasoLine MF.
- Structural soffits: new slabs / new composite deck.
- Suspension system:
Frame, hangers, perimeter channels, fixings, etc. as recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C.
- Linings: 2 layers 12.5mm Gyproc Wallboard.
- Insulation: As clause 420.
- Access units: As shown on the drawings and as clause 430.
- Finishing: Skim coated as clause 680.
 - Primer/ sealer: One coat diluted joint sealer.
- Accessories: As shown on the drawings and as clause 690.



250 CEILING LINING ON METAL FRAMING SYSTEM

- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc GyLyner Ceiling Lining System
- Background: New slabs.
- Linings: 2 layers 12.5mm Gyproc Wallboard.
- Suspension system:
Hanger brackets, framing channels, perimeter channels, fixings, etc. as recommended for the purpose by the board manufacturer, fabricated from galvanized mild steel sheet to BS EN 10142 designation Fe PO2 G Z 275 NA - C.
- Finishing: Skim coated as clause 680.
 - Primer/ sealer: One coat diluted joint sealer.
- Accessories: As shown on the drawings and as clause 690.

GENERAL/ PREPARATION

305 COMPLIANCE WITH PERFORMANCE REQUIREMENTS:

- Testing/ assessment: Submit UKAS accredited laboratory reports for the following:
All wall, ceiling and lining types.
- Materials, components and details: Use in accordance with the testing/ assessment reports. If discrepancies arise, give notice and obtain instructions.

325 PREPARATION OF SOLID BACKGROUNDS TO RECEIVE WALL LININGS

- General: Suitable to receive lining system. Redundant fixtures and services removed. Cutting, chasing and making good completed.
- Holes, gaps, service penetrations, perimeter junctions and around openings: Seal completely.
- Adhesive fixings: Prepare to achieve effective bonding.
- Contaminants: Remove loose material, dirt, grease, oil, paper, etc.

- Framing: Accurately position and securely fix to fully support:
 - Partition heads: Running parallel with, but offset from main structural supports.
 - Fixtures, fittings and service outlets: To suit fixings. Mark framing positions clearly and accurately on linings.
 - Board edges and lining perimeters: As recommended by board manufacturer to suit type and performance of board.

- Dpcs: install under partitions/ freestanding wall linings, cut to full width of partition/ lining.

- General: Complete areas of finished work and obtain approval of appearance before proceeding.

- Type: To BS 1230-1, type 1.
- Core density (minimum): 650 kg/m³.
- Exposed surface and edge profiles: Suitable to receive specified finish.

- Type: To BS 1230-1, type 1.
- Core density (minimum): 650 kg/m³.
- Moisture vapour resistance of backing layer (minimum): 60 MNs/g.
- Exposed surface and edge profiles: Suitable to receive specified finish.

- Type: To BS 1230-1, type 3 and 4.
- Core density (minimum): 710 kg/m³.
- Core: Moisture resistant.
- Paper facings: Moisture resistant.
- Exposed surface and edge profiles: Suitable to receive specified finish.

- Type: To BS 1230-1, type 5.
- Core density (minimum): 800 kg/m³.
- Core: Including fibres for improved cohesion.
- Exposed surface and edge profiles: Suitable to receive specified finish.

- Type: To BS 1230-1, type 3 and 5.
- Core density (minimum): 800 kg/m³.
- Core: Moisture resistant and including fibres for improve coheslon.
- Paper facings: Moisture resistant.
- Exposed surface and edge profiles: Suitable to receive specified finish.

- Type: To BS 1230-1, type 5.
- Core density (minimum): 800 kg/m³.
- Moisture vapour resistance of backing layer (minimum): 60 MNs/g.
- Exposed surface and edge profiles: Suitable to receive specified finish.

- Type: To BS 1230-1, type 5.
- Core density (minimum): 900 kg/m³.
- Paper facings: Heavy duty.
- Exposed surface and edge profiles: Suitable to receive specified finish.

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GRESSE STREET

23 JUL 2007

DATE	DESCRIPTION	AMOUNT
23 JUL 2007	BAUFORD BEATTY CONSTRUCTION LTD	100.00

- Type: To BS 1230-1, type 1.
 - Core density (minimum): 820 kg/m³.
 - Exposed surface and edge profiles: Suitable to receive specified finish.
- 410 GYPSUM PLASTERBOARD (IMPROVED SOUND INSULATION AND MOISTURE RESISTANT)
- Type: To BS 1230-1, type 3.
 - Core density (minimum): 820 kg/m³.
 - Core: Moisture resistant.
 - Paper facings: Moisture resistant.
 - Exposed surface and edge profiles: Suitable to receive specified finish.
- 420 MINERAL WOOL INSULATION TO METAL STUD PARTITIONS/LININGS
- Type: Glass mineral wool.
 - Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Isowool 1200
 - Thickness: Minimum 25mm.
- 430 ACCESS UNITS TO CEILINGS
- Type: Spun aluminium.
 - Manufacturer: Panelcraft Access Panels (Tel: 01827 720830).
 - Product reference: Discpan SBF.
 - Sizes: As noted on the drawings.
 - Finish: Polyester powder coated RAL9010, prepared and over painted insitu to match adjoining ceiling finish.
 - Support accessories/fixings: As recommended for the purpose by the manufacturer including intermediate backing strips/noggings and fixings.
 - Other requirements: Fire resistance to match adjoining construction.
- 435 ACCESS UNITS TO WALLS
- Type: Spun aluminium.
 - Manufacturer: Panelcraft Access Panels (Tel: 01827 720830).
 - Product reference: Slimpan/Firepan/Tradpan SBF.
 - Sizes: As noted on the drawings.
 - Finish: Polyester powder coated RAL9010, prepared and over painted insitu to match adjoining ceiling finish.
 - Support accessories/fixings: As recommended for the purpose by the manufacturer including intermediate backing strips/noggings and fixings.
 - Other requirements: Fire resistance to match adjoining construction.



INSTALLATION

- 436 DRY LININGS GENERALLY
- General: Use fixing, jointing and finishing materials, components and installation methods recommended by board manufacturer.
 - Cutting plasterboards: Neatly and accurately without damaging core or tearing paper facing.
 - Cut edges: Minimize and position at internal angles wherever possible. Mask with bound edges of adjacent boards at external corners.
 - Fixings plasterboards: Securely and firmly to suitably prepared and accurately levelled backgrounds.
 - Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.
- 445 CEILINGS
- Sequence: Fix boards to ceilings before dry lined walls and partitions.
 - Orientation of boards: Fix with bound edges at right angles to supports and with ends staggered in adjacent rows.
 - Two layer boarding: Stagger joints between layers.
- 455 METAL FRAMING FOR PARTITIONS/ WALL LININGS
- Setting out: Accurately aligned and plumb.
 - Stud positions: Equal centres to suit specified linings, maintaining sequence across openings.
 - Additional studs: To support vertical edges of boards.
 - Fixing centres at perimeters (maximum): 600 mm.
 - Openings: Form accurately, including:
 - Doorsets: Sleeved/ boxed metal studs and/ or suitable timber framing to achieve strength grade requirements for framing assembly and adequately support weight of door.

- Services penetrations: Allow for associated fire stopping.

465 STAGGERED STUD PARTITIONS

- Fixing horizontal frame members (noggins, bearers, etc.) and boards: Between alternate studs and not touching adjacent offset studs.

475 METAL FURRINGS FOR WALL LININGS

- Setting out: Accurately aligned and plumb.
 - Vertical furring positions: Equal vertical centres to suit specified linings, maintaining sequence across openings. Position adjacent to angles, openings and movement joints, etc.
 - Additional vertical furrings: At junctions with partitions.
 - Horizontal furring positions: To provide continuous support to edges of boards.
- Adhesive bedding to furrings:
 - Dabs (at least 200 mm long): To ends of furrings and thereafter at 450 mm (maximum) centres.
 - Junctions with partitions: Continuous bed with no gaps across cavity.

485 SUSPENDED CEILING GRIDS

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

505 INSTALLING MINERAL WOOL INSULATION

- Fitting: Accurately and firmly with closely butted joints and no gaps.
- Widths: Lay insulation in the widest practical widths to suit grid member spacings.
- Services: Do not cover electrical cables that are not sized accordingly.
 - Ceilings: Cut insulation carefully around electrical fittings, etc. Do not lay over luminaires.
- Fixing:
 - Partitions/ wall linings: Fasten insulation at head of frame to prevent displacement, unless insulation is self supporting and friction fitted between studs.
 - Ceilings (vertical/ sloping areas): Fasten insulation to prevent displacement.

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510 SEALING GAPS AND AIR PATHS

- Application of sealant to dry lining systems: Continuous beads leaving no gaps or air paths.
- Acoustic sealant: Apply to perimeter abutments with walls, floors, ceilings and around openings.
 - Gaps greater than 6 mm wide: After application of sealant, complete sealing with jointing compound.
- Air pressure sealant: Apply to board to board and board to metal frame junctions in pressurised shafts, ducts, etc.

520 SOUND BARRIERS:

- Material: as clause 545
- Align accurately with partition heads. Fit tightly and fix securely at perimeters and joints, using methods recommended by the barrier manufacturer, including steel support sections as appropriate. Ensure permanent stability and continuity with no gaps.
- Seal any gaps at junctions of sound barriers with partition heads, suspended ceiling, structural soffit, walls, ducts, pipes, etc. using mineral wool or suitable sealants.

525 AIR PLENUM BARRIERS:

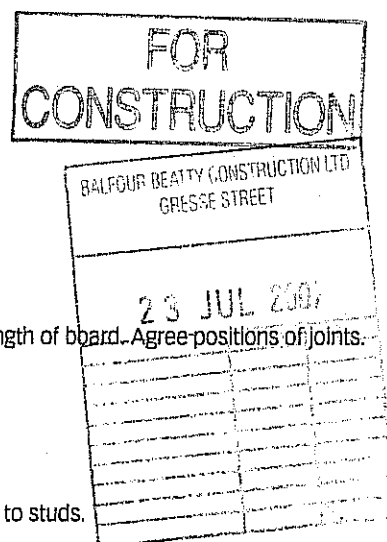
- Material: rigid or semirigid non porous sheets with smooth nondusting surfaces having the same fire spread rating as that required for membrane materials exposed within the void.
- Fix securely at perimeters and joints, using methods recommended by the barrier manufacturer to ensure permanent stability. All edges and joints to be effectively sealed to prevent air leakages.

530 CAVITY FIRE BARRIERS WITHIN PARTITIONS/ WALL LININGS

- Metal framed systems:
 - Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Isowool 1200.
 - Installation: Form accurately and fix securely with no gaps to provide a complete barrier to smoke and flame.
- Adhesive fixed wall lining systems:
 - Material: Adhesive compound.
 - Installation: Form in a continuous line with no gaps to provide a complete barrier to smoke and flame.

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- 555 FIRE STOPPING AT PERIMETERS OF DRY LINING SYSTEMS
- Material: Tightly packed mineral wool or intumescent mastic/ sealant.
 - Application: To perimeter abutments to provide a complete barrier to smoke and flame.
- 556 INTUMESCENT STRIPS
- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc Firestrip.
- 557 INTUMESCENT STRIPS
- Manufacturer: Bostik Findley Ltd. (Tel: 01785 272727).
 - Product reference: Evo-Stik Intustrip Sealant.
- 560 JOINTS BETWEEN BOARDS
- Tapered edged plasterboards:
 - Bound edges: Lightly butted.
 - Cut/ unbound edges: 3 mm gap.
 - Square edged plasterboards: 3 mm gap.
 - Square edged fibre reinforced gypsum boards: 5 mm gap.
- 565 VERTICAL JOINTS
- Centre joints on studs.
 - Partitions: Stagger joints on opposite sides of studs.
 - Two layer boarding: Stagger joints between layers.
- 570 HORIZONTAL JOINTS
- Surfaces exposed to view: Horizontal joints not permitted.
 - Exception: Where height of partition/ lining exceeds maximum available length of board. Agree positions of joints.
 - Two layer boarding: Stagger joints between layers by at least 600 mm.
 - Provide support to edges of boards with additional framing.
 - Two layer boarding: Support edges of outer layer.
- 575 PLANK PLASTERBOARD
- First layer in two layer boarding: Square edged with long edges at right angles to studs.
- 580 INSULATION BACKED PLASTERBOARD
- General: Do not damage insulation or cut it away to accommodate services.
 - Installation at corners: Carefully cut back insulation or plasterboard as appropriate along edges of boards to give a continuous plasterboard face, with no gaps in insulation.
- 590 FIXING PLASTERBOARD TO METAL FRAMING/ FURRINGS
- Fixing to framing/ furrings: Securely and firmly working from the centre of each board at the following centres (maximum):
 - Partitions/ wall linings: 300 mm. Reduce to 200 mm at external angles.
 - Ceilings: 230 mm. Reduce to 150 mm at board ends and at lining perimeters.
 - Position of screws from edges of boards (minimum): 10 mm.
 - Screw heads: Set in a depression. Do not break paper or gypsum core.
- 592 FIXING INSULATION BACKED PLASTERBOARD TO METAL FURRINGS
- Fixing to furrings: In addition to screw fixings (clause 590) apply continuous beads of adhesive sealant to furrings.
- 595 DEFLECTION HEADS
- Fixing boards: Do not fix to head channels.
- 610 FIXING PLASTERBOARD TO TIMBER
- Fixing to timber: Securely and firmly working from the centre of each board at the following centres (maximum):
 - Nail fixing: 150 mm.
 - Screw fixing to partitions/ wall linings: 300 mm. Reduce to 200 mm at external angles.
 - Screw fixing to ceilings: 230 mm.
 - Position of nails/ screws from edges of boards (minimum):
 - Bound edges: 10 mm.
 - Cut/ unbound edges: 13 mm.
 - Position of nails/ screws from edges of timber supports (minimum): 6 mm.



620 FIXING PLASTERBOARD WITH ADHESIVE DABS

- Setting out boards: Accurately aligned and plumb.
- Adhesive dab spacings: Apply grid of adhesive dabs to background for each board as follows:
 - Horizontally: One row along top edge and one continuous dab along bottom edge.
 - Vertically: One row along each edge and thereafter at intermediate spacings to suit size of board:

Thickness (mm)	Width (mm)	Dab centres (mm)
9.5	1200	400
9.5/12.5	900	450
12.5	1200	600
- Adhesive dab dimensions (width x length): At least 50 - 75 mm x 250 mm.
- Position of dabs from edges/ ends of boards (minimum): 25 mm.
- Fixing: Press boards firmly against dabs to secure.
- Temporary supports: Provide under bottom edge of boards until dabs have set.

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625 FIXING INSULATION BACKED PLASTERBOARD WITH ADHESIVE DABS

- Fixing to background: In addition to adhesive dab fixings (clause 620), secure boards with nailable plugs in locations recommended by board manufacturer.

630 FIXING INSULATION BACKED PLASTERBOARD WITH ADHESIVE SPOTS

- Setting out boards: Accurately aligned and plumb.
- Adhesive spot spacings: Apply adhesive on a 300 mm grid to background or back of boards.
- Adhesive spot diameters (minimum): 25 mm.
- Position of adhesive from edges of boards: 25 mm.
- Fixing: Press boards firmly into position and secure with nailable plugs in locations recommended by board manufacturer.

FINISHING

650 LEVEL OF DRY LINING ACROSS JOINTS

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

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MEASUREMENTS	

670 SEAMLESS JOINTING TO PLASTERBOARDS

- Cut edges of boards: Lightly sand to remove paper burrs.
- Filling and taping: Fill joints, gaps and internal angles with jointing compound and cover with continuous lengths of paper tape, fully bedded.
- Protection of edges/ corners: Reinforce external angles, stop ends, etc. with specified edge/ angle bead, metal cored tape.
- Finishing: Apply jointing compound. Feather out each application beyond previous application to give a flush, smooth, seamless surface.
- Nail/ screw depressions: Fill with jointing compound to give a flush surface.
- Minor imperfections: Lightly sand jointing and spotting to remove any minor imperfections.

680 SKIM COAT PLASTER FINISH

- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
- Product reference: Thistle Board Finish up to 2mm coat; Thistle Bonding Coat/Thistle Plaster Finish above 2mm coat.
- Thickness: 2 - 3 mm, in accordance with plaster manufacturer's recommendations.
- Joints: Fill and tape except where coincident with metal beads.
- Finishing: Trowel/ float to a tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.
- Other requirements: install beads/stops throughout as clauses 690, 692.

- Alternative finishing: taped seamless finish as clause 670 will be permitted where this is stated and approved by the CA at the submission of the tenders for the works, however on a single method of finishing will be permitted across the project.

690 RIGID BEADS/ STOPS

- Manufacturer: British Gypsum Ltd (Tel: 08705 456123).
 - Product reference: Gyproc Styletrim: BGM 101, BGM 102, BGM 103, BGM 104, BGM 105, BGM 106, BGM 119
- Material: Extruded aluminium.
Where bead / stop profiles are not available from the Gyproc range:
- Manufacturer: Quality Interior Components Ltd (Tel: 01280 818 950).
 - Product reference: Type C series, Type D series, Type E series, Type R series, Type S series, Type ST series, Type W series, Type X series
- Material: Extruded aluminium.

692 RIGID BEADS/ STOPS

- Type: Galvanized steel to BS 6452-1.

695 INSTALLING BEADS/ STOPS

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

END

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K11 RIGID SHEET FLOORING/ SHEATHING/ DECKING/ SARKING/ LININGS/ CASINGS

To be read with Preliminaries/ General conditions.

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

140 PLYWOOD Exposed, for clear finishing/painting:

- Base: as shown on the drawings.
- Additional supports as clause 930.
- Plywood to BS 6566 or equivalent approved national standard.
- Thickness: as shown on drawings.
- Bond type: WBP
- Durability class: H
- Face veneer species: Birch
- Face grain direction: parallel to length
- Surface grade: E
- Grade: structural grade W30
- Surface finish: Sanded
- Edges: Square
- Treatment: Flame retardent pre-treatment to give Class 1 unless stated otherwise.
- Long edges running parallel to length.
- Fix at 150 mm maximum centres along edges of boards and 300 mm maximum centres along intermediate supports with brass c/s cups and screws.
- Joint treatment: as shown on the drawings.

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300 FIRE PROTECTIVE LINING / CASINGS TO U/S SLABS

- Fire resistance: to provide in conjunction with the ground floor insitu slab a minimum fire resistance of 4 hours.
- Substrate: As shown on the drawings.
- Additional supports: As clause 930.
- Manufacturer/ Supplier:
- Promat UK Ltd
- Tel: 01344 381404
- Product reference: Durasteel
- Thickness: As shown on the drawings.
- Edges: Square, unless stated otherwise.
- Supports: galvanised ms ceiling support channels min 80x60mm at max 1200mm centres
- Cavity fill: tightly pack resultant cavity of 80mm with mineral fibre wool (max 40mm thick with staggered joints) min density 140kg/m3.
- Setting out: Long edges running across supports.
- Fixing to supports:
 - Fasteners: Stainless steel Tek screws
 - Fixing centres (maximum):
 - Around board edges: 100mm.
 - Along intermediate supports: 150mm.
 - Fixing distance from edges (minimum): 12mm.
- Other requirement: fulfil all requirements of manufacturer to ensure that required performance in service is achieved.

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415 PLYWOOD WALL SHEATHING (CONCEALED)

- Substrate: As shown on the drawings.
- Additional supports: As clause 930.
- Sheathing: Plywood to BS 6566 or equivalent approved national standard, and manufactured to the relevant standards and quality control procedures specified in BS 5268-2, and so marked.
- Type: Finnish Birch plywood.
- Grade: Structural grade W30.
- Nominal thickness/ number of plies: As shown on the drawings.
- Edges: Square.
- Bond: WBP.
- Durability class: H.
- Setting out: Long edges vertical and centred on supports.

- Substrate: As shown ion the drawings.
 - Additional supports: As clause 930.
- Plywood: To BS 1088 but excluding plywood made of gaboob veneers.
 - Thickness: As shown ion the drawings.
 - Edges: Square edged/ tongued and grooved.
 - Preservative treatment: To BS 4079, treatment mark W2/1.
- Setting out: Long edges running across supports.
 - Gap between adjacent boards: 3mm around square edged boards.
- Fixing to supports:
 - Fasteners: Annular ringed shank nails where not shown otherwise on the drawings.
 - Fixing centres (maximum):
 - Around board edges: 150 mm.
 - Along intermediate supports: 300 mm.
 - Fixing distance from edges (minilum):10 mm.

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- Substrate: As shown on the drawings.
 - Additional supports: As clause 930.
- Medium density fibreboard: To BS EN 622-5, Type MDF.H1, moisture resistant.
 - Manufacturer/ Supplier: Weyerhaeuser Europe Ltd (Tel: 01702 619044).
Product reference: Medite
 - Thickness: As shown on the drawings.
 - Edges: Square, unless stated otherwise.
- Setting out: Long edges running across supports.
- Fixing to supports:
 - Fasteners: Lost head nails unless stated otherwise.
 - Fixing centres (maximum):
Around board edges: 100mm.
Along intermediate supports: 150mm.
 - Fixing distance from edges (minimum): 12mm.

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- Specified in section K13.

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

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

940 BOARD MOISTURE CONTENT AND CONDITIONING

- Moisture content of boards at time of fixing: Appropriate to end use.
- Conditioning regime: Condition all boards storing on site, in conditions similar to those that will prevail after the building is occupied, for at least 48 hours before fixing. Ensure free circulation of air to all surfaces.

950 MOISTURE CONTENT TESTING

- Test regime and equipment: When instructed by the CA, test boards/sheets with an approved electrical moisture meter, used in accordance with manufacturer's recommendations.
- Test results: Submit record of tests and results.

960 FIXING GENERALLY

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

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975 METAL WALL FRAMING

- Construct framing, including forming openings to receive windows and doorsets, using components, accessories and methods recommended by the board manufacturer.
- Setting out: Framing accurately aligned, vertical and securely fixed to surrounding structure at maximum 600 mm centres. All board edges supported.
- Fix intermediate studs at equal centres to suit specified lining(s). Maintain spacing above and below openings as necessary. Ensure all board edges are supported.

976 MINERAL WOOL INSULATION TO METAL FRAMING

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

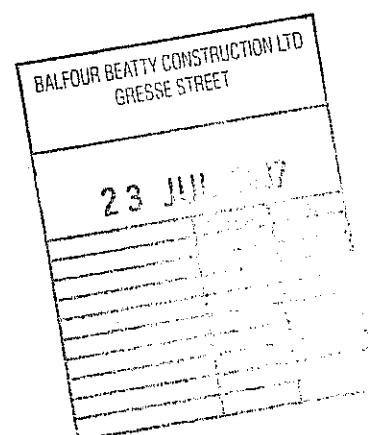
980 OPEN JOINTS

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

990 ACCESS PANELS

- Size and position: Agree with the CA before boards are fixed.
- Additional noggings, battens, etc: Provide and fix as necessary.

END



K13 RIGID SHEET FINE LININGS/ PANELLING

To be read with Preliminaries/ General conditions.

TYPES OF LINING/ PANELLING

132 LAMINATED PLASTICS VENEERED PANEL LINING

- Substrate: As shown on the drawings.
- Battens: Regularized softwood free from decay and active insect attack and with no knots wider than half the width of the section.
 - Finished size: As shown on the drawings.
 - Moisture content at time of fixing (maximum): 18%.
 - Spacing (centres): As shown on the drawings.
 - Method of fixing: Screwed and pelleted.
- Panels:
 - Core material: Moisture resistant MDF.
Type, grade and quality as recommended by the manufacturer/fabricator for the intended use. Finished sheets shall exceed the minimum requirements required to satisfy the standards defined by BS EN 622-5: Type MDF.H.
 - Fire retardant treatment: As section Z12 and British Wood Preserving and Damp-proofing Association Commodity Specification FR 3; Type B.
 - Facing sheet: High pressure laminate to BS EN 438-1.
Manufacturer: Formica Ltd (Tel: 0191 259 3000).
Product reference: Colorcore.
Thickness: As shown on the drawings.
Classification: HG.
Fire rating: Class O.
Colour/ Pattern/ Finish: As shown on the drawings and to CA's approval. (CA to be offered full choice from manufacturer's range of solid colours; ie colour to be through whole thickness of material).
 - Backing sheet:
As recommended by the manufacturer/fabricator.
- Installation:
 - Method of fixing panels: Secret fix.
 - Joint treatment: All open joints to have all exposed edges finished with facing laminate.

