

M50 RUBBER/ PLASTICS/ CORK/ LINO/ CARPET TILING/ SHEETING

To be read with Preliminaries/ General conditions.

15 CARPET TILING TO GROUP ROOM & LIBRARY/RESOURCE AREA

- Location: Refer to finishes schedule.
- Base: Screed
- Preparation:
 - Newly laid concrete floors: Clauses 410, 430, 450 (liquid dpm) and 460 (smoothing compound)
- Carpet tiles:
 - Manufacturer: Heckmondwike.
 - Product reference: Heckmondwike Supacord.
 - Type: Fibre bonded carpet tile.
 - BS EN 1307 classification:
 - Category: N.
 - Level of use class: Heavy contact.
 - Size: 500 x 500 mm.
 - Colour/ pattern: From the manufacturer's entire range
- Method of laying: Loose laid, fully adhere tiles with adhesive as Clause 640.
- Accessories: Gradus threshold strips, as Clause 740.

16 BARRIER CARPET TILING TO LOBBY

- Location: Refer to finishes schedule
- Base: Screed
- Preparation:
 - Existing floors: Clauses 420 and 460 (smoothing compound)
 - Existing floors to rooms where internal walls have previously been removed: Clauses 420, 450 (liquid dpm) and 460 (smoothing compound)
 - Newly laid floors: Clauses 410, 430, 450 (liquid dpm) and 460 (smoothing compound)
 - Carpet tiles: A range of 11mm thick bitumen backed 50 x 50 cm tiles manufactured with 100% polypropylene and bitumen backing.
- Manufacturer: Heckmondwike FB A Division of National Floorcoverings Ltd, Wellington Mills, Liversedge, West Yorkshire WF15 7FH. Tel: 01924 406161, Fax: 0800 136769 Email: sales@heckmondwike-fb.co.uk Web: www.heckmondwike-fb.co.uk
 - Product reference: Heckmondwike 'Battleship/Hippo' tile
 - Type: Raised Rib carpet tile
 - BS EN 1307 classification:
 - Category: N
 - Level of use class: Heavy Contract
 - Size: 500 x 500mm
- Method of laying: Loose laid, fully adhere tiles with adhesive as clause 640.
- Accessories: Gradus threshold strips, as Clause 740.

20 NON-SLIP VINYL SHEETING TO CORRIDOR, STORES, CHAIR STORE

- Location: Refer to floor finishes schedule
- Base: Varies.
- Preparation:
 - Newly laid concrete floors: Clauses 410, 430, 450 (liquid dpm) and 460 (smoothing compound 65mm depth)
 - Existing concrete floors: Clauses 420 and 460 (smoothing compound)

- Manufacturer: Polyflor Ltd, PO Box 3, Radcliffe New Road, Whitefield, Manchester, M45 7NR. Tel: 0161 767 1111, Fax: 0161 767 1128, E-mail: info@polyflor.com, Website: www.polyflor.com
 - Product reference: Polysafe 'Wood fx PUR' Vinyl floor covering with enhanced slip resistance.
 - BS EN 685 Class: 23/34/43
 - Width: 2000 mm.
 - Thickness: 2 mm.
 - Colour: To be confirmed from the manufacturers entire colour range.
 - Adhesive: As clause 641, to be specified by manufacturer, Polyflor.
 - Seam welding: All seams to be correctly grooved out and heat welded with matching Polyflor Ejecta weld rod. Final finish trimming to be carried out when the weld has cooled
 - Gradus threshold strips, as Clause 740
- 21 NON-SLIP SAFETY VINYL SHEETING TO KITCHEN, HYGIENE ROOM & CLEANER STORE
- Location: Refer to floor finishes schedule
 - Base: Varies.
 - Preparation:
 - Newly laid concrete floors: Clauses 410, 430, 450 (liquid dpm) and 460 (smoothing compound 65mm depth)
 - Existing concrete floors: Clauses 420 and 460 (smoothing compound)
 - Manufacturer: Polyflor Ltd, PO Box 3, Radcliffe New Road, Whitefield, Manchester, M45 7NR. Tel: 0161 767 1111, Fax: 0161 767 1128, E-mail: info@polyflor.com, Website: www.polyflor.com
 - Produce Reference: Polysafe 'Verona PUR' vinyl flooring containing safety aggregates to enhance slip resistance.
 - BS EN 685 Class: 23/34/43
 - Width: 2000 mm.
 - Thickness: 2 mm.
 - Colour: To be confirmed from the manufacturers entire colour range.
 - Adhesive: As clause 641, to be specified by manufacturer, Polyflor.
 - Seam welding: All seams to be correctly grooved out and heat welded with matching Polyflor Ejecta weld rod. Final finish trimming to be carried out when the weld has cooled
 - Accessories: Site-formed coving to be formed in conjunction with Polyflor Ejecta 'CF' Cove-Former and Ejecta 'CS' Capping Strips
 - Gradus threshold strips, as Clause 740
- 40 LAYING COVERINGS ON NEW WET LAID BASES
- Base drying aids: Not used for at least four days prior to moisture content test.
 - Base moisture content test: Carry out in accordance with BS 5325, Annex A or BS 8203, Annex A.
 - Commencement of laying coverings: Not until all readings show 75% relative humidity or less.
- 45 EXISTING FLOOR COVERING REMOVED
- Substrate: Clear of covering and as much adhesive as possible. Skim with smoothing compound to give smooth, even surface.
- 60 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.

65 LAYING COVERINGS

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

70 EDGINGS AND COVER STRIPS

- Manufacturer: Gradus Limited, Park Green, Macclesfield, Cheshire, SK11 7LZ
- Product Reference: FXR40/FXB336.
- Material/ finish: PVC: This is a ramp top, two-piece flooring transition profile from the Clip-Top fx range.
- Fixing: In accordance with manufacturer's instructions. Allow for bending neatly and uniformly to specified radii on site.
- Colour: TBC by CA.

85 WASTE

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

86 WORKMANSHIP GENERALLY

- All bases must be rigid, dry, sound, smooth and free from grease, dirt and contaminants before coverings are applied.
- Finished coverings must be accurately fitted, jointed as per manufacturer's instructions, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains.

M60 PAINTING/ CLEAR FINISHING

To be read with Preliminaries/ General Conditions.

