

Atelier Mb Ltd

XLB

Tootal Courtyard Windows

Window Repair Works

A

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C40 Cleaning masonry

General/ preparation

001 Methodology

1. Carry out full survey of brickwork area under consideration. Survey to be carried out by suitably skilled masonry expert. Determine type and characteristics of existing masonry and bedding/pointing.
2. Determine location, type, and severity of surface deposits.
3. Soiling sampling is to be undertaken to determine material if deemed necessary.
4. Determine whether such deposits risk causing physical damage/deterioration to the historical fabric if left undisturbed. Examples of such soiling include vegetation growth, general dirt deposits, animal waste.
5. Determine whether such deposits are preventing full determination of the masonry condition. Examples of such soiling include vegetation growth, general dirt deposits, animal waste.
6. Where risk of further damage is considered high, and or is required to inspect the stone fabric fully - carry out cleaning methods as outlined below. Presumption towards non-invasive cleaning.
7. Staining will not be cleaned for aesthetic reasons.
8. Ensure all surrounding surfaces are protected from damage. Issue proposed methodology for sign off prior to proceeding.
9. Site trials to be carried out using TORC abrasive system (by Stonehealth) or similar approved. Starting with low pressure soft abrasives. The intensity will only be increased if deemed necessary, and until the lowest impact solution is determined that removes the cement crust.
10. IF this process does not sufficiently remove the soiling, consider appropriate chemical cleaning trials – such as Proteger Masonry Wash

110 Scope of work

1. Removal of cement deposits to window and door reveals within site.
2. To be read in conjunction with TORC methodology document.

120 Related repair and remedial works

1. **Work to be carried out before cleaning work:** Pointing to cracks and joints in masonry - as section C41.

160 Protection

1. **Additional Notes::** Provide and maintain throughout the cleaning works, effective protection and sealing to prevent:
 - Ingress of water, cleaning agents, debris and dust into the building via windows, doors, vents and other openings.
 - Damage to all components and finishes that can reasonably be protected during cleaning procedures, including lightning conductors, roof coverings, flashings, rainwater goods, glass, metal work, services equipment, signage and pavings.
 - Staining of surfaces from ferrous or other reactive metals.
2. **Surfaces not designated for cleaning:** Prevent damage, including marking and staining.
3. **Openings:** Prevent ingress of water, cleaning agents and detritus.
 - 3.1. **Vents and grilles:** Protect but do not seal up ventilation grilles, air bricks, or other ventilation openings without first seeking instructions.
4. **Temporary mechanical fastenings**

- 4.1. In masonry: Locate in joints.
- 4.2. In other surfaces: Seek instructions.
- 5. Additional protection:

165 PROTECTIVE MEMBRANES/BOARDS

- 1. · Use approved protective boards, sheetings, films, sealants and sealing tapes that do not stain protected materials and that can be readily removed after cleaning without damaging or staining the protected material.
- Do not use temporary fastenings into components, masonry features and fittings without approval. When fixing into masonry, locate fastenings in joints

175 Control and disposal of wash water and detritus

- 1. Disposal: Safely. Obtain approvals from relevant Authority.
- 2. Control of wash water: Collect and divert to prevent ingress and damage to building fabric and adjacent areas.
- 3. · Discharge wash water to an approved foul drainage system. Check outlets, gullies, etc. regularly to ensure that they are not blocked
- 4. Above and below ground drainage systems: Keep free from detritus and maintain normal operation.
- 4.1. ∴ · Ensure that drains are clear on completion of cleaning work.

180 Cold weather

- 1. Cleaning procedures using water: Do not use when air temperature is at or below 5°C. Protect damp surfaces from frost.
- 2. Chemical cleaning agents: Do not use when surface temperatures are below those recommended by manufacturer.

190 Cleaning generally

- 1. Operatives: Appropriately trained and experienced for each type of cleaning work.
 - 1.1. Evidence of training: Submit on request.
- 2. Control of cleaning: Confine cleaning processes and materials to designated areas. Prevent wind drift.
- 3. Detritus: Remove regularly. Dispose of safely.
- 4. Monitoring: Frequently check results of cleaning compared to approved trial samples. If results established by trials are not achieved, seek instructions.
- 5. Modifications to cleaning methods and materials: Seek instructions.

210 HEALTH AND SAFETY

- 1. Take all necessary precautions to protect site operatives and the general public from health hazards associated with the materials and procedures for the cleaning method(s) used.

215 Record of cleaning works

- 1. Written report: Record cleaning methods and procedures used for each type of surface and deposit.
 - 1.1. Content: Relevant attributes of cleaning methods used including:
 - 1.1.1. Equipment and settings.
 - 1.1.2. Dwell times.
 - 1.1.3. Number of applications.
 - 1.1.4. Ambient temperatures.

2. **Additional documentation:** Survey before cleaning: Photogrammetric drawings of each elevation
3. **Submission:** At completion of cleaning works.

220 CONDITION OF SURFACES

1. Before commencing cleaning of each area, ensure that surfaces are in a suitable condition to be cleaned and that:
 - Walling and associated features/components are stable and that preparatory repair works are complete.
 - Fixtures and fittings have been removed.

230 Trial samples

1. **Trial sample reference:** TS 001
 - 1.1. **Surface:** Brick
 - 1.2. **Location/ Size:** TBA on site
 - 1.3. **Type of soiling:** Cement deposits
 - 1.4. **Cleaning methods:** Abrasive - TORC
2. **Records:** Maintain written records for each trial area, including cleaning methods and conditions, to enable replication of results elsewhere.
3.
 - Provide the Architect with a copy of trial sample records
 - Make arrangements to enable the Architect and all other interested parties including Conservation Officers and other Heritage where listed. The Architect should ascertain and take note of the agreed level of clean that all the interested parties have approved.
 - Obtain approval before commencing cleaning.

230 Trial samples Type A

1. **Trial sample reference:** TS 002
 - 1.1. **Surface:** Brick
 - 1.2. **Location/ Size:** TBA on site
 - 1.3. **Type of soiling:** Cement deposits
 - 1.4. **Cleaning methods:** Proteger Masonry Wash (or similar approved)
2. **Records:** Maintain written records for each trial area, including cleaning methods and conditions, to enable replication of results elsewhere.
3.
 - Provide the architect with a copy of trial sample records
 - Make arrangements to enable the architect and all other interested parties including Conservation Officers and other Heritage where listed. The architect should ascertain and take note of the agreed level of clean that all the interested parties have approved.
 - Obtain approval before commencing cleaning.

250 CLEANING GENERALLY

1.
 - Use operatives who are skilled Stonehealth Approved, having been trained and experienced with the equipment, materials and procedures for the type(s) of cleaning and surfaces specified. Provide evidence of their training and experience to the CA on request.
 - Confine cleaning to designated area(s)/surfaces. Do not allow cleaning agents or residues to stray onto adjacent or protected surfaces.
 - Clean, collect and safely dispose of debris from scaffolding, ledges, etc. at the end of each day. Prevent debris falling to lower levels.
 - Prevent marking of cleaned areas from dirt and debris splashing up from scaffold boards.

260 MONITORING

1.
 - Regularly monitor effects of each cleaning procedure against the degree of cleaning established by approval trial sample(s). Seek instructions immediately, wherever:

- o Disruption to the surface occurs
- o Anticipated level of surface cleaning is not being achieved
- o Discolouration or stains are revealed by cleaning.
- Do not modify cleaning procedures or materials without approval from the CA

270 RECORDING CLEANING METHODS

1. · Maintain records of cleaning methods used for each area/surface. Include details of equipment type, cleaning agents, ambient temperature conditions and other variables as specified in the relevant method(s) of cleaning clauses(s)
 - On completion of cleaning, provide copies of records to the CA

280 CONTROL OF WATER

1. · Provide suitable temporary catchment boards/sheeting, gutters etc. to collect wash water and divert it to suitable discharge points. Location of catchment are(s) TBA
 - Do not let wash water build up at outlets or above levels of flashings or anywhere where there is risk of it penetrating and causing damage to the building fabric.
 - Ensure that water does not penetrate interiors and damage finishes, etc. Monitor interior of building and seek instructions when any signs of damp appear internally.

Products/ equipment

300 Compatibility of chemical products

1. **Products:** Compatible and produced by the same manufacturer.

310 BRUSHING AND SCRAPING

1. Before commencing any other methods of cleaning, remove loosely adhered deposits and heavy deposits of biological matter using suitable corrosion resistant brushes and scrapers/spatulas that do not abrade or gouge the surface. Do not use brushes with steel bristles.

312 Surface biocides

1. **Types:** Registered by the Health and Safety Executive (HSE) and listed on the HSE website under non-agricultural pesticides.
2. **Compatibility with surface:** Free from staining or other harmful effects.