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135 SOLID LAMINATED PLASTICS VENEERED PANEL LINING

- Substrate: As shown on the drawings.
- Battens: Regularized softwood free from decay and active insect attack and with no knots wider than half the width of the section.
 - Finished size: As shown on the drawings.
 - Moisture content at time of fixing (maximum): 18%.
 - Spacing (centres): As shown on the drawings.
 - Method of fixing: Screwed and pelleted.
- Panels:
 - Core material/Facing sheet: High pressure solid laminate to BS EN 438-1.
Thickness: As shown on the drawings.
Classification: HG.
Manufacturer: Formica Ltd (Tel: 0191 259 3000).
Product reference: Colorcore.
Thickness: As shown on the drawings.
Fire rating: Class O.
Colour/ Pattern/ Finish: As shown on the drawings and to CA's approval; (CA to be offered choice from manufacturer's full range of solid colours; ie colour to be through whole thickness of material).
- Installation:
 - Method of fixing panels: Secret fix.
 - Joint treatment: Machined square edges with pencil round arrisses.

138 SOLID LAMINATED PLASTICS PANEL LINING

- Background: As shown on the drawings.
- Battens: Regularized softwood free from decay and active insect attack and with no knots wider than half the width of the section.
Nominal size: As shown on the drawings.

Moisture content at time of fixing: Not exceeding 18%.

Method of fixing: secret.

- Panels:
 - Core material: solid laminate
 - Facing sheet:
 - High pressure laminate to BS 3794:Part 1, classification: HG
 - Manufacturer and reference: Polyrey.
 - Colour/Pattern/Finish: As shown on the drawings and to CA's approval. (CA to be offered full choice from manufacturer's range of solid colours).
- Joint treatment: machined square edges with pencil round arrisses

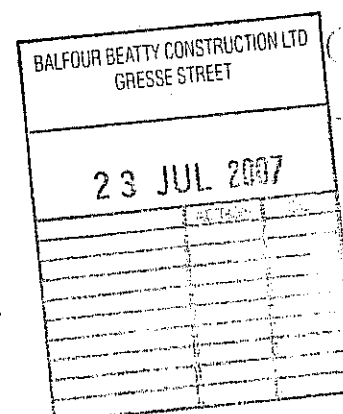
140 HIGH GLOSS LACQUERED PANEL LINING

- Substrate: As shown on the drawings.
- Battens: Regularized softwood free from decay and active insect attack and with no knots wider than half the width of the section.
 - Finished size: As shown on the drawings.
 - Moisture content at time of fixing (maximum): 18%.
 - Spacing (centres): As shown on the drawings.
 - Method of fixing: Screwed and pelleted.
- Panels:
 - Core material: Moisture resistant MDF.
 - Type, grade and quality as recommended by the manufacturer/fabricator for the intended use. Finished sheets shall exceed the minimum requirements required to satisfy the standards defined by BS4965: H/1.
 - Thickness: As shown on the drawings.
 - Classification: HG.
 - Facing: plastic laminate sheet
 - Finish (to match approved sample): min 6 coats sprayed catalytic high gloss lacquer
 - Fire rating: Class O Surface Spread of Flame.
 - Colour/ Pattern/ Finish: As shown on the drawings and to CA's approval including specially prepared colours selected from NCS colour referencing system
- Installation:
 - Method of fixing panels: Secret fix.
 - Joint treatment: tight butted machined square edges with pencil round arrisses to CA's approval.

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151 MEDIUM DENSITY FIBREBOARD PANEL LINING

- Substrate: As shown on the drawings.
- Battens: Regularized softwood free from decay and active insect attack and with no knots wider than half the width of the section.
 - Finished size: As shown on the drawings, cut from 1525 x 3050mm sheets.
 - Moisture content at time of fixing (maximum): 18%.
 - Spacing (centres): As shown on the drawings.
 - Method of fixing: Screwed and pelleted.
- Panels:
 - Core/facing material: MDF as K11/875.
- Fire retardant treatment: Class O surface spread of flame.
 - Thickness: 22mm minimum unless noted otherwise.
 - Edges: Square, unless stated otherwise.
- Finish: Fire retardant (eggshell) coating as M60/175
 - Initial coats: Factory primed finish as M60/175 to inner and outer faces and all edges.
 - Finishing coats: Site (roller) applied as M60/175 to outer face and all edges
- Installation:
 - Method of fixing panels: Secret fix as indicated on the drawings.
 - Joint treatment: Tight butted square edges to CA's approval.
- Other requirements:
 - Curved panels as indicated on the drawings.
 - Panel widths and joint setting out as indicated on the drawings and to CA's approval.



155 STAINLESS STEEL SHEET PANEL LINING

- Substrate: As shown on the drawings.
- Finished size: As shown on the drawings.
- Spacing (centres): As shown on the drawings.

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[illegible]

- Operation up to Practical Completion of the Works: Submit proposals to ensure that excessive moisture movement of linings/panelling does not take place.

280 AIR CONDITIONING SYSTEM

- Operation up to Practical Completion of the Works: Submit proposals to ensure that excessive moisture movement of linings/panelling does not take place.

FABRICATION/ FIXING/ FINISHING

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310 ACCURACY OF FABRICATION

- Site dimensions: Take as necessary before starting fabrication.
 - Discrepancies with drawings: Report without delay and obtain instructions before proceeding.
- Permissible deviations for panels:
 - Length: ± 1.5 mm.
 - Width: ± 1.5 mm.
 - Squareness (taking the longer of 2 sides at any corner as a baseline and measuring the deviation of the shorter side from the baseline perpendicular): ± 1.5 mm in 1 m.
 - Flatness (of panels with a core thickness of 12 mm and over, as delivered to site): ± 1 mm under a 600 mm straightedge.

320 LAMINATED TIMBER CORES FOR WOOD VENEERED PANELS

- Face grain direction: Perpendicular to specified direction of veneer grain.
- Alternative arrangement: Panels cross veneered before applying face veneer.

340 HOLES/ CUT OUTS IN LAMINATED PLASTICS VENEERS

- Internal corners: Formed to a radius, minimum 5 mm when not specified otherwise.
- Holes for fasteners: Formed slightly oversize.

350 FIXING LININGS/ PANELLING

- Setting out: Accurate, true to line and level, free from undulations and lipping, with lines and joints aligned straight and parallel unless specified otherwise.
- Movement allowance: Adequate for future moisture and temperature movement of boards.
- Fixing of panels: Secure, to prevent pulling away, bowing, or other movement during use.
- Methods of fixing and fasteners: As section Z20 unless specified otherwise.
- Trims: Wherever possible, to be in unjointed lengths between angles or ends of runs.
 - Running joints: Where unavoidable, submit proposals for location and method of jointing.
 - Angle joints: Mitred, unless specified otherwise.

360 OPEN JOINTS (JOINTS WITHOUT COVER STRIPS OR SIMILAR)

- General: Within any joint (including in-line continuations across transverse joints) greatest width must not exceed the least width by more than:
 - 0.5 mm in 1 metre.
 - 1.0 mm in 2 metres.
 - 1.5 mm in 3 metres.
- Variations in width: Evenly distributed with no sudden changes. Joints with bevelled edges to be measured to the face arrises.

370 SEALANT POINTING

- Sealant: Silicone based to BS 5889, Type B with fungicide.
 - Manufacturer: GE Bayer Silicones (Tel: 01204 469090).
 - Product reference: Silpruf.
 - Colour: To CA's approval.
- Application: As section Z22.

400 DOOR FRAMES

- Hardwood packing between frames and reveals: To give even joints of specified width.
 - Position of packs: Where fixings tighten frame against structure.
- Positions of frames: Accurate, plumb, level, and aligned.
 - Fixing of frames: Secure to prevent pulling away, deflection, or other movement during use.
 - Fastener locations: 600 mm maximum centres with at least one fixing 150 mm from each end of jambs and one adjacent to each hanging point.

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440 IRONMONGERY

- Installation:
 - Fasteners: Supplied by ironmongery manufacturer.
 - Finish/ Corrosion resistance: To match ironmongery.
- Adjacent surfaces: Undamaged.
- Moving parts: Adjusted, lubricated and functioning correctly at completion.

480 CLEAR FINISHED WOOD

- Nail holes: Filled with stopping coloured to match wood.
- Prepared surface: Smooth, closed and free from sanding marks.
- Finish: Smooth, free from brush marks, nibs, sags, runs and other defects.

END

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L10 WINDOWS/ LOUVRES (READ IN CONJUNCTION WITH H11 & H42)

To be read with Preliminaries/ General conditions.

GENERAL INFORMATION/ REQUIREMENTS

010 INTENT

The windows form part of an integrated cladding system (referred to as 'system assemblies) for the building and as such will be required to satisfy the same criteria for all other parts and elements for the external enclosure of a high quality office building, as well as those set out in other sections of this specification including A50 and H11.

110 EVIDENCE OF PERFORMANCE

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

COMPONENTS

400 ROOF HATCHES

- Manufacturer:
Bilko UK Ltd
Tel:01284 701696
- Product Reference: Type S Roof Scuttle, size 914mm x 762mm
- Curb: Standard 12" Curb with Curb Liner fixed to RC upstand
- Finish: painted as M60/145
- Fixing: fixed back to RC upstand
- Other requirements: Ladder up safety post, Ref LU4, painted as M60/145

450 ROOF STAIR VENTS:

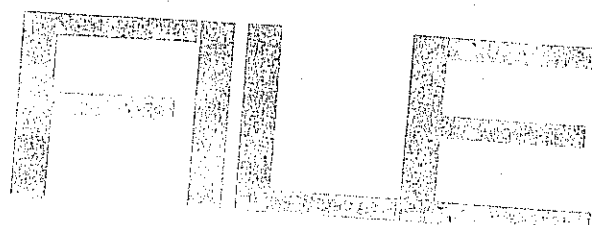
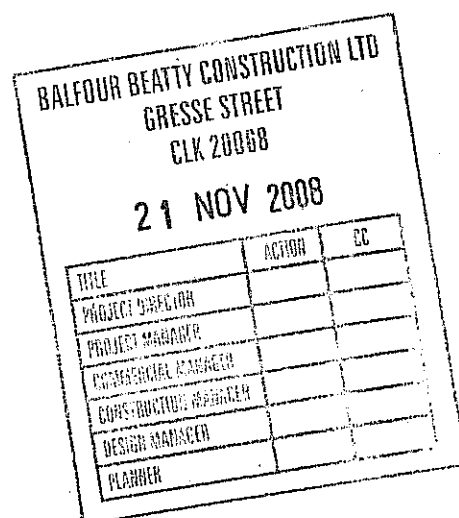
- Manufacturer:
Bilko UK Ltd
Tel: 01284 701696
- Product Reference: EW-50REM automatic smoke ventilator.
- Curb: Standard 12" Curb with Curb Liner fixed to RC upstand
- Finish: painted as M60/145
- Fixing: fixed back to RC upstand
- Other requirements: OSO Battery Backed Control Panel
OSO Fireman's Switch
OSO Ionisation Smoke Detector

460 ROOFLIGHTS

- Manufacturer: _____
- Product reference: _____
- Type: _____
- Frame: _____
- Finish: _____
- Colour: _____
- Kerb: _____
- Glazing details: _____
- Other requirements: _____
- Fixing: _____

500 ROOF MOUNTED LIFT SHAFT VENTILATORS.

- Manufacturer:
VES Andover Limited
Tel: 08702 404340
- Product Reference: Skyline SLC 250 / FB / BG
- Finish: painted as M60/145
- Guards: Bird Guard.
- Fixing: fixed back to RC upstand



- Other requirements: Cowl and base only

600 METAL LOUVRES:

- Manufacturer and reference:
Gill Air Ltd – or similar approved
Tel: 01903 782060
System 75, fully integrated and concealed frame
Material: extruded aluminum
Blade pitch and angle: 75mm/45 degrees
Accessories:
 - System 75 PVC Weather Grid / Verminguard
 - Special stainless steel mesh fly / insect screens
 - 2mm thick aluminum alloy blanking plates to 33% of louvre panels, screwed and sealed to back faces of louvres, ppc finish as M60/145.
 - Fully integrated frameless doors including ironmongery, locks and door stays.
 - Closures flashings and cills, as H31/155 where these are in addition to the manufacturer's standard components.
- Support: aluminum carrier tracks fixed to painted steel framing
Finish as delivered: anodized as clause 840
- Fixing: Non ferrous bolted to framing cover all fixings with matching snap on PVC covers.

610 SLIMLINE METAL LOUVRES:

- Manufacturer and reference:
Air Diffusion Ltd – or similar approved
Tel: 01746 761921
Material: extruded aluminum
Blade pitch and angle: 50mm/45 degrees
- Support: aluminum carrier tracks and frames
- Finish as delivered: anodized as clause 840

615 STEEL LOUVRES TO EDF ENERGY TRANSFORMER CHAMBER

- Manufacturer: Sunray Engineering Ltd (Tel: 01233 639 039).
- Product reference: Standard louvre.
Material: Galvanised steel (non-standard size, as indicated on the drawings).
- Frame: Galvanised steel angle.
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: Matt black.
- Other requirements:
Louvres set behind decorative PC cladding unit louvre panels.
Vermin guard to rear of louvres.

INSTALLATION

710 PROTECTION OF COMPONENTS

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

782 FIXING OF ALUMINIUM FRAMES

- Standard: As section Z20.
 - Spacing: When not predrilled or specified otherwise, position fasteners not more than 150 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 200 mm centres.

760 GASKETS

- Material:
 - Noncellular rubber to BS 4255-1.
 - Cellular rubber to ASTM-C509.
- Continuity: Outer gaskets of single front sealed curtain walling systems and inner gaskets of drained and ventilated or pressure equalized curtain walling systems must be formed in a complete frame with sealed joints. Vulcanized rubber gaskets must have factory moulded corner joints.
- Durability: Resistant to oxidation, ozone and UV degradation.

772 WINDOW JOINT ASSEMBLY SEALANTS

- Material: Silicone to BS 5889, type A or B, neutral curing where in contact with or close proximity to other products that may be adversely affected by acetoxy curing.
- Manufacturer: General Electric – or similar approved
 - Product reference: to CA's approval
 - Colour: selected from manufacturers full colour and product range to CA's approval

780 WINDOW TO PCC PANEL SEALANT JOINTS

- Sealant: Silicone to BS 5889, type A or B, neutral curing where in contact with or close proximity to other products that may be adversely affected by acetoxy curing.
 - Location: at pcc panel to panel joints
- Manufacturer: General Electric – or similar approved
 - Product reference: to CA's approval
 - Colour: selected from manufacturers full colour and product range to CA's approval
 - Application: As section Z22.
 - Backing rods: flexible cellular rods with bond breakers in accordance with sealant manufacturers recommendations
- Secondary seal: Compriband Fakband – or similar approved
- Carry out test samples prior to commencement to check compatibility of sealants with adjoining materials, submit to CA for approval.

END

L20 DOORS/ SHUTTERS/ HATCHES

To be read with Preliminaries/ General conditions.

PRELIMINARY INFORMATION/ REQUIREMENTS

- 110 EVIDENCE OF PERFORMANCE
- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.
- 115 FIRE RESISTING DOORS/ DOORSETS/ ASSEMBLIES
- Certification: Provide evidence, in the form of a product conformity certificate, test report or engineering assessment, that each door/ doorset/ assembly supplied will comply with the specified requirements for fire resistance if tested to BS 476-22, BS EN 1634-1 or BS EN 1634-3. Such certification must cover door and frame materials, glass and glazing materials and their installation, essential and ancillary ironmongery, hinges and seals.
- 120 FIRE RESISTING STEEL DOORS/SHUTTERS
- Provide evidence that the doors and doorsets comply with the Loss Prevention Council Rules for the construction and installation of firebreak doors and shutters.
- 150 SITE DIMENSIONS
- Procedure: Before starting work on any components take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- 160 PROTOTYPES
- Prepare one of each of the components and arrange for inspection by the CA before starting repetitive fabrication.
- 170 CONTROL SAMPLES
- Procedure:
 - Finalize component details.
 - Fabricate one of each of the components as part of the quantity required for the project.
 - Obtain approval of appearance and quality before proceeding with manufacturer of the remaining quantity.

COMPONENTS

415 PAINTED PLYWOOD FACED INTERNAL TIMBER FLUSH DOORSETS

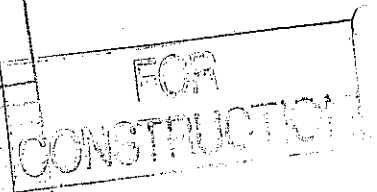
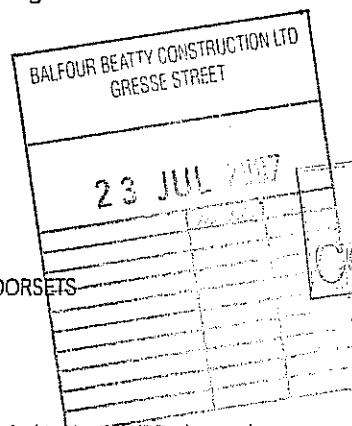
- Manufacturer: LS Leaderflush Shapland (Tel: 0870 240 0666).
- or: other similar approved.
- Door leaf:
 - Fire rating: As schedules.
 - Core: Solid laminated timber.
 - Facings:
 - 4mm thick WBP plywood on chipboard.
 - MDF as clause K11/875 permitted to inner (concealed) riser doors.
 - Lippings: 8mm hardwood to 2 long edges.
 - Finish as delivered: Primed by manufacturer.
 - Finish: Painted as M60/152.
 - Glazing details: Refer to drawings (all vision panels to be fire resisting clear glass-wired glass not permitted); painted hw bead fixing.
- Frame and architraves:
 - Fire rating: As schedules.
 - Wood species: Hardwood.
 - Class: (to BS 1186:Part 1): 1
 - Finish as delivered: Primed by manufacturer.
 - Finish: Painted as M60/150.
- Moisture content on delivery: 15%±2
- Fixing: Screwed and pelleted.

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416 PLASTIC LAMINATE FACED INTERNAL TIMBER FLUSH DOORSETS

- Manufacturer: As clause 415.
- Door leaf:
 - Fire rating: As schedules.
 - Core: Wood fibre insulation board (E).
 - Facings: 6mm WBP plywood.
 - Lippings: 8mm polished hardwood.

Laminate facing to run over lipping on front and rear faces of door leaf: ie lipping not visible when door is in the closed position.
- Finish as delivered:
 - Manufacturer and grade: Polyrey or other equal approved, high pressure laminate in accordance with BS EN 438:Part 1 Classification HDF, Fire rating Class O.
 - Colour/finish: to CA's approval from laminate manufacturer's full range.
- Glazing details: Refer to drawings (all vision panels to be fire resisting clear glass- wired glass not permitted), painted hw bead fixing. Where indicated on the drawings or schedules, translucent coloured interlayer; colour to CA's approval from manufacturer's full range including non-standard colours.
- Frame:
 - Fire rating: As schedules.
 - Wood species: Hardwood.
 - Class: (to BS 1186:Part 1): 1
 - Finish as delivered: Primed by manufacturer.
 - Finish: Painted as M60/150.
- Moisture content on delivery: 12%±2
- Fixing: Screwed and pelleted.



417 STAINLESS STEEL FACED INTERNAL TIMBER FLUSH DOORSETS

- Manufacturer: As clause 415.
- Door leaf:
 - Fire rating: As schedules.
 - Core: Wood fibre insulation board (E).
 - Facings: 1.2mm thick Grade 304 stainless steel bonded to 6mm WBP plywood.
 - Lippings: 1.2mm thick Grade 304 stainless steel.
- Finish as delivered: Satin and mirror polished to bespoke pattern as indicated on the drawings; polish to CA's approval.
- Glazing details: Refer to drawings (all vision panels to be fire resisting clear glass- wired glass not permitted), satin polished stainless steel bead fixing.
- Frame:
 - Fire rating: As schedules.
 - Wood species: Hardwood.
 - Class: (to BS 1186:Part 1): 1
 - Finish as delivered: 1.2mm thick Grade 304 stainless steel.
 - Finish: satin polished; polish to CA's approval.
- Moisture content on delivery: 12%±2
- Fixing: Concealed steel fixing lugs, fire protected where doors are fire rated.



460 FRAMELESS GLASS DOORS AND FIXED SIDE SCREENS

- Manufacturer: Dorma Entrance Systems Ltd (Tel: 01462 477600)
- Door leaf material: Toughened safety glass to BS 6206, class A.
- Thickness: To match adjoining structural glazing.
- Colour: Clear.
- Decoration: Bespoke manifestation as shown on the drawings to CA's approval, by Etchlike (Tel: 0800 282 2821).
- Door rails: Dorma Glas continuous aluminium head and cill rails.
 - Material/ Finish: Silver anodised aluminium.
- Peripheral fixings: Concealed channel.
- Lock: Adams Rite deadlock 1850/A operated by Newman Tonks MIWA N3/441 cylinder.
 - Position: To each leaf both sides at high and low level.
- Floor springs: Dorma Glas double swing with 90 degree stand open.
- Pull handles: Algoods 'd line'.
 - Size: 650x19mm offset cranked pull handles 1pair per leaf, fixed back to back ref 14.4232.02.654.
 - Material/ Finish: Satin polished ss.
- Additional Ironmongery/ accessories: 1 pair Algoods 'd line' stops per leaf ref. 14.5070.02.

480A STEEL DOORSETS TO EDF ENERGY TRANSFORMER CHAMBER: OPTION 1

The contractor is to price all three specifications L20/480A, 480B, and 480C which are subject to the approval of EDF Energy.

The preferred option (subject to EDF approval) is L20/480A.

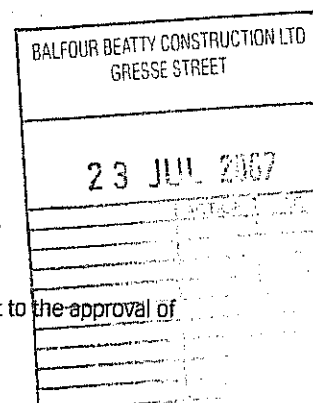
- Manufacturer: Sunray Engineering Ltd (Tel: 01233 639 039).
 - Product reference: LouvreDoor Steel Door System.
- Door leaf: Steel double door, fully louvred.
 - Finish as delivered: PPC finish as M60/145.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Frame and architraves: Steel RHS.
 - Finish as delivered: PPC finish as M60/145.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Overpanel: Steel fully louvred to match door leafs.
 - Finish as delivered: PPC finish as M60/145.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Ironmongery: 3-point locking with internal panic bar; padlockable PPC finish handle.
- Other requirements:
 - PPC finish blanking plates (allow for 50% of door area) and vermin guard to rear of door leafs and overpanel.
 - PPC finish threshold plate.

480B STEEL DOORSETS TO EDF ENERGY TRANSFORMER CHAMBER: OPTION 2

The contractor is to price all three specifications L20/480A, 480B, and 480C which are subject to the approval of EDF Energy.

The preferred option (subject to EDF approval) is L20/480A.

- Manufacturer: Sunray Engineering Ltd (Tel: 01233 639 039).
 - Product reference: Heavy Duty steel plate doorset ref. DO/SD/001 type E.
- Door leaf: Steel double door, louvred (non-standard size, as indicated on the drawings).
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Frame and architraves: Steel angle.
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Overpanel: Steel plate (non-standard size, as indicated on the drawings).
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Ironmongery: 3-point locking with internal panic bar; padlockable PPC finish handle.
- Other requirements:
 - PPC finish blanking plates (allow for 50% of door area) and vermin guard to rear of door leafs.