COATING SYSTEMS

- 12 GLOSS PAINT TO NEW INTERNAL JOINERY
- Manufacturer: ICI Paints AkzoNobel, Wexham Road, Slough, Berkshire, SL2 5DS.
 - Product reference: Dulux Trade High Gloss
 - Surfaces: New internal joinery, i.e. doors, architraves, skirting's, etc.
 - Preparation: In strict accordance with appended Dulux specification.
 - Priming: Dulux Trade Wood Primer.
 - Number of coats: Prime overall with: 1 coat of Dulux Trade Wood Primer White.
 - Making good: In strict accordance with appended Dulux specification.
 - Undercoats: Dulux Trade Undercoat.
 - Number of coats: 1 coat of Dulux Trade Undercoat of selected shade.
 - Finishing coats: Dulux Trade High Gloss
 - Number of coats: 1 coat of Dulux Trade High Gloss of selected shade.
- 14 EGGSHELL PAINT TO NEWLY PLASTERED INTERNAL SURFACES
- Manufacturer: ICI Paints AkzoNobel, Wexham Road, Slough, Berkshire, SL2 5DS.
 - Product reference: Armstead Trade Durable Acrylic Eggshell
 - Surfaces: New plaster finished internal walls.
 - Preparation: In strict accordance with appended Dulux specification.
 - Priming: Armstead Trade Durable Acrylic Eggshell.
 - Number of coats: Prime overall with: 1 coat of Armstead Trade Durable Acrylic Eggshell of appropriate shade thinned up to 1 part clean water to 10 parts of product as appropriate.
 - Making good: In strict accordance with appended Dulux specification.
 - Finishing coats: Armstead Trade Durable Acrylic Eggshell.
 - Number of coats: 2 coats of Armstead Trade Durable Acrylic Eggshell of selected shade.
- 20 COATING MATERIALS
- Manufacturers: Obtain materials from ICI Paints AkzoNobel, Wexham Road, Slough, Berkshire, SL2 5DS.
 - Selected manufacturers: Submit names before commencement of coating work.
- 30 PREPARATION GENERALLY
- Standard: In accordance with BS 6150.
 - Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment, and reoccupation, and obtain approval before commencing work.
 - 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.
 - Surface irregularities: Remove.
 - Joints, cracks, holes and other depressions: Fill flush with surface, provide smooth finish.
 - Dust, particles and residues from preparation: Remove and dispose of safely.
 - 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.
 - Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 - Prime resulting bare areas.
- 32 PREVIOUSLY COATED SURFACES GENERALLY
- Preparation: In accordance with BS 6150, clause 11.5.
 - Contaminated or hazardous surfaces: Give notice of:
 - Coatings suspected of containing asbestos or other hazardous materials.
 - Significant rot, corrosion or other degradation of substrates.
 - Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
 - Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
 - Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
 - Alkali affected coatings: Completely remove.
 - Retained coatings:
 - Thoroughly clean.
 - Gloss coated surfaces: Provide key.
 - Partly removed coatings: Apply additional preparatory coats.
 - Completely stripped surfaces: Prepare as for uncoated surfaces.
- 35 FIXTURES AND FITTINGS
- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
 - Removal: Before commencing work remove: remove all fixtures and fittings affected by reason of the works, set aside and replace on completion.
 - Replacement: Refurbish as necessary, refit when coating is dry.
- 37 WOOD PREPARATION
- General: Provide smooth, even finish with lightly rounded arrises.
 - Degraded or weathered surface wood: Take back surface to provide suitable substrate.
 - Degraded substrate wood: Repair with sound material of same species.
 - Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
 - Resinous areas and knots: Apply two coats of knotting.
 - Defective primer: Take back to bare wood and reprime.
- 39 STEEL PREPARATION
- Corrosion and loose scale: Take back to bare metal.
 - Residual rust: Treat with a propriety removal solution.
 - Bare metal: Apply primer as soon as possible.
- 43 PLASTER PREPARATION
- Nibs, trowel marks and plaster splashes: Scrape off.
 - Overtrowelled 'polished' areas: Provide suitable key.
- 55 EXISITNG GUTTERS
- Dirt and debris: Remove from inside of gutters.
 - Defective joints: Clean and seal with suitable jointing material.
 - Suspected hazardous materials: Submit method statement.

61 COATING GENERALLY

- Application: In accordance with BS 6150, clause 9.
- 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.
- Finish:
 - Even, smooth and of uniform colour.
 - Free from brush marks, sags, runs and other defects.
 - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

75 BEAD GLAZING TO COATED WOOD

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

N10 GENERAL FIXTURES/ FURNISHINGS/ EQUIPMENT

To be read with Preliminaries/ General conditions.

PRODUCTS

30 SHELVING

- Manufacturer: Storage Solutions UK Tel: 01367 711 800 Fax: 01367 711 809 email: info@storagesolutions.co.uk Website: www.spurshelving.co.uk
- Product reference: Steel-Lok Heavy Duty polyester powder coated wall mounted adjustable shelving system.
- Components: Adjustable shelving system complete with wall mounted uprights at 800mm centres, heavy duty brackets and book supports.
- Shelving: 18mm Block board with 18mm rounded European selected hardwood lippings all exposed edges, pinned and glued.
- Finish/colour: Finish of Spur shelving to be confirmed by CA from entire manufacturers colour ranges. Shelving finish as delivered generally manufacturer's primer to receive 2 coat paint finish as specified in section M60

40 NOTICEBOARDS TO NURSERY CLASSROOM

- Type: Wall mounted .
- Use: Pinboard.
- Manufacturer: Sundeala Ltd .
 - Product reference: K Quality .
- Size: 2400x1200 .
- Fire resistance: Boards to be FRB coated.
- Board:
 - Covering finish/ Colour: TBC by School .
- Accessories/ Other requirements: Boards to be plugged and screwed to masonry walls using cups & screws at Max 500mm centres. Boards to be retained in the room to be fitted to allow to adjust to humidity and stop movement when fixed to walls.

41 ROLLER BLINDS – ALL NEW EXTERNAL WINDOWS

Manufacturer: Pentel Contracts Ltd, Dyer Street, off Ordsall Lane, Salford, Manchester M5 4TH. Phone: 0161 872 7642

Reference: Astralux 1000 Vertical Blind System.