321 TOOLING

1. To remove thick encrustations of dirt carbon and limescale etc. Is not permitted unless agreed in advance with CA and:
 - The work is carried out by skilled and experienced stone masons.
 - The original surface/detail is not removed unless agreed otherwise with the CA.

322 Masonry cleaning systems Type A

1. **Manufacturer/ Supplier:** [Stonehealth Ltd](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** G4/5 Draycott Business Park
Cam
Dursley
Gloucestershire
GL11 5DQ
 - 1.1.2. **Telephone:** +44 (0)1453 540600
 - 1.1.3. **Web:** www.stonehealth.com
 - 1.1.4. **Email:** info@stonehealth.com
 - 1.2. **Product reference:** [TORC Gentle Vortex Cleaning System \(With Auxiliary Pump\)](#)

2. Cleaning operations
 - 2.1. Cleaning methods: Gentle vortex cleaning system.
 - 2.2. Rinsing: As Cleaning schedule.
3. Power supply: Auxiliary pump.
4. WaterConsumption: 60 L/hour.
5. Ambient temperature: Not suitable for use below 5°C.
6. Volume: 3540 L/minute (125 CFM).
7. Dry weight:
8. Pump: 600 x 310 x 340 mm.
9. Nozzle types: Subject to site trials
10. Abrasives: Subject to site trials

323 TORC ABRASIVE CLEANING - METHODOLOGY

1. See appendix A

362 Chemical agents

1. Description: Specialist commercial grade cleaner for the removal of carbon, soot and black mould from building **façades** and elevations.
2. Manufacturer: <https://www.proshieldsolutions.com/>
 - 2.1. Product reference: Proteger ProShield Noir Wash.

362 Chemical agents Type A

1. Description: FOR cement deposit REMOVAL
2. Manufacturer: Proteger
 - 2.1. Product reference: Masonry Wash

Application

412 Removal of loosely adhered deposits

1. Timing: Before commencement of other cleaning methods.
2. Surfaces: Prevent damage, including abrasion.

422 Biocide application

1. Preparation: Dampen dry growths
2. Surfaces: Prevent damage, including abrasion.
3. Biocide treatment: Appropriate solutions to kill growths and inhibit further growths.
 - 3.1. Dead growths: Remove.

462 Water spray cleaning (mounted nozzles)

1. Surfaces: Minimize water run-off. Prevent damage.
2. Adjustment of washing cycle and nozzle positions: Regularly to achieve optimum cleaning performance.

472 Pressurized water cleaning

1. Surfaces: Prevent damage, including abrasion.
2. Equipment settings (including nozzle type and distance from surface): Adjust regularly to achieve optimum cleaning performance for each surface.

482 Steam cleaning

1. **Surfaces:** Prevent damage, including abrasion.
2. **Equipment settings (including nozzle type and distance from surface):** Adjust regularly to achieve optimum cleaning performance for each surface.

495 Testing pH values for chemical cleaning

1. **pH indicator:** To distinguish pH values between 1-14.
2. **Testing before cleaning**
 - 2.1. **Clean rinsing water, wetted surfaces and joints:** Test for pH. Record as 'control' values.
3. **Testing after water rinsing and neutralization**
 - 3.1. **Wetted surfaces and joints:** Record pH values.
 - 3.2. **Acceptance criteria:** Seek instructions

500 Chemical cleaning

1. **Surfaces:** Prevent damage, including discolouration, bleaching and efflorescence.
2. **Product variables (including concentrations, dwell times and number of applications):** Adjust for each surface to achieve optimum cleaning performance.
For each area/surface, establish the lowest possible concentration of agent(s) and the shortest dwell times, number of applications, ambient temperatures and rinsing water temperatures.
3. **Application:** To wetted surfaces.
Contain chemical agents and rinsing water/sprays within each treatment area. Do not allow agents or rinsing water/sprays to contact surfaces that are either excluded from cleaning or that have already been cleaned. Prevent wind drift.
Before each application of agent, wet the surface and adjacent areas using clean water applied by low pressure spray. Test for pH of wetted surface as clause 495.
 - 3.1. **Drying out:** Prevent unless recommended otherwise by cleaning product manufacturer.
4. **Removal of chemicals and neutralization:** As recommended by product manufacturer, including rinsing with clean water.
Rinse treated surfaces thoroughly and evenly with clean water working from the bottom of each area upwards. Do not use water spray pressures that will drive cleaning agents into, or cause disruption of, the surface material and joints.
Carry out pH testing and neutralisation procedures as clauses 495.
 - 4.1. **Additional treatment:** Where water rinsing is insufficient to neutralize surface, apply compatible neutralizing agent.
 - 4.2. **Surfaces and joints:** Minimize absorption of chemicals. Prevent damage, including abrasion.

520 COMPLETION

1.
 - Obtain CA's approval of cleaning to each area/surface and before removal of temporary protection.
 - After removal of temporary protection, thoroughly clean all glazing, window frames, doors, sills and other affected surfaces.
 - Check that all gutters, hoppers, downpipes and gullies are free from obstruction and debris arising from cleaning works.
 - Give the CA 1 weeks notice before striking each stage of scaffolding, to allow for final inspections.
 - Refix the following fittings: Window frames.

Complete all necessary documentation, review and record final results with supportive drawings and photographs
2. Check that all gutters, hoppers, downpipes and gullies are free from obstruction and debris arising from cleaning works.
Give the CA 5 working days notice before striking each stage of scaffolding, to allow for final inspections.

Complete all necessary documentation, review and record final results with supportive drawings and photographs.

3.

Ω End of Section

C41

Repairing/ renovating/ conserving masonry

Generally/ preparation

001 Methodology

1. Retain as much of the original sound brickwork as possible.
2. Replacement or repair will not be carried out for aesthetic reasons.
3. Where replacement must be considered, this should match the existing brick in all respects and be determined following review of suitable samples on site only.
4. During cleaning and survey work as detailed in NBS CI C40, determine areas of friable/eroded bricks and extent of damage.
5. Determine whether damaged brickwork will lead to accelerated weathering without repair.
6. Where this is found to be the case, determine whether the damaged or missing brick can be replaced using a specialist moulding repair putty. This may not be possible due to the extent, position, or likely strength of repair.
7. Where replacement brickwork is required, the minimal number of bricks must be removed, and be replaced with matching brickwork as above. Ensure a solid bedding with lime:sand mortar. Mix to be determined following site sampling and analysis.
8. Any removal or disturbance of surrounding brickwork should be minimised and adjacent fabric protected from damage and or movement as a result. If there are any concerns with regards to the stability of the structure before or during the works, these must be reported to the CA and the works halted until an inspection and appropriate course of action can be take.
9. All bedding, and repointing to be carried out on a like for like basis in the context of the surrounding fabric. Any deviations must be reviewed by the CA prior to proceeding.

110 Scope of work

1. **Schedule:** Brickwork reveals to all windows to be repaired. Where repairs cannot be carried out due to the extent of damage, replacement of damaged brick with matching material. Repoint said brickwork. To be read in conjunction with drawing package and methodology
2. **Records of masonry to be repaired:** Before starting work, use measurements and photographs as appropriate to record bonding patterns, joint widths, special features, etc.
3. **Identification of masonry units to be removed, replaced or repaired:** Mark clearly, but not indelibly, on face of masonry units or parts of units to be cut out and replaced. Transcribe markings to drawings/ photographs.

120.1 REVIEWING SCOPE OF WORK

1. Provide access lighting to all areas where brickwork repair is to be made to enable the conservation architect to make a close inspection.
To confirm type and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.
2. **Timing:** At least 7 working days before starting each section of work
3. Inspect each relevant area of masonry with the CA to confirm the type and extent of the work. Mark clearly on face any masonry units or parts of units that are to be cut out and replaced.
4. Identify each masonry unit that is to be removed, replaced or repaired with a code number cross-referenced to drawings/photographs.
5. Adequately record the characteristics of existing masonry in areas affected by repair works. Use measurements and photographs as appropriate to record bonding patterns, joint widths, special features, etc.

6. Instructions issued during inspection: Confirm in writing, with drawings and schedules as required, before commencing work

125 Removal of fittings/ fixtures

1. Items to be removed, and reinstated on completion of repair work: **TBA on site.**
 - 1.1. Identification: Attach labels or otherwise mark items using durable, non-permanent means, to identify location and describe refixing instructions, where applicable.
 - 1.2. Treatment following removal: n/a.
 - 1.3. Storage: Protect against damage, and store until required.
 - 1.3.1. Storage location: On site - Submit proposals
 - 1.4. Reinstatement: Refit in original locations using original installation methods. Use existing fixing positions.
2. Items unsuitable or not required for reuse: TBC
 - 2.1. Disposal: Submit proposals
3. Masonry fabric and surfaces: Do not damage during removal and replacement of fittings/ fixtures.