480C STEEL DOORSETS TO EDF ENERGY TRANSFORMER CHAMBER: OPTION 3

The contractor is to price all three specifications L20/480A, 480B, and 480C which are subject to the approval of EDF Energy.

The preferred option (subject to EDF approval) is L20/480A.

- Manufacturer: Sunray Engineering Ltd (Tel: 01233 639 039).
 - Product reference: Firelock steel plate doorset.
- Door leaf: Steel double door (non-standard size, as indicated on the drawings).
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Frame and architraves: Steel angle.
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Overpanel: Steel plate (non-standard size, as indicated on the drawings).
 - Finish as delivered: Shop sprayed as M60/110.
 - Colour: From manufacturer's full range including non-standard colours, to CA's approval.
- Ironmongery: Surelock McGill Type B1 three point locking panic bar system to inside with padlockable Sunray 6000 Hasp & Staple to front.

INSTALLATION

710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.
 - Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.
- 730 PRIMING/ SEALING
- Timber surfaces inaccessible after installation: Primed or sealed as specified before fixing components.
- 740 CORROSION PROTECTION
- Surfaces to be protected: All dissimilar adjoining surfaces prone to corrosion in damp conditions.
 - Protective coating: Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
 - Timing of application: Before fixing components.
- 750 FIXING DOORSETS
- Timing: After rooms have been made weathertight and the work of wet trades is finished and dried out.
- 760 BUILDING IN
- General: Not permitted unless indicated on drawings.
- 780 DAMP PROOF COURSES IN PREPARED OPENINGS
- Location: Correctly positioned in relation to door frames. Do not displace during fixing operations.
- 790 FIXING OF WOOD FRAMES
- Spacing of fixings (frames not predrilled): 150 mm from ends of each jamb and at 300 mm maximum centres.
- 800 FIXING OF LOOSE THRESHOLDS
- Spacing of fixings: 150 mm from each end and at 150 mm maximum centres.
- 820 SEALANT JOINTS
- Sealant:
 - Manufacturer: As H11 & Z22
 - Product reference: As H11 & Z22
 - Colour: To CA's approval and as H11 & Z22/110.
 - Application: As section H11 & Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile.
- 830 FIXING IRONMONGERY GENERALLY
- Fasteners: Supplied by ironmongery manufacturer.
 - Finish/ Corrosion resistance: To match ironmongery.
 - Holes for components: No larger than required for satisfactory fit/ operation.
 - Adjacent surfaces: Undamaged.
 - Moving parts: Adjusted, lubricated and functioning correctly at completion.
- 840 FIXING IRONMONGERY TO FIRE RESISTING DOOR ASSEMBLIES
- General: All items fixed in accordance with door leaf manufacturer's recommendations ensuring that integrity of the assembly, as established by testing, is not compromised.
 - Holes for through fixings and components: Accurately cut.
 - Clearances: Not more than 8 mm unless protected by intumescent paste or similar.
 - Lock/ Latch cases for FD60 doors: Coated with intumescent paint or paste before installation.
- 850 LOCATION OF HINGES
- Primary hinges: Where not specified otherwise, positioned with centre lines 250 mm from top and bottom of door leaf.
 - Third hinge: Where specified, positioned on centre line of door leaf.
 - Hinges for fire resisting doors: Positioned in accordance with door leaf manufacturer's recommendations.
- 860 INSTALLATION OF EMERGENCY EXIT DEVICES
- Standard: Unless specified otherwise, install panic bolts/ latches in accordance with BS EN 1125.

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END

L40 GENERAL GLAZING

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

111 PREGLAZING

- Preglazing of components: Permitted.
- Prevention of displacement: Submit details of precautions to be taken to protect glazing and compound/ seals during delivery and installation.
- Defective/ displaced glazing/ compound/ seals: Reglaze components in situ.

140 MATERIAL SAMPLES

- Representative samples of the materials: Submit and obtain approval before cutting panes.
- Sample size (minimum): 900 mm square.

150 WORKMANSHIP GENERALLY

- Glazing generally: To BS 6262.
- Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
- Materials:
 - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
 - Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

151 PREPARATION

- Surrounds, rebates, grooves and beads: Cleaned and prepared by others.

152 PREPARATION

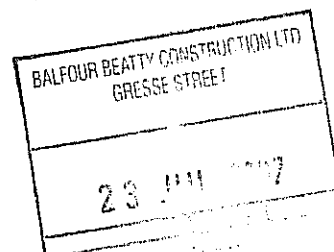
- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing.

155 GLASS GENERALLY

- Standards: To BS 952 and relevant parts of:
 - BS EN 572 for basic soda lime silicate glass.
 - BS EN 1096 for coated glass.
 - BS EN 1748-1 for borosilicate glass.
 - BS EN 1748-2 for ceramic glass.
 - BS EN 1863 for heat strengthened soda lime silicate glass.
 - BS EN 12150 for thermally toughened soda lime silicate safety glass.
 - BS EN 12337 for chemically strengthened soda lime silicate glass.
 - BS EN 13024 for thermally toughened borosilicate safety glass.
 - BS EN ISO 12543 for laminated glass and laminated safety glass.
- Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.
- Edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.

156 DIMENSIONAL TOLERANCES ON GLASS

- Measurement of tolerances: Before any thermal toughening/ heat strengthening.
- Pane dimensions less than 1500 mm:
 - For 3 to 6 mm thick glass: ± 1.0 mm.
 - For 8 to 12 mm thick glass: ± 1.5 mm.
 - For 15 mm and thicker glass: ± 2.5 mm.
- Pane dimensions more than 1500 mm:
 - For 3 to 6 mm thick glass: ± 1.5 mm.
 - For 8 to 12 mm thick glass: ± 2.0 mm.
 - For 15 mm and thicker glass: ± 3.0 mm.
- Pane squareness: Not more than 4 mm difference in diagonal measurements.



157 DISTORTIONAL TOLERANCES ON GLASS

- Measurement of tolerances: After any thermal toughening/ heat strengthening.
- Maximum bow: 0.2% of pane dimension.
- Maximum roller wave:
 - For 3 to 5 mm thick glass: 0.5 mm.
 - For 6 to 10 mm thick glass: 0.3 mm.
 - For 12 mm and thicker glass: 0.15 mm.
- Maximum edge dip:
 - For 3 to 5 mm thick glass: 0.8 mm.
 - For 6 to 10 mm thick glass: 0.5 mm.
 - For 12 mm and thicker glass: 0.25 mm.

160 LINEAR PATTERNED/ WIRED GLASS

- Alignment: Vertical/ Horizontal as appropriate, and pattern matched across adjacent panes in close proximity.

165 HEAT SOAKING OF THERMALLY TOUGHENED GLASS

- Heat soaking regime: All glass must be subjected to a heat soaking regime designed to eliminate the incidence of failure due to nickel sulfide inclusions.
 - Heat soaking period (minimum): In accordance with prEN 14179-1 and glass manufacturer's recommendations.
 - Mean glass temperature: $290 \pm 10^{\circ}\text{C}$.
- All panes must be heat soaked.
- All edgework and holes must be completed before toughening.
- The toughening process must be horizontal to eliminate tong marks and minimise dimensional inaccuracies.
- Certified evidence of treatment: Submit to CA for approval.

170 HEAT TOUGHENED GLASS:

- To BS 6206, Class A.
- All edgework and holes must be completed before toughening.
- The toughening process must be horizontal to eliminate tong marks and minimise dimensional inaccuracies.
- All toughened glass must be subjected to a heat soaking test designed to remove 90% of nickel sulfide inclusions

171 LAMINATED GLASS:

- Glass leaves must be heat toughened as clause 165, heat strengthened or annealed, combined to retain integrity of the laminated pane in case of breakage.
- Interlayers to glass leaves must be polyvinyl butyral (pnb) or cast in place resin. They must be sealed at the perimeter to prevent deterioration.

172 EDGE TAPES TO INSULATING UNITS

- Report to CA any damage to edge tapes. Obtain approval of proposed method of repair.

180 BEAD FIXING WITH PINS

- Pin spacing: Regular at maximum 150 mm centres, and within 50 mm of each corner.
- Exposed pin heads: Punched just below wood surface.

181 BEAD FIXING WITH SCREWS

- Screw spacing: Regular at maximum 225 mm centres, and within 75 mm of each corner.

190 GLASS TO GLASS JOINTING

- Sealant: Clear silicone to BS 5889, Type A or B as recommended for the purpose by the manufacturer.
- Joints:
 - Width: Consistent and suitable to receive sealant.
 - Gap between panes: Completely filled, leaving no voids or bubbles.
 - Surplus sealant: Removed to leave a clean, neatly finished weathertight joint.

200 ENAMEL SCREEN PRINTING (FRIT)

- Screen printed enamel design applied to inner surface of laminated panel assemblies.

TYPES OF GLAZING

260 SINGLE GLAZING

- Pane material: Heat soaked toughened and laminated glass min 9.5mm thick, to comply with BS 5544.

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- Surround/ bead: To match adjoining framing.
- Glazing system: To CA's approval.
- Glazing installation:
 - Glass: Located centrally in surround using setting and location blocks.
 - Gaskets and beads: Installed as recommended by frame manufacturer.
 - Gasket fit at corners: Tight, without gaps.
- Install as BS 8000-7, clause 3.3.5.2.

300 PATTERNED GLASS

- Pane material: Heat soaked toughened glass min 8mm thick, to comply with BS 5544.
- Manufacturer: Solaglas Ltd (Tel: 0124 76754 7400).
 - Product reference: Saint Gobain/ Solaglas SGG Masterpoint.
- Laminated construction: Incorporate with toughened clear float glass as clause 260.

350 ANTI-REFLECTIVE GLASS TO RECEPTION DESK

- Pane material: Heat soaked toughened low iron glass min 12mm thick, to comply with BS 5544.
- Manufacturer: Schott UK Ltd (Tel: 01785 223166).
 - Product reference: Amiran
- Installation: As Indicated on the drawings.

351 LOW IRON GLASS

- Pane material: Low iron oxide float glass, toughened / laminated as necessary or specified.
- Manufacturer: Solaglas Ltd (Tel: 0124 76754 7400).
 - Product reference: Saint Gobain/ Solaglas SGG Diamant.
- Glazing installation: Laminated construction: incorporate with toughened clear float glass as clause 260.

550 GLASS MIRRORS

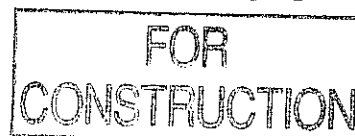
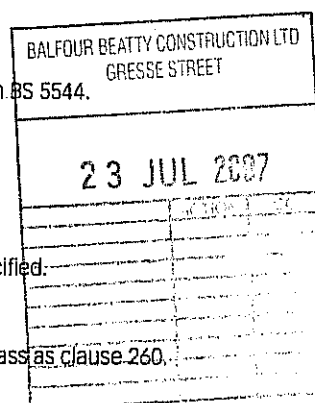
- Mirror material: Float glass, silvered to give maximum reflection, free from tarnishing, discoloration, scratches and other defects visible in the designed viewing conditions.
 - Thickness: 6mm.
 - Backing: Plastic film (safety in accordance with BS 6262).
 - Edge treatment: Polished bevel.
- Background: WBP plywood as clause K11/140.
- Fixing method: Self adhesive pads.
- Installation: Fixed accurately and securely without overtightening fasteners, to provide a flat surface giving a distortion free reflection.

GLASS GENERALLY

610 GLASS GENERALLY:

- To BS 952 and the relevant parts of BS EN 572, free from scratches, bubbles, cracks, rippling, dimples and other defects.
- Edges must be free from vents, shelling, and severe feathering. They must be flat ground with a small arris, suitable for sealant jointing.
- Dimensional tolerances measured before any heat toughening/heat strengthening are:
 - Pane size: ± 1 mm of dimension required.
 - Pane squareness: Not more than 3 mm difference in diagonal measurement when the diagonal is less than 4 m.
 - Not more than 4 mm difference in diagonal measurement when the diagonal is more than 4 m.
 - Pane thickness:
 - ± 0.2 mm for 6 mm glass.
 - ± 0.3 mm for 10/12 mm glass.
 - ± 0.5 mm for 15 mm glass.
 - ± 1.0 mm for 19 mm glass.
 - Hole positional tolerance: ± 1.0 mm from single datum point.
 - Hole diameter tolerance: ± 1.0 mm
- Minimum dimensional tolerances measured after any heat toughening/heat strengthening are:
 - Maximum bow: 0.2% of pane dimension.
 - Mean roller wave: 0.05 mm peak to trough variation.
 - 0.25 mm edge dip.

END



M22 SPRAYED MONOLITHIC COATINGS

To be read with Preliminaries/ General conditions.

TYPES OF COATING

120 SPRAYED PLASTER TO CONCRETE

- Survey: Carry out before installation commences.
- Preparation: remove all protrusions, nibs, fins etc in accordance with coating manufacturer's recommendations; fill larger holes accordance with coating manufacturer's recommendations.
- Coating material:
 - Manufacturer: Alltek UK (tel: 07963 723024; www.alltekuk.com)
 - Product reference: Alltek Airless Violet 200 WR.
 - Colour: white.
 - Surface finish: flat, smooth finish.
 - Minimum applied thickness: 2 coat, in accordance with manufacturer's recommendations; overall nominal thickness 2.5mm.
- Mechanical retention/ reinforcement: galvanised steel edge stop beads to perimeters.
- Finishing/ Sealing coat: emulsion paint as M60/174.
- Installer: from coating manufacturer's list of approved applicators.

PERFORMANCE REQUIREMENTS

165 REACTION TO FIRE

- Internal surfaces:
 - Location: generally.
 - Class: 0, BS 476.

GENERAL REQUIREMENTS

210 SURFACES TO BE COATED

- Condition: Structurally sound, dry, frost free, free from contamination by dirt, dust, efflorescence or other deleterious substances, and in a suitable condition to receive specified coatings.

220 ENVIRONMENTAL CONDITIONS

- General: Do not start work specified in this section before building is weathertight.
- Surface temperature: Minimum 4°C above the dew point temperature with conditions stable or improving.

240 SEQUENCE OF WORK

- Hangers, supports, clips, sleeves and other attachments: Securely fixed before application of coating.
- Sprayed coating and sealer coats: Applied and cured before:
 - Installation of ductwork, piping, conduit and other suspended equipment.
 - Application of finishes to adjacent surfaces.

250 DIFFICULT ACCESS AREAS

- Requirement: Where difficulty of access may prejudice achievement of complete integrity of the coating or application of the specified coating thickness; identify and, if necessary, seek advice from the coating manufacturer and submit proposals.

260 PROTECTION FROM OVERSPRAY

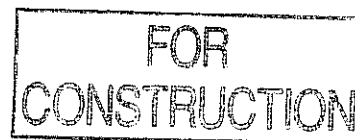
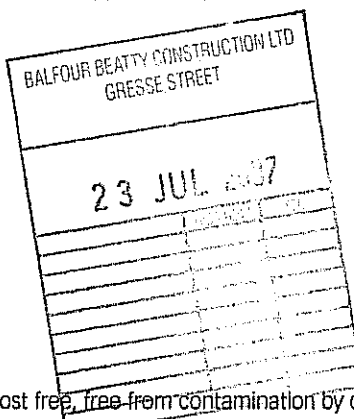
- Adjacent areas: Protected using suitable shielding/ masking materials that will not damage the surface when removed.

270 HEALTH AND SAFETY

- Dust, vapour and fumes: Prevent exposure in excess of occupational limits set in the current Health and Safety Executive (HSE) document EH40.

280 CONTROL SAMPLES

- Areas of finished work: Complete in approved locations as follows: to CA's approval.



- Approval: Obtain before proceeding

290 INSPECTIONS

- Surface preparation and coating: Notify proposed starting dates.
- Coating manufacturer: Permit to:
 - Inspect the work in progress.
 - Inspect all quality control records.
 - Take dry coating thickness measurements and samples of coating products.
- Coating manufacturer's directions or requests: Submit proposals.
- Coating manufacturer's inspection reports: Submit copies without delay.

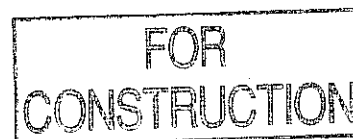
300 FINISHED COATING APPEARANCE

- Standard: Appropriate to the end use and position within the building.
- Decorative coatings: Free from surface crazing, unevenness, inconsistency in colour and other defects.

APPLICATION OF COATINGS

350 SPRAYED COATINGS GENERALLY

- Standards:
 - Coatings for fire protection: To BS 8202-1.
 - Coatings for thermal insulation and sound absorption: To BS 8216.



380 CURING

- Ventilation: Sufficient and continuous.
- Newly coated surfaces: Prevent from drying out too rapidly.

390 MOVEMENT JOINTS

- Location: Coincident with movement joints in substrate.
- Extent: Through coating to substrate.
- Joint type: to CA's approval.

430 COMPLETION

- Remove:
 - Masking tape and temporary coverings.
 - Overspray from adjacent exposed surfaces.

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END

M40 STONE/ CERAMIC TILING

To be read with Preliminaries/ General conditions.

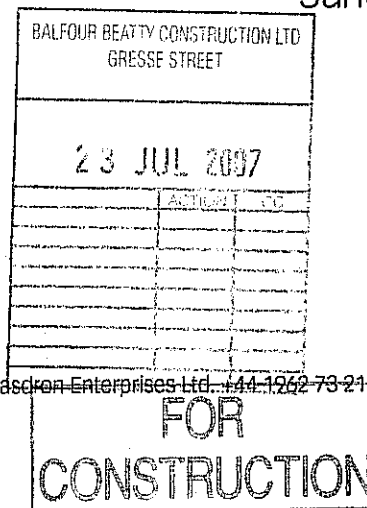
TYPES OF TILING/ MOSAIC

115 BASALT SLAB FLOORING

- Stone:
 - Name (traditional): Basaltina Capriana.
 - Petrological family: Basalt.
 - Colour: Dark grey.
 - Origin: Italy.
 - Finish: Honed Etruria finish and sealed (Lithofin Stainstop from Casdron Enterprises Ltd. +44 1962 73 2126) to match approved sample.
 - Supplier: Strata Tiles Ltd
Tel: +44 870 608 8878
www.stratatiles.co.uk
 - Quality: Premium quality, batched and matched, with close uniformity to CA's approval. Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
 - Work size: Large format, as indicated on the drawings.
 - Thickness: Minimum 40mm.
 - Work size: Large format, (varies) as indicated on the drawings. Typically 675 x 800mm nom. modular to 760 x 1500mm nom. modular.
 - Other requirements: Edge treatment: Square edged, honed.
 - Background/ Base: Screed as clause M10/110 up to 45mm thick; M10/120 in excess of 45mm thick.
 - Bedding: Semidry sand-cement bed as clause 730.
 - Nominal joint width: 3mm.
 - Grout to basic joints: Ardex C2 grout (or equal approved) colour-matched to stone.
 - Movement/other joints: As clause 805/810.
 - Other requirements:
 - Supplier: Stone slab flooring to be supplied, designed and laid by the same subcontractor supplying, designing and fixing adjacent natural stone cladding (M40/116). Choice of subcontractor to be to the CA's approval, and to be experienced in supplying and installing this particular specified stone in this specific application.

116 BASALT WALL FACING/ CLADDING

- Stone:
 - Name (traditional): Basaltina Capriana.
 - Petrological family: Basalt.
 - Colour: Dark grey.
 - Origin: Italy.
 - Finish: Honed Etruria finish and sealed (Lithofin Stainstop from Casdron Enterprises Ltd. +44 1962 73 2126) to match approved sample.
 - Supplier: Strata Tiles Ltd
Tel: +44 870 608 8878
www.stratatiles.co.uk
 - Quality: Premium quality, batched and matched, with close uniformity to CA's approval. Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
 - Work size: Large format, as indicated on the drawings.
 - Thickness: Minimum 20mm.
 - Other requirements:
 - Edge treatment: Square edged, honed.
 - Background/base: Marine ply as K11/816 on stud partition.
 - Bedding: Thick bed adhesive- solid as clause 670.
 - Adhesive: Mapei Keraquick fast setting adhesive grey including Mapei Latex Plus latex admixture
 - Joint width: 3mm
 - Grout: Mapei Ultracolor Plus as clause 875/885; colour to CA's approval.
 - Movement joints: Silicone sealant as clause 815 and BS 5385; colour to CA's approval.



FOR
CONSTRUCTION

- Stone:**

 - Name (traditional): white Carrara Bianca Venato Gioia.
 - Petrological family: Marble.
 - Colour: White.
 - Origin: Italy.
 - Finish: Honed and sealed (Lithofin Stainstop from Casdron Enterprises Ltd. +44 1962 73 2126) to wearing/exposed surface.
 - Supplier: Marmi Ltd
Tel: 01621 840555
 - Quality: Premium quality, batched and matched, with close uniformity to CA's approval. Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
 - Thickness: Minimum 40mm.
 - Work size: 1500 x 750mm modular, as indicated on the drawings and to CA's approval.
 - Background/ Base: Screed as clause M10/110 up to 45mm thick; M10/120 in excess of 45mm thick.
 - Bedding: semi dry sand-cement bed as clause 730, reinforced as clause 578. Exposed faces of stone to be sealed and protected from cement and other seepage into the stone.
 - Adhesive: As recommended by the material supplier
 - Nominal joint width: 3mm.
 - Grout to basic joints: Ardex C2 grout (or equal approved) as clause 875/885, colour-matched to stone, special colour to CA's approval.
 - Movement/other joints: As clause 825, colour to CA's approval.
 - Location: Around all room perimeters and in accordance with manufacturer's recommendations to CA's approval
 - Other requirements:
 - Supplier: Stone slab flooring to be supplied, designed and laid by the same subcontractor. Choice of subcontractor to be to the CA's approval, and to be experienced in supplying and installing this particular specified stone in this specific application.
 - Quality and appearance: The selected marble shall be equivalent or better than that which is installed in the ground floor reception area at the following location:
Davidson Building
5 Southampton Street
London WC2
 - Floor boxes for power and communications services: To have specially fabricated satin ss frames and covers to receive the adjoining floor finish to the CA's approval.
 - Access panels for underfloor services: To have specially fabricated satin ss frames and covers to receive the adjoining floor finish to the CA's approval.
 - Dividing strips: Satin ss 6mm thick x depth of finish and bed, at joints and junctions with adjoining floor finishes and perimeter grilles.

Body coloured vitrified ceramic mosaic:

- Supplier:
Strata Tiles Ltd
Tel: +44 870 608 8878
www.stratatiles.co.uk
Reference: Stak Grigio Short (matt),
Colour: mid grey
Size nominally 35 x 16 x 6mm thick.
- Background/Base: Moisture resistant MDF panel as clause K11/875; blockwork/render as clause M20/111.
- Bedding: Thin bed adhesive as clause 660.
Adhesive: Permabond C-Fix 550/No3701 polymer liquid and as recommended by the tile manufacturer
- Grouting material: Permabond C-Joint 121 cement based grout, colour to CA's approval.
Joint width: to match pre-formed tile spacings
- Movement joints: As clause 815: Permabond flexible sealant (800 series) colour to CA's approval.