Material: The solar shading system consists of aluminium headrail with flame retardant fabric louvres. Louvres can be tilted to accurately attenuate amount of light to enter space.

Operation: Manual cord and chain.

Material/Finish/Colour: Dim out material. Colour to be confirmed from the manufacturer's entire colour range.

Accessories: Supplied and installed by an approved Astralux distributor.

80 SEALANT BEDDING AND POINTING

- Application: As section Z22.

N13 SANITARY APPLIANCES AND FITTINGS

To be read with Preliminaries/ General conditions.

PRODUCTS

- 21 UNISEX DOC M PACK
- Manufacturer: Twyford Bathrooms, Lawton Road, Alsager, Stoke-on-Trent, ST7 2DF.
 - Product Reference: PK8185BE
 - Type approval certificate: LABC certificate, ref: Pending WRAS approved TRV3
 - Finish/Colour:
 - Pan: Avalon HO Pan (White Vitreous china)
 - Cistern: fitting & standard lever – 6 litre flush (white Vitreous china)
 - Seat: Doc M seat ring (blue/grey/white), stainless steel hinge
 - Basin: Alcona 360 Handrinse basin, (white Vitreous china)
 - Tap hole stopper for handrinse basin
 - Handrails and Grab Bars: 4nr. 600 mm, 1nr. 450 mm, 1nr. hinged support rail and toilet roll holder (all exposed fixing)
 - Material: Powder coated steel
 - Colour: blue/grey/white
 - Transfer Handling: TBC
 - Tap: Sola single lever basin monobloc
 - Mixing valve- thermostatic TMV3 (SF1037XX)
 - Water supply temperature: 43° C maximum.
 - Accessories: Pan fixings, Cistern cover clip, Grid waste.
- 25 CLEANERS SINK
- Standard: BS 1206 – Fireclay sinks.
 - Manufacturer: Twyford Bathrooms, Lawton Road, Alsager, Stoke-on-Trent, ST7 2DF.
 - Product reference: **High Back Cleaner's Sink** (Ref: FC1044WH)
 - Size: 470 x 400mm with 300mm high splashback and grating.
 - Material: Enamelled fireclay.
 - Configuration: Floor standing
 - Tap/ Chainstay/ Overflow holes: Overflow hole.
 - Water supply fittings: Sola ½" Cross Head Bib Taps (Ref: SF2302CP) with basin tap regulator.
 - Water supply temperature (maximum): 43 degrees C.
 - Wastes:
 - Standards: To BS EN 274-1, -2 and -3.
 - Size: 1 ½" grid waste.
 - Material: Chrome plated.
 - Tail: Unslotted.
 - Traps: Tubular, P type.
 - Standards: To BS EN 274-1, -2 and -3.
 - Size: DN40.
 - Material: Plastics.
 - Depth of seal (minimum): 75 mm.
 - Accessories: Legs, brackets and supports.

38 MIRRORS

- Manufacturer: Pilkington Building Products UK, Prescot Road, St Helens, WA10 3TT, Tel: 01744 692000, Fax: 01744 6928800, E-mail: Pilkington@respond.uk.com
- Product reference: 'Pilkington Optimirror Protect' high performance mirror with impact protection.
 - Thickness: 6mm
 - Size: 300 x 300mm mirrors.
 - Edge treatment: 6mm polished bevel.
- Background: Plaster.
- Fixing method: To BS 6262-6, Clause 8.3 to suit background.
- Installation: In strict accordance with the mirror manufacturer's instructions

40 DOC M PACK SHOWER

All in accordance with the Building Regulations Approved Document M 2015.

- Manufacturer: Contour Showers Limited, Siddorn Street, Winsford, Cheshire, CW6 2BA.
- Product reference: **Prinia Step in Shower with**
- Tray: Prinia Step In Shower Tray (PRIN1000x1000) 110mm high, Gravity waste flow rate in excess of 35 l/m.
- Shower fittings
 - TMV3 approved thermostatic exposed concentric mixer shower, Easy to grip and control, Low resistance separate lever controls for flow and temperature, automatic shutdown safety feature, suitable for all pressure systems, separate tamper proof flow and temperature controls, dual purpose grab riser rail able to withstand up to 150kg support load, rub clean five spray pattern shower head, WRAS approved-valve only.
 - Fixed shower Head and Handset (Product reference: PK7010)
- Water supply temperature: BS 8300-2, clause 18.1.3, maximum 43°C
- Flow rate:
 - Minimum operating pressure (0.2 bar)
 - Maximum operating pressure (10 bar)
- Wastes: top access outlet
 - Material: Plastics, see R12
- Enclosure: Half-height shower doors
 - Complies with the British Standard for impact resistance and ISO 179 for impact performance
 - Front access, half height shower doors, 750 mm high. Rise & fall hinges. Curtain rail with 2000 mm drop, 4oz shower curtain. 3mm thick translucent PET. Made to measure. Lifetime guarantee. Product ref (**WF2**)

58 SOAP DISPENSERS

- Manufacturer: Washware Essentials Ltd, Kestrel Court, Harbour Road, Portishead, North Somerset, BS20 7AN Tel: 01275 338064
- Product reference: Soap Dispenser Vertical, Surface Mounted Model 0347 **or similar approved by CA.**
- Material: Stainless steel.
- Finish/ Colour: Satin finish.

62 TOILET PAPER HOLDERS

- Manufacturer: Washware Essentials Ltd, Kestrel Court, Harbour Road, Portishead, North Somerset, BS20 7AN Tel: 01275 338064
- Product reference: Double Toilet Roll Holder, Surface Mounted Model 0030 **or similar approved by CA.**
- Material: Stainless steel.
- Finish/ Colour: Satin finish.

68 SEALANT FOR POINTING

- Standard: To BS EN ISO 11600.
 - Manufacturer: Fosroc Limited, Coleshill Road, Tamworth, Staffordshire, B78 3TL. Tel: 01827 262222
 - Product reference: Fosroc Silicone Sealant 33HM.
- Colour: White.
- Application: As section Z22.