130 Removal of plant growths from masonry

1. Plants, root systems and associated soil/ debris: Carefully remove from joints, voids and facework.
2. Removal of roots: Where growths cannot be removed completely without disturbing masonry seek instructions.
3. Unwanted plants close to masonry: Where removal of root system is not possible or desirable, cut through stem as close to the ground as possible. Remove bark from stump and apply herbicide paste. Leave stump to wither.

140 Record of work

1. General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.
2. Specific records: Full measured drawings of stones to be replaced. Note bond, joint size, style and texture of pointing and any special or unusual features for replication.
3. Documentation: Submit on completion of the work.
 - 3.1. Number of sets: One - Electronic, pdf format.

Workmanship generally

150 Power tools

1. Usage for removal of mortar: Not permitted

155 Putlog scaffolding

1. Usage: Not permitted

160 Protection of masonry units and masonry

1. Masonry units: Prevent overstressing during transit, storage, handling and fixing. Store on level bearers clear of the ground, separated with resilient spacers. Protect from adverse weather and keep dry. Prevent soiling, chipping and contamination. Lift units at designed lifting points, where provided.
2. Masonry: Prevent damage, particularly to arrises, projecting features and delicate, friable surfaces. Prevent mortar/ grout splashes and other staining and marking on facework. Protect using suitable nonstaining slats, boards, tarpaulins, etc. Remove protection on completion of the work.

165 Structural stability

1. **General:** Maintain stability of masonry. Report defects, including signs of movement that are exposed or become apparent during the removal of masonry units.

170 Disturbance to retained masonry

1. Retained masonry in the vicinity of repair works: Disturb as little as possible.
2. Existing retained masonry: Do not cut or adjust to accommodate new or reused units.
3. Retained loose masonry units and those vulnerable to movement during repair works: Prop or wedge so as to be firmly and correctly positioned.

180 Workmanship

1. Skill and experience of site operatives: Appropriate for types of work on which they are employed.
 - 1.1. Documentary evidence: Submit on request.
 - 1.2. **OPERATIVES:** Use operatives who are skilled and experienced with the materials and procedures required for the types of repairs specified. Provide evidence of their training and previous experience to the CA on request.

185 Adverse weather

1. **General:** Do not use frozen materials or lay masonry units on frozen surfaces.
2. **Air temperature:** Do not bed masonry units or repoint:
 - 2.1. In hydraulic lime:sand mortars when ambient air temperature is at or below 5°C and falling or unless it is at least 3°C and rising.
 - 2.2. In nonhydraulic lime:sand mortars in cold weather, unless approval is given.
3. **Temperature of the work:** Maintain above freezing until mortar has fully set.
4. **Rain, snow and dew:** Protect masonry by covering during precipitation, and at all times when work is not proceeding.
5. **Hot conditions and drying winds:** Prevent masonry from drying out rapidly.
6. **New mortar damaged by frost:** Rake out and replace.

190 Control samples

1. **General:** Complete an area of each of the following types of work, and arrange for inspection before proceeding with the remainder: Cleaning - see C40, stone repairs, repointing..

Materials/ production/ accessories

215 Material samples

1. **Representative samples of designated materials:** Arrange for representative samples to be delivered to site for inspection by the architect prior to placing orders.
 - 1.1. **Designated materials: brick, mortar.**
 - 1.2. **SAND SAMPLE(S):** : Sands for bedding and pointing.
Sands for grouting.
Sands for mortar repair.
2. **Retention of samples:** Unless instructed otherwise, retain samples on-site for reference. Protect from damage and contamination.

221 Setting Out and Drawings

1. Setting out points are to be taken from the existing building prior to carrying out repair work. Survey reference points should be taken and recorded to enable the correct placement of repairs.

2. Advise CA or any discrepancies in the alignment of existing work prior to carrying out repairs.

231 GUARANTEE

1. Obtain and submit written guarantee that all new stone is from the quarry and bed as specified/agreed following site samples.

259 Brick Repair and Replacement

1. Individual facing bricks to be replaced where there is significant cracking or missing material such that the masonry is no longer performing within the wall.

260 Bricks (Repair and Replacement)

1. **Standard:** To BS EN 771-1.
2. **Type:** New to match existing – submit samples for approval prior to commencing works. Bricks to match existing as closely as possible in terms of strength, shape, dimensions, texture and colour. Bricks tested to BS EN 771-1:2011
3. **Manufacturer:** Submit proposals.
 - 3.1. **Product reference:** Submit proposals.
4. **Size:** To match existing
5. **Recycled content:** Submit proposals

Dismantling/ rebuilding - Not Used

Replacements and insertions

365 Replacement of bricks

1. **Description:** To window reveals
2. **Bricks:** Clay as clause 260
3. **Mortar:** As section Z21.
 - 3.1. **Standard:** BS EN 998-2
 - 3.2. **Mix:** Price for:
 - 3.3. **Sand source/ type:**
4. **Fixings:**
5. **Joints:**
6. **Other requirements:**

385 Laying replacement masonry units

1. **Exposed faces of new material:** Keep to agreed face lines.
2. **Faces, angles and features:** Align accurately. Set out carefully to ensure satisfactory junctions with existing masonry and maintain existing joint widths.
3. **Joint surfaces:** Dampen to control suction as necessary.
4. **Laying units:** On a full bed of mortar, all joints filled.
5. **Exposed faces:** Keep clear of mortar and grout.
Turn back scaffold boards at night and during heavy rain.

390 Grouting joints

1. **Grout mix:** Nonhydraulic lime with pozzolanic admixture; mix subject to site trials
2. **Joints that cannot be fully filled with bedding mortar:** Grout thoroughly around replacement masonry units.

3. **Grouting:** Keep grout back from exposed face to allow for the depth of pointing, using an approved temporary sealing material. Prevent grout staining exposed face.

395 Installing stone inserts

1. **Pockets to receive inserts**
 - 1.1. Cut out accurately. Undercut sides of pocket where necessary to provide space for bonding material.
 - 1.2. Adjust depth so that insert stands proud of existing stone for finishing in situ.
 - 1.3. Clean out thoroughly.
2. **Inserts:** Cut to the smallest rectangular shape necessary to replace the defective area and provide a firm seating. Install accurately and securely.
 - 2.1. **Exposed faces:** Keep clear of bonding material.
3. **Existing joint widths:** Maintain. Do not bridge joints.

405 Bonded dowels

1. **Description:** If required to fix cartouche.
2. **Standard:** To BS EN 1090-1
3. **Dowels:** Steel to European Standard indicated in BS EN 1090-2 - or submit proposals.
4. **Adhesive:** Epoxy resin - submit proposals
5. **Holes for dowels:** Suitably sized and accurately aligned in masonry background and in rear of replacement/ insert stone; clean and dry.
6. **Other requirements:** Do not use adhesive to bond stones at joints unless instructed.

410 Corroded metal fixings

1. **Removal:** Cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.
2. **Replacement:** Compatible fixings as clause 281.

420 Temporary distance pieces for joints in ashlar stonework

1. **Material:** Lead or stainless steel.
2. **Removal:** When mortar/ grout is sufficiently strong to take loading without compression.

Tooling/ dressing stone in situ - Not Used

Mortar repairs

510 Preparation for mortar repairs

1. **Repair area:** Scribe area of masonry to be removed using straight horizontal and vertical lines parallel to joints. Where repair area abuts joints, maintain existing joint widths and do not bridge joints.
2. **Decayed masonry:** Cut back carefully to a minimum depth of 20 mm to a sound background. Where the depth of removal exceeds 50 mm, seek instructions.
3. **Precautions:** Do not weaken masonry by removing excessive material. Do not damage adjacent masonry.
4. **Top and vertical reveals of repair area:** Undercut.

515 Reinforcement for mortar repairs

1. **Material:** Austenitic stainless steel, phosphor bronze or copper alloy wire, TBC diameter.
2. **Armatures:** Form to suit profiles of mortar repair and provide effective reinforcement.

3. **Cover to reinforcement:** Not less than 18 mm.
4. **Installation:** Drill holes into background to receive reinforcement, and bond firmly with a suitable epoxy resin.

520 Mortar repairs

1. **Description:** As required to hood mould
2. **Undercoats:** As section Z21.
 - 2.1. **Standard:** BS EN 998-2
 - 2.2. **Mix:** TBA - to match colour and finish of surrounding stone - exact mix and extent to be agreed on site with CA.
 - 2.3. **Sand source/ type:** TBA to BS 1200. Clean sharp and course. Colour and texture such that when dry it will match surrounding stonework.
 - 2.4. **Building up:** In layers where necessary, each layer not exceeding 12 mm.
3. **Finishing coat:** To match approved samples.
 - 3.1. **Standard:** BS EN 998-2
 - 3.2. **Mix:** TBA - to match colour and finish of surrounding stone - exact mix and extent to be agreed on site with CA. The mix to be as directed by the architect on site to suit the conditions. In general, the proportion of binder to aggregate is to be approx. 1:2.
 - 3.3. **Sand source/ type:** Sieved and graded with max. 10 percent volume passing through a 150 micron sieve. Details TBA on site.
 - 3.4. **Finished thickness:** Max 7mm
 - 3.5. **Finish:** Wood float.
4. **Reinforcement:** See instructions if required.