Location: as clause 530 and round all room perimeters and in accordance with manufacturer's recommendations
Width: in accordance with manufacturer's recommendations

- Accessories:
Extruded stainless steel edge trims as shown on the drawings and to the CA's approval.
- Other requirements: align tile joints with adjoining tile joints (floor, wall, skirting etc)

180 COMPOSITE SLAB WALL FACING/ CLADDING:

Strata Tiles Ltd

Minley Farm

Minley

Surrey

GU17 9LE

Tel: +44 870 608 8878

Composite stone; conglomerate marble based stone

Colour: Geneoastone STSMV18

Size and thickness: as shown on the drawings

- Background: drylining/plaster
- Bedding: thin bed adhesive as clause 660
- Adhesive: Permabond C-Fix 550/No3701 polymer liquid and as recommended by the tile manufacturer
- Grouting material: Permabond C-Joint 121 cement based grout, colour white.
- Joint width: to match pre-formed tile spacings
- Movement joints: As clause 815: Permabond flexible sealant (800 series) colour to CA's approval.
- Accessories: matching trim tiles at all details by tile manufacturer
- Other requirements: align tile joints with adjoining tile joints (floor, wall, skirting etc)

FOR
CONSTRUCTION

BALFOUR BEATTY CONSTRUCTION LTD
GRESSE STREET

28 JUL 17

GENERALLY

210 SUITABILITY OF BACKGROUNDS/ BASES

- Background/ base tolerances: To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.
- New background drying times (minimum):
 - Concrete walls: 6 weeks.
 - Brick/ block walls: 6 weeks.
 - Rendering: 2 weeks.
 - Gypsum plaster: 4 weeks.
- New base drying times (minimum):
 - Concrete slabs: 6 weeks.
 - Cement:sand screeds: 3 weeks.

215 FALLS IN BASES

- General: Before starting work give notice if falls are inadequate. Do not attempt to provide falls by increasing or decreasing the specified thickness of the bedding material.

250 SAMPLES

- General: Submit representative sample(s) of materials. Ensure that delivered materials match sample(s).

260 CONTROL SAMPLES

- General: Complete sample area(s), being part of finished work, in approved location(s), and obtain approval of appearance before proceeding.

PREPARATION

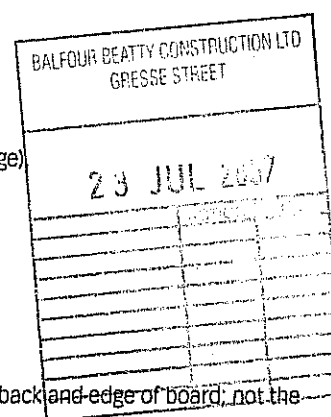
310 EXISTING BACKGROUNDS/ BASES GENERALLY

- Efflorescence, laitance, dirt and other loose material: Remove.
- Deposits of oil, grease and other materials incompatible with the bedding: Remove.
- Tile, paint and other nonporous surfaces: Clean.
- Wet backgrounds: Dry before tiling.

370 NEW IN SITU CONCRETE

- Mould oil, surface retarders and other materials incompatible with bedding: Remove. Rinse with clean water and allow to dry unless specified otherwise.
- 380 NEW PLASTER
- Plaster: Dry, solidly bedded, free from dust and friable matter.
 - Plaster primer: Apply if recommended by adhesive manufacturer.
- 390 PLASTERBOARD BACKGROUNDS
- Boards: Dry, securely fixed and rigid with no protruding fixings and face to receive decorative finish exposed.
- 400 OTHER BOARDED BACKGROUNDS
- Boards: Dry, securely fixed and rigid with no protruding fixings.
 - Surfaces to be tiled: Seal or prime if recommended by adhesive manufacturer.
- 438 PREPARING CONCRETE BASES FOR FULLY BONDED BEDDING
- Surface cement:sand matrix: Remove to expose coarse aggregate.
 - Surface preparation: Suitable to achieve a full bond with bedding. Select from:
 - Keep well wetted for several hours. Remove free water then brush in a slurry bonding coat.
Slurry: SBR polymer modified cement.
 - Prepare, prime as necessary and apply a bonding agent.
Bonding agent: BBA certified SBR polymer.
- 451 PREPARING CONCRETE BASES FOR UNBONDED BEDDING
- Separating layer: Polyethylene sheet not less than 65 micrometres thick (250 gauge)
 - Lap at joints: 100 mm.
- 460 SMOOTHING UNDERLAYMENT
- Type: Recommended by adhesive manufacturer.
 - Condition: Allow to dry before tiling.
- 471 WALLBOARDS, MARINE PLY, OTHER BOARD SUBSTRATES:
- Should be dry and securely fixed with no protruding fixing on surface. Prime only back and edge of board, not the face to be tiled.

FOR
CONSTRUCTION

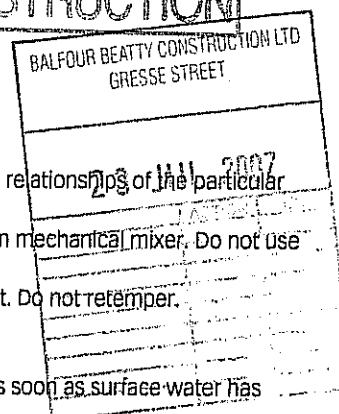


FIXING

- 510 FIXING GENERALLY
- Colour/ shade: Unintended variations within tiles for use in each area/ room are not permitted.
 - Variegated tiles: Mix thoroughly.
 - Adhesive: Compatible with background/ base. Prime if recommended by adhesive manufacturer.
 - Cut tiles: Neat and accurate.
 - Fixing: Provide adhesion over entire background/ base and tile backs.
 - Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints when viewed under final lighting conditions.
 - Surplus bedding material: Clean from joints and face of tiles without disturbing tiles.
- 520 ADVERSE WEATHER:
- Do not fix tiles if the temperature is below 5 °C or in damp conditions.
 - Do not use frozen materials or apply finishes to frozen or frost covered surfaces.
 - Comply with manufacturers' recommendations for minimum/maximum temperatures when using proprietary adhesives.
 - Take adequate precautions to protect work from inclement weather, frost and premature drying out.
- 530 SETTING OUT
- Joints: True to line, continuous and without steps.
 - Joints on walls: Horizontal, vertical and aligned round corners.
 - Joints in floors: Parallel to the main axis of the space or specified features.
 - Cut tiles: Minimize number, maximize size and locate unobtrusively.
 - Joints in adjoining floors and walls: Align.
 - Joints in adjoining floors and skirtings: Align.

- Movement joints: If locations are not indicated, submit proposals to the CA.
- 540 LEVEL OF FLOOR TILING
 - Permissible deviation in level from datum to be $\pm 5\text{mm}$.
- 550 FLATNESS/ REGULARITY OF TILING
 - Sudden irregularities: Not permitted.
 - Deviation of surface: Measure from underside of a 2 m straightedge placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 3 mm.
- 560 LEVEL OF TILING ACROSS JOINTS
 - Deviation (maximum) between tile surfaces either side of any type of joint:
 - 1 mm for joints less than 6 mm wide.
 - 2 mm for joints 6 mm or greater in width.
- 570 MORTAR BEDDING: Unless specified otherwise:
 - Bedding mix:
 - Cement: Portland to BS EN 197-1 type CEM I/42.5.
 - Sand for walls: To BS 1199, type A.
 - Sand for floors: To BS 882.
 - Grading limit: To BS 8204-1, table 1.
 - Batching: Select from:
 - Batch by weight.
 - Batch by volume: Permitted on the basis of previously established weight:volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
 - Mixing: Mix materials thoroughly to uniform consistence. Use a suitable forced action mechanical mixer. Do not use a free fall type mixer.
 - Application: At normal temperatures use within two hours. Do not use after initial set. Do not retemper.
- 580 POROUS TILES
 - Tiles to be bedded in cement:sand: Soak in clean water for at least 30 minutes. Fix as soon as surface water has drained.
- 590 COVERED TILE SKIRTINGS
 - Sequence: Bed solid to wall before laying floor tiles. Ensure joints in skirtings match and align with joints in floor tiling.
- 600 SIT-ON TILE SKIRTINGS
 - Sequence: Bed solid to wall after laying floor tiles. Ensure joints in skirtings match and align with joints in floor tiling.
- 650 THIN BED ADHESIVE - RIBBED (WALLS)
 - Application: Apply 3 mm floated coat of adhesive to dry background in areas of approximately 1 m^2 . Trowel to ribbed profile.
 - Tiling: Press tiles firmly onto float coat.
- 651 THIN BED ADHESIVE - SOLID (WALLS)
 - Application: Apply floated coat of adhesive to dry background in areas of about 1 m^2 . Comb surface.
 - Tiling: Apply thin even coat of adhesive to backs of dry tiles. Press tiles firmly onto float coat.
 - Finished adhesive thickness (maximum): 3 mm.
- 660 THIN BED ADHESIVE - MESH BACKED MOSAIC (WALLS)
 - Application: Apply 3 mm floated coat of adhesive to dry background. Comb surface.
 - Placing mosaic sheets: Hang in horizontal rows, working downwards. Stagger vertical joints. Prevent slippage of sheets. Lightly beat mosaics into adhesive.
 - Width, plane and alignment of joints between sheets: To match joints between mosaic tiles.
- 661 THIN BED ADHESIVE - PAPER FACED MOSAIC (WALLS)
 - Application: Apply 3 mm floated coat of adhesive to dry background. Comb surface.
 - Preparing mosaic sheets: Pregrout. Remove surplus before fixing.
 - Placing mosaic sheets: Hang in horizontal rows, working downwards. Stagger vertical joints.
 - Width, plane and alignment of joints between sheets: To match joints between mosaic tiles.

FOR
CONSTRUCTION



- Paper face: Before adhesive hardens completely, remove paper face. Complete grouting. Wash off glue from face of mosaic.
- 670 THICK BED ADHESIVE - SOLID (WALLS)
 - Application: Apply floated coat of adhesive to dry background. Comb surface.
 - Tiling: Apply thin even coat of adhesive to backs of dry tiles. Press tiles firmly onto float coat.
 - Finished adhesive thickness: Within range recommended by manufacturer.
- 710 THICK BED ADHESIVE - SOLID (FLOORS)
 - Application: Apply floated coat of adhesive to dry base and comb surface.
 - Tiling: Apply coat of adhesive to backs of tiles filling depressions or keys. Press tiles firmly onto position.
 - Finished adhesive thickness: Within range recommended by manufacturer.
- 720 CEMENT:SAND BED (FLOORS)
 - Mortar bedding mix: 1:3-4 cement:sand.
 - Consistency: Stiff plastic.
 - Laying: Lay suitably small working areas of screeded bed. Compact thoroughly to level.
 - Finished bed thickness: 15-25 mm.
 - Tiling: Within two hours and before bedding sets, evenly coat backs of tiles with adhesive. Press tiles firmly into position.
 - Finished adhesive thickness: Within range recommended by manufacturer.
- 730 SEMIDRY CEMENT:SAND BED (FLOORS)
 - Mortar bedding mix: 1:3.5-4 cement:sand as clause 570.
 - Water content: A film of water must not form on surface of bed when fully compacted, and a sample squeezed in the hand will retain its shape and not crumble.
 - Preparation: Dampen base.
 - Laying: Lay suitably small working areas of screeded bed. Compact thoroughly to level.
 - Finished bed thickness (minimum): as recommended by the manufacturer.
 - Finished bed thickness (maximum): as recommended by the manufacturer.
 - Tiling: Within two hours and before bedding sets, evenly coat backs of tiles with a neat cement slurry. Beat tiles firmly into position.
 - Grout tiles as specified.

FOR
CONSTRUCTION

BALFOUR BEATTY CONSTRUCTION LTD	
GRESSE STREET	
23 JUL 1997	CC

MOVEMENT JOINTS/ GROUTING/ COMPLETION

- 805 SEALANT MOVEMENT JOINTS WITH METAL EDGINGS: To areas with overall tile & bedding thickness 75mm.
 - Edging material: Stainless steel plate.
 - Size: 60 mm x 4 mm.
 - Installation: Centre over joints in base. Set to exact finished level of floor.
 - Fixing to base: Stainless steel cleats to exact finished level of floor.
 - Joint width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.
 - Colour: To CA's approval.
 - Preparation and application: As section Z22.
- 810 SEALANT MOVEMENT JOINTS WITH METAL EDGINGS: To areas with overall tile & bedding thickness 50mm.
 - Edging material: Stainless steel plate.
 - Size: 45 mm x 4 mm.
 - Installation: Centre over joints in base. Set to exact finished level of floor.
 - Fixing to base: Stainless steel cleats to exact finished level of floor.
 - Joint width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.
 - Colour: To CA's approval.
 - Preparation and application: As section Z22.
- 815 SEALANT MOVEMENT JOINTS FOR INTERNAL WALL TILING
 - Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
 - Width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.

- Colour: To CA's approval.
- Preparation and application: As section Z22.

820 SEALANT MOVEMENT JOINTS FOR INTERNAL FLOOR TILING

- Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
- Width: As shown on the drawings.
- Sealant: Dow Corning Hansil Ltd silicone rubber.
- Colour: To CA's approval.
- Preparation and application: As section Z22.

825 STRIP MOVEMENT JOINTS

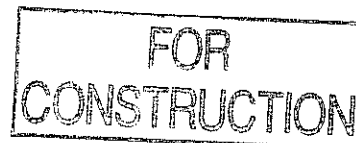
- Manufacturer and reference: to CA's approval
- Fixing: to exact finished level of floor. Ensure that joints extend through tiles and bedding to base.

835 METAL SECTION MOVEMENT JOINTS

- Manufacturer: Latham & Co PTY Ltd.
- Product reference: Neoprene - X - Pansion Loc Strip.
- Colour: To CA's approval.
- Installation: Location of joints to be co-ordinated and agreed with CA. Centre over joints in base. Set to exact finished level of floor.

870 PREFORMED STRIP MOVEMENT JOINTS:

- Manufacturer: Fosroc Ltd (Tel: 01827 262222).
- Product reference: Expandafoam



875 GROUTING

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

885 COLOURED GROUT

- Staining of tiles: Not permitted.
- Evaluating risk of staining: Apply grout to a few tiles in a small trial area. If discoloration occurs apply a protective sealer to tiles and repeat trial.

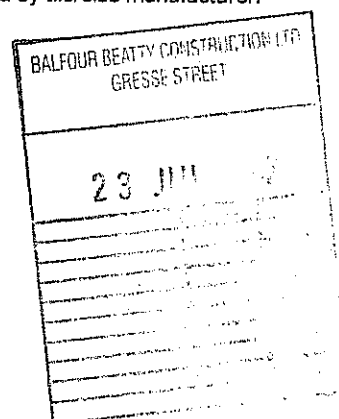
910 PROTECTION GENERALLY: Adequately protect and keep clean all completed areas. Clean off any droppings immediately.

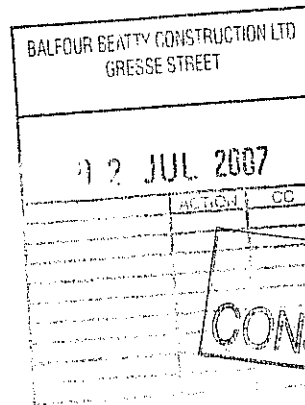
911 PROTECTION IN WET AREAS: Tiles/slabs to be kept dry and not brought into service for at least three weeks after grouting/jointing.

920 PROTECTION OF FLOORS: Keep completed floors clear of traffic for at least four days and permit only light traffic for the next 10 days.

930 POLISH stone tiling with 2 coats of matt non-slip sealer of type recommended by tile/slab manufacturer.

END





Lifschutz
Davidson
Sandilands

M40 STONE/ CERAMIC TILING

To be read with Preliminaries/ General conditions.

TYPES OF TILING/ MOSAIC

115 BASALT SLAB FLOORING

- Stone:
 - Name (traditional): Basaltina Capriana.
 - Petrological family: Basalt.
 - Colour: Dark grey.
 - Origin: Italy.
 - Finish: Honed Etruria finish and sealed (Lithofin Stainstop from Casdron Enterprises Ltd. +44 1962 73 2126) to match approved sample.
 - Supplier:
 - Strata Tiles Ltd
 - Tel: +44 870 608 8878
 - www.stratatiles.co.uk
 - Quality: Premium quality, batched and matched, with close uniformity to CA's approval. Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
 - Work size: Large format, as indicated on the drawings.
 - Thickness: Minimum 40mm.
 - Work size: Large format, (varies) as indicated on the drawings. Typically 675 x 800mm nom. modular to 760 x 1500mm nom. modular.
 - Other requirements: Edge treatment: Square edged, honed.
- Background/ Base: Screed as clause M10/110 up to 45mm thick; M10/120 in excess of 45mm thick.
- Bedding: Semidry sand-cement bed as clause 730.
- Nominal joint width: 3mm.
- Grout to basic joints: Ardex C2 grout (or equal approved) colour-matched to stone.
- Movement/other joints: As clause 805/810.
- Other requirements:
 - Supplier: Stone slab flooring to be supplied, designed and laid by the same subcontractor supplying, designing and fixing adjacent natural stone cladding (M40/116). Choice of subcontractor to be to the CA's approval, and to be experienced in supplying and installing this particular specified stone in this specific application.

116 BASALT WALL FACING/ CLADDING

- Stone:
 - Name (traditional): Basaltina Capriana.
 - Petrological family: Basalt.
 - Colour: Dark grey.
 - Origin: Italy.
 - Finish: Honed Etruria finish and sealed (Lithofin Stainstop from Casdron Enterprises Ltd. +44 1962 73 2126) to match approved sample.
 - Supplier:
 - Strata Tiles Ltd
 - Tel: +44 870 608 8878
 - www.stratatiles.co.uk
 - Quality: Premium quality, batched and matched, with close uniformity to CA's approval. Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
 - Work size: Large format, as indicated on the drawings.
 - Thickness: Minimum 20mm.
 - Other requirements:
 - Edge treatment: Square edged, honed.
- Background/base: Marine ply as K11/816 on stud partition.
- Bedding: Thick bed adhesive- solid as clause 670.
- Adhesive: Mapei Keraquick fast setting adhesive grey including Mapei Latex Plus latex admixture
- Joint width: 3mm
- Grout: Mapei Ultracolor Plus as clause 875/885; colour to CA's approval.
- Movement joints: Silicone sealant as clause 815 and BS 5385; colour to CA's approval.

- Supplier: Stone cladding to be supplied and fixed by the same subcontractor supplying and laying adjacent natural stone flooring (M40/115). Choice of subcontractor to be to the CA's approval, and to be experienced in supplying and installing this particular specified stone in this specific application.

120 MARBLE SLAB FLOORING

- Stone:
 - Name (traditional): white Carrara Bianca Venato Gioia.
 - Petrological family: Marble.
 - Colour: White.
 - Origin: Italy.
 - Finish: Honed and sealed (Lithofin Stainstop from Casdron Enterprises Ltd. +44 1962 73 2126) to wearing/exposed surface.
 - Supplier:
Marmi Ltd
Tel: 01621 840555
 - Quality: Premium quality, batched and matched, with close uniformity to CA's approval. Free from vents, cracks, fissures, discolouration, or other defects deleterious to strength, durability or appearance. Before delivery to site, season thoroughly, dress and work in accordance with shop drawings prepared by supplier.
 - Thickness: Minimum 40mm.
 - Work size: 1500 x 750mm modular, as indicated on the drawings and to CA's approval.
- Background/ Base: Screed as clause M10/110 up to 45mm thick; M10/120 in excess of 45mm thick.
- Bedding: semi dry sand-cement bed as clause 730, reinforced as clause 578. Exposed faces of stone to be sealed and protected from cement and other seepage into the stone.
- Adhesive: As recommended by the material supplier
- Nominal joint width: 3mm.
- Grout to basic joints: Ardex C2 grout (or equal approved) as clause 875/885, colour-matched to stone, special colour to CA's approval.
- Movement/other joints: As clause 825, colour to CA's approval.
- Location: Around all room perimeters and in accordance with manufacturer's recommendations to CA's approval
- Other requirements:
 - Supplier: Stone slab flooring to be supplied, designed and laid by the same subcontractor. Choice of subcontractor to be to the CA's approval, and to be experienced in supplying and installing this particular specified stone in this specific application.
 - Quality and appearance: The selected marble shall be equivalent or better than that which is installed in the ground floor reception area at the following location:
Davidson Building
5 Southampton Street
London WC2
 - Floor boxes for power and communications services: To have specially fabricated satin ss frames and covers to receive the adjoining floor finish to the CA's approval.
 - Access panels for underfloor services: To have specially fabricated satin ss frames and covers to receive the adjoining floor finish to the CA's approval.
 - Dividing strips: Satin ss 6mm thick x depth of finish and bed, at joints and junctions with adjoining floor finishes and perimeter grilles.

155 CERAMIC MOSAIC WALL TILING:

Body coloured vitrified ceramic mosaic:

- Supplier:
Strata Tiles Ltd
Tel: +44 870 608 8878
www.stratatiles.co.uk
Reference: Stak Grigio Short (matt),
Colour: mid grey
Size nominally 35 x 16 x 6mm thick.
- Background/Base: Moisture resistant MDF panel as clause K11/875; blockwork/render as clause M20/111.
- Bedding: Thin bed adhesive as clause 660.
Adhesive: Permabond C-Fix 550/No3701 polymer liquid and as recommended by the tile manufacturer
- Grouting material: Permabond C-Joint 121 cement based grout, colour to CA's approval.
Joint width: to match pre-formed tile spacings
- Movement joints: As clause 815: Permabond flexible sealant (800 series) colour to CA's approval.

Location: as clause 530 and round all room perimeters and in accordance with manufacturer's recommendations
Width: in accordance with manufacturer's recommendations

- Accessories:
Extruded stainless steel edge trims as shown on the drawings and to the CA's approval.
- Other requirements: align tile joints with adjoining tile joints (floor, wall, skirting etc)

180 COMPOSITE SLAB WALL FACING/ CLADDING:

Strata Tiles Ltd

Minley Farm

Minley

Surrey

GU17 9LE

Tel: +44 870 608 8878

Composite stone; conglomerate marble based stone

Colour: Geneoastone STSMV18

Size and thickness: as shown on the drawings

- Background: drylining/plaster
- Bedding: thin bed adhesive as clause 660
Adhesive: Permabond C-Fix 550/No3701 polymer liquid and as recommended by the tile manufacturer
- Grouting material: Permabond C-Joint 121 cement based grout, colour white.
Joint width: to match pre-formed tile spacings
- Movement joints: As clause 815: Permabond flexible sealant (800 series) colour to CA's approval.
- Accessories: matching trim tiles at all details by tile manufacturer
- Other requirements: align tile joints with adjoining tile joints (floor, wall, skirting etc)

GENERALLY

210 SUITABILITY OF BACKGROUNDS/ BASES

- Background/ base tolerances: To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.
- New background drying times (minimum):
 - Concrete walls: 6 weeks.
 - Brick/ block walls: 6 weeks.
 - Rendering: 2 weeks.
 - Gypsum plaster: 4 weeks.
- New base drying times (minimum):
 - Concrete slabs: 6 weeks.
 - Cement:sand screeds: 3 weeks.

215 FALLS IN BASES

- General: Before starting work give notice if falls are inadequate. Do not attempt to provide falls by increasing or decreasing the specified thickness of the bedding material.

250 SAMPLES

- General: Submit representative sample(s) of materials. Ensure that delivered materials match sample(s).

260 CONTROL SAMPLES

- General: Complete sample area(s), being part of finished work, in approved location(s), and obtain approval of appearance before proceeding.

PREPARATION

310 EXISTING BACKGROUNDS/ BASES GENERALLY

- Efflorescence, laitance, dirt and other loose material: Remove.
- Deposits of oil, grease and other materials incompatible with the bedding: Remove.
- Tile, paint and other nonporous surfaces: Clean.
- Wet backgrounds: Dry before tiling.