EXECUTION

70 INSTALLATION GENERALLY

- Assembly and fixing: Surfaces designed to falls to drain as intended.
- Fasteners: Nonferrous or stainless steel.
- Supply and discharge pipework: Fix before appliances.
- Fixing: Fix appliances securely to structure. Do not support on pipework.
- Jointing and bedding compounds: Recommended by manufacturers of appliances, accessories and pipes being jointed or bedded.
- Appliances: Do not use. Do not stand on appliances.
- On completion: Components and accessories working correctly with no leaks.
- Labels and stickers: Removed.

75 INSTALLING CISTERNS

- Cistern operating components: Obtain from cistern manufacturer.
- Inlet and flushing valves: Matched to pressure of water supply.
- Internal Overflows: Into pan, to give visible warning of discharge.
- External overflows: Fix pipes to falls, and located to give visible warning of discharge. Agree position.

81 SEALANT BEDDING AND POINTING

- Bedding: Bed WC's.
- Pointing: Joints between appliances and walls and floors.

P10 SUNDRY INSULATION/ PROOFING WORK

To be read with Preliminaries/ General conditions.

40 INSULATION FITTED BETWEEN INTERNAL STUD WALLS

- Location: Internal walls
- Manufacturer: Knauf Insulation Ltd
Stafford Road, St. Helens, Merseyside, WA10 3NS, UK
Tel: 01744 766 666
- Product Reference: Earthwool Acoustic Roll
- Material: Glass Mineral wool
- Recycled content: 50% (min.) to BS EN 14021.
- Density (min): 10kg/m³ min.
- Thickness: Both 100mm and 50mm
- Width: Widest Practical
- Installation requirements:
 - Joints: Butted, no gaps
 - Head fixing: Staples or large head nails

P12 FIRE STOPPING SYSTEMS

GENERAL

- 10 FIRE PERFORMANCE OF INTERNAL COMPARTMENT WALLS, FLOORS & CEILINGS
- Resistance to fire: To BS 476-20 and 22, **60 minutes integrity and insulation (minimum)**
 - Reaction to fire: In accordance with current Building Regulations, Class 0.

PRODUCTS

- 36 INTUMESCENT FOAM
- Manufacturer: Tremco Illbruck Limited, Coupland Road, Hindley Green, Wigan, WN2 4HT, Tel: 01942 251400
 - Product reference: Nullifire FF197 Gun Grade Fire Rated PU Foam **or similar approved by CA.**
- 37 FIRE STOPPING COMPOUND
- Manufacturer: Tremco Illbruck Limited, Coupland Road, Hindley Green, Wigan, WN2 4HT, Tel: 01942 251400
 - Product reference: Nullifire FR230 Fire Stopping Compound **or similar approved by CA.**
- 40 MINERAL WOOL RIGID BATTS
- Standard: To BS EN 13162.
 - Manufacturer: Tremco Illbruck Limited, Coupland Road, Hindley Green, Wigan, WN2 4HT, Tel: 01942 251400
 - Product reference: Nullifire FB750 Coated Batt **or similar approved by CA.**
- 43 PIPE COLLAR
- Manufacturer: Tremco Illbruck Limited, Coupland Road, Hindley Green, Wigan, WN2 4HT, Tel: 01942 251400
 - Product reference: Nullifire FP170 Intumescent Pipe Collars **or similar approved by CA.**
- 44 PIPE WRAP
- Manufacturer: Tremco Illbruck Limited, Coupland Road, Hindley Green, Wigan, WN2 4HT, Tel: 01942 251400
 - Product reference: Nullifire FP300 Intumescent Pipe Wrap **or similar approved by CA.**
- 47 SEALANT
- Manufacturer: Tremco Illbruck Limited, Coupland Road, Hindley Green, Wigan, WN2 4HT, Tel: 01942 251400
 - Product reference: Nullifire FS709 Intumescent Sealant **or similar approved by CA.**

EXECUTION**62 EXECUTION GENERALLY**

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

63 INSTALLING FLEXIBLE INTUMESCENT GAP SEALER

- Fitting of strips: Compress strips and fit into gap so that, as they decompress, the strips wedge themselves in the void.
- Shrink wrapping: Do not remove.
- Joints:
 - Ends of strips: Fit intumescent 'end piece' at both ends of run of stop laminate.
 - Joints between strips: Fit two intumescent 'end pieces' at each butt joint.

64 APPLYING INTUMESCENT FOAM

- New joints: Remove builder's debris, mortar droppings, grease, and other contaminants.
- Old joints: Clean and remove existing sealant from each joint.
- Priming: Lightly moisten substrate with water.
- Application: Fill joint to approximately half its depth and allow foam to expand to face of joint.
- Trimming: In strict accordance with manufacturer's instructions.

65 APPLYING INTUMESCENT MORTAR

- Sequence: Install mortar after services are permanently installed.
- Loose dust and combustible materials: Remove from the opening.
- Shuttering: Install suitable shuttering panels to the faces of the opening.
- Temperature: Do not apply mortar when it could be damaged by frost.
- Powder:water ratio: In strict accordance with manufacturer's instructions
- Mortar cure: Do not disturb mortar before final set has taken place.
- Shuttering: Remove after mortar has cured.

66 INSTALLING MINERAL WOOL BATTS

- Installing batts: Fit tight into void between the penetrating services and the surrounding construction to form a solid barrier.
- Face of batts: Flush with the surface of wall, floor or soffit.
- Joints between batts: Close butt joints sealed with intumescent sealant.
- Gaps between services and barrier: Seal with fire resisting sealant.

68 FIXING PIPE COLLARS

- Collar fixing: In strict accordance with manufacturer's instructions.
- Gap around collar: In strict accordance with manufacturer's instructions.
- Length of wraps: In strict accordance with manufacturer's instructions.

71 INSERTING SEALANT BACKING MATERIAL

- Preparation: Removed debris from service penetration.
- Installation: In strict accordance with manufacturer's instructions.

73 APPLYING SEALANTS GENERALLY

- Application: As section Z22.

74 APPLYING CAPPING SEALANT

- Preparation: In strict accordance with manufacturer's instructions.
- Priming: In strict accordance with manufacturer's instructions.
- Depth of sealant: In strict accordance with manufacturer's instructions.
- Temperature: Do not apply water based sealants when they could be damaged by frost.

COMPLETION

91 CLEANING

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

92 INSPECTION

- Notice for inspection (minimum): 48 Hours.

P20 UNFRAMED ISOLATED TRIMS/SKIRTINGS/SUNDRY ITEMS

To be read with Preliminaries/General conditions.