540 Applying mortar

1. **Surfaces to receive mortar:** Clean, and free from dust and debris. Dampen to control suction.
2. **Applying coats:** Build up in layers to specified thickness. Apply mortar firmly, ensuring good adhesion with no voids. Form a mechanical key to undercoats by combing or scratching to produce evenly spaced lines.
3. Allow each layer to achieve an initial set before applying subsequent coats. Prevent each layer from drying out rapidly by covering immediately with plastics sheeting and/ or dampening intermittently with clean water.
4. **Finishing mortar coat:** Form accurately to required planes/ profiles, and finish flush with adjacent masonry.
5. **Protection:** Protect completed repairs from adverse weather/strong sun until mortar has set - upto 14 days. Damp hessian or similar. Any frost-damaged work is to be cut out and replaced at the contractor's own expense.
6. **Cleaning:** Keep face work clean and free from staining during construction until completion. Clean off and leave stonework clean to the satisfaction of the architect as the scaffolding is taken down. tar or stains caused by the works on the face of the masonry must be completely removed before the mortar hardens.

555 Float finish to mortar repairs

1. **Procedure:** Use a wood float and/ or a felt faced float to give an even overall texture. Do not use steel floats.

Crack repairs/ ties/ reinforcement

610 Mortar repair of cracks

1. **Description:** As required to hood mould

2. Mortar: As section Z21.
 - 2.1. Standard: BS EN 998-2
 - 2.2. Mix: TBC following site sampling - for pricing: 1:2 Quicklime:Sand
 - 2.3. Sand source/ type: TBC following site sampling - for pricing: lean, well graded sharp - Nostafeld sand
3. Preparation: Clean out cracks to remove debris, dust and dirt. Dampen recesses, as necessary, to control suction.
4. Applying mortar: Press well into cracks so that they are fully filled. Ensure that mortar does not encroach upon exposed faces. Finish mortar flush with masonry face.
5. Other requirements: None

Grouting rubble filled cores - Not Used

Pointing/ repointing

810 Preparation for repointing

1. Existing mortar: Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of not less than 18-25mm.
 - 1.1. Loose or friable mortar: Seek instructions when mortar beyond specified recess depth is loose or friable and/ or if cavities are found.
2. Raked joints: Remove dust and debris.

820 Pointing

1. Description: BRICKWORK GENERALLY
2. Preparation of joints: Carefully brush away loose mortar Dampen joints, as necessary, to control suction, as cl 810.
3. Mortar: As section Z21.
 - 3.1. Standard: BS EN 998-2
 - 3.2. Mix: TBC following site sampling - for pricing: 1:3 Quicklime:Sand (To achieve 1:1.5 ratio once set). To be slightly softer and more porous than the stone.
 - 3.3. Sand source/ type: TBC following site sampling. Clean, sharp and well graded. Colour and texture such that once dry the mortar matches the existing surrounding mortar.
4. Joint profile/ finish: To match existing
5. Samples: Allow for 3 no. samples to be analysed of existing mortar prior to agreeing mixes for sample replacement mortars. Locations to be agreed with CA. These are to be presented as 'biscuit' samples on site for review by CA prior to proceeding. The contractor is to allow for blending and sieving sands from different sources, as necessary, to achieve appropriate grading, colour and texture.

840 Pointing with tools/ Irons

1. Preparation:: Using hand tools only, rake out all loose jointing material to a depth of not less than twice the joint width. All raking/cutting shall leave a clean, square face at the back of the joint, so as to provide optimum contact with the new mortar. Carefully clean out prepared face with bristle brush and flush with clean water - avoid unnecessary saturation, and work from top to bottom. Sound pointing must be left undisturbed. Where cement mortar is to be removed - the technique is to be agreed with the CA and site trials carried out to limit damage to surrounding stone.
2. Dampen:: Thoroughly dampen masonry prior to commencing repointing. Re-wet with hand spray as required - without leaving water to pool in prepared joint.
3. General: Press mortar well into joints using pointing tools/ irons that fit into the joints, so that they are fully filled. Press firmly to ensure full compaction across depth of joint. The contractor should be aware that it may be necessary for him to fabricate pointing irons to undertake the

works. Begin at the top of the wall and work downwards. Avoid getting mortar on the finished faces of stonework - clean off immediately to prevent staining.

4. **Face of masonry:** Keep clear of mortar. Use suitable temporary adhesive tape on each side of joints where necessary. Finish joints neatly.

860 Brushed finish to joints

1. **Timing:** After initial mortar set has taken place remove laitance and excess fines by brushing, to give a coarse texture. Do not compact mortar.

900 Protection and cleaning

1. -Protect works from direct sun and rain, well ventilated and moist min 10 deg C for min 4 weeks until face cured.
- Turn back scaffold boards adjacent to brick faces at night and during heavy rain.
-Remove any staining immediately.
-Do not carry out works below 5deg and falling. Recommence at 3deg and rising.
-Keep daily max/min temperature records on site during October-April (and beyond should frost be forecast).

901 Completion

- Give at least one weeks notice of completion to allow inspection prior to scaffold removal.
- Remove all tools, plant and equipment and used materials and debris.

Ω End of Section

C42

Repairing/ renovating/ conserving concrete

General

100 Scope

1. Repair to concrete edge/cill at 3 no. windows WG-01 - WG03. Repair step to WG_05. To enable formation of sound seal with new window frame.
2. Refer to Appendix B for detailed Sika specification. Allow for all testing to determine appropriate final specification.
3. Submit methodology. Ensure works can be carried out from loading bay elevation.

Products - Not Used

Execution - Not Used

Completion - Not Used

Ω End of Section

C49

Repairing/ renovating/ conserving metalwork

General

100 Scope

1. Restoration and repair of 2 no. existing metal framed windows (refs WG-01, WG-02). Extent of repair required is to be limited to that necessary to fully redecorate the frames to prevent further corrosion, and enable reglazing. Repairs for aesthetic reasons only are not to be carried out.
2. Fabrication and fitting of 1 no. new metal framed window to match above (ref WG_03)
3. Refer to drawings for further details.

105 Methodology

1. Restoration and Repair:
 - 1.1. Conservation, repair and maintenance shall be as defined in BS 7913
 - 1.2. Full photographic survey of existing frames prior to removal. Record to be issued to CA and conservation officer.
 - 1.3. Without damaging the glass, frame and surrounding masonry, carefully remove existing metal frame and enclosed glass infills. Carefully transport to workshop. Ensure adequate protection to prevent further damage to glass or metal framing. Label all items to enable reinstatement in the correct locations. Protect areas with barriers and warning tape.
 - 1.4. Carry out spark test and shaving test to determine material composition. A selection of known materials should be available for comparison. Take photographs of process.
 - 1.5. Carry out paint sampling and send to suitably qualified testing lab for confirmation of paint layers to inform specification of new coating.
2. Cleaning:
 - 2.1. Clean any loosely adhered paint from the surface. Sound well adhered coatings to be retained. Proceed on the assumption that lead content is present, and ensure necessary H&S precautions are included within methodology. Ensure at least a nominal area of existing paint layers (both internal and external face) to be retained and protected to inform future restoration works.

A targeted approach is required to localised areas of rust/damaged metalwork and/or poorly adhered surface coatings. Avoid bruising, distorting or fracturing the metal.
 - 2.2. Clean surface to remove corrosion, atmospheric soiling, and loose paint, ready to take new coatings in accordance with BS 7079:2009. Clean nominal 25mm around all damaged areas to ensure all rust is removed.

Where applicable, surfaces are to be fully cleaned of rust back to 'bright metal'. Clean as follows:
 - 2.3. Low pressure cleaning with water and brush. If this is insufficient, proceed with hand cleaning with wire brushes and abrasive papers only. Only then proceed with needle gun cleaning - carry out test clean and seek instructions prior to proceeding. Only skilled experienced operatives to be used. Any remaining corrosion within joints can be cleaned using a localised soft abrasive blasting method - submit proposals.
 - 2.4. Immediately dry surface, feather edge retained sound paint and apply a holding primer to all exposed surfaces to prevent atmospheric corrosion.
 - 2.5. Determine scope of repair work and whether dismantling of frames will be necessary - finalise scope and methodology with conservation architect and CA prior to proceeding.
 - 2.5.1. Prepare itemised repair schedule for sign off by conservation architect - temporarily marking the areas of the frame accordingly. Suitable repair techniques - see below
 - 2.6. Repairs:

- 2.6.1.Scope - Repairs as necessary to enable framing to be reassembled and successfully coated. Pitting/fractures etc to be filled to enable re-coating.
- 2.6.2.The holding primer must be entirely removed. Especially from crevices and occlusions.
- 2.6.3.Record all repair works both written and in photographic form - confirming details of methodology used.
- 2.7.
- 2.8. Apply new coating
- 2.9. Install frame and seal perimeter with red burnt sand mastic. Refer to clause L for glazing details.