370 NEW IN SITU CONCRETE

- Mould oil, surface retarders and other materials incompatible with bedding: Remove. Rinse with clean water and allow to dry unless specified otherwise.
- 380 NEW PLASTER
 - Plaster: Dry, solidly bedded, free from dust and friable matter.
 - Plaster primer: Apply if recommended by adhesive manufacturer.
- 390 PLASTERBOARD BACKGROUNDS
 - Boards: Dry, securely fixed and rigid with no protruding fixings and face to receive decorative finish exposed.
- 400 OTHER BOARDED BACKGROUNDS
 - Boards: Dry, securely fixed and rigid with no protruding fixings.
 - Surfaces to be tiled: Seal or prime if recommended by adhesive manufacturer.
- 438 PREPARING CONCRETE BASES FOR FULLY BONDED BEDDING
 - Surface cement:sand matrix: Remove to expose coarse aggregate.
 - Surface preparation: Suitable to achieve a full bond with bedding. Select from:
 - Keep well wetted for several hours. Remove free water then brush in a slurry bonding coat.
Slurry: SBR polymer modified cement.
 - Prepare, prime as necessary and apply a bonding agent.
Bonding agent: BBA certified SBR polymer.
- 451 PREPARING CONCRETE BASES FOR UNBONDED BEDDING
 - Separating layer: Polyethylene sheet not less than 65 micrometres thick (250 gauge).
 - Lap at joints: 100 mm.
- 460 SMOOTHING UNDERLAYMENT
 - Type: Recommended by adhesive manufacturer.
 - Condition: Allow to dry before tiling.
- 471 WALLBOARDS, MARINE PLY, OTHER BOARD SUBSTRATES:
 - Should be dry and securely fixed with no protruding fixing on surface. Prime only back and edge of board; not the face to be tiled.

FIXING

- 510 FIXING GENERALLY
 - Colour/ shade: Unintended variations within tiles for use in each area/ room are not permitted.
 - Variegated tiles: Mix thoroughly.
 - Adhesive: Compatible with background/ base. Prime if recommended by adhesive manufacturer.
 - Cut tiles: Neat and accurate.
 - Fixing: Provide adhesion over entire background/ base and tile backs.
 - Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints when viewed under final lighting conditions.
 - Surplus bedding material: Clean from joints and face of tiles without disturbing tiles.
- 520 ADVERSE WEATHER:
 - Do not fix tiles if the temperature is below 5 °C or in damp conditions.
 - Do not use frozen materials or apply finishes to frozen or frost covered surfaces.
 - Comply with manufacturers' recommendations for minimum/maximum temperatures when using proprietary adhesives.
 - Take adequate precautions to protect work from inclement weather, frost and premature drying out.
- 530 SETTING OUT
 - Joints: True to line, continuous and without steps.
 - Joints on walls: Horizontal, vertical and aligned round corners.
 - Joints in floors: Parallel to the main axis of the space or specified features.
 - Cut tiles: Minimize number, maximize size and locate unobtrusively.
 - Joints in adjoining floors and walls: Align.
 - Joints in adjoining floors and skirtings: Align.

- Movement joints: If locations are not indicated, submit proposals to the CA.
- 540 LEVEL OF FLOOR TILING
- Permissible deviation in level from datum to be $\pm 5\text{mm}$.
- 550 FLATNESS/ REGULARITY OF TILING
- Sudden Irregularities: Not permitted.
 - Deviation of surface: Measure from underside of a 2 m straightedge placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 3 mm.
- 560 LEVEL OF TILING ACROSS JOINTS
- Deviation (maximum) between tile surfaces either side of any type of joint:
 - 1 mm for joints less than 6 mm wide.
 - 2 mm for joints 6 mm or greater in width.
- 570 MORTAR BEDDING: Unless specified otherwise:
- Bedding mix:
 - Cement: Portland to BS EN 197-1 type CEM I/42.5.
 - Sand for walls: To BS 1199, type A.
 - Sand for floors: To BS 882.
 - Grading limit: To BS 8204-1, table 1.
 - Batching: Select from:
 - Batch by weight.
 - Batch by volume: Permitted on the basis of previously established weight:volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
 - Mixing: Mix materials thoroughly to uniform consistence. Use a suitable forced action mechanical mixer. Do not use a free fall type mixer.
 - Application: At normal temperatures use within two hours. Do not use after initial set. Do not retemper.
- 580 POROUS TILES
- Tiles to be bedded in cement:sand: Soak in clean water for at least 30 minutes. Fix as soon as surface water has drained.
- 590 COVERED TILE SKIRTINGS
- Sequence: Bed solid to wall before laying floor tiles. Ensure joints in skirtings match and align with joints in floor tiling.
- 600 SIT-ON TILE SKIRTINGS
- Sequence: Bed solid to wall after laying floor tiles. Ensure joints in skirtings match and align with joints in floor tiling.
- 650 THIN BED ADHESIVE - RIBBED (WALLS)
- Application: Apply 3 mm floated coat of adhesive to dry background in areas of approximately 1 m². Trowel to ribbed profile.
 - Tiling: Press tiles firmly onto float coat.
- 651 THIN BED ADHESIVE - SOLID (WALLS)
- Application: Apply floated coat of adhesive to dry background in areas of about 1 m². Comb surface.
 - Tiling: Apply thin even coat of adhesive to backs of dry tiles. Press tiles firmly onto float coat.
 - Finished adhesive thickness (maximum): 3 mm.
- 660 THIN BED ADHESIVE - MESH BACKED MOSAIC (WALLS)
- Application: Apply 3 mm floated coat of adhesive to dry background. Comb surface.
 - Placing mosaic sheets: Hang in horizontal rows, working downwards. Stagger vertical joints. Prevent slippage of sheets. Lightly beat mosaics into adhesive.
 - Width, plane and alignment of joints between sheets: To match joints between mosaic tiles.
- 661 THIN BED ADHESIVE - PAPER FACED MOSAIC (WALLS)
- Application: Apply 3 mm floated coat of adhesive to dry background. Comb surface.
 - Preparing mosaic sheets: Pregrout. Remove surplus before fixing.
 - Placing mosaic sheets: Hang in horizontal rows, working downwards. Stagger vertical joints.
 - Width, plane and alignment of joints between sheets: To match joints between mosaic tiles.

- Paper face: Before adhesive hardens completely, remove paper face. Complete grouting. Wash off glue from face of mosaic.
- 670 THICK BED ADHESIVE - SOLID (WALLS)
 - Application: Apply floated coat of adhesive to dry background. Comb surface.
 - Tiling: Apply thin even coat of adhesive to backs of dry tiles. Press tiles firmly onto float coat.
 - Finished adhesive thickness: Within range recommended by manufacturer.
- 710 THICK BED ADHESIVE - SOLID (FLOORS)
 - Application: Apply floated coat of adhesive to dry base and comb surface.
 - Tiling: Apply coat of adhesive to backs of tiles filling depressions or keys. Press tiles firmly onto position.
 - Finished adhesive thickness: Within range recommended by manufacturer.
- 720 CEMENT:SAND BED (FLOORS)
 - Mortar bedding mix: 1:3-4 cement:sand.
 - Consistency: Stiff plastic.
 - Laying: Lay suitably small working areas of screeded bed. Compact thoroughly to level.
 - Finished bed thickness: 15-25 mm.
 - Tiling: Within two hours and before bedding sets, evenly coat backs of tiles with adhesive. Press tiles firmly into position.
 - Finished adhesive thickness: Within range recommended by manufacturer.
- 730 SEMIDRY CEMENT:SAND BED (FLOORS)
 - Mortar bedding mix: 1:3.5-4 cement:sand as clause 570.
 - Water content: A film of water must not form on surface of bed when fully compacted, and a sample squeezed in the hand will retain its shape and not crumble.
 - Preparation: Dampen base.
 - Laying: Lay suitably small working areas of screeded bed. Compact thoroughly to level.
 - Finished bed thickness (minimum): as recommended by the manufacturer.
 - Finished bed thickness (maximum): as recommended by the manufacturer.
 - Tiling: Within two hours and before bedding sets, evenly coat backs of tiles with a neat cement slurry. Beat tiles firmly into position.
 - Grout tiles as specified.

MOVEMENT JOINTS/ GROUTING/ COMPLETION

- 805 SEALANT MOVEMENT JOINTS WITH METAL EDGINGS: To areas with overall tile & bedding thickness 75mm.
 - Edging material: Stainless steel plate.
 - Size: 60 mm x 4 mm.
 - Installation: Centre over joints in base. Set to exact finished level of floor.
 - Fixing to base: Stainless steel cleats to exact finished level of floor.
 - Joint width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.
 - Colour: To CA's approval.
 - Preparation and application: As section Z22.
- 810 SEALANT MOVEMENT JOINTS WITH METAL EDGINGS: To areas with overall tile & bedding thickness 50mm.
 - Edging material: Stainless steel plate.
 - Size: 45 mm x 4 mm.
 - Installation: Centre over joints in base. Set to exact finished level of floor.
 - Fixing to base: Stainless steel cleats to exact finished level of floor.
 - Joint width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.
 - Colour: To CA's approval.
 - Preparation and application: As section Z22.
- 815 SEALANT MOVEMENT JOINTS FOR INTERNAL WALL TILING
 - Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
 - Width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.

- Colour: To CA's approval.
 - Preparation and application: As section Z22.
- 820 SEALANT MOVEMENT JOINTS FOR INTERNAL FLOOR TILING
- Joints: Extend through tiles and bedding to base/ background. Centre over joints in base/ background.
 - Width: As shown on the drawings.
 - Sealant: Dow Corning Hansil Ltd silicone rubber.
 - Colour: To CA's approval.
 - Preparation and application: As section Z22.
- 825 STRIP MOVEMENT JOINTS
- Manufacturer and reference: to CA's approval
 - Fixing: to exact finished level of floor. Ensure that joints extend through tiles and bedding to base.
- 835 METAL SECTION MOVEMENT JOINTS
- Manufacturer: Latham & Co PTY Ltd.
 - Product reference: Neoprene - X - Panslon Loc Strip.
 - Colour: To CA's approval.
 - Installation: Location of joints to be co-ordinated and agreed with CA. Centre over joints in base. Set to exact finished level of floor.
- 870 PREFORMED STRIP MOVEMENT JOINTS:
- Manufacturer: Fosroc Ltd (Tel: 01827 262222).
 - Product reference: Expandafoam
- 875 GROUTING
- Sequence: Grout when bed/ adhesive has set sufficiently to prevent disturbance of tiles.
 - Joints: 6 mm deep (or depth of tile if less). Free from dust and debris.
 - Grouting: Fill joints completely, tool to an approved profile, clean off surface. Leave free from blemishes.
 - Polishing: When grout is hard, polish tiling with a dry cloth.
- 885 COLOURED GROUT
- Staining of tiles: Not permitted.
 - Evaluating risk of staining: Apply grout to a few tiles in a small trial area. If discoloration occurs apply a protective sealer to tiles and repeat trial.
- 910 PROTECTION GENERALLY: Adequately protect and keep clean all completed areas. Clean off any droppings immediately.
- 911 PROTECTION IN WET AREAS: Tiles/slabs to be kept dry and not brought into service for at least three weeks after grouting/jointing.
- 920 PROTECTION OF FLOORS: Keep completed floors clear of traffic for at least four days and permit only light traffic for the next 10 days.
- 930 POLISH stone tiling with 2 coats of matt non-slip sealer of type recommended by tile/slab manufacturer.

END

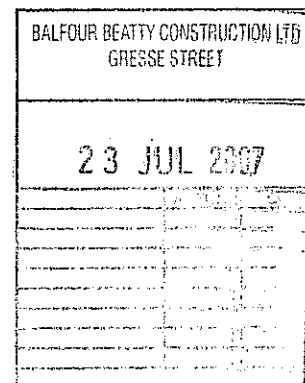
M50 RUBBER/ PLASTICS SHEETING

To be read with Preliminaries/ General conditions.

TYPES OF COVERING

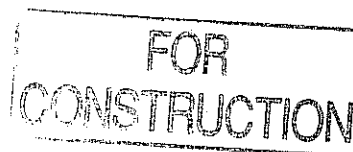
110 RUBBER TILING

- Sheet: UPEC classification U3.P2.E3.C2.
- Manufacturer: Freudenberg Building Systems UK Ltd (Tel: 01455 204483).
- Product reference: Norament 925/354.
- Size: 1002 x 1002mm.
- Thickness: 4.0mm.
- Colour/ pattern: To CA's approval from manufacturer's full range.
- Adhesive (and primer if recommended by manufacturer): As clause 640.
- Accessories: Welded skirtings, edging strips etc as clause 740 and clause 770.
- Finishing: Dressed in accordance with manufacturers' instructions.
- Other requirements: All joints between sheets/tiles and adjoining elements to be welded.



150 NON SLIP VINYL SHEETING

- Base: Screed as clause M10/110/120.
- Manufacturer: Altro Ltd. (Tel: 01462 707600).
- Product reference: Stronghold 30.
- Thickness: 3mm.
- Colour/ pattern: K3010 Dolphin.
- Adhesive (and primer if recommended by manufacturer): As clause 640.
- Seam welding: Hot welded and laid according to the manufacturers instructions, with matching vinyl rod.
- Accessories: Welded covered skirtings as clause 775.
- Finishing: Dressed in accordance with manufacturer instructions.
- Other requirements: All joints between sheets and adjoining elements to be welded.



160 NON SLIP VINYL SHEETING TO ACCESSIBLE SHOWER ROOM

- Base: Screed as clause M10/110/120 laid to falls.
- Manufacturer: Altro Ltd. (Tel: 01462 707600).
- Product reference: Marine 20.
- Thickness: 2mm.
- Colour/ pattern: T20153 Fog (Grey).
- Adhesive (and primer if recommended by manufacturer): Water resisting adhesive as clause 640.
- Seam welding: Hot welded and laid according to the manufacturers instructions, with matching vinyl rod.
- Accessories: Welded covered skirtings as clause 776.
- Finishing: Dressed in accordance with manufacturer instructions.
- Other requirements: All joints between sheets and adjoining elements to be welded. Stainless steel clamping floor drain outlet as recommended by vinyl manufacturer.

190 STAIR COVERING SYSTEM

- Manufacturer and product reference: As clause 110 to stair treads, risers and landings.
- Colour: To CA's approval from manufacturer's full range.
- Nosings:
- Manufacturer: Quantum Profile Systems Ltd (Tel: 0161 627 4222; www.quantum-ps.co.uk)
- Product reference: HPR
- Material: PVCU.
- Colour: To CA's approval from manufacturer's full range.
- Non-slip insert colour: To CA's approval from manufacturer's full range.
- Accessories: trims and skirtings as clauses 750/771.
- Other requirements:
- Lay on smoothing compound as clause 460.
- Provide matching coverings to landings/associated corridor areas.

GENERAL REQUIREMENTS

210 WORKMANSHIP GENERALLY

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

220 SAMPLES

- Covering samples: Before placing orders, submit representative sample of each type of covering. Ensure that delivered materials match samples.

230 CONTROL SAMPLES

- General: Complete area(s) of finished work in approved location(s), and obtain approval of appearance before proceeding.

250 LAYOUT - ROLL MATERIALS

- Setting out of seams: Before placing orders agree setting out for all sheeting types.

251 LAYOUT - SEAMS IN ROLL MATERIALS

- Setting out: Minimise occurrences of seams and cross seams.
- Cross seams: Not permitted.

252 LAYOUT - PATTERNS

- Setting out: Before placing orders agree setting out for all covering types.

270 EXTRA MATERIAL

- Provision of extra material: At completion, hand to Employer extra material of each type of covering to extent of 5%.

330 COMMENCEMENT

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

340 CONDITIONING

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

350 ENVIRONMENT

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

360 FLOORS WITH UNDERFLOOR HEATING

- Commencement of laying: Not before a period of 48 hours after heating has been turned off.
- Post laying start up of heating system: Slowly return heating to its operative temperature not less than 48 hours after completing laying.

PREPARING BASES

410 NEW BASES

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

420 EXISTING BASES

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- Notification: Before commencing work, confirm that existing bases will, after preparation, be suitable to receive coverings.
 - Suitability of bases and conditions within any area: Commencement of laying of coverings will be taken as acceptance of suitability.
- 430 NEW WET LAID BASES
- Base drying aids: Not used for at least four days prior to moisture content testing.
 - Base moisture content test: Carry out in accordance with BS 5325, Annex A or BS 8203, Annex A.
 - Locations for readings: In all corners, along edges, and at various points over area being tested.
 - Commencement of laying coverings: Not until all readings show 75% relative humidity or less.
- 440 SUBSTRATES TO RECEIVE THIN COVERINGS
- Trowelled finishes: Uniform, smooth surface free from trowel marks and other blemishes. Abrade suitably to receive specified floor covering material.
- 460 SMOOTHING/ LEVELLING UNDERLAYMENT COMPOUND
- Selection: As recommended by covering manufacturer.
 - Application: Mix and lay in accordance with the manufacturer's recommendations.
- 470 EXISTING FLOOR COVERINGS REMOVED
- Substrate: Clear of covering and as much adhesive as possible. Skim with smoothing underlayment compound to give smooth, even surface.
- 560 PLYWOOD UNDERLAY
- Standard: An approved national standard.
 - Bonding quality: To BS EN 314-2 class 3.
 - Appearance: To BS EN 635 class III.
 - Finish: Sanded.
 - Sheet size: 1200 x 1200mm.
 - Substrate: Existing floor boards securely fixed and acceptably level with no gross irregularities or protruding fasteners.
 - Laying sheets: Stagger cross joints such that no joint within base and underlay is coincident and with a 0.5-1 mm gap between sheets.
 - Fasteners: 25 mm ring shanked or twisted shank nails or divergent staples.
 - Location: Commencing at centre of one side of each sheet, at 150 mm grid centres over area of each sheet and at 100 mm centres along perimeter, set in 12 mm from edge.
 - Placement: Driven with heads set flush with surface, and not projecting through underside of base. No deformed.
- LAYING COVERINGS**
- 610 SETTING OUT TILES
- Method: Set out from centre of area/ room, so that wherever possible:
 - Tiles along opposite edges are of equal size.
 - Edge tiles are more than 50% of full tile width.
- 620 COLOUR CONSISTENCY
- Finished work in any one area/ room: Free from banding or patchiness.
- 630 HEATING OF TILES
- When recommended by manufacturer, to be carried out in accordance with manufacturer's recommendations. Do not overheat.
- 640 ADHESIVE FIXING GENERALLY
- Adhesive: Type to be as specified, recommended by covering/ underlay manufacturer or as approved.
 - Primer: Use and type as recommended by adhesive manufacturer.
 - Application: As necessary to achieve good bond.
 - Finished surface irregularities: Trowel ridges and high spots caused by particles on the substrate not acceptable.
- 650 SEAMS
- Patterns: Matched.

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RAE FOUR BEATTY CONSTRUCTION LTD GRESSE STREET	
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- Application: Cut strips along length of sheet to prevent curl.
- Corners: Mitre joints.

- Commencement: Not before a period of 24 hours after laying, or until adhesive has set.
- Joints: Neat, smooth, strongly bonded, flush with finished surface.

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

- Joint location: On centre line of door leaf unless specified otherwise.

- Manufacturer(s): Freudenberg Building Systems UK Ltd (Tel: 01455 204483), or: Gradus Accessories (Tel: 01625 428922).
- Material/ finish: To match floor covering.
- Fixing: Secure (using matching fasteners where exposed to view) with edge of covering gripped.

- Manufacturer: Gradus Ltd (Tel: 01625 428 922).
- Product reference: TA5.
- Material and finish: Polished aluminium.
- Fixing: Secure with top edge straight and parallel with floor.
- Corners: Welded mitre joints with TC2 clips.

- Fixing: Accurately cut. Fit risers before treads.

- Fixing: Accurately cut. Fit with coved riser/ tread.

- Types: PVC/Rubber.
- Manufacturer: Freudenberg Building Systems UK Ltd (Tel: 01455 204483).
 - Product reference: Nora sit on skirtings, 50mm high.
 - Colour: To CA's approval from manufacturer's full range.
- Fixing: Secure with top edge straight and parallel with floor.
 - Corners: Mitre joints.

- Types: PVC.
- Manufacturer: Gradus Ltd (Tel: 01625 428 922).
 - Product reference: CS 060 P, 60mm high.
 - Colour: Only available in black.
- Fixing: Secure with top edge straight and parallel with floor.
 - Corners: Mitre joints.

- Manufacturer: Altro Ltd. (Tel: 01462 707600).
- Product reference: CF38R radius cove former; C7 capping seal.

Fix at junction of wall and floor and finish with Capping seal C7.

- Adhesive (and primer if recommended by manufacturer): As clause 640
- Other requirements: All mitres and joints must be hot welded and laid according to the manufacturers instructions with matching vinyl rod.

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GRESSE STREET

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- Fit tread and riser in one piece on stairs with coved tread/riser.

780 TRAFFICKING AFTER LAYING

- Traffic free period: 7 days.

COMPLETION

820 FINISHING SHEET FLOORING

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

830 FINISHING RUBBER FLOORING

- Cleaning operations:
 - Wash floor with a cleaner recommended by covering manufacturer.
 - Wet vacuum or mop up residue.
 - Rinse with clean water. Wet vacuum or mop up and allow to dry.
- Final treatment: Follow recommendations of covering manufacture and spray buff with wetting agent or dry burnish.

870 PROTECTION

- Cover flooring with clean dust sheets, or other non-staining suitable material to prevent damage from dirt and traffic prior to Practical Completion. Ensure any material with printed information on one face is laid with printed face uppermost.

880 WASTE

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

END

FOR
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GRESSE STREET

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- Manufacturer: As Clause 210.
- Surfaces: Moisture resistant plasterboard.
 - Preparation: As clause 400 and Dulux System.
- Initial coats:
 - Type: Quick drying eggshell.
 - Number of coats: 1.
- Finishing coats:
 - Type: Quick drying eggshell. (As Dulux System BB27).
 - Number of coats: 2.

- Manufacturer: As clause 210.
- Surfaces: Plasterboard.
 - Preparation: As clause 400 and Dulux System.
- Initial coats:
 - Type: Thinned vinyl matt emulsion.
 - Number of coats: 1.
- Finishing coats:
 - Type: Vinyl matt emulsion (Dulux System BB15).
 - Number of coats: 2.

- Manufacturer: As clause 210.
- Surfaces: Plaster.
 - Preparation: As clause 400 and Dulux System.
- Initial coats:
 - Type: 50% thinned vinyl matt emulsion (one prior to filling).
 - Number of coats: 1.
- Finishing coats:
 - Type: Vinyl matt emulsion (Dulux System W+C2).
 - Number of coats: 2.

- Manufacturer: Akzo Nobel Decorative Coatings Limited (Tel: 01254 704951)
 - Product reference: Crown Trade Timonox.
- Surfaces: MDF board as K11/875 .
 - Preparation: As recommended by the coating manufacturer.
 - Undercoats: Timonox Intumescent Base Coat.
 - Number of coats: 2.
- Finishing coats: Timonox Acrylic Eggshell.
- Application: Roller.
 - Number of coats: 2.
- Fire rating: Class O.
- Colour: To CA's approval from manufacturer's full range.

- Manufacturer: Sika Ltd. (Tel: 01707 394444).
 - Product code: PUR55
 - Product reference: Sikafloor –CureHard 24 (Clear Sodium Silicate).
- Surfaces: All blockwork & In situ RC not receiving other finishes.
 - Preparation: As clause 400 and manufacturer's recommendations.
- Finishing coats:
 - Number of coats: 2no. coats on clean, dry surface.

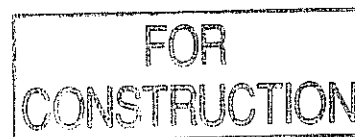
FOR
CONSTRUCTION

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- Manufacturer: Keim Mineral Paints Ltd (Tel: 01746 714543).
- Product reference: Biosil.
- Surfaces: Internal in situ RC not receiving other finishes.
- Preparation: As clause 400 and in accordance with manufacturer's recommendations.
- Finishing coats:
- Number of coats: 3.
- Application: Roller at a rate not less than 0.3 l/m².
- Colour: To CA's approval from manufacturer's full range.

184 FLOOR SEALANT

- Manufacturer: Tremco (Tel: 01753 691696).
- Product reference: Drycote 100.
- Location: All plantroom and unfinished floors.
- Surfaces: Screed as clause M10/120 or insitu concrete.
- Preparation: As clause 400; initial prime as recommended by manufacturer.
- Finishing coats:
- Type: Drycote 100.
- Number of coats: 2 full coats.
- Colour: Grey (BS 18-B-23).
- Other requirements: Non slip finish at 250g/m² light texture of fine aggregate.