10 SOFTWOOD SKIRTING BOARDS

- Quality of wood and fixing: To BS 1186: Part 3.
 - Species: Redwood
 - Class: 1
- Moisture content at time of fixing: 9 to 13 %
- Profile: Pencil rounded.
 - Finished size: To match existing
- Finish as delivered: Prepared and primed to receive 2 coat paint finish as specified in section M60.
- Fixing: Fixed at 450 mm centres and pelleted

11 SOFTWOOD ARCHITRAVES

- Quality of wood and fixing: To BS 1186: Part 3.
 - Species: Redwood
 - Class: 1
- Moisture content at time of fixing: 9 to 13 %
- Profile: Chamfered to match existing
 - Finished size: To match existing
- Finish as delivered: Prepared and primed to receive 2 coat paint finish as specified in section M60.
- Fixing: Fixed at 450 mm centres and pelleted.

12 SOFTWOOD SHADOW BATTENS

- Quality of wood and fixing: To BS 1186-3.
 - Species: Redwood
 - Class: 1
- Moisture content at time of fixing: 9 to 13 %
- Profile: Rectangular section.
 - Finish size: 32 x 12 mm
- Finish as delivered: Prepares and primed to receive 2 coat paint finish as specified in section M60. Colour to be approved by CA from manufacturer's full colour range prior to order.
- Fixing: Fixed at 450 mm.

35 MEDIUM DENSITY FIBRE BOARD BOXING OUT TO HORIZONTAL & VERTICAL PIPEWORK, DUCTS, SOIL,WASTE AND SERVICE RUNS.

- Standard: To BS EN 622-5
 - Type: MDF.H
 - Formaldehyde class: A
- Profile: Pencil round all Arises, 5mm radii.
- Dimensions:
 - Thickness: 15 mm
 - Width: to suite full coverage of services and any insulation.
- Finish: Prepared and primed to receive 2 coat paint finish as specified in section M60.
- Support/Fixing: Pelleted, plugged and screwed to Blockwork.

36 MEDIUM DENSITY FIBRE BOARD WINDOW BOARDS.

- Standard: To BS EN 622-5
- Type: MDF.H
- Formaldehyde class: A

- Profile: Bullnosed edge.
- Dimensions:
 - Thickness: 25 mm
 - Width: to suite opening size.
- Finish: Prepared and primed to receive 2 coat paint finish as specified in section M60.
- Support/Fixing: Pelletted, plugged and screwed to Blockwork.

80 INSTALLATION GENERALLY

- Joinery workmanship: As Section Z10.
- Metal workmanship: As section Z11.
- Methods of fixing and fasteners: 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: Mitred unless shown otherwise.
- Position and level: To be agreed where not detailed.

P31 HOLES, CHASES, COVERS AND SUPPORTS FOR SERVICES

10 HOLES, RECESSES AND CHASES IN MASONRY

- Locations: To maintain integrity of strength, stability and sound resistance of construction.
- Sizes: Minimum needed to accommodate services.
 - Holes (maximum): 300 mm².
- Walls of hollow or cellular blocks: Do not chase.
- Walls of other materials:
 - Vertical chases: No deeper than one third of single leaf thickness, excluding finishes.
 - Horizontal or raking chases: No longer than 1 m. No deeper than one sixth of the single leaf thickness, excluding finishes.
- Chases and recesses: Do not set back to back. Offset by a clear distance at least equal to the wall thickness.
- Cutting: Do not cut until mortar is fully set. Cut carefully and neatly. Avoid spalling, cracking and other damage to surrounding structure.

20 NOTCHES AND HOLES IN STRUCTURAL TIMBER

- General: Avoid if possible.
- Sizes: Minimum needed to accommodate services.
- Position: Do not locate near knots or other defects.
- Notches and holes in same joist: Minimum 100 mm apart horizontally.
- Notches in joists:
 - Position: Locate at top. Form by sawing down to a drilled hole.
 - Depth (maximum): 0.15 x joist depth.
 - Distance from supports: Between 0.7 and 0.2 x span.
- Holes in joists:
 - Position: Locate on neutral axis.
 - Diameter (maximum): 0.25 x joist depth.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from supports: Between 0.25 and 0.4 of span.
- Notches in roof rafters, struts and truss members: Not permitted.
- Holes in struts and columns: Locate on neutral axis.
 - Diameter (maximum): 0.25 x minimum width of member.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from ends: Between 0.25 and 0.4 of span.

30 PIPE SLEEVES

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

Q10 KERBS/EDGINGS/CHANNELS/PAVING ACCESSORIES

To be read with Preliminaries/General conditions.

TYPES OF KERBS/EDGINGS/CHANNELS

- 10 PRECAST CONCRETE KERBS TO EXTERNAL FLAGGED AREA
- Standard: To BS 7263-1.
 - Manufacturer: Marshalls PLC
 - Product reference: Conservation Textured Silver Grey.
 - Type: Flat top
 - Size (width x height x length): 50 x 250 x 914 mm.
 - Special shapes: None
 - Finish/colour: Grey.
 - Joints: Dry, 2mm (minimum) gap.
 - Other requirements: Concrete haunching as clause 530
- 30 DRAINAGE CHANNEL SYSTEMS WITH GRATINGS
- Manufacturer: ACO United Kingdom, ACO Technologies plc, ACO Business Park, Hitchen Road, Shefford, Bedfordshire, SG17 5TE. Tel: 01462 816666, Fax: 01462 815895.
 - Product reference: ACO 'CivicDrain' Channel drainage system with reinforced edge.
 - Sizes: 135 mm x 150dp mm
 - Type of fall: Constant depth.
 - Accessories: silt traps (as noted on drawings) and all connections, end caps etc. to provide a fully functional installation.
 - Bedding: Concrete bed/haunch, as clause 530.
 - Joints generally: In strict accordance with the manufacturer's instructions.
 - Cover gratings: Black composite Heelguard grating.
 - Fixings: Drainlock fixing system, in strict accordance with manufacturer's instructions.
 - Loading grade: C250
 - Finish/colour: Stainless steel

LAYING

- 40 LAYING KERBS, EDGINGS AND CHANNELS
- Cutting: Neat, accurate and without spalling. Form neat junctions.
 - Long units (450mm and over) minimum length after cutting: 300mm
 - Short units minimum length after cutting: The lower of one third of their original length of 50mm.
 - Bedding of units: Positioned true to line and levelled along top and front faces, in a mortar bed on accurately cast foundations or on a race of fresh concrete.
 - Securing of units: After bedding has set, secure with a continuous haunching of concrete or on a race of fresh concrete with backing concrete cast monolithically.
 - Concrete for foundations and haunching:
 - Standard: To BS8000-2 and BS EN 206-1
 - Designated mix: Not less than GEN0 or Standard mix ST1.
 - Workability: Very low.
 - Mortar bedding: 1:3 cement: sand as section Z21.
 - Bed thickness: 12-40 mm

45 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3 mm in 3 m.