110 Inspection

- 1. **Purpose:** To confirm nature and extent of repair/ renovation/ conservation work shown on drawings, and described in survey reports and schedules of work.
- 2. **Parties involved:** Contract administrator, conservation architect, conservation officer.
- 3. **Timing:** At least 10 working days before starting each section of work
- 4. **Instructions issued during inspection:** Confirm in writing, with drawings and schedules as required, before commencing work

140 STORAGE

- 1. Ensure frames are securely stored and kept clean and dry to prevent deterioration
- 2. Store vertically, and do not stack components. Ensure adequate support to prevent bending.
- 3. Protect from abrasion with padding

148 Mild Steel Repairs

- 1. Plating and pinning - using stainless steel 316L.
Plates shaped to the rear surface profile , drilled and tapped with countersunk screws.
Filler medium compatible with the paint system to be used to bed the mating faces together. The filler should be carefully applied to ensure no air entrapment and sufficient material deployed that excess will squeeze out on compression.
- 2. Pinning - penetration shall be filled with a compatible filler medium for assembly and mating cast iron faces likewise.
Surface fractures should be filled to ensure no water penetration prior to final painting.

149 Wrought Iron and Mild Steel Repairs

- 1. Non-metallic cold repairs - two-pack epoxy adhesives may be used to make small non structural repairs, to fit small gaps. Repairs to be weaker than the original construction - i.e. sacrificial.
 - 1.1. Two-pack epoxy adhesives may be used to make small non structural repairs, to fit small gaps.
 - 1.2. Repairs to be weaker than the original construction - i.e. sacrificial. Steel plates to be thinner than wrought iron sections due to increased strength.
 - 1.3. Holes drilled into original component to be minimised, small and staggered to minimise weakening fabric.
- 2. Forge Welding and brazing - contractor to submit proposals
 - 2.1. Surfaces to be joined are to be cleaned and then fluxed prior to flame heating.
Non-structural and lightly loaded repairs of wrought iron only.

151 Coating

- 1. Works to be carried out in accordance with ISO 12944-7 recommendations.
- 2. Ensure workshop is clean, dry and properly lit, heated and ventilated.

3. Method:
 - Surfaces to be coated: Clean, dust free and suitably dry. Previous coats to be adequately cured.
 - Multiple coats of same material: Use different tints to assist checking of complete coverage.
 - Penultimate coat: Colour recommended by paint manufacturer to suit top coat colour.
 - Finish required: Smooth and even, of uniform thickness and colour, free from defects.
4. STRIPE COAT
External angles, nuts, bolt heads, rough weld seams, and areas difficult to coat: Apply an additional stripe coat of primer and undercoat. This is a supplementary coat, applied to ensure adequate protection of critical areas.
5. Apply cleaner as cl151B
6. Apply primer as cl160
7. Apply top coats as cl161

200 MATERIALS

208 Metal Filling Adhesive

1. Scope: Filling holes and imperfections in wrought iron or steel to prevent water gathering.
2. Materials: www.upol.com - 2 part epoxy adhesive filler - P38 in accordance with manufacturer recommendations, or similar approved.
3. Instructions: Trial small area before wider execution

209 Adhesives

1. Supplier: <https://www.belzona.co.uk/en/products/purpose/metal-repair.aspx>
Final specification and methodology to manufacturer recommendations.

211 Wrought Iron

1. Supplier: Reclaimed - contractor to submit proposals.

212 Mild Steel

1. Hot rolled carbon steel to EN 10111: 2008. Thickness to match existing.
2. Supplier - Submit proposals.

213 Cleaning agents

1. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
2. Contact details
 - 2.1. Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA
 - 2.2. Telephone: [+44 \(0\)1924 354354](tel:+441924354354)
 - 2.3. Web: <https://ppgac.co.uk/>
 - 2.4. Email: specifiers.acuk@ppg.com
3. Product reference: [Cleaner and Degreaser](#).
4. Category: Water-borne, non-hazardous.
5. Form: Liquid.
6. Capacity: 5 L.

215 Solvent-borne metal primers

1. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
2. Contact details
 - 2.1. Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA
 - 2.2. Telephone: [+44 \(0\)1924 354354](tel:+44(0)1924354354)
 - 2.3. Web: <https://ppgac.co.uk/>
 - 2.4. Email: specifiers.acuk@ppg.com
3. Product reference: [Johnstone's Trade Quick Dry Zinc Phosphate Primer \(Performance Coatings\)](#).
4. Colour:
5. Coverage: 11 m²/L.
6. Drying time: Touch-dry in two to four hours. Recoatable after 16 hours.
7. Volume solids: 34%.
8. VOC content: High (25–50%).
9. Film thickness: Dry: 35 µm. Wet: 75 µm.
10. Application method: Brush.
11. Capacity:

217 Solvent-based finishing coats

1. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
2. Contact details
 - 2.1. Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA
 - 2.2. Telephone: [+44 \(0\)1924 354354](tel:+44(0)1924354354)
 - 2.3. Web: <https://ppgac.co.uk/>
 - 2.4. Email: specifiers.acuk@ppg.com
3. Product reference: [Johnstone's Trade Steel & Cladding Semi-Gloss Topcoat \(Performance Coatings\)](#)
4. Composition: Silicone alkyd.
5. Sheen: Semi-gloss.
6. Colour:
7. Coverage: 10 m²/L.
8. Drying time: Touch dry in 3–4 hours.
9. Volume solids: 50%.
10. Film thickness: Dry: 50 µm; Wet: 100 µm.
11. VOC content: High (25–50%).
12. Application method: Brush or roller.
13. Capacity: 5 L.

218 Perimeter Sealant

1. Manufacturer: Wormersleys
Atelier Mb Ltd
08-06-2022

2. Contact details

2.1. Address: Womersley's Ltd
Ravensthorpe Indust Est, Low Mill Lane, Ravensthorpe, West Yorkshire, WF13 3LN, United Kingdom

2.2. Telephone: 01924 400 651

2.3. Web: <https://www.womersleys.co.uk/contact-us>

2.4. Email: info@womersleys.co.uk

3. Product reference: Burnt Sand Mastic

4. Sealant type: Oil based.

5. Colour: Red

6. Joint width: Mastic fillets should be neat 20 - 25mm across the diagonal face

7. Preparation: Before pointing ensure that all wide gaps between the frames and the masonry are tightly packed with well haired lime mortar that has been allowed to cure and harden. Joints to remain recessed 4-5mm.

8. Method: Burnt sand mastic is a two-part product. For each litre of burnt sand add approximately 200ml of the double boiled linseed oil hardener. Add only a little at a time and mix until the mastic forms a thick putty like consistency, which comes cleanly off the mixing trowel. Let the mix stand for 15 minutes and use any excess oil which runs off plus any remaining oil as a primer, applied with a brush to the frame and adjoining masonry. Do not over oil the surface. If the mastic mix is over wet, let it stand for longer to allow it to stiffen up and then remix vigorously. Apply the mastic whilst the primer still feels oily or tacky to touch. Working with a mastic box or a small hawk and a proprietary mastic trowel press the mastic firmly into the angle of the frame / jamb and filling from the bottom up, forming the mastic joint to a neat 45 degree angle. Keep tools wiped with an oiled cloth during the application. After forming the angle, starting from a corner, press a clean oiled mastic trowel tightly against the face of the timber frame and masonry jamb and carefully press and draw the trowel to create a neat regular fillet. Clean away any excess mastic and wipe the finished edges on completion. For mastic to sills, ensure the mastic does not bridge any drips and is left recessed behind the drip check. Mastic should not be over painted. Mastic fillets should be neat 20 - 25mm across the diagonal face

Structural repairs/ alterations - Not Used

Products

205 Sealant

1. Description: Sealant or flexible joining material as part of metal framed assembly
2. Type: Red or white lead paste from red oxide and boiled linseed oil , or High quality polysulphide mastic (Arbo or similar approved. Product should meet BS EN ISO 11600 F 25 LM / BS 4254:1983.

430 Proprietary framing anchors and cleats

1. Manufacturer: Submit proposals
2. Material/ finish: Stainless steel grade 316
3. Fasteners: To match existing.

480 Screws

1. Description: Countersunk screws to attach plates as required. Slot head.
2. Standard: As section Z20.
3. Material: Stainless steel grade 316
4. Tensile strength (minimum):
5. Finish as delivered:

6. **Accessories:** Insulate fixings from ironwork to prevent sacrificial corrosion. Nylon or PTFE sleeves or collars with stainless steel washers
7. **Notes:** Tighten by hand.