186 DECORATIVE COATING TO CONCRETE TO BE LEFT EXPOSED:

- Manufacturer:
Keim Mineral Paints Ltd
Tel: 01746 714543
- Location: staircase soffits, strings, landings etc and all other areas shown on the drawings and schedules.
- Preparation: As clause 400 and in accordance with manufacturers recommendations:
- Pre-treatment: Keim Concrete Cleaner, brush applied diluted 1:5 with water, wash off after 3 hours
- Initial coat: dilute Concretal Lasur (70% Concretal Dilution / 30% Concretal Lasur)
- Top coats: Concretal Lasur.
- Application: brush and laid off with a lambswool roller
- Colour: to CA's approval from manufacturers full range
- Samples/trial areas: 2no trial areas 2sqm, 1no sample areas 2sqm, all located on the soffit of the basement slab, provide final sample/reference area prior to proceeding with the permanent coatings.

190 PROTECTIVE COATING TO GLASS

Location: all surfaces of external roof glass and frameless glass screens/ doors exposed to the atmosphere

Manufacture and reference:

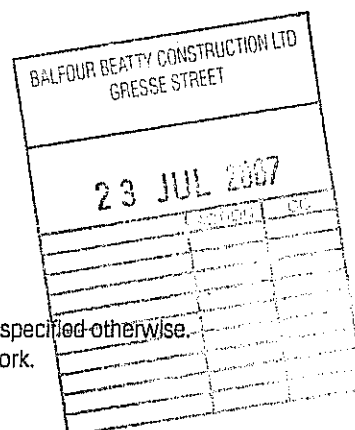
Ritec International Ltd

Tel: 020 8885 5155

Clear-Shield

Preparation: In accordance with manufacturers instructions

Application: prior to delivery of glass to site and prior to glazing into frames



GENERALLY

210 COATING MATERIALS

- Manufacturer: Obtain coatings from one only manufacturer for each type unless specified otherwise.
- Selected manufacturer: Submit name to CA before commencement of coating work.

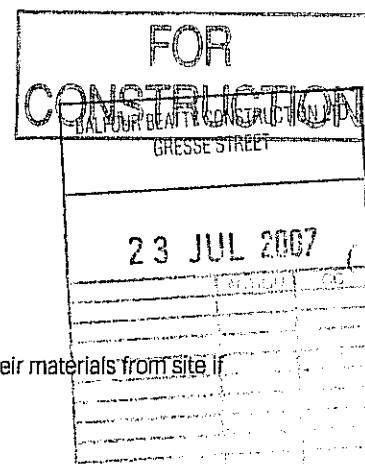
215 HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
- Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.
- Store materials in accordance with manufacturer's recommendations. Use in order of delivery and before expiry of any shelf life date.

220 COMPATIBILITY

- Coating materials selected by contractor:
- Recommended by their manufacturers for the particular surface and conditions of exposure.
- Compatible with each other.

- Compatible with and not inhibiting performance of preservative/ fire retardant pretreatments.
 - Inform the CA of any discrepancy in specification of coatings and obtain instructions before proceeding with application.
- 230 ANCILLARY SURFACES: The descriptions of areas to be coated given in schedules, etc. are of necessity simplified. All ancillary exposed surfaces and features are to be coated to match similar or adjacent materials or areas except where a fair faced natural finish is required or items are completely prefinished. In cases of doubt obtain instructions before proceeding.
- 270 OFF SITE WORK:
- All off site preparation and coating to be carried out under cover in a suitable environment with adequate lighting.
 - Store all items, both before and after coating, in a clean, dry area protected from the weather and mechanical damage, properly stacked with spaces to permit air circulation and prevent sticking of surfaces.
- 280 PROTECTION
- Adequately protect internal and external surfaces, fixtures and fittings which are not to be coated, by covering with dust sheets, masking or other suitable materials.
 - 'Wet paint' signs and barriers: Provide where necessary to protect other operatives and the general public, and to prevent damage to freshly applied coatings.
- 290 TESTING OF VISCOSITY, ETC
- The CA may, with discretion, take samples of materials from each manufacturing batch as follows:
- Unopened containers, or samples from previously unopened containers, for submission to manufacturer for comparison with manufacturer's own retained samples from the same batch.
 - Unopened containers, or samples from previously unopened containers, as a control sample for assessment of samples taken from painters' kettles.
 - Samples from painters' kettles for submission with control sample to manufacturer and/or independent testing laboratory for comparative testing.
- 300 CONTROL SAMPLES
- General: Carry out sample areas of finished work, including preparation, as follows:
Types of coating Nature of sample
All min 900mm in each direction
 - Approval of appearance: Obtain before commencement of general coating work.
- 310 SUPERVISED CONTROL SAMPLES
- General: Carry out sample areas of finished work, including preparation, as follows:
Types of coating Nature of sample
All min 900mm in each direction
 - Give notice: When each stage is ready for inspection.
 - Approval of appearance: Obtain before commencement of general coating work.
- 320 INSPECTION BY COATING MANUFACTURER
- General: Permit manufacturers to inspect the work in progress and take samples of their materials from site if requested.
- 321 INSPECTION OF WORK STAGES
- General: Inspection of the whole of the work at each of the stages may be made, at the discretion of the CA. Submit a programme for such inspections.
 - Give notice: When each stage is ready for inspection.
 - Do not proceed with subsequent stages of the work until authorised.

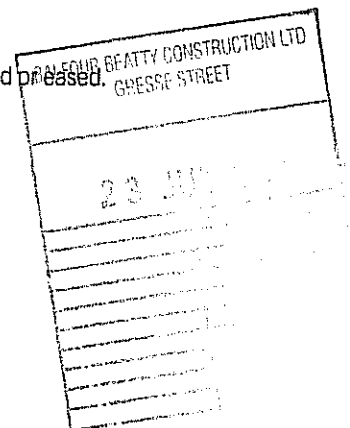


PREPARATION

- 400 PREPARATION GENERALLY
- Standard: To BS 6150, Section 4.
 - Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
 - Substrates: Sufficiently dry in depth to suit coating.
 - Efflorescence salts: Remove.
 - Dirt, grease and oil: Remove.

- Give notice if contamination of surfaces/ substrates has occurred.
 - Joints, cracks, holes and other depressions:
 - Fill with stoppers/ fillers. Work well in and finish off flush with surface.
 - Abrade to a smooth finish.
 - Water based stoppers and fillers:
 - Apply before priming unless recommended otherwise by manufacturer.
 - If applied after priming: Patch prime.
 - Oil based stoppers and fillers: Apply after priming.
 - Surface irregularities: Abrade to a smooth finish.
 - Dust, particles and residues from abrasion: Remove.
 - Doors, opening windows and other moving parts:
 - Ease before coating.
 - Prime resulting bare areas
 - Painted finishes to fair faced insitu concrete: fill, rub down and generally prepare to provide a finished, painted surface comparable with painted hard plaster.
- 410 SUITABILITY OF SURFACES AND CONDITIONS
- 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.
- 420 FIXTURES AND FITTINGS
- Before commencing work: Remove and set aside fixtures and fittings.
 - On completion of coating work: Refix.
- 425 IRONMONGERY
- Before commencing work: Remove ironmongery from surfaces to be coated.
 - Hinges: Do not remove.
 - On completion of coating work: Refix.
- 471 PREPRIMED TIMBER
- Defective primer: Abrade back to bare timber.
 - Bare areas: Reprime.
- 481 UNCOATED TIMBER
- General: Abrade to a smooth, even finish with arrises and moulding edges lightly rounded or eased.
 - Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
 - Resinous areas and knots: Apply two coats of knotting.
- 500 PREPRIMED STEEL
- Defective primer, corrosion and loose scale: Abrade back to bare metal.
 - Bare areas: Reprime as soon as possible.
- 511 GALVANIZED, SHERARDIZED AND ELECTROPLATED STEEL
- White rust: Remove.
 - Pretreatment: Apply one of the following:
 - 'T wash' / mordant solution to blacken whole surface.
 - Etching primer recommended by coating system manufacturer.
- 521 UNCOATED STEEL - MANUAL CLEANING
- Oil and grease: Remove.
 - Corrosion, loose scale, welding slag and spatter: Abrade to remove.
 - Residual rust: Treat with a proprietary removal solution.
 - Primer: Apply as soon as possible.
- 531 UNCOATED STEEL - BLAST CLEANING
- Oil and grease: Remove.
 - Blast cleaning:
 - Atmospheric conditions: Dry.
 - Abrasive: Suitable type and size, free from fines, moisture and oil.
 - Surface finish: To BS EN ISO 8501-1, preparation grade SA3
 - Primer: Apply as soon as possible and within four hours of blast cleaning.

FOR
CONSTRUCTION

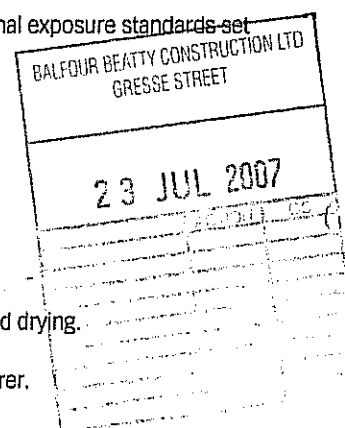


- 541 UNCOATED ALUMINIUM
- Surface corrosion: Remove and lightly abrade.
 - Pretreatment: Etching primer if recommended by coating system manufacturer.
- 560 UNCOATED CONCRETE
- Release agents: Remove.
- 570 UNCOATED MASONRY/ RENDERING
- Loose and flaking material: Remove.
- 580 UNCOATED PLASTER
- Nibs, trowel marks and plaster splashes: Scrape off.
 - Overtrowelled 'polished' areas: Abrade lightly.
- 590 UNCOATED PLASTERBOARD
- Depressions around fixings: Fill with stoppers/ fillers.
- 601 UNCOATED PLASTERBOARD - TO RECEIVE TEXTURED COATING
- Joints: Fill, tape and feather out with materials recommended by textured coating manufacturer.
- 622 ORGANIC GROWTHS
- Loose growths and infected coatings: Scrape off and remove.
 - Treatment biocide: Apply appropriate solution to growth areas and surrounding surfaces.
 - Dead growth: Scrape off and remove.
 - Residual effect biocide: Apply appropriate solution to inhibit re-establishment of growths.

FOR
CONSTRUCTION

APPLICATION

- 700 UNSUITABLE CONDITIONS:
- 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.
 - 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.
 - Unless it is specifically permitted by the coating manufacturer, do not apply coatings:
 - To surfaces affect by moisture, frost or airborne dust.
 - When the air or substrate temperature is below 5°C.
 - When the relative humidity is above 80%.
 - When heat is likely to cause blistering or wrinkling.
- 711 COATING GENERALLY
- Application standard: To BS 6150, Section 5.
 - Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
 - Surfaces: Clean and dry at time of application.
 - Thinning and Intermixing of coatings: Not permitted unless recommended by manufacturer.
 - Overpainting: Do not paint over intumescent strips or silicone mastics.
 - Priming coats:
 - Thickness: To suit surface porosity.
 - Application: As soon as possible on same day as preparation is completed.
 - Subsequent coats of the same pigmented material must be of a different tint to ensure that each coat provides complete coverage.
 - Keep brushes and equipment in a clean condition. Dispose safely of cleaning and waste materials; do not pour into sanitary appliances or drains.
 - Finish:
 - Even, smooth and of uniform colour.
 - Free from brush marks, sags, runs and other defects.
 - Cut in neatly. Do not splash or mark adjacent surfaces.
- 720 PRIMING JOINERY
- Preservative treated timber: Retreat cut surfaces before priming.
 - End grain: Liberally coat, allow to soak in and then recoat.



730 WORKSHOP COATING OF CONCEALED JOINERY SURFACES

- General: Apply coatings to all surfaces of components.

731 SITE COATING OF CONCEALED JOINERY SURFACES

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

740 CONCEALED METAL SURFACES

- General: Apply black bitumen coatings to BS3416, Type 1 to surfaces that will be concealed when fixed in place.

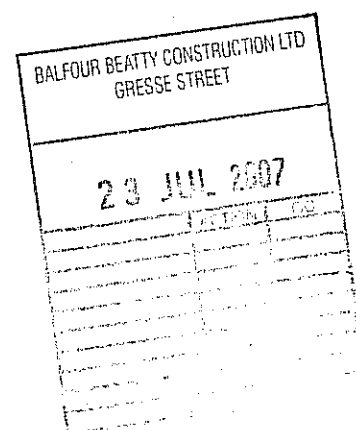
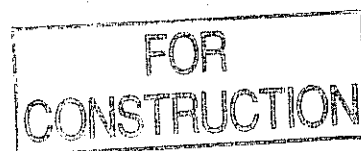
800 GLAZING

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

820 COMPLETION

- Ensure that opening lights and other moving parts move freely. Remove all masking tape and temporary coverings.

END

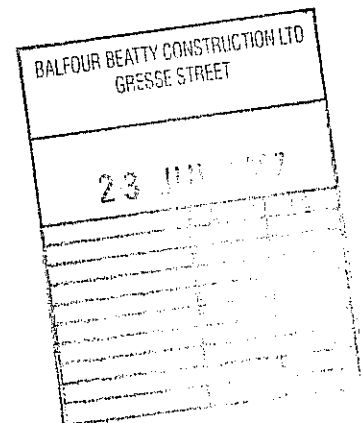


N10 GENERAL FIXTURES/ FURNISHINGS/ EQUIPMENT

To be read with Preliminaries/ General conditions.

PRODUCTS

- 290 MATWELL FRAMES
- Material: Grade 316 stainless steel.
 - Finish: Satin polished.
 - Angles:
 - Corners: Mitred and welded.
 - Matwell size: As specified on the drawings.
- 300 ENTRANCE MATTING
- Manufacturer: Bonar Floors Ltd. (Nuway) (Tel: 01773 744121).
 - Product reference: Nuway Tuftiguard Plain; Ref. TP-H-17-AL-2.
 - Colour: To CA's approval from manufacturer's full range.
 - Size: As specified on the drawings.
- 310 ENTRANCE MATTING (LOOSE-LAID)
- Supplier: UK Mats Ltd (Tel: 01494 444 568).
 - Product reference: Unicolour
 - Colour: To CA's approval from manufacturer's full range.
 - Size: As specified on the drawings.
 - Other requirements: Non-slip gripper backing.



EXECUTION

- 710 MOISTURE CONTENT
- Temperature and humidity: During delivery, storage, fixing and to handover maintain conditions to suit specified moisture contents of timber components.
 - Testing: When instructed, test components with approved moisture meter to manufacturer's recommendations.
- 720 INSTALLATION GENERALLY
- Fixing and fasteners: As section Z20.
- 740 TAPS
- Fixing: Secure, watertight seal with the appliance.
 - Positioning: Hot tap to left of cold tap as viewed by user of appliance.
- 750 WASTES/ OVERFLOWS
- Bedding: Waterproof jointing compound.
 - Fixing: With resilient washer between appliance and backnut.
- 760 SEALANT POINTING
- Material: Silicone based to BS 5889, Type B with fungicide.
 - Colour: To CA's approval.
 - Manufacturer and reference: As section Z22.
 - Application: As section Z22.
- 770 TRIMS
- Lengths: Wherever possible, unjointed between angles or ends of runs.
 - Running joints: Where unavoidable, obtain approval of location and method of jointing.
 - Angle joints: Mitred.
- 780 COMPLETION
- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.
 - Ironmongery: Checked, adjusted and lubricated to ensure correct functioning.
- END

N13 SANITARY APPLIANCES/FITTINGS

To be read with Preliminaries/General conditions.

TYPE(S) OF APPLIANCE/FITTING

126 WC PAN AND FLUSHING ARRANGEMENT:

- Sanitaryware supplier:
Alternative Plans
160-162 Notting Hill Gate
London W11 3QG
Tel: 0207 243 9747
www.alternative-plans.co.uk
- Type: Agape 'Pear', wall mounted pan with concealed low level cistern.
www.agapedesign.it
- Pan: 2-colour white ceramic / grey exterior Ref CER-895W, complete with fixing frame-ref-MET-315; installation kit etc
Seat: white seat and cover, sprung hinges
- Flushing arrangement: Grohe Rapid SL concealed cistern system for wall-hung WC, complete with all fittings including front wall brackets, integral access panel and Skate dual-flush CP push plate ref. 38506000.
- Flushing arrangement supplier:
Grohe Ltd
1 River Road
Barking,
Essex IG11 0HD
Tel: 0208 594 7292
www.grohe.co.uk
- Sealing: Silicon rubber jointing between pan/wall as clause 750.
- Other requirements: Grohe Rapid SL Skate single-flush CP raised push plate ref. 38564000 to accessible WCs.

128 WC PAN AND FLUSHING ARRANGEMENT TO ACCESSIBLE SHOWER ROOM:

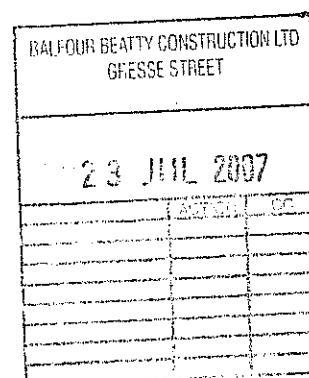
- Type: Back to wall floor mounted pan with concealed low level cistern.
- Pan: Twyford's Bathrooms Ltd (Tel: 01270 879777); Gallerie BTW (white) Ref. GR1438 WH.
Seat: Seat and cover (white) with CP metal top fixed hinges. Ref. GA7867 WH.
- Flushing arrangement: Spectrum 7.5 litre cistern and fittings including CP cistern lever.
- Sealing: Silicon rubber jointing between pan/floor, pan/wall as clause 750.

160 CLEANER'S STORE SINK:

- Type: Armitage Shanks
Tel: 01543 490253)
Reference: Angus SS sink with bucket grating Ref. 5409100.
- Taps: Barking Grohe.
- Trap: 1½" CP bottle trap Ref. 70198Q4.
- Other accessories: Civic Bibcock ½" + Petita Lever Handles Ref. 26933 & S. spout 200mm Ref. 13008, CP brass.
- Sealing: As clause 750.

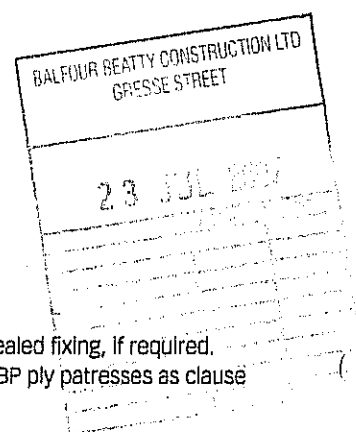
180 WALL HUNG WASH BASIN TO WCS (WALL-MOUNTED TAPS):

- Sanitaryware and tap supplier:
Alternative Plans
160-162 Notting Hill Gate
London W11 3QG
Tel: 0207 243 9747
www.alternative-plans.co.uk
- Type: Agape 'Pear' wall mounted basin
www.agapedesign.it
- Basin: 2-colour white ceramic / grey exterior Ref CER-895, supplied without tap holes complete with installation kit etc. Fitted with SS overflow collar Ref. MET-161, no chain stay.
- Taps: d38 concealed single lever basin mixer in polished CP; ref: 038.105.280. Available from Itfitz (Tel: 01628 520 998).
- Waste: Chrome plated brass strainer waste MET-346 / MET-416
- Trap: exposed CP bottle trap with 75mm seal.



- Other accessories: concealed hangers, toggle bolts and clips.
 - Sealing: As clause 750.
- 185 WALL HUNG WASH BASIN TO ACCESSIBLE WC
- Type: Armitage Shanks Portman 400mm, ref S2198 (white), central tap hole with over flow, no chain stay.
 - Taps: Grohe basin mounted mixer Ref: EuroStyle 33.558 without waste.
 - Waste: CP grating.
 - Trap: exposed CP bottle trap with 75mm seal.
 - Other Accessories: Ref S9151 concealed hangers, toggle bolts and clips
 - Sealing: As clause 750.
- 200 SHOWER SET
- Shower mixer: Grohe Eurostyle thermostatically controlled single lever mixer Ref 19507.000
 - Finish: chrome plated
 - Handset and wall rail: Grohe EuroStyle BIV set Ref 33568.000
 - Finish: chrome plated
 - Waste: CP grating.
 - Trap: floor mounted top access .
 - Sealing: As clause 750.
- 230 SHOWER UNITS:
- Tray: Kaldewei Duschplan steel enamel
 - Waste: chrome plated
 - Trap: upvc accessible from waste
 - Sealing: as clause 750.
 - Enclosure: Frameless glass door.
 - Manufacturer: Majestic Shower Co. Ltd. (Tel: 01279 443 644; www.majesticshowers.com)
 - Product reference: Straight screen Type P.
 - Glass: Toughened clear float
 - Hinges: Polished Grade 316 stainless steel
 - Size: special
 - Accessories: 450mm Grade 316 stainless steel double-D handle
- 231 SHOWER CURTAIN RAIL:
- Manufacturer: T. Savaker. Ltd. (Tel: 0121 331 1903; www.tsavaker.co.uk)
 - Product reference: G1805.
 - Material: 25mm dia. satin polished Grade 316 stainless steel tube
 - Size: special
 - Other requirements:
 - 19mm dia. satin polished Grade 316 stainless steel tube vertical support with concealed fixing, if required.
 - Ceiling / partition / wall panelling to be reinforced locally at rail fixing points with WBP ply patresses as clause K11/415 and secondary steelwork hanger within ceiling void.
- 310 SOAP DISPENSER:
- Manufacturer and reference: Allgood plc (Tel: 020 7387 9951); D Line Ref 14.7045.02.002.
- Material/finish: Satin polished ss.
- 340 TOILET ROLL HOLDER:
- Manufacturer and reference: Allgood plc; Modric 2431-PC Beefeater fixings
- Material/finish: Polished chrome
- 350 HANDRAIL/GRAB RAIL, SEAT & OTHER ACCESSORIES TO ACCESSIBLE WC/ SHOWER:
- Manufacturer:
- Higrade Hardware Ltd
Foundation House,
Fairacres Industrial Estate,
Dedworth Road,
Windsor, Berkshire,
SL4 4LE
T: 01753 866500
F: 01753 866550
Product Reference: Vieler

FOR
CONSTRUCTION



Equipment: selected from the manufacturers range in compliance with the drawings and statutory requirements, submit a schedule prepared by the supplier to the CA for approval prior to ordering

Material/finish: 18 gauge type 304 satin polished ss.

Other requirements:

Grab rail to rear of WC door: secret fix 30mm dia. pull handle without roses, ref. 240.

Material/finish: 18 gauge type 304 satin polished ss.

360 TOWEL DISPENSER/ BIN:

Manufacturer and reference: Allgood plc (Tel: 020 7387 9951); D line Washroom and Sanitary Panel Programme.

Material/finish: Satin ss front panels.

WORKMANSHIP

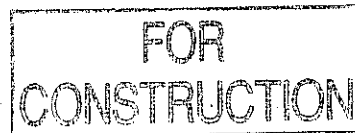
610 INSTALLATION GENERALLY:

- Assemble and fix appliances and accessories so that surfaces designed to falls drain as intended.
- Use nonferrous or stainless steel fastenings unless specified otherwise.
- Wherever possible, fix supply and discharge pipework before appliances. Ensure that appliances are fixed securely to structure and are not supported by pipework.
- When not specified otherwise, use jointing and bedding compounds recommended by the manufacturers of the appliances, accessories and pipes being jointed or bedded.
- Prevent use of appliances for any purpose until Practical Completion: Do not stand on appliances.
- On completion, check for damage and defects and test for satisfactory operation. Replace damaged or defective components and accessories. Check for, and rectify leaks. Remove labels/stickers and clean appliances thoroughly.