50 TOOLED MORTAR JOINTS

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

80 Regularity of paved surfaces.

- Maximum undulation of (non-tactile) paving surface: 3 mm.
 - Method of measurement: Under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
- Difference in level between adjacent units (maximum):
 - Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
- Recessed, filled joints: 2 mm.
Recess depth (maximum): 5 mm.
- Unfilled joints: 2 mm.
- Sudden irregularities: Not permitted.

Q20 GRANULAR SUB-BASES TO ROADS/PAVINGS

To be read with Preliminaries/General conditions.

10 THICKNESSES OF SUB-BASE/SUBGRADE IMPROVEMENT LAYERS

- Thicknesses: See sections Q25

20 HERBICIDES

- Apply an approved type of herbicide in accordance with manufacturer's recommendations to subgrade.

30 EXCAVATION AND COMPACTION OF SUBGRADES

- Final excavation to formation level: Carry out immediately before compaction of subgrade.
- Soft spots and voids: Give notice.
- Old drainage and service: Give notice
- Wet conditions: Do not excavate or compact when the subgrade may be damaged or destabilized.
- Compaction: Thoroughly, by roller or other suitable means, adequate to resist subsidence or deformation of the subgrade during construction and of the completed roads/ pavings when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

40 SUB-BASE

- Granular material: Of a known suitability for use in sub-bases, free from ice, harmful matter and excessive dust of clay, well graded, all pieces less than 75 mm in any direction, and selected from one of the following:
 - Crushed hard rock or quarry waste (other than chalk), with not more binding material than is required to help hold the stone together
 - Crushed concrete, crushed brick or tile, free from plaster, timber or metal
 - Crushed non-expansive slag.
 - Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay
 - Well-burned non-plastic colliery shale
 - Natural gravel or sand

45 LAYING AND COMPACTING SUB-BASES

- Subgrade: Not frozen and free from loose soil, rubbish and standing water.
- Structures, membranes and buried services: Ensure stability and avoid damage.
- General: Spread and level in layers.
- Compaction:
 - Timing: As soon as possible after laying.
 - Method: By roller or other suitable means, adequate to resist subsidence or deformation of the sub-base during construction and of the compact paving when in use. Take particular care to compact fully at intrusions, perimeters and where local excavation and backfilling has taken place.

- 50 ACCURACY: Maximum permissible deviation from the required levels, falls and cambers to be as follows:

	Roads Parking areas	Footways Recreation areas
Subgrade	+/-25 mm	+/-20 mm
Sub-base	+/-20 mm	+/-12 mm

- 60 SURFACES TO RECEIVE SAND BEDDING FOR PAVING

- Blind surface: As necessary before compaction to ensure that surface is tight and dense enough to prevent laying course sand being lost into it during construction or use.
- Material: Sand or PFA

- 70 PROTECTION

- Sub-bases: As soon as practicable, cover with subsequent layers, specified elsewhere.
- Subgrades and sub-bases: Prevent damage to sub grades and sub-bases from construction traffic, construction operations and inclement weather.

Q25 SLAB/BRICK/COBBLE PAVINGS

To be read with Preliminaries General conditions.

GENERALLY

05 CONDITION OF SUB-BASE/BASES BEFORE LAYING BEDDING COURSE:

- Trenches and excavation of soft or loose spots in sub grade: Filled and compacted as specified.
- Granular surfaces: Sound, clean, smooth and close-textured enough to prevent migration of bedding materials into the sub-base during compaction and use, free from movement under compaction plant and free from compaction ridges, cracks and loose material.
- Prepared existing and new bound bases: sound, clean, free from rutting or major cracking and cleared of sharp stones, projections or debris.
- Sub-base level tolerances: To BS 7533-7, Annex A.
- Levels and falls: Accurate and within the specified tolerances.
- Drainage outlets: Within 0 to -10mm of the required finished level.
- Features in sand bedded paving (including mortar bedded restraints and drainage ironwork): Complete, to required levels, and adequately bedded and haunched in mortar that has reached sufficient strength.
- Cementitious sub-bases: cured for the minimum times specified in BS7533-4, clause 4.5.3.

11 LAYING PAVINGS:

- Cutting: Cut paving units neatly and accurately with a masonry saw to give neat junctions with edgings and adjoining finishes.
- Lines and levels of finished surface: to be smooth and even with regular falls to prevent ponding.
- Bedding of units: Firm so that rocking or subsidence does not occur or develop.
- Slopes: Lay paving units upwards from the bottom of slopes.
- Appearance: Even and regular with even joint widths and free mortar and sand stains.

16 LEVELS OF PAVING

- Permissible deviation from specified levels: ± 6 mm
Generally: Set paving +6-10 mm above gullies, +3-6 mm above surface drainage channels.
- Regularity of paved surfaces
 - Maximum undulations in the surface of pavings (except tactile paved surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
 - Joints between paving units or utility access covers: Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5 mm max difference in level).
Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
Unfilled joints: difference in level between adjacent units to be no greater than 2 mm.
- Sudden irregularities: Not permitted.

21 PROTECTION FROM TRAFFIC:

- Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining.
- Do not overload pavings with stacks of materials.
- Handle pavings with care to avoid damage to corners and arrises, and to previously laid paving.
- Mortar bedded paving: Pavings bedded on mortar must be kept free from pedestrian traffic for 4 days and Vehicular traffic for 10 days after laying:
- Restrict access to paved areas as necessary to prevent damage from site traffic and plant.