481 Ironmongery

1. Refurbish and reuse existing hinges. Where replacement required, these are to match existing. Allow for cast iron.
2. New door lock to WG-02. Final specification TBA on site. Allow for blackcast iron hinged locking bar: <https://www.castinstyle.co.uk/product.php/1116/kirkpatrick-black-iron-lockable-hinged-locking-bar-3420-3430>

Execution

600 Workmanship

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

650 Dimensions generally

1. **Site dimensions:** Take as necessary before starting fabrication.
 - 1.1. **Discrepancies with drawings:** Report without delay and obtain instructions before proceeding.

Completion

910 Mechanically fastened joints

1. **General:** Inspect accessible bolted, coach screwed and timber pegged joints and tighten fasteners if necessary.
 - 1.1. **Timing:** On Completion and at end of Defects Liability Period or Rectification Period.

Ω End of Section

C51

Repairing/ renovating/ conserving timber

General

110 Inspection

1. **Purpose:** To confirm nature and extent of repair/ renovation/ conservation work shown on drawings, and described in survey reports and schedules of work.
2. **Parties involved:** contract administrator
3. **Timing:** At least 5 days before starting each section of work
4. **Instructions issued during inspection:** Confirm in writing, with drawings and schedules as required, before commencing work

150 Timber procurement

1. **Timber (including timber for wood-based products):** Obtained from well-managed forests and/ or plantations in accordance with:
 - 1.1. The laws governing forest management in the producer country or countries.
 - 1.2. International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
2. **Documentation:** Provide either in accordance with the chain of custody certification scheme requirements:
 - 2.1. documentary evidence (that has been or can be independently verified) regarding the provenance of all timber supplied; or
 - 2.2. evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
3. **Chain of Custody Certification scheme:** Forest Stewardship Council (FSC), Grown in Britain (GiB) or Programme for the Endorsement of Forest Certification (PEFC)
 - 3.1. Other evidence:

Structural repairs/ alterations - Not Used

Products

360 Softwood for joinery repairs

1. **Description:** To replacement fascia - no. 212
2. **Species:** Slow grown redwood
3. **Quality:** Generally to BS EN 942; free from decay and insect attack (except pinhole borers).
 - 3.1. **Appearance class:** Class J20.
4. **Treatment:** to NBS section Z12 and Wood Protection Association Commodity Specification
5. **Moisture content on delivery:** 13-19%

470 Nails

1. **Description:**
2. **Standard:** As section Z20.
3. **Type:**
4. **Material:** Steel.
 - 4.1. **Strength (minimum):**
5. **Finish as delivered:** Sherardized

480 Screws

1. Description:
2. Standard: As section Z20.
3. Material: Stainless steel
4. Tensile strength (minimum):
5. Finish as delivered: Sherardized

540 Resin grout/ adhesive

1. Description: As required
2. Type: Submit proposals
3. Manufacturer: Submit proposals
 - 3.1. Product reference: Submit proposals

Execution

600 Workmanship

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

610 Temporary supports/ propping

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

620 Protection of timber and wood components before and during installation

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

650 Dimensions generally

1. Site dimensions: Take as necessary before starting fabrication.
 - 1.1. Discrepancies with drawings: Report without delay and obtain instructions before proceeding.

665 Cross section dimensions of non-structural softwood

1. Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
2. Maximum permitted deviations from finished sizes: As stated in BS EN 1313-1, clause 6 for sawn sections.

670 Cross section dimensions of non-structural hardwood

1. Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
2. Maximum permitted deviations from finished sizes: As stated in BS EN 1313-2:
 - 2.1. Clause 6 for sawn sections.
 - 2.2. Clause NA.3 for further processed sections.

680 Warping of timber

1. **Bow, spring, twist and cup:** *Not greater than the limits set down in BS 4978 or BS EN 14081-1 for softwood, or BS 5756 for hardwood.*

690 Processing treated timber

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

710 Reuse of timber sections/ wood components

1. **Sections/ components scheduled to be removed but not reused in existing locations:** Agree extent of retention for reuse elsewhere in the works.
 - 1.1. **Treatment following removal:**
 - 1.2. **Storage:** Protect against damage, and store until required.
 - 1.2.1. **Storage location:** On site
2. **Reuse:** Adapt sections/ components, as necessary, and install in agreed locations.

740 Removal of existing decorative/ protective finish

1. **Description:** Previously painted
2. **Extent:** Remove completely back to bare wood.
3. **Method:** Paint removal using poultice - submit proposals.

750 Cleaning dirty or stained wood

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

780 Repair of distorted timber members

1. **Generally:** Repair to shape that member has assumed.

850 Glued joints

1. **Adhesive:** *To BS EN 301 - external grade.*
 - 1.1. **Compatibility:** Where relevant, obtain manufacturer's confirmation that adhesive is compatible with preservative/ fire-retardant treatment.
2. **Glued structural components:** Fabricated to BS 6446 in clean, controlled workshop conditions.
3. **Anticipated equilibrium moisture content of timber in service:**

860 Moisture content checking

1. **Procedure:** Check moisture content of timber sections with an approved electrical moisture meter.
2. **Test results:** Keep records of all tests. If moisture content falls outside specified range obtain instructions.

870 Moisture content testing

1. **Procedure:** Test timber sections with an electrical moisture meter with deep probes. (A meter that has been carefully calibrated against oven drying tests or otherwise guaranteed by an independent testing authority.)

2. **Test sample:** Test 5% but not less than 10 lengths of each cross-section in the centre of the length.
3. **Test results:** 90% of values obtained to be within the specified range. Provide records of all tests.

Completion

910 Mechanicallyfastened joints

1. **General:** Inspect accessible bolted, coach screwed and timber pegged joints and tighten fasteners if necessary.
 - 1.1. **Timing:** On Completion and at end of Defects Liability Period or Rectification Period.

Ω End of Section

F30

Accessories/ sundry items for brick/ block/ stone walling

Cavities

165 Air grilles Type A

1. Manufacturer: [Cast Iron Air Brick Company](#)
 - 1.1. Contact details
 - 1.1.1.Address: Down Farm
Brayford
Barnstaple
Devon
EX32 7QQ
 - 1.1.2.Telephone: [+44 \(0\)1598 711999](tel:+44(0)1598711999)
 - 1.1.3.Web: www.castironairbricks.co.uk
 - 1.1.4.Email: sales@castironairbricks.co.uk
 - 1.2. Product reference: Submit proposals
2. Material: Cast iron.
3. Finish: Painted black.
4. Type: To suit existing opening on site. Horizontal bars.
5. Accessories/ Other requirements: Drill holes. Mesh.
6. Dimensions: TBC following site measure
7. Thickness: 12 mm.
8. Vent: 11 mm.

165 Air grilles Type B

1. Standard: To BS 493, class 2.
2. Manufacturer: Submit proposals
 - 2.1. Contact details
 - 2.2. Product reference: Submit proposals
3. Material: Aluminium
4. Finish: Polyester powder coated
5. Accessories/ Other requirements: Drill holes. Mesh.
6. Dimensions: To suit existing flexible duct.
7. Air flow: To suit existing flexible duct.
8. Material/ Colour: White
9. Placement: Built in with no gaps at joints.

Reinforcing/ fixing accessories - Not Used

Flexible damp proof courses/ cavity trays - Not Used

Installation of dpcs/ cavity trays - Not Used

Joints

650 Pointing in flashings

1. Joint preparation: Free of debris and lightly wetted.

2. Pointing mortar: TBC following site sampling - for pricing: 1:3 Quicklime:Sand (To achieve 1:1.5 ratio once set). To be slightly softer and more porous than the stone.
3. Placement: Fill joint and finish to match existing style.

Proprietary sills/ lintels/ copings/ dressings - Not Used

Miscellaneous items - Not Used

Ω End of Section

H14

Precast concrete and glass lens/ paver rooflights/ floor lights/ pavement lights/ security panels

Products

325 Pavement lights

1. **Description:** Cast Iron Pavement Light Glass Lens Replacement
2. **Manufacturer:** New Age Glass,
Unit 4, Phoenix Business Centre,
Spur Road,
Chichester,
West Sussex,
PO19 8PN
Phone: 01243 790414 - Fax: 01243 790415
info@newageglass.co.uk
Contact: Marc Parkinson
- 2.1. **Product reference:** Sizes to be confirmed on site:
For pricing: NAG- PR - 2007
Dimensions: Length: 93mm
Width: 93mm
Thickness: 18mm
Weight: 1 kg
Cast quality: EN-GJL-200
Cast finish: Natural
3. **Other requirements:** Lens finish: Sand-blasted
Lens bedding material: JetCem Rapid setting Cement

350 Mortar bedding

1. **Type:** As cl325
2. **Thickness:** To manufacturer recommendations and to match existing setting.

