

William Temple Church, Wythenshawe
2507-A ASHP Enclosure Specification, Dec 2025

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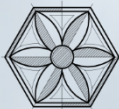


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SPECIFICATION FOR ASHP ENCLOSURE

F10 Brick/block walling

To be read with Preliminaries/General conditions.

TYPE(S) OF WALLING

310A CLAY COMMON BRICKWORK TO NEW PLINTH FOR ASHP

- Bricks: To BS 3921.
- Type: Bricks to match existing to church, submit samples for approval
- Minimum average compressive strength: 30 N/mm²
- Durability designation: Type FL
- Mortar: As section Z21.
- Pointing: Flush pointing knocked back to expose arris, as existing to the church. Form weeps holes by leaving open perpend.
- Mix: 1:3 cement mortar, to match existing to church.
- Bond: English garden wall bond

WORKMANSHIP GENERALLY

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

430 CONDITIONING OF BRICKS

- Do not use clay bricks or calcium silicate bricks when still warm from the manufacturing process.
- In dry warm weather wet the surfaces of very absorbent bricks slightly to reduce suction. Do not soak.

500 LAYING GENERALLY

- Lay bricks/blocks on a full bed of mortar; do not furrow. Fill all cross joints and collar joints; do not tip and tail.
- Build walls in stretching half lap bond when not specified otherwise.
- Plumb perpend of facework every third or fifth cross joint along a course and even out the joint widths in between.

561 COURSING BRICKWORK Arrange brick courses to line up with existing work.

635 JOINTING When not specified otherwise, finish joints neatly to the specified profile(s) as the work proceeds.

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- 645 UNEXPOSED JOINTS As the work proceeds, strike off joints that will not be exposed to view in the finished work.
- 690 ADVERSE WEATHER
- Do not use frozen materials and do not lay on frozen surfaces.
 - Do not lay bricks/blocks:
 - In cement gauged mortars when the air temperature is at or below 3°C and falling or below 1°C and rising (unless mortar has a temperature of 4°C when laid and walling is thoroughly protected).
 - In hydraulic lime:sand mortars when the air temperature is at or below 5°C and falling or below 3°C and rising.
 - In thin joint mortar glue when climatic conditions are outside the limits set by the mortar manufacturer.
 - Maintain temperature of the work above freezing until mortar has fully hardened.
 - Protect newly erected walling from:
 - Rain and snow by covering when precipitation occurs, and at all times when the work is not proceeding.
 - Drying out too rapidly in hot conditions and in drying winds.
 - Rake out and replace cement gauged or hydraulic lime mortar damaged by frost. When instructed, rebuild damaged work.
 - When instructed rebuild frost damaged thin joint masonry walling.
- 760 APPEARANCE
- Select bricks/blocks with unchipped arrises. Cut with a masonry saw where cut edges will be exposed to view.
 - Set out and lay bricks to match appearance of relevant approved reference panel(s).
 - Keep courses evenly spaced using gauge rods. Set out carefully to ensure satisfactory junctions and joints with adjoining or built-in elements and components.
 - Complete each lift in one period of operation.
 - Protect facework against damage and disfigurement during the course of the works, particularly arrises of openings and corners.
- 800 TOOTHED BOND Except where a straight vertical joint is specified, new and existing facework in the same plane to be bonded together at every course to give a continuous appearance.

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F30 Accessories/sundry items for brick/block/stone walling

To be read with Preliminaries/General conditions.

REINFORCING/FIXING ACCESSORIES

FLEXIBLE DAMP PROOF COURSES/CAVITY TRAYS

- 310A DAMP PROOF COURSE BETWEEN TIMBER AND MASONRY/BRICKWORK
Bitumen based to BS 6398, class E
Manufacturer and reference: Code 5 milled lead painted with black bitumen on faces in contact with masonry.

INSTALLATION OF DPCS/CAVITY TRAYS

- 400 COLD WEATHER WORKING In cold weather warm dpc rolls before unrolling, to avoid cracking.
- 415 HORIZONTAL DPCS
- Lay in continuous lengths on a full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.
 - Width of dpc to be at least full width of masonry leaf unless otherwise specified. Do not cover edges of dpc with mortar.
 - Where there are separate dpcs in each leaf of a cavity wall, ensure that edges do not project into the cavity.
 - Immediately lay at least one further course of masonry on a thin even bed of fresh mortar. Keep finished joint thickness as close to normal as practicable.
- 455 COPING/CAPPING DPCS
- Bed dpcs and copings/cappings in one operation to ensure maximum bond between masonry units, mortar and dpc.
 - Provide rigid support for dpcs in cavity walls.