-

SLAB/FLAG PAVING

31 CONCRETE FLAG PAVING

- Granular sub-base: compacted hardcore as clause Q20
 - Thickness: 150 mm min.
- Bedding: Semi dry cement/ sand bed as Clause 32
 - Normal thickness of bed: minimum 50 mm
- Flags: to BS 7263-1
 - Manufacturer: Marshalls PLC
 - Product Ref: Standard concrete pimple paving
 - Colour/finish: Natural
 - Nominal size(s): 600x600x50mm.
- Joints: Ready mixed mortar
- Bond: Straight line.

32 FULL MORTAR BEDDING

- Mortar: Section Z21.
 - Mix: 1:3 cement sand
 - Consistency: semidry
 - Sand: TO BS 882, grading limit M or F
- Spread and level mortar to give the specified average nominal thickness after bedding of slabs/flags.
- Lay slabs/flags on a full mortar bed and bed down to line and level with a maul.

Q40 FENCING

To be read with Preliminaries/ General conditions.

FENCING SYSTEMS**30 WELD MESH FENCING**

- Manufacturer: CLD. Fencing Systems
 - Product reference: EXEMPLA™
- Standard: To BS 1722-9.
- Height: To match existing height (1000/1200/1500/1800mm)
- Mesh and wire:
 - mesh size: 200 x 55 mm
 - Wire diameter: 5 mm
 - Top edge projection: 30 mm
- Posts: RSH, 40 x 60 mm
 - Finish: Galvanised and polyester powder-coated to BS EN ISO 1461.
 - Colour: To be confirmed by CA prior to commencement from manufacturer's full colour range.
- Centres of posts (maximum): 2.73 m.
- Method of setting posts/ stays/ legs: Concrete, see section 70.
- Accessories: None.
- Conformity: Submit manufacturer's and installer's certificates, to BS 1722-9.

60 INSTALLATION GENERALLY

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

70 SETTING POSTS IN CONCRETE

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

90 MAKING GOOD GALVANIZED SURFACES

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

R10 RAINWATER PIPEWORK/GUTTERS

To be read with Preliminaries/General conditions.

SYSTEM PERFORMANCE**10 DESIGN**

- Design: Complete the design of the rainwater drainage system.
- Standard: To BS EN 12056-3, clauses 3-7 and National Annexes.
- Proposals: Submit drawings, technical information, calculations and manufacturers literature.

11 COLLECTION AND DISTRIBUTION OF RAINWATER

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

PRODUCTS**35 PVC-U PIPEWORK**

- Standards: To BS EN 1329-1 or BS 4514, Kitemark certified
- Manufacturer: Marley Plumbing & Drainage Solutions. Tel: 01622 858888 Email: marketing@marleypd.com, Web: www.marleyplumbinganddrainage.com
- Product Reference: Deepflow
- Recycled content: N/A
- Sections: Square
- Nominal sizes: 100 x 100
- Colour: To match existing
- Accessories: Offsets, bends and shoes and any other accessories for a complete and watertight installation.
- Brackets: As per Marley literature
- Fixing: per Marley literature

EXECUTION**50 INSTALLATION GENERALLY**

- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
- Plastics and galvanized steel pipes: Do not bend.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
- Protection:
 - Fit purpose made temporary caps to prevent ingress of debris.
 - Fit access covers, cleaning eyes and blanking plates as the work proceeds.
- Work to be completed before commencing work specified in this section:
 - Below ground drainage. Alternatively, make temporary arrangements for dispersal of rainwater without damage or disfigurement of the building fabric and surroundings.
 - Painting of surfaces which will be concealed or inaccessible

60 GUTTERS LAID TO FALL

- Setting out: To true line and even gradient to prevent ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Joints: Watertight.
- Roofing underlay: Dressed into gutter.

70 PIPEWORK

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

80 INTERNAL PIPEWORK TEST – ENGLAND, WALES, IRELAND AND NORTHERN IRELAND

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

81 INTERNAL PIPEWORK TEST – SCOTLAND

- Standard: To BS EN 12056-2, NG.3.1.
- Required performance: To BS EN 12056-2, NG.3.1.2.

R11 ABOVE GROUND FOUL DRAINAGE SYSTEMS

05 ABOVE GROUND FOUL DRAINAGE SYSTEM

- Sanitary and floor drainage outlets: Sanitary fittings as section N13.
- Waste pipework: Plastics
- Discharge stack and branch pipework: PVC-U
- Disposal: To below ground drainage as Section R12.

21 ABS PIPEWORK FOR SINKS, WASH BASINS, ETC

- Standard:
 - To BS 5255 and Kitemark certified; or
 - To BS EN 1455-1 and Kitemark certified
 Application area code: B.
 Opening dimensions of access fittings, design of swept fittings, stand off dimensions of pipe and fitting brackets and requirements for adaptors and plugs: To BS 4514.
- Manufacturer: Marley Plumbing & Drainage or similar approved.
- Nominal sizes: DN 32/40mm. Where 32mm wastes exceed 1.7m or where 40mm wastes exceed 3m pipe size increased or anti siphon traps used.
- Colour: White where exposed to view. Black elsewhere.
- Brackets: Plastic pipe clips, etc, as
 - Fixings: All as per manufactures recommendations.
 - Size: All as per manufactures recommendations.
- Accessories: All accessories necessary to ensure a complete serviceable installation.

50 INSTALLATION GENERALLY

- Standard: BS EN 12056-5.
- Components: From the same manufacturer for each type of pipework.
- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
- Plastics and galvanized steel pipes: Do not bend.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
- Concealed or inaccessible surfaces: Decorate before starting work specified in this section.
- Protection:
 - Purpose made temporary caps: Fit to prevent ingress of debris.
 - Access covers, cleaning eyes and blanking plates: Fit as the works proceeds.

60 PIPEWORK

- Fixing: Securely plumb and/ or true to line. Fix lengths of discharge stack pipes at or just below socket collar or coupling.
 - Additional supports: Provide as necessary at junctions and changes in direction.
- Cut ends of pipes: Clean and square with burrs and swarf removed.

70 PIPEWORK TEST

- Preparation: Temporarily seal open ends of pipework using plugs.
- Testing: Connect a 'U' tube water gauge and pump air into pipework until gauge registers 38 mm.
- Required performance: Allow a period for temperature stabilisation, after which the pressure of 38 mm is to be maintained without loss for at least 3 minutes.