620 NOGGINGS/BEARERS: Ensure that noggings, bearers, etc. required to support sanitary appliances and fittings are accurately positioned and securely fixed.

630 TILED BACKGROUNDS (other than splashbacks): Ensure that:

- Tiling is complete before fixing appliances.
- Fixings do not overstress tiles.



650 WC PANS:

- Screw fix floor mounted pans and fit cover caps over screw heads. Unless specified otherwise, do not use mortar or other beddings.
- Ensure that seat and lid are stable when raised.

670 CISTERNS:

- Unless specified otherwise obtain cistern operating components from cistern manufacturer. Ensure that ball valve matches pressure of water supply.
- Fix at the height recommended by manufacturer unless otherwise specified or shown on drawings.
- Ensure that overflow pipe is fixed to falls, and located to give visible warning of discharge. Agree position with CA where not shown on drawings.

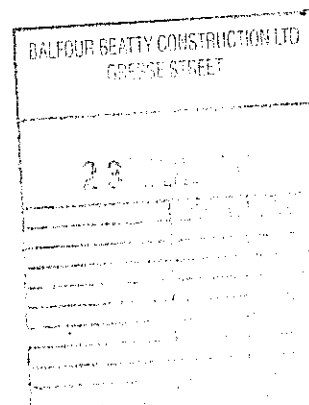
710 TAPS: Fix securely, making a watertight seal with the appliance. Place hot tap to left of cold tap as viewed by user of appliance.

720 WASTES/OVERFLOWS: Bed in waterproof jointing compound and fix with resilient washer between appliance and backnut.

750 SEALANT POINTING:

- Sealant: silicone based to BS 5889, Type B with fungicide.
- Manufacturer and reference: GE Bayer Sillicones (Tel: 01204 469090); silicone rubber.
- Colour: White.
- Application: As section Z22.

END



N15 SIGNS/ NOTICES

To be read with Preliminaries/ General conditions.

GENERAL

120 STATUTORY SIGNS RANGE

- Range: Unless specified otherwise, select signs from one manufacturer's range as far as possible.
- Signs not available in selected range: Submit proposals compatible in design, style, material, colour and finish.
- Inform and obtain approval of CA of selected range, manufacturer and/or supplier.

130 SAMPLES

- Sign types: (Refer to signage component drawing no. A3601):
Floor indicator numeral: type 1F.
Fire escape route directional sign type 2D.
Fire extinguisher cabinet sign type 5B.
Fire action sign type 6A.
Tenant directory board (single slot component).
All other signs as directed by the CA.
- Action: Submit samples.
- Timing: Retain samples on site until instructed to remove.

131 SAMPLES

- Sample board: Submit.
- Content: Selected signs, showing methods of fixing.
- Timing: Retain sample board on site until instructed to remove.

FOR
CONSTRUCTION

BALFOUR BEATTY CONSTRUCTION LTD
GRESSE STREET

23 JUL 2007

TYPES OF SIGNS

210 ESCAPE ROUTE SIGNS

- Standard: To BS 5499-1, -4 and -5.
- Manufacturer and reference: Bespoke design as indicated on signage component drawing no. A3601.
- Base material: Cast acrylic sheet.
 - Thickness: As specified on the drawings.
- Manufacturer: Degussa Ltd; Roehm Plexiglas Division (Tel: 01908 626200).
- Other requirements: Coloured screen printing as indicated on drawings.
- Fixing: Stainless steel ferrules as indicated on the drawings.

240 INTERNALLY ILLUMINATED ESCAPE ROUTE SIGNS

- Standard: To BS 5499-1, -3, -and -4.
- Manufacturer: Erco Lighting Ltd (Tel: 020 7408 0320).
- Product reference: From Erco edge-illuminated directive luminaire range.

270 TACTILE SIGNS FOR THE VISUALLY IMPAIRED

- Manufacturer and reference: To CA's approval.
- Base material: Satin polished ss.
 - Thickness: 1mm.
- Corners of rectangular rigid signs: Radiused.
- Surface: Nonreflective with maximum gloss factor of 15% when tested to BS 2782-5 or BS EN ISO 2813.
- Characters: Embossed between 1 and 1.5 mm with a stroke width that allows both sides of the character to be felt with the fingers at a single pass.
 - Font: To CA's approval.
 - Colour: To CA's approval.
 - Height: To CA's approval.
- Braille: English Standard located 6 mm below the bottom of the text with braille locator at left edge of sign.
- Fixing: Secret fix.

290 FLOOR INDICATOR NUMERALS

- Manufacturer and reference: Bespoke design as indicated on signage component drawing no. A3601.
- Base material: Water jet cut stainless steel.

FOR
CONSTRUCTION

[illegible]

- 0382A

- Other accessories: concealed hangers, toggle bolts and clips.
 - Sealing: As clause 750.
- 185 WALL HUNG WASH BASIN TO ACCESSIBLE WC
- Type: Armitage Shanks Portman 400mm, ref S2198 (white), central tap hole with over flow, no chain stay.
 - Taps: Grohe basin mounted mixer Ref: EuroStyle 33.558 without waste.
 - Waste: CP grating.
 - Trap: exposed CP bottle trap with 75mm seal.
 - Other Accessories: Ref S9151 concealed hangers, toggle bolts and clips
 - Sealing: As clause 750.
- 200 SHOWER SET
- Shower mixer: Grohe Eurostyle thermostatically controlled single lever mixer Ref 19507.000
 - Finish: chrome plated
 - Handset and wall rail: Grohe EuroStyle BIV set Ref 33568.000
 - Finish: chrome plated
 - Waste: CP grating.
 - Trap: floor mounted top access .
 - Sealing: As clause 750.
- 230 SHOWER UNITS: ✓
- Tray: Kaldewei Duschplan steel enamel
 - Waste: chrome plated
 - Trap: upvc accessible from waste
 - Sealing: as clause 750.
 - Enclosure: Frameless glass door.
 - Manufacturer: Majestic Shower Co. Ltd. (Tel: 01279 443 644; www.majesticshowers.com)
 - Product reference: Straight screen Type P.
 - Glass: Toughened clear float
 - Hinges: Polished Grade 316 stainless steel
 - Size: special
 - Accessories: 450mm Grade 316 stainless steel double-D handle
- 231 SHOWER CURTAIN RAIL:
- Manufacturer: T. Savaker, Ltd. (Tel: 0121 331 1903; www.tsavaker.co.uk)
 - Product reference: G1805.
 - Material: 25mm dia. satin polished Grade 316 stainless steel tube
 - Size: special
 - Other requirements:
 - 19mm dia. satin polished Grade 316 stainless steel tube vertical support with concealed fixing, if required.
 - Ceiling / partition / wall panelling to be reinforced locally at rail fixing points with WBP ply patresses as clause K11/415 and secondary steelwork hanger within ceiling void.
- 310 SOAP DISPENSER:
- Manufacturer and reference: Allgood plc (Tel: 020 7387 9951); D Line Ref 14.7045.02.002.
- Material/finish: Satin polished ss.
- 340 TOILET ROLL HOLDER:
- Manufacturer and reference: Allgood plc; Modric 2431-PC Beefeater fixings
- Material/finish: Polished chrome
- 350 HANDRAIL/GRAB RAIL, SEAT & OTHER ACCESSORIES TO ACCESSIBLE WC/ SHOWER:
- Manufacturer:
- Higrade Hardware Ltd
- Foundation House,
- Fairacres Industrial Estate,
- Dedworth Road,
- Windsor, Berkshire,
- SL4 4LE
- T: 01753 866500
- F: 01753 866550
- Product Reference: Vieler

Equipment: selected from the manufacturers range in compliance with the drawings and statutory requirements, submit a schedule prepared by the supplier to the CA for approval prior to ordering

Material/finish: 18 gauge type 304 satin polished ss.

Other requirements:

Grab rail to rear of WC door: secret fix 30mm dia. pull handle without roses, ref. 240.

Material/finish: 18 gauge type 304 satin polished ss.

360 TOWEL DISPENSER/ BIN:

Manufacturer and reference: Allgood plc (Tel: 020 7387 9951); D line Washroom and Sanitary Panel Programme.

Material/finish: Satin ss front panels.

WORKMANSHIP

610 INSTALLATION GENERALLY:

- Assemble and fix appliances and accessories so that surfaces designed to falls drain as intended.
- Use nonferrous or stainless steel fastenings unless specified otherwise.
- Wherever possible, fix supply and discharge pipework before appliances. Ensure that appliances are fixed securely to structure and are not supported by pipework.
- When not specified otherwise, use jointing and bedding compounds recommended by the manufacturers of the appliances, accessories and pipes being jointed or bedded.
- Prevent use of appliances for any purpose until Practical Completion. Do not stand on appliances.
- On completion, check for damage and defects and test for satisfactory operation. Replace damaged or defective components and accessories. Check for, and rectify leaks. Remove labels/stickers and clean appliances thoroughly.

620 NOGGINGS/BEARERS: Ensure that noggings, bearers, etc. required to support sanitary appliances and fittings are accurately positioned and securely fixed.

630 TILED BACKGROUNDS (other than splashbacks): Ensure that:

- Tiling is complete before fixing appliances.
- Fixings do not overstress tiles.

650 WC PANS:

- Screw fix floor mounted pans and fit cover caps over screw heads. Unless specified otherwise, do not use mortar or other beddings.
- Ensure that seat and lid are stable when raised.

670 CISTERNS:

- Unless specified otherwise obtain cistern operating components from cistern manufacturer. Ensure that ball valve matches pressure of water supply.
- Fix at the height recommended by manufacturer unless otherwise specified or shown on drawings.
- Ensure that overflow pipe is fixed to falls, and located to give visible warning of discharge. Agree position with CA where not shown on drawings.

710 TAPS: Fix securely, making a watertight seal with the appliance. Place hot tap to left of cold tap as viewed by user of appliance.

720 WASTES/OVERFLOWS: Bed in waterproof jointing compound and fix with resilient washer between appliance and backnut.

750 SEALANT POINTING:

- Sealant: silicone based to BS 5889, Type B with fungicide.
- Manufacturer and reference: GE Bayer Sillicones (Tel: 01204 469090); silicone rubber.
- Colour: White.
- Application: As section Z22.

END

N15 SIGNS/ NOTICES

To be read with Preliminaries/ General conditions.

GENERAL

120 STATUTORY SIGNS RANGE

- Range: Unless specified otherwise, select signs from one manufacturer's range as far as possible.
- Signs not available in selected range: Submit proposals compatible in design, style, material, colour and finish.
- Inform and obtain approval of CA of selected range, manufacturer and/or supplier.

130 SAMPLES

- Sign types: (Refer to signage component drawing no. A3601):
Floor indicator numeral: type 1F.
Fire escape route directional sign type 2D.
Fire extinguisher cabinet sign type 5B.
Fire action sign type 6A.
Tenant directory board (single slot component).
All other signs as directed by the CA.
- Action: Submit samples.
- Timing: Retain samples on site until instructed to remove.

BALFOUR BEATTY CONSTRUCTION LTD GRESSE STREET T2		
23 JUL 2007		
	ACTION	CC
PROJECT MANAGER		
PROJECT SUPERVISOR		
CONSET MANAGER		
CSM MANAGER		

131 SAMPLES

- Sample board: Submit.
- Content: Selected signs, showing methods of fixing.
- Timing: Retain sample board on site until instructed to remove.

TYPES OF SIGNS

210 ESCAPE ROUTE SIGNS

- Standard: To BS 5499-1, -4 and -5.
- Manufacturer and reference: Bespoke design as indicated on signage component drawing no. A3601.
- Base material: Cast acrylic sheet.
 - Thickness: As specified on the drawings.
- Manufacturer: Degussa Ltd; Roehm Plexiglas Division (Tel: 01908 626200).
- Other requirements: Coloured screen printing as indicated on drawings.
- Fixing: Stainless steel ferrules as indicated on the drawings.

FOR
CONSTRUCTION

240 INTERNALLY ILLUMINATED ESCAPE ROUTE SIGNS

- Standard: To BS 5499-1, -3, -and -4.
- Manufacturer: Erco Lighting Ltd (Tel: 020 7408 0320).
- Product reference: From Erco edge-illuminated directive luminaire range.

270 TACTILE SIGNS FOR THE VISUALLY IMPAIRED

- Manufacturer and reference: To CA's approval.
- Base material: Satin polished ss.
 - Thickness: 1mm.
- Corners of rectangular rigid signs: Radiused.
- Surface: Nonreflective with maximum gloss factor of 15% when tested to BS 2782-5 or BS EN ISO 2813.
- Characters: Embossed between 1 and 1.5 mm with a stroke width that allows both sides of the character to be felt with the fingers at a single pass.
 - Font: To CA's approval.
 - Colour: To CA's approval.
 - Height: To CA's approval.
- Braille: English Standard located 6 mm below the bottom of the text with braille locator at left edge of sign.
- Fixing: Secret fix.

290 FLOOR INDICATOR NUMERALS

- Manufacturer and reference: Bespoke design as indicated on signage component drawing no. A3601.
- Base material: Water jet cut stainless steel.

- Thickness: Minimum 2mm.
- Finish: Satin polished.
- Font: To CA's approval.
- Height: As specified on the drawings.
- Fixing: Concealed fixing comprising stainless steel ferrules as indicated on the drawings.
- Other requirements: 10mm stainless steel return edge to numeral; all welds fully ground down and polished.

300 TENANT DIRECTORY BOARD

- Manufacturer and reference: Bespoke design as indicated on signage component drawing no. A3601, and A3605.
- Base material: Water jet cut stainless steel.
- Finish: Satin polished.
- Thickness: As specified on the drawings.
- Font: To CA's approval.
- Height: As specified on the drawings.
- Fixing: Stainless steel blocks and dowels as indicated on the drawings.

305 STAINLESS STEEL NUMERALS

- Manufacturer: Allgood plc (Tel: 020 7387 9951).
- Product reference: D-line range; ref.14.6020.02.
- Material: Grade 316 stainless steel.
- Finish: Satin polished.
- Height: 150mm.
- Fixing: Concealed fixing with D-line 10mm stainless steel spacers.

FIXING SIGNS

410 FIXING SIGNS GENERALLY

- Fixing signs: Secure, plumb and level, using fixing methods recommended by manufacturer, unless specified otherwise.
- Fasteners/ Adhesives: As section Z20, unless specified otherwise.
- Strength of fasteners: Sufficient to support all live and dead loads.
- Fasteners for external signs: Corrosion resistant material or with a corrosion resistant finish. Isolate dissimilar metals to avoid electrolytic corrosion.
- Fixings showing on surface of sign: Must not detract from the message being displayed.

420 SIGNS FOR THE VISUALLY IMPAIRED

- Protection of users: Ensure that fasteners for tactile signs have no sharp edges or protrusions that would cause confusion or injury to users.

END

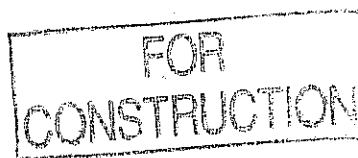
- Set out: With continuity to form a barrier to prevent water, snow and wind blown dust reaching the substrate.
- Fasteners: Galvanized, sherardized or stainless steel large head nails or stainless steel staples.
- Lapped joints: Minimum 100 mm horizontally and 150 mm vertically, to shed water away from substrate and structure.
- Openings: Lap over and fix to reveals.
- Bottom edges: Lapped over flashings, sills, etc. to allow free drainage to the exterior.
- Ensure that membrane extends below lowest timber member and into reveals of openings.
- Penetrations: Sealed.

400 FLEXIBLE STRIP JOINT FILLER

- Manufacturer: Alfes Industries Limited (Compriband Ltd): (Tel: 0191 417 8700).
- Product reference: Compriband V or Fakband V to elements of external envelope.

410 FLEXIBLE CAVITY BARRIERS

- Fire resistance to BS 476-20 (Integrity/ Insulation): 60 minutes unless stated otherwise.
- Material: Mineral fibre.
- Manufacturer: Rockwool Ltd (Tel: 01656 862621).
- Product reference: Rockwool Fire Barrier.
- Installation requirements:
 - Spacing: Installed to subdivide the void into areas not exceeding 20m in any direction.
 - Fixing: Secure at perimeters and joints with no gaps, to provide a complete barrier to smoke and flame.



415 FLEXIBLE FIRE STOPPING TO COMPARTMENT WALL PERIMETERS

- Approved manufacturers and reference: or equivalent (see clause A31/200):
Rockwool Ltd (Tel: 01656 862621): Conlit Firestop 2 and Firestop 3A/3B material in conjunction with intumescent emulsion coating both sides for cold smoke sealing.
PFC Corofil Fire Stop Products (Tel: 020 8391 0533): Cavity Firestop System: C144 Firestop Strip and C144 Firestop Blocks, in conjunction with intumescent emulsion coating both sides for cold smoke sealing.
- Cut to fit tightly, fix securely as detailed along all edges and wire or staple together all joints to provide a complete barrier to smoke and flame. Apply two coats of intumescent emulsion both sides with minimum 25mm overlaps at perimeters.

418 FIRE STOPPING CEMENT:

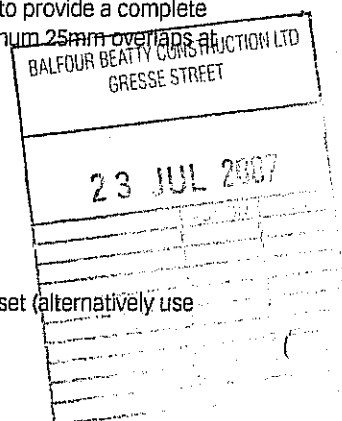
- Approved manufacturers and reference: or equivalent (see clause A31/200).
Nullifire Ltd. (Tel: 024 7685 5000): System B (fire stop compound): B240.
Quelfire Ltd. (Tel: 0161 928 7308): System QF1, QF2 or QF4 (fire protection compound).
PFC Corofil Fire Stop Products (Tel: 020 8391 0533): Firestop Compound.
- Wrap penetrating pipes exceeding 12mm dia in 8mm glass wool.
- Shutter prior to placing cement, remove shutters and make good within 12 hours of cement set (alternatively use permanent mineral fibre shuttering).
- Use in accordance with manufacturers instructions.

421 FIRE STOPPING:

- Approved manufacturers and reference: or equivalent (see clause A31/200)
Nullifire Ltd. (Tel: 024 7685 5000): System B (mineral fibre batts with intumescent coating): B735/B747.
Quelfire Ltd. (Tel: 0161 928 7308): SS System (mineral fibre batts with intumescent coating).
PFC Corofil Fire Stop Products (Tel: 020 8391 0533): Firewall C144, Coated Panel System (where used with intumescent coating).
- Use with protected independant support system in all cases. Collapse of fire stopped element should not dislodge fire stop system.

425 SPRAYED FIRE PROTECTION TO EXISTING SOFFITS

- Location: Existing reinforced concrete/ clinker concrete soffits.
- Manufacturer and reference:
Cafco International (Tel: 01773 837900): Spraydon FG, or Mandolite CP2.
- Required fire resistance: 1 hour minimum.
- Sprayed protection: Before commencing works on site, obtain the approval of the structural engineer, and undertake site tests, to ensure that moisture content of the sprayed protection will not adversely affect existing clinker. Ensure that holes in the external lining for pipes, cables, etc. are sealed. Spray to full depth of wall studs and remove residual material before fixing wall lining.
- Ensure that electric cables, which will be covered by protection, have been sized accordingly.



- 430 WIRED MINERAL WOOL SMALL CAVITY BARRIERS
- Material: Wire reinforced mineral wool minimum 50 mm thick.
 - Installation requirements:
 - Fasteners: Staples at maximum 150 mm centres, fold if necessary to ensure a tight fit.
 - Joints and intersections: Closely butted, no gaps.
- 440 FIRE STOPPING
- Imperfections of fit between building elements that are required to have fire resistance and/ or resist the passage of smoke: Seal.
 - Gaps: Where not specified otherwise, tightly packed gaps with mineral wool.
- 450 INTUMESCENT SEALANT
- Fire resistant joint filler to be installed to manufacturers' instructions.
 - Approved systems supplied by: or equivalent (see clause A31/200).
 Quelfire Ltd. (Tel: 0161 928 7308): Intumescent mastic system.
 Nullifire Ltd. (Tel: 024 7685 5000): System M (Intumescent mastic): M701/M703.
 - Sealant colour: To CA's approval.
 - Thickness: To suit joint width as directed by manufacturer.
 - Fire resistance period: Compatible with designated fire resistance of wall/ floor.
 - Insert into place in open joint. Install with accessories or adhesives where recommended by manufacturer to achieve required fire/ smoke seal.
- 455 COMPRESSIBLE INTUMESCENT SHEET
- Manufacturer and reference: Nullifire Ltd. (Tel: 024 7685 5000): System J2000.
- 460 FLEXIBLE INTUMESCENT SEALANT
- Manufacturer and reference: Nullifire Ltd. (Tel: 024 7685 5000): System M: M701/M703.

END

FOR CONSTRUCTION		
BALFOUR BEATTY CONSTRUCTION LTD GRESSE STREET		
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110 SOFTWOOD/ HARDWOOD/ MDF SKIRTINGS AND CILL BOARDS FOR PAINTING

- Quality of wood and fixing: To BS 1186-3.
 - Class: 1.
- Moisture content at time of fixing: 8 to 12%.
- Medium Density Fibreboard: Moisture Resistant painting grade.
- Profile: As shown on the drawings.
 - Finished size: As shown on the drawings.
- N.B. Treated softwood is specified in clause G20/270.
- Finish: Painted as clause M60/152.

N.B. Treated softwood is specified in clause G20/270.

- Finish: Painted as clause M60/152.

120 HARDWOOD ARCHITRAVES, SKIRTINGS AND HANDRAILS INTERNALLY FOR CLEAR FINISHING

- Quality of wood and fixing: To BS 1186-3.
 - Species: Air dried seasoned English Oak selected and approved by CA.
 - Class: CSH.
- Moisture content at time of fixing: 8% to 12%.
- Profile: As shown on the drawings.
 - Finished size: As shown on the drawings.
- Finish: As clause M60/158.

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141 ALUMINIUM LINEAR BAR GRILLE

- Manufacturer:
Brooke Air Ltd (Tel: 01268 572266; www.brookeair.co.uk) or equal and approved.
- Product reference: Linear bar grille.
- Material: Aluminium alloy.
- Finish: Polyester powder coated as M60/145.
- Colour: To CA's approval, from manufacturer's full range of colours.
- Fixing: Recessed (flangeless) frame secret fixed to PPC finish aluminium angle carrier frame.
- Metalwork: As section Z11.
- Other requirements:
Curved grille panels as indicated on the drawings.
Blanking plate to riser side of grilles; blanking plate to be painted matt black.

150 STAINLESS STEEL SKIRTINGS AND CORNER GUARDS

- Material: Grade 304 stainless steel.
- Thickness: 16swg unless specified otherwise.
- Finish: Satin polished, grit to CA's approval.
- Fixing: Concealed.
- Metalwork: As section Z11.

151 STAINLESS STEEL SHELF TO WCS

- Material: Grade 316 stainless steel.
- Thickness: 3mm minimum.
- Finish: Satin polished, grit to CA's approval.
- Fixing: Concealed.
- Metalwork: As section Z11.

152 STAINLESS STEEL ANGLE TRIMS

- Material: Grade 316 stainless steel.
- Thickness: 5mm minimum unless specified otherwise.
- Finish: Satin polished, grit to CA's approval.
- Fixing: Concealed.
- Metalwork: As section Z11.

155 ALUMINIUM TRIMS

- Material: Extruded aluminium alloy.
- Thickness: Minimum 5mm thick unless specified otherwise.
- Finish: Silver anodised as H11/840.