370 Samples

1. **General:** Prior to manufacture of panels/ units submit labelled samples of glass lens.

Execution

605 Adverse weather

1. **General:** Do not use frozen materials or lay units on frozen surfaces.
2. **Air temperature requirements:** Do not lay units in mortar or apply sealant when air temperature is at or below 3°C and falling or unless it is at least 1°C and rising.
3. **Newly laid panels/ units:** Protect at all times from rain and snow.

Ω End of Section

L10

Windows/ rooflights/ screens/ louvres

General

001 SCOPE

1. Replacement steel/iron louvres - if beyond repair.
2. Modifications to existing window frames to reinstate historic configuration.
3. Replacement steel/iron window frame to match existing.

002 Methodology - Steel/cast iron framed windows A

1. For repairs -refer to clause C49.

003 Window Detailed Design - steel/iron and timber

1. Carefully remove existing frame from site and carry out full measured survey. Prepare fabrication drawing for new frame to match existing - issue for comment.

110 Evidence of performance

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

111 Warranty

1. Provide insurance backed warranties as follows:
2. Frame - min 30 years
3. Factory finish - min 10 years.

115 Timber procurement

1. **Timber (including timber for wood based products):** Obtained from well managed forests and/ or plantations in accordance with:
 - 1.1. The laws governing forest management in the producer country or countries.
 - 1.2. International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
2. **Documentation:** Provide either:
 - 2.1. Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
 - 2.2. Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
3. **Certification scheme:** Forest Stewardship Council (FSC) or similar to be agreed.
 - 3.1. **Other evidence:**

120 Preconstruction survey

1. **Procedure:** Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
2. **Designated items:** All windows
3. **Primary support structure:** Carry out survey sufficient to verify that required accuracy and security of erection can be achieved.
4. **Timing:** Before fabrication.

Products

260 Wood windows

1. Standard: Non-fire rated window to BS EN 14351-1 and BS 644
2. Manufacturer: A firm currently registered under a third party quality assurance scheme.
3. Exposure category to BS 6375-1/ Design wind load:
4. Operation and strength characteristics: To BS 6375-2.
5. Timber: Generally to BS EN 942.
 - 5.1. Species: European redwood
 - 5.2. Appearance class: J2 for glazing beads, drip mouldings etc. J30 or better for all other members. Finger jointing and knots on arrises not permitted where exposed to view.
 - 5.3. Moisture content on delivery: 12-19%.
6. Preservative treatment: Organic solvent as section Z12 and WPA Commodity Specification C5; Desired service life 30 years
7. Finish as delivered: Primed for painting. See CI M60.
8. Glazing details: Restover light, thickness to match existing. Seek instructions once scaffolding erected and existing frame profile measured.
 - 8.1. Beading: To match existing.
9. Ironmongery/ Accessories:
10. Fixing: Screwed to timber framing

261 Workmanship

1. All joints to be properly designed to give a tight fit without gaps between abutting surfaces.

315 Steel windows - Replacement

1. Standard: Bespoke
 - 1.1. Material: Hot rolled carbon steel to EN 10111: 2008. Thickness to match existing.
 - 1.2. Window section: To match existing elsewhere
2. Exposure category to BS 6375-1/ Design wind load: TBC by contractor
3. Operation and strength characteristics: To BS 6375-2.
4. Finish as delivered: Hot dip galvanised then polyester powder-coated
5. Glazing details: As CI L40
 - 5.1. Beading: External
6. Ironmongery/ Accessories: weather bar to cill
7. Fixing: Screwed to unrebutted brick reveal

650 Metal louvres - replacement

1. Material: Steel or cast iron to match existing if beyond repair. Seek instructions prior to proceeding.
 - 1.1. Finish as delivered: Painted as CI M60
2. Number of louvre banks: As existing.
3. Louvre blade pitch and angle: As existing.
4. Fixing: Bolted in accordance with the manufactures recommendations.

Execution

710 Protection of components

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

730 Priming/ sealing

1. **Wood surfaces inaccessible after installation:** Prime or seal as specified before fixing components. All end grain to be sealed.

740 Corrosion protection

1. **Surfaces to be protected:** n/a use only stainless steel and brass fittings.
2. **Protective coating:** Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
 - 2.1. **Timing of application:** Before fixing components.

765 Window installation generally

1. **Installation:** Into existing openings.
2. **Gap between frame edge and surrounding construction**
 - 2.1. **Minimum:** 5mm
 - 2.2. **Maximum:** 10mm
3. **Distortion:** Install windows without twist or diagonal racking.

780 Fixing of wood frames

1. **Standard:** As section Z20.
2. **Fasteners:** Stainless steel fixings
 - 2.1. **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 450 mm centres.

781 Fixing of steel frames

1. **Standard:** As section Z20.
2. **Fasteners:**
 - 2.1. **Spacing:** use existing fixing locations.

820 Ironmongery

1. **Fixing:** In accordance with any third party certification conditions applicable. Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
2. **Checking/ Adjusting/ Lubricating:** Carry out at Completion and ensure correct functioning.

Ω End of Section

L40

General glazing

General requirements

130 Removal of glass/ plastics for reuse

1. Existing glass/ plastics and glazing compound, beads, etc: Remove carefully, avoiding damage to frame, to leave clean, smooth rebates free from obstructions and debris.
2. Deterioration of frame/ surround: Submit report on defects revealed by removal of glazing.
 - 2.1. Affected areas: Do not reglaze until instructed.
3. Reusable materials: Clean glass/ plastics, beads and other components that are to be reused.

140 Material samples

1. Representative samples of designated materials: Submit before cutting panes.
 - 1.1. Sample size (minimum): 300 x 300 mm
 - 1.2. Designated materials: 10mm thick cast glass; 10mm thick laminated glass.

150 Workmanship and positioning generally

1. Glazing generally: In accordance with BS 6262 series.
2. Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
3. Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
4. Materials
 - 4.1. 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.
 - 4.2. Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

152 Preparation

1. Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing; ensure compliance with any certified installation requirements.

155 Glass generally

1. Standards: To BS 952 and relevant parts of:
 - 1.1. BS EN 572 for basic soda lime silicate glass.
 - 1.2. BS EN 1096 for coated glass.
 - 1.3. BS EN 1748-1 for borosilicate glass.
 - 1.4. BS EN 1748-2 for ceramic glass.
 - 1.5. BS EN 1863 for heat strengthened soda lime silicate glass.
 - 1.6. BS EN 12150 for thermally toughened soda lime silicate safety glass.
 - 1.7. BS EN 12337 for chemically strengthened soda lime silicate glass.
 - 1.8. BS EN 13024 for thermally toughened borosilicate safety glass.
 - 1.9. BS EN ISO 12543 for laminated glass and laminated safety glass.
2. Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.

- 2.1. **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.

165 Heat soaking of thermally toughened glass

1. **Standard:** To BS EN 14179-1 and -2.
 - 1.1. **Holding period (minimum):** To manufacturer recommendations - min 2 hours.
2. **Certified evidence of treatment:** Submit.
3. **Designated locations:** loading bay

180 Bead fixing with pins

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

181 Bead fixing with screws

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

Types of glazing

210 Putty fronted single glazing

1. **Description:** Replacement glass to retained and new steel/wrought iron window frames.
2. **Pane material:** 10mm cast or laminated unit by Pearsons (details TBC). Outer face to be toughened.
3. **Surround:** galvanised steel/wrought iron - TBC pending site testing.
 - 3.1. **Sealer:** Paint primer
4. **Type of putty:** Linseed oil
5. **Thermal performance (U-value maximum):** Manufacturer standard
6. **Glass installation**
 - 6.1. **Glass:** Located centrally in surround using setting and location blocks, and secured with putty as recommended by glazing supplier.
 - 6.2. **Finished thickness of back bedding after inserting glazing (minimum):** 1.5 mm.
 - 6.3. **Front putty:** Finished to a smooth, neat triangular profile stopping 2 mm short of sight line. Surface lightly brushed to seal putty to glass and left smooth with no brush marks.
7. **Installation:** Replacement glass should be cut about 3mm smaller than the frame, to allow for thermal movement. Putty to be profiled to ensure water will not be trapped in the frame.
8. **Sealing putty:** Seal as soon as sufficiently hard but not within 7 days of glazing. Within 28 days apply either:
 - 8.1. The full final finish, suitably protected until completion and cleaned down and made good as necessary, or
 - 8.2. Two coats of primer applied locally to the compound, to be followed nearer completion with the full specified finish.
9. **Opening lights:** Keep in closed position until putty has set sufficiently to prevent displacement of glazing when opened.