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G20 Carpentry/timber framing/first fixing

To be read with Preliminaries/General conditions.

TYPE(S) OF TIMBER

210 OAK FOR ASHP ENCLOSURE

- Strength graded to BS 4978 or BS EN 519 other national equivalent and so marked. Strength class to BS EN 338: C 16
- Preservative treatment: N/A
- Type/Species: Grade A kiln dried European Oak
- Fixing: Predrilled with stainless steel screws or bolts. Use oak pellets to conceal fixings as Z20/230.
- Finish: Planed with three coats of Clear UV-Protection Oil Extra by Osmo UK Ltd.
- Preparation: Wood surface must be dust and dirt-free and thoroughly dry. UV-Protection Oil is ready to use; do not thin. Ensure product is at room temperature before use and stir well.
- Moisture content at time of erection: As clause 450.

WORKMANSHIP GENERALLY

430 SELECTION AND USE OF TIMBER

- Do not use timber members which are damaged, crushed or split beyond the limits permitted by their grading.
- Ensure that notches and holes are not so positioned in relation to knots or other defects that the strength of members will be reduced.
- Do not use scarf joints, finger joints or splice plates without approval.

440 PROCESSING TREATED TIMBER

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

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- 450 **MOISTURE CONTENT** of timber at time of erection to be not more than Covered in generally unheated spaces: 24%
Covered in generally heated spaces: 20%
Internal in continuously heated spaces: 20%
- 510 **PROTECTION**
- Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
 - Store timber and components under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
 - Arrange sequence of construction and cover timber as necessary during and after erection to ensure that specified moisture content is not exceeded.
 - Keep trussed rafters vertical during handling and storage.
- 520 **SEAL** exposed end grain of the following with clear end grain sealer before delivery to site
rafters.
- 540 **CLEAR FINISHES** Structural timber which is to be clear finished to be kept clean and first coat of specified finish applied before delivery to site.
- 550 **EXPOSED TIMBER** Prevent damage to and marking of surfaces and arises of planed structural timber which will be exposed to view in completed work.
- 570 **JOINTING/FIXING GENERALLY** Where not specified otherwise, select fixing and jointing methods and types, sizes and spacings of fasteners in compliance with section Z20. Fasteners to comply with relevant British Standards.
- 630 **BOLTED JOINTS**
- Locate holes accurately and drill to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger.
 - Place washers under all bolt heads and nuts that would otherwise bear directly on timber. Use spring washers in locations which will be hidden or inaccessible in the completed building.
 - Tighten bolts so that washers just bite the surface of the timber. Ensure that at least one complete thread protrudes from the nut.
 - Check at agreed regular intervals up to Practical Completion and tighten as necessary to prevent slackening of joints.

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ERECTION AND INSTALLATION

770 ADDITIONAL SUPPORTS

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

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SPECIFICATION FOR ASHP ENCLOSURE

H71 Lead sheet coverings/flashings

To be read with Preliminaries/General conditions.

TYPE(S) OF LEADWORK

- 360 **DAMP PROOF COURSE**
Position: On the wall head to plinth.
Lead: As clause 512
Thickness: Code 5.
Protection: Fully coated with high build bitumen-based paint on all surfaces to be embedded or in direct contact with masonry.
Dimensions: Maximum 1500mm lengths (min.100mm lap between sheets) by approx. 375mm, plan thickness of wall plus 120mm (lead turned down 25mm to outer face, and inner edge left long to act as cover flashing to secret gutter), to be confirmed on site.
Laying: On a thin even bed of wet mortar.

GENERAL REQUIREMENTS/PREPARATORY WORK

- 510 **WORKMANSHIP GENERALLY**
- Cut, joint and dress lead neatly and accurately, to provide fullywaterproof coverings/flashings, free from ripples, kinks, buckling and cracks.
 - Comply with BS 6915 and current good practice as described in the latest editions of 'The Lead Sheet Manual' and Updates published by the Lead Sheet Association, unless specified or agreed otherwise.
 - Do not use scribes or other sharp instruments to mark out lead.
 - Use solder only where specified.
 - Ensure that finished leadwork is fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
 - Ensure that finished leadwork is protected against staining, discolouration and damage by subsequent works.
- 512 **LEAD SHEET** Colour marked for thickness and weight and of the type and code specified:
- Rolled, to BS EN 12588, or
 - Machine cast, Agrément certified and to code thicknesses with a tolerance (by weight) of $\pm 5\%$, or
 - Sand cast, from lead free from bitument, solder, other impurities, inclusions, laminations, cracks, air, pinholes and blowholes; to code thicknesses but with a

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tolerance (by weight) of $\pm 10\%$.