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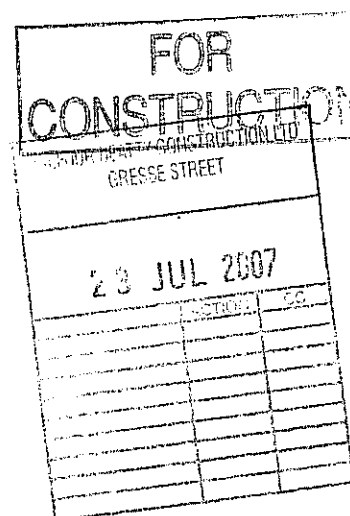
- Fixing: As shown on the drawings.
 - Metalwork: As section Z11.
- 156 ALUMINIUM TRIMS TO WCS
- Material: Extruded aluminium alloy.
 - Thickness: Minimum 6mm thick unless specified otherwise.
 - Finish: Anodised as H11/840.
 - Colour: Gold anodised, to CA's approval, from anodiser's full range of colours, including non-standard
 - Fixing: Secret fixed, as shown on the drawings.
 - Metalwork: As section Z11.

- 162 ALUMINIUM ROLL-UP FLOOR GRILLE
- Manufacturer: Dunham-Bush Ltd (Tel: 023 9247 7700); www.dunham-bush.co.uk.
 - Reference: Hydrocourse Trench
 - Material: Aluminium alloy.
 - Finish: Silver anodised AA5.
 - Accessories: Silver anodised aluminium edge trim frame to match grille blades.
 - Other requirements: Radial blades and curved trim frame to bespoke radii at curved corner areas.
 - Metalwork as clause Z11.

INSTALLATION

- 510 INSTALLATION GENERALLY
- Joinery workmanship: Unless specified as section Z10.
 - Metal workmanship: Unless specified as section Z11.
 - Methods of fixing and fasteners: Unless specified as section Z20.
 - Straight runs: To be in one piece, or in long lengths with as few joints as possible.
 - Running joints: Location and method of forming to be agreed where not detailed.
 - Joints at angles: Mitre unless shown otherwise.
 - Position and level: To be agreed where not detailed.
 - Moisture content of timber and wood based board: To be maintained during storage and installation within the range specified for the component.

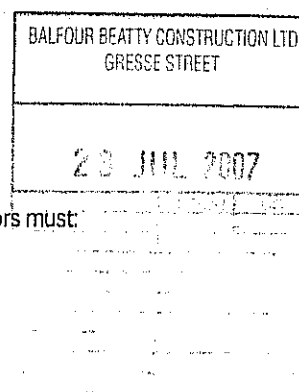
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- 330 NUMBER OF DOOR HINGES
- Provide three butt hinges to each leaf unless specified otherwise.

DOOR OPERATING DEVICES

- 410 OVERHEAD DOOR CLOSERS GENERALLY
- Standard: To BS EN 1154.
 - Door closing devices to fire/ smoke control doors: CE marked.
 - Manufacturer and reference: As clause 121.
 - Power size: Matched to size, weight, fire resistance and location of doors, and in accordance with BS EN 1154 Table 1.
 - Casing finish: As clause 121.
 - Operational adjustment:
 - Variable power: Matched to size, weight and location of doors.
 - Latched doors: Override latches and/ or door seals when fitted.
 - Unlatched doors: Hold shut under normal working conditions.
 - Closing against smoke seals of fire doors: Positive. No gaps.



- 421 OVERHEAD CLOSERS FOR FIRE DOORS
- In addition to the general requirements for closers, overhead closers for fire resisting doors must:
 - Hold a current Certifire certificate.
 - Be fixed on the opening face of the door unless specified otherwise.
 - Have no mechanical hold open facility.
 - Close positively against smoke seals where fitted.
 - Have arms of iron, steel or other metal with melting point not less than 800 °C.
- 440 SURFACE MOUNTED CLOSERS
- To be mounted on opening face of door except where they will be obstructed or where specified otherwise.

- 450 FLOOR SPRINGS GENERALLY
- Standard: To BS EN 1154.
 - Door closing devices to fire/ smoke control doors: CE marked.
 - Manufacturer and reference: Dorma UK Ltd, Door Controls Division (Tel: 020 8558 8411).
 - Material/ finish: As clause 121.
 - Operational adjustment:
 - Variable power: Matched to size, weight and location of doors.
 - Latched doors: Override latches and/ or door seals when fitted.
 - Unlatched doors: Hold shut under normal working conditions.
 - Closing against smoke seals of fire doors: Positive. No gaps.



- 460 FLOOR SPRINGS FOR FIRE DOORS
- In addition to the general requirements for floor springs, floor springs for fire resisting doors must:
 - Be types included in successful tests to BS 476-22 of door assemblies similar to those for which the floor springs are proposed. Submit evidence of testing by an approved laboratory.
 - Have no mechanical hold open facility.
 - Close positively against smoke seals where fitted.
- 470 ELECTROMAGNETIC HOLD OPEN DEVICES (MAINS VOLTAGE)
- Manufacturer and reference: To CA's approval.
 - Material/ finish: As clause 121.
 - Means of release: Alarm system and/ or failure of power supply.
 - Test switch: Located in a convenient position adjacent to door.
 - Other requirements: To comply with BS 5839-3.
- 471 ELECTROMAGNETIC HOLD OPEN/ SWING-FREE DEVICES (24 V)
- Standard: To BS EN 1155.
 - Electromagnetic devices to fire/ smoke control doors: CE marked.
 - Manufacturer and reference: To CA's approval.
 - Material/ finish: As clause 121.
 - Means of release: Alarm system and/ or failure of power supply.

- Test switch: Located in a convenient position adjacent to door.
- Operational adjustment of integral closer:
 - Variable power: Matched to size, weight and location of doors.
 - Latched doors: Override latches and/ or door seals when fitted.
 - Unlatched doors: Hold shut under normal working conditions.

481 DOOR CO-ORDINATORS

- Standard: To BS EN 1158.
 - Door co-ordinators to fire/ smoke control doors: CE marked.
- Manufacturer and reference: To CA's approval.
- Material/ finish: As clause 121.
- Application: To all single swing double doors with rebated meeting stiles and fitted with self closers.
- Selection criteria: Provide types that:
 - Require the minimum amount of material to be removed from the door and frame.
 - Are suitable for the size of rebates.
- Application: To all single swing double doors with rebated meeting stiles and fitted with self closers.
- Selection criteria: Provide types that:
 - Require the minimum amount of material to be removed from the door and frame.
 - Are suitable for the size of rebates.
 - Are from the same range as the closers and are of matching finish and colour.

DOOR SECURING DEVICES

515 LOCKS GENERALLY

- Standard: To BS 5872.
 - Category: B.
- Manufacturer and reference: As clause 121.
- Material/ finish: As clause 121.

540 LATCHES

- Standard: To BS 5872.
 - Category: B.
- Manufacturer and reference: As clause 121.
- Material/ finish: As clause 121.
- Latch spring strength: Select to prevent unsprung lever handles drooping.

550 LOCKS/LATCHES FOR FIRE RESISTING DOORS

- Must not compromise the fire performance of the door and must be approved for the purpose by the door leaf manufacturer.
- Components critical to the retention of the door in a closed position must not have a melting point lower than 800 °C.

560 ESCAPE LOCKS

- Locks specified for security purposes on escape routes must be fitted with a means of withdrawing the bolt without use of a key.

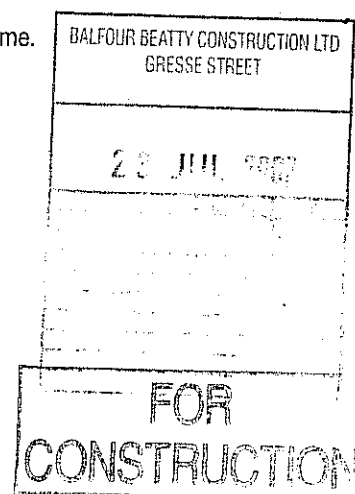
571 EMERGENCY EXIT DEVICES

- Standard: To BS EN 179.
 - Emergency exit devices for locked doors on escape routes: CE marked.
- Manufacturer and reference: As clause 121.
- Material/ finish: As clause 121.

577 PANIC EXIT DEVICES

- Standard: To BS EN 1125.
 - Panic exit devices for locked doors on escape routes: CE marked.
- Manufacturer and reference: As clause 121.
- Material/ finish: As clause 121.

578 EMERGENCY EXIT DEVICES FOR FIRE DOORS



- Type included in successful tests to BS 476- 22 of door assemblies similar to those for which the closers are proposed. Submit evidence of testing by an approved laboratory.

582 BOLTS GENERALLY

- Standard: To BS EN 12051.
- Unless specified otherwise, provide bolts:
 - To match door furniture and sized to suit height, weight and function of door.
 - To secure the first closing leaf on double doors.

586 PRIVACY INDICATOR BOLTS

- Manufacturer and reference: As clause 121.
- Material/ finish: As clause 121.
- Emergency release facility: Required.

END

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210 PURPOSE MADE JOINERY

To be read with Preliminaries/ General conditions.

110 FABRICATION

- Standard: To BS 1186-2.
- Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
- Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Joints: Tight and close fitting.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes.
 - Screws of 8 gauge or more and screws into hardwood: Provide clearance holes.
 - Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.

120 CROSS SECTION DIMENSIONS OF TIMBER

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

130 PRESERVATIVE TREATED WOOD

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

140 MOISTURE CONTENT

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

210 LAMINATED PLASTICS VENEERED BOARDS/ PANELS

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

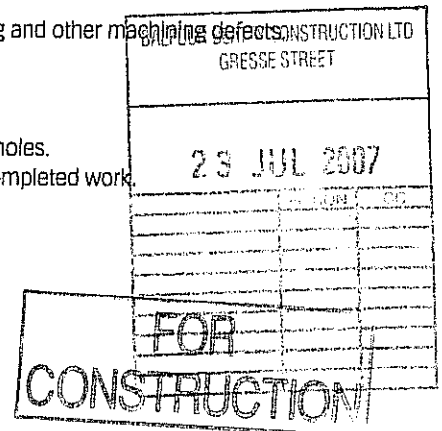
220 WOOD VENEERED BOARDS/ PANELS

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

250 FINISHING

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

END



110 MATERIALS GENERALLY

- 120 FABRICATION GENERALLY

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130 COLD FORMED WORK

- 140 ADHESIVE BONDING

- 150 THERMAL CUTTING OF STAINLESS STEEL

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porosity or cracks,
weld spatter.

170 WELDING/ BRAZING GENERALLY

- 180 WELDING OF STEEL

- 190 WELDING OF STAINLESS STEEL

- 200 WELDING OF ALUMINIUM ALLOYS

- 220 BRAZING

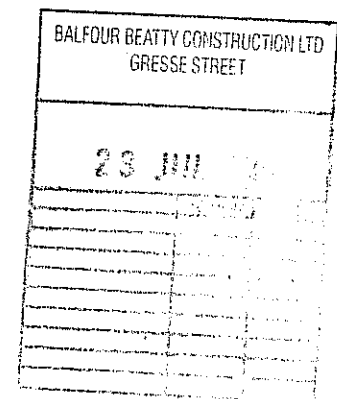
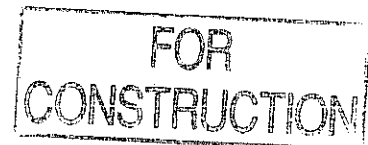
- 230 BRONZE WELDING

- 250 FINISHING WELDED/ BRAZED JOINTS VISIBLE IN COMPLETED WORK

- Z11/1

- 310 PREPARATION FOR APPLICATION OF COATINGS
- General: Fabrication complete, and fixing holes drilled before applying coatings.
 - Paint, grease, flux, rust, burrs and sharp arrises: Removed.
 - Make good all defects which would show after application of coating, and finish surfaces smooth.
- 320 LIQUID ORGANIC COATING FOR ALUMINIUM ALLOY COMPONENTS
- Standard: To BS 4842.
- 340 ZINC/ CADMIUM PLATING OF IRON AND STEEL SURFACES
- Standard: To BS EN 12329/ BS EN 12330.
- 350 CHROMIUM PLATING
- Standard: To BS EN 12540.
- 360 GALVANIZING
- Standard: To BS EN ISO 1461.
 - Vent and drain holes: Provide in approved locations and seal to approval after galvanizing.
- 370 VITREOUS ENAMELLING OF STEEL SURFACES
- Standard: To BS 3830.
- 380 ANODIZING
- Standards:
 - Internal applications: To BS EN 12373-1.
 - External applications: To BS 3987 or BS EN 12373-1.
 - Certificate of compliance: Submit.
- CONST

END



Z12 PRESERVATIVE/ FIRE RETARDANT TREATMENT

To be read with Preliminaries/ General conditions.

110 TREATMENT APPLICATION

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

120 COMMODITY SPECIFICATIONS

- Standard: Current edition of the British Wood Preserving and Damp-proofing Association (BWPDA) Manual.

130 PRESERVATIVE TREATMENT SOLUTION STRENGTHS/ TREATMENT CYCLES

- General: Select to achieve specified service life and to suit timber treatability.

150 CCA PRESERVATIVE TREATMENT

- Solution: Based on oxides of copper, chromium and arsenic.
 - Manufacturer and reference: To CA's approval.
 - Application: High pressure impregnation.
- Moisture content of timber at time of treatment: Not more than 28%. After treatment, allow timber to dry for at least 14 days before using.

160 ORGANIC SOLVENT PRESERVATIVE TREATMENT

- Solution:
 - Manufacturer and reference: To CA's approval.
 - Application: Double vacuum + low pressure impregnation.
- Moisture content of timber at time of treatment: As specified for the timber/ component at time of fixing. After treatment, timber to be surface dry before use.

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220 LEACH RESISTANT FIRE RETARDANT TREATMENT

- Solution:
 - Manufacturer and reference: To CA's approval.
 - Application: Vacuum + pressure impregnation.
- Moisture content of timber at time of treatment: As specified for the timber/ component at time of fixing.

END

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	LOCATION	NO.

Z20 FIXINGS/ADHESIVES

To be read with Preliminaries/General conditions.

- 110 **FIXING GENERALLY:** Use fixing and jointing methods and types, sizes, quantities and spacings of fasteners which are suitable having regard to:
- Nature of and compatibility with product/material being fixed and fixed to,
 - Recommendations of manufacturers of fasteners and manufacturers of components, products or materials being fixed and fixed to,
 - Materials and loads to be supported,
 - Conditions expected in use,
 - Appearance, this being subject to approval.
- 120 **FASTENERS** for materials and components forming part of external construction to be of corrosion resistant material or have a corrosion resistant finish.
- 130 **FASTENERS** for materials and components:
- Forming part of external construction but not directly exposed to the weather to be of corrosion resistant material or have a corrosion resistant finish.
 - Directly exposed to the weather to be of corrosion resistant material.
- 140 **FIXING THROUGH FINISHES:** Ensure that fasteners and plugs (if used) have ample penetration into the backing material.
- 150 **PACKINGS:**
- Provide suitable, tight packings at fixing points to take up tolerances and prevent distortion.
 - Use noncompressible, rot proof, noncorrodible materials positioned adjacent to fixing points.
 - Ensure that packings do not intrude into zones that are to be filled with sealant.
- 160 **CRAMP FIXING:**
- When not specified otherwise, position cramps not more than 150 mm from each end of frame sections and at 600 mm maximum centres.
 - Secure cramps to frames with matching screws as masonry work proceeds, and fully bed in mortar.
- 170 **NAILING:**
- Nails: To BS 1202.
 - In joints, use not less than two nails and opposed skew nailing unless specified otherwise.
 - Drive nails fully in without splitting or crushing the material being fixed.
 - Punch nail heads below surfaces that will be visible in the completed work.
- 180 **MASONRY NAILS:** Do not use without approval.
- 210 **PLUGS:**
- Proprietary types selected to suit the background, loads to be supported and conditions expected in use.
 - Locate plugs accurately in correctly sized holes in accordance with manufacturer's recommendations.
- 220 **SCREW FIXING:**
- Screws: To BS 1210.
 - 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.
 - Before using brass, aluminium or other soft metal wood screws precut the thread with a matching steel wood screw.
 - Do not hammer screws unless specifically designed to be hammered.
 - Drive countersunk heads flush with timber surface, or not less than 2 mm below it if they are to be stopped.
 - Washers and screw cups, where specified, to be of the same material as the screw.
- 230 **PELLETING:** Countersink screw heads 6 mm below timber surface and glue in grain-matched pellets not less than 6 mm thick, cut from matching timber. Pellets to occupy the whole depth of the holes and be finished off flush with surface.
- 240 **PLUGGING:** Countersink screw heads 6 mm below timber surface and glue in plugs. Plugs to occupy the whole depth of the holes and project from the surface.

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- 510 ADHESIVES:

- END

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Z22 SEALANTS

To be read with Preliminaries/ General conditions.

110 SEALANT TYPES: GENERAL

- Manufacturer: GE Bayer Silicones (Tel: 01204 469090).
- Product reference: Silpruf
- Other requirements: Allow for special/ non standard colours in all locations, except where specified otherwise.

120 SUITABILITY OF JOINTS

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

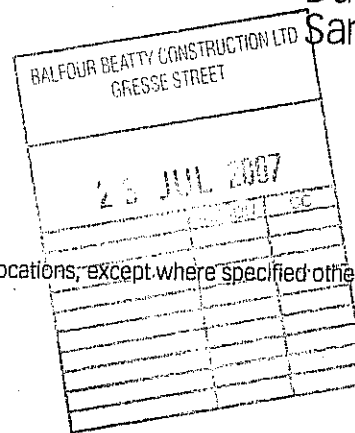
130 PREPARING JOINTS

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

160 APPLYING SEALANTS

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

END

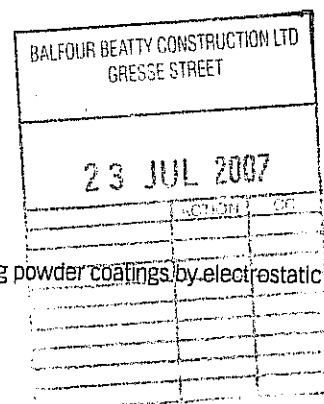


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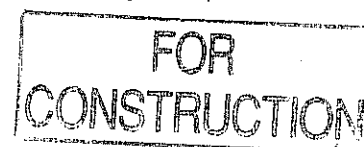
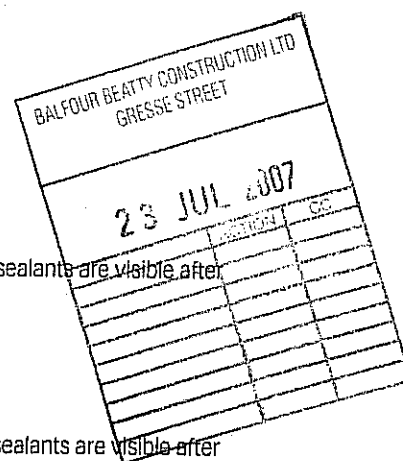
Z31 POWDER COATINGS

To be read with Preliminaries/ General conditions.

- 110 POWDER COATING
- This is invoked by reference in other sections. Details of powder coatings to components are given in clause(s): M60/145.
- 120 POWDER COATING MATERIALS
- Manufacturer: Obtain from a single manufacturer.
- 210 WORKING PROCEDURES
- Requirement: Comply with:
 - BS 6496 for aluminium alloy backgrounds.
 - BS 6497 for galvanized steel backgrounds.
 - British Coatings Federation: Code of safe practice - Application of thermosetting powder coatings by electrostatic spraying.
 - Powder coating manufacturer's guarantee.
- 220 POWDER COATINGS APPLICATORS
- Applicator requirements:
 - Approved by powder coating manufacturer.
 - Currently certified to BS EN ISO 9001.
 - Comply with quality procedures, guarantee conditions, standards and tests required by powder coating manufacturer.
 - Each applicator to use only one plant.
 - Selected applicator: Submit details before commencement of powder coating.
- 225 GUARANTEES
- Powder coating manufacturer and applicator guarantees:
 - Submit sample copies before commencement of powder coating.
 - Submit signed project specific copies on completion of work.
- 230 CONTROL SAMPLES
- Sequence: Prior to ordering materials for the works, obtain approval of appearance for:
 - Powder coated samples: Of various grades and forms of background metal to be used, showing any colour, texture and gloss variation.
 - Fabrication samples: Showing joint assembly, how powder coating is affected and how any cut metal edges are protected.
- 310 PRETREATMENT
- Condition of components to be powder coated:
 - Free from corrosion and damage.
 - Suitable for and compatible with the pretreatment and powder coating process.
 - Process: Clean, conversion coat, condition, rinse in demineralised water, drain and dry components in accordance with the powder coating manufacturer's requirements and the pretreatment supplier's recommendations.
- 430 EXTENT OF POWDER COATINGS
- Application: To visible component surfaces, and concealed surfaces requiring protection. Obtain approval of drawn proposals or schedules for component surfaces to receive powder coatings. Coated surfaces will be deemed 'significant surfaces' for relevant BS 6496/ BS 6497 performance requirements.
- 435 APPLICATION OF POWDER COATINGS
- Surfaces to receive powder coatings: Free from dust or powder deposits.
 - Completion of powder coatings: Within 48 hours of pre-treatment of components.
 - Jig points: Not visible on coated components.
 - Curing: Controlled to attain metal temperatures and hold periods recommended by powder coating manufacturer.
 - Stripping and recoating of components: Only acceptable by prior agreement of powder coating manufacturer. Stripping, pretreatment and powder coating are to be in accordance with manufacturer's requirements and must be carried out at applicator's plant.
 - Overcoating of components: Not acceptable.



- 440 PERFORMANCE AND APPEARANCE OF POWDER COATINGS
- Standard: To BS 6496/ BS 6497.
- 450 ALUMINIUM ALLOY FABRICATIONS
- Units may be assembled:
 - Before powder coating.
 - From components powder coated after cutting to size.
 - Where approved, from components powder coated before cutting to size.
 - Exposure of uncoated background metal: Not acceptable.
 - Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.
- 460 STEEL FABRICATIONS
- Unit assembly: Wherever practical, before powder coating.
 - Exposure of uncoated background metal: Not acceptable.
 - Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.
- 470 FIXINGS
- Exposed metal fixings: Powder coat together with components, or coat with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.
- 480 FABRICATION DAMAGE REPAIR/ REPLACEMENT
- Inspection: Check all components before delivery to site for damage to powder coatings. Report findings and proposed method of repair or replacement to the CA, and obtain approval before commencing remedial work.
 - Repair components with minor damage as soon as possible by cleaning, abrading and coating with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.
 - Replace components with major damage considered unacceptable for repair.
 - Stripping and recoating of components will only be acceptable by prior agreement of the powder coating manufacturer. Stripping, pretreatment and powder coating are to be in accordance with manufacturer's requirements.
 - Overcoating of components will not be acceptable. Submit proposals for repair or replacement.
- 510 PROTECTION
- Powder coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.
 - Protective coverings: Must be:
 - Resistant to weather conditions.
 - Partially removable to suit building in and access to fixing points.
 - Protective tapes in contact with powder coatings: Must be:
 - Low tack, self adhesive and light in colour.
 - Applied and removed in accordance with tape and powder coating manufacturers' recommendations. Do not use solvents to remove residues.
 - Inspection of protection: Carry out monthly. Promptly repair any deterioration or deficiency.
 - Remove protective coverings only when instructed by the CA.
- 520 PROTECTION OF MOCK-UPS/PROTOTYPES:
- Provide protection for mock-ups/prototypes of powder coated components.
 - Erect protection for mock-ups/prototypes in similar exposure conditions to their proposed installation and agree inspection procedures with the CA.
- 530 SITE DAMAGE REPAIR/ REPLACEMENT
- Damage to powder coatings: Rectify immediately damage caused during handling and installation, or by subsequent site operations. Submit proposals for extensive repair or replacement to the CA.
 - Repair components with minor damage by cleaning, abrading and coating with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.
 - Replace components with major damage considered unacceptable for repair.



540 COMPLETION

- Cleaning and maintenance of powder coatings: Carry out in accordance with procedures detailed in powder coating manufacturer and applicator guarantees.
- Duration: From removal of protection until Practical Completion.

END

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