Z10 PURPOSE MADE JOINERY

To be read with Preliminaries/General conditions.

10 FABRICATION GENERALLY:

- Standard: BS 1186:Part 2.
- Sections: Accurate in profile and length and free from twist and bowing. Form out of the solid unless specified otherwise.
 - Machined surfaces: smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes.
 - Screws of 8 gauge or more and all screws into hardwood to have clearance holes.
 - Countersunk screws: Sink heads not less than 2 mm below timber surfaces visible in completed work.
- Adhesives: Compatible with wood preservatives applied and end uses of timber.

20 CROSS SECTION DIMENSIONS OF TIMBER:

- Dimensions on drawings are finished sizes.
- Maximum permitted deviations from finished sizes:
 - Softwood sections to be as stated in BS EN 1313:Part 1:
 Clause 6 for sawn sections
 Clause NA. 2 for further processed sections.
 - Hardwood sections to be as stated in BS EN 1313:Part 2:
 Clause 6 for sawn sections
 Clause NA.3 for further processed sections.

30 PRESERVATIVE TREATED TIMBER:

- Carry out as much cutting and machining as possible before treatment.
- Retreat all timber which is sawn along the length, ploughed, thickened, planed or otherwise extensively processed.
- Treat surfaces exposed by minor cutting and drilling with two flood coats of a solution recommended for the purpose by main treatment solution manufacturer.

40 MOISTURE CONTENT of timber and wood based boards to be maintained within the range specified for the component during manufacture and storage.**50 FINISHING AND PROTECTING:**

- Joinery Surfaces: Smooth, even and suitable to receive specified finishes.
 - Arrises to be eased unless specified otherwise on drawings.
- End grain in external components: Seal with primer or sealer as specified in section M60 and allow to dry.
- Protect completed joinery against damage, dirt, moisture and other deleterious substances.

Z12 PRESERVATIVE/ FIRE RETARDANT TREATMENT

10 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.

20 COMMODITY SPECIFICATIONS

- Standard: Current edition of the Wood Protection Association (WPA) publication 'Industrial wood preservation specification and practice'.

25 PRESERVATIVE TREATMENT SOLUTION STRENGTHS/ TREATMENT CYCLES

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

40 ORGANIC SOLVENT PRESERVATIVE TREATMENT

- Solution:
 - Manufacturer: Sovereign Chemicals Ltd .
 - Product reference: Wood Preservative .
 - Application: Brush applied to insitu timbers, double vacuum impregnation to new timbers.
- Moisture content of wood:
 - At time of treatment: As specified for the timber/ component at time of fixing.
 - After treatment: Timber to be surface dry before use.
 - After treatment: Timber to be redried slowly at temperatures not exceeding 65°C to minimize distortion and degradation.

70 MAKING GOOD TO PROTECTION TREATMENT ON SITE

- Fire retardant/ preservative solution: Compatible with off-site treatment.
- Application: In accordance with preservative manufacturer's recommendations.

Z20 FIXINGS AND ADHESIVES

To be read with Preliminaries/ General conditions.

10 FIXINGS AND FASTENERS GENERALLY

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

25 FASTENER DURABILITY

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

30 FIXINGS THROUGH FINISHES

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

35 PACKINGS

- Materials: Noncompressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.

30 FIXING THROUGH FINISHES

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

40 FIXING CRAMPS

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

50 PELLETED COUNTERSUNK SCREW FIXING

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

55 PLUGGED COUNTERSUNK SCREW FIXING

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

60 APPLYING ADHESIVES

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

Z21 MORTARS

To be read with Preliminaries/ General conditions.

- 10 CEMENT GAUGED MORTAR MIXES
 - Specification: Proportions and additional requirements for mortar materials are specified elsewhere.
- 20 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS
 - Standard: To BS EN 13139.
 - Grading: 0/2 (FP or MP).
 - Fines content where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5–6):
 - Lower proportion of sand: Use category 3 fines.
 - Higher proportion of sand: Use category 2 fines.
 - Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.
- 30 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
 - Standard: To BS EN 998-2.
 - Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
 - Pigments for coloured mortars: To BS EN 12878.
- 31 SITE MADE LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
 - Permitted use: Where a special colour is not required and in lieu of factory made ready-mixed material.
 - Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
 - Mixing: Thoroughly mix lime with sand, in the dry state. Add water and mix again. Allow to stand, without drying out, for at least 16 hours before using.
- 40 CEMENTS FOR MORTARS
 - Cement: To BS EN 197-1 and CE marked.
 - Types:
 - Portland cement, CEM I.
 - Portland limestone cement, CEM II/A-L or CEM II/A-LL.
 - Portland slag cement, CEM II/B-S.
 - Portland fly ash cement, CEM II/B-V.
 - Strength class: 32.5, 42.5 or 52.5.
 - White cement: To BS EN 197-1 and CE marked.
 - Type: Portland cement, CEM I.
 - Strength class: 52.5.
 - Sulfate resisting Portland cement:
 - Types:
 - To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
 - To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
 - Strength class: 32.5, 42.5 or 52.5.
 - Masonry cement: To BS EN 413-1 and CE marked.
 - Class: MC 12.5.
- 50 ADMIXTURES FOR SITE MADE CEMENT GAUGED MORTARS
 - Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
 - Other admixtures: Submit proposals.

- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.

60 MAKING MORTARS GENERALLY

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

70 MAKING HYDRAULIC LIME:SAND MORTARS

- Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix.
 - Water quantity: Only sufficient to produce a workable mix.

Z22 SEALANTS

To be read with Preliminaries/General conditions

PRODUCTS

31 JOINTS GENERALLY

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

EXECUTION

61 SUITABILITY OF JOINTS

- Pre-sealing 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.

62 PREPARING JOINTS

- Surfaces to which sealant must adhere:
 - Remove all temporary coatings, tapes, loosely adhering material, dust, oil, grease and other contaminants which may affect bond.
 - Clean surfaces to which sealant must adhere using methods and materials recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- 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.

63 APPLYING SEALANTS

- Substrates: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Mix and apply primers and sealants within a temperature and humidity ranges recommended by manufacturers. Do not dry or raise temperature of joints by heating.
- Sealant application: Unless shown otherwise on drawings, 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.