610 SUITABILITY OF BASES

- Bases to be dry and free of dust, debris, grease and other deleterious matter.
- Laying of lead will be taken as acceptance by the lead contractor of the suitability of bases.

FIXING/JOINTING LEAD

715 FIXINGS

- Where not specified otherwise, fix lead sheet to timber substrates with: Copper clout nails to BS 1202-2, table 2, with annular ringed, helical threaded or serrated shank, length not less than 20 mm, shank diameter not less than 2.65 mm, or Stainless steel (austenitic) clout nails with annular ringed, helical threaded or serrated shank, length not less than 19 mm, shank diameter not less than 2.65 mm.
- Where not specified otherwise, fix lead sheet to concrete or masonry substrates with:
Brass or stainless steel screws to BS 1210, table 3, length not less than 19 mm and diameter not less than 3.35 mm; with washers of the same material and plastics plugs of length and diameter to suit screws.

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M60 Painting/ clear finishing

To be read with Preliminaries/ General conditions.

COATING SYSTEMS

130A OIL TO EUROPEAN OAK

- Manufacturer: Dulux Trade, brand of AkzoNobel.
- Surfaces: European Oak
Preparation: Wood surface must be dust and dirt-free and thoroughly dry. UV-Protection Oil is ready to use; do not thin. Ensure product is at room temperature before use and stir well.
- Coats: Three coats

GENERAL

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.

280 PROTECTION

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

PREPARATION

400 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

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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.

420 FIXTURES AND FITTINGS

- Removal: Before commencing work remove: ceiling vents.
- Replacement: Refurbishment as necessary, refit when coating is dry.

APPLICATION

711 COATING GENERALLY

- Application standard: 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.

730 WORKSHOP COATING OF CONCEALED JOINERY SURFACES

- General: Apply coatings to all surfaces of components.

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Z10 Purpose made joinery

To be read with Preliminaries/General conditions.

110 FABRICATION GENERALLY

- Fabricate joinery components to BS 1186:Part 2.
- Form sections out of the solid when not specified otherwise. Carefully machine timber to accurate lengths and profiles.
After machining, sections to be free from twist and bowing, and surfaces to be smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Assemble with tight, close fitting joints to produce rigid components free from distortion.
- All screws to have pilot holes. Screws of 8 gauge or more and all screws into hardwood to have clearance holes. Screw heads to be countersunk not less than 2 mm below timber surfaces that will be visible in completed work.

130 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.

140 MOISTURE CONTENT of timber and wood based boards to be maintained within the range specified for the component during manufacture and storage.

250 FINISHING AND PROTECTING

- Sand all joinery to give smooth, flat surfaces suitable to receive specified finishes. Arrises to be eased unless specified otherwise.
- Before assembly, seal all end grains for external components with primer or sealer as specified in section M60 and allow to dry.
- Protect completed joinery against damage, dirt, moisture and other deleterious substances.

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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.
- 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.
- 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.
- 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.
- 510 **ADHESIVES**
- Adhesive types: As specified in the relevant section.
 - Surfaces to receive adhesive to be sound, unfrozen, free from dust, grease and any other contamination likely to affect bond. Where necessary, clean surfaces using methods and materials recommended by adhesive manufacturer.
 - Adjust surface regularity and texture as necessary to suit bonding and gap filling characteristics of adhesive.
 - Ensure that operatives observe manufacturer's and statutory requirements for

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storage and safe usage of adhesives.

- Do not use adhesives in unsuitable environmental conditions or beyond the storage period recommended by the manufacturer.
- Apply adhesives using recommended spreaders/applicators to ensure correct coverage. Bring surfaces together within recommended time period and apply pressure evenly over full area of contact to ensure full bonding.
Remove surplus adhesive using methods and materials recommended by adhesive manufacturer and without damaging surfaces.

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Z21 Mortars

To be read with Preliminaries/ General conditions.

CEMENT:SAND MORTARS

310 LIME:SAND MORTAR MIXES

- Specification: Proportions and additional requirements for mortar materials are specified within section F10.

320 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS

- Type: Sharp, well graded.
 - Quality, sampling and testing: 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.

320A 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 4027 and Kitemarked.
- 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.

210 MAKING CEMENT GAUGED MORTARS

- 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.