610 Window film

1. **Type:** Obscure
2. **Manufacturer:** Contractor choice
 - 2.1. **Product reference:** Submit proposals

3. Colour: White
4. Application: Carried out by a firm approved by the film manufacturer in accordance with manufacturer's recommendations.
 - 4.1. Evidence of applicator's competence and experience: Submit on request.
 - 4.2. Sample area: Complete as part of the finished work, in an approved location and obtain approval of appearance before proceeding.
 - 4.3. Ambient air temperature at time of application: Above 5°C.
5. Installed film: Fully adhered to the glass with no peeling, and free from bubbles, wrinkles, cracks or tears.
6. Further contact with applied films: Avoid until bonding adhesive has cured.
7. Cleaning and maintenance instructions: Submit copies.

Ω End of Section

M60

Painting/clear finishing

Coating systems

110 Emulsion paint

1. Description: To previously painted timber frames and door leafs.
2. Manufacturer: See Clause 210
 - 2.1. Product reference: Submit proposals
3. Surfaces: External existing painted timber, weatherboarding, profiled timber window frames.
 - 3.1. Preparation: Ensure surfaces are clean and dry
4. Initial coats: mist coat as recommended by manufacturer
5. Number of coats: 1
6. Undercoats: As recommended by manufacturer
 - 6.1. Number of coats: 1
7. Finishing coats: Semi-gloss to match existing.
 - 7.1. Number of coats: Two.

110 Cleaning agents Type A

1. Description: To new steel/iron surfaces (window frames).
2. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
 - 2.1. Contact details
 - 2.1.1. Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA
 - 2.1.2. Telephone: [+44 \(0\)1924 354354](tel:+441924354354)
 - 2.1.3. Web: <https://ppgac.co.uk/>
 - 2.1.4. Email: specifiers.acuk@ppg.com
 - 2.2. Product reference: [Cleaner and Degreaser](#).
3. Category: Water-borne, non-hazardous.
4. Form: Liquid.
5. Capacity: 5 L.
6. Surfaces:
 - 6.1. Preparation: Ensure surfaces are clean and dry
7. Initial coats: mist coat as recommended by manufacturer
8. Number of coats: 1
9. Undercoats: As recommended by manufacturer
 - 9.1. Number of coats: 1
10. Finishing coats: As specified by the Interior Designer
 - 10.1. Number of coats: Two.

110 Emulsion paint Type B

1. Description: To new timber frames.
2. Manufacturer: See Clause 21 0

- 2.1. Product reference: Submit proposals
- 3. Surfaces: Treated slow grown redwood
 - 3.1. Preparation: Ensure surfaces are clean and dry
- 4. Initial coats: mist coat as recommended by manufacturer
- 5. Number of coats: 1
- 6. Undercoats: As recommended by manufacturer
 - 6.1. Number of coats: 1
- 7. Finishing coats: Semi-gloss to match existing.
 - 7.1. Number of coats: Two.

110 Solvent-based finishing coats Type C

- 1. Description: To previously painted timber frames and door leafs, and new unpainted timber.
- 2. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
 - 2.1. Contact details
 - 2.1.1. Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA
 - 2.1.2. Telephone: [+44 \(0\)1924 354354](tel:+441924354354)
 - 2.1.3. Web: <https://ppgac.co.uk/>
 - 2.1.4. Email: specifiers.acuk@ppg.com
 - 2.2. Product reference: [Stormshield Flexible Satin](#)
- 3. Sheen: Satin.
- 4. Colour: To match existing (2no. colours across scheme, both pale).
- 5. Coverage: 14—16 m²/L.
- 6. Drying time: Touch dry in 4–6 hours.
- 7. Volume solids: 61%.
- 8. Film thickness: Dry: 41 µm; Wet: 67 µm.
- 9. VOC content: High (25—50%).
- 10. Application method: Brush or roller.
- 11. Capacity:
- 12. Surfaces: External existing painted timber, weatherboarding, profiled timber window frames. Replacement window framing.
 - 12.1. Preparation: Ensure surfaces are clean and dry
- 13. Initial coats: mist coat as recommended by manufacturer
- 14. Number of coats: 1
- 15. Undercoats: As cl 110D
 - 15.1. Number of coats: 1
- 16. Finishing coats: Semi-gloss to match existing.
 - 16.1. Number of coats: Two.

110 Primer-undercoats Type D

- 1. Description: To previously painted timber frames and door leafs, and new unpainted timber.
- 2. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
 - 2.1. Contact details

2.1.1.Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA

2.1.2.Telephone: +44 (0)1924 354354

2.1.3.Web: <https://ppgac.co.uk/>

2.1.4.Email: specifiers.acuk@ppg.com

2.2. Product reference: [Johnstone's Trade Flexible Primer Undercoat \(Stormshield\)](#).

3. Colour: To manufacturer recommendations to suit top-coat colour.
4. Type: Solvent based.
5. Coverage: 16–18 m²/L, depending on the nature and porosity of the surface being painted.
6. Drying time: Tough dry in 4-6 hours. Recoatable after 16–24 hours.
7. Film thickness: Dry: 53 µm. Wet: 85 µm.
8. Volume solids: 63%.
9. VOC content: High (25-50%).
10. Application method: Brush or roller.
11. Third-party certification: BBA Agrément Certificate 97/3440.
12. Capacity:
13. Sheen: Satin.

111 Solvent-borne metal primers

1. Description: To new steel/iron surfaces (window frames).
2. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)

2.1. Contact details

2.1.1.Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA

2.1.2.Telephone: +44 (0)1924 354354

2.1.3.Web: <https://ppgac.co.uk/>

2.1.4.Email: specifiers.acuk@ppg.com

2.2. Product reference: [Johnstone's Trade Quick Dry Zinc Phosphate Primer \(Performance Coatings\)](#).

3. Colour: TBC following paint testing.
4. Coverage: 11 m²/L.
5. Drying time: Touch-dry in two to four hours. Recoatable after 16 hours.
6. Volume solids: 34%.
7. VOC content: High (25–50%).
8. Film thickness: Dry: 35 µm. Wet: 75 µm.
9. Application method: Brush.
10. Capacity:
11. Surfaces:
 - 11.1. Preparation: Ensure surfaces are clean and dry
12. Initial coats: mist coat as recommended by manufacturer
13. Number of coats: 1

14. Undercoats: As recommended by manufacturer
 - 14.1. Number of coats: 1
15. Finishing coats: As specified by the Interior Designer
 - 15.1. Number of coats: Two.

112 Solvent-based finishing coats

1. Description: To new steel/iron surfaces (window frames).
2. Manufacturer: [Johnstone's Trade Paints - a brand of PPG Industries](#)
 - 2.1. Contact details
 - 2.1.1. Address: Huddersfield Road
Birstall
Batley
West Yorkshire
WF17 9XA
 - 2.1.2. Telephone: [+44 \(0\)1924 354354](tel:+441924354354)
 - 2.1.3. Web: <https://ppgac.co.uk/>
 - 2.1.4. Email: specifiers.acuk@ppg.com
 - 2.2. Product reference: [Johnstone's Trade Steel & Cladding Semi-Gloss Topcoat \(Performance Coatings\)](#)
3. Composition: Silicone alkyd.
4. Sheen: Semi-gloss.
5. Colour: Single, dark. TBC following sampling of existing paint build-up
6. Coverage: 10 m²/L.
7. Drying time: Touch dry in 3–4 hours.
8. Volume solids: 50%.
9. Film thickness: Dry: 50 µm; Wet: 100 µm.
10. VOC content: High (25–50%).
11. Application method: Brush or roller.
12. Capacity: 5 L.
13. Application method: Brush.
14. Surfaces:
 - 14.1. Preparation: Ensure surfaces are clean and dry
15. Initial coats: mist coat as recommended by manufacturer
16. Number of coats: 1
17. Undercoats: As recommended by manufacturer
 - 17.1. Number of coats: 1
18. Finishing coats: As specified by the Interior Designer
 - 18.1. Number of coats: Two.

150 Eggshell/ satin paint

1. Description: For internal woodwork
2. Manufacturer: See Clause 210
 - 2.1. Product reference: Submit proposals
3. Surfaces: Preprimed and sealed or Previously decorated
 - 3.1. Preparation: As Clause 400 or 440 as appropriate
4. Initial coats: As recommended by manufacturer

- 4.1. Number of coats:
- 5. Undercoats: As recommended by manufacturer
 - 5.1. Number of coats:
- 6. Finishing coats: As specified by the Interior Designer
 - 6.1. Number of coats: 1

Generally

215 Handling and storage

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

220 Compatibility

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

240 Surfaces not to be coated

- 1. Components supplied pre-finished.

280 Protection

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

320 Inspection by coating manufacturers

- 1. General: Permit manufacturers to inspect work in progress and take samples of their materials from site if requested.

321 Inspection of work stages

- 1. Programme for inspections: Submit as follows:
- 2. Types of coating Inspection at completion of
- 3. M60/ 111, 112. Primer, undercoat.
- 4. Inspection: Give prior notice when each stage is ready for inspection.

Preparation

400 Preparation generally

- 1. Standard: In accordance with BS 6150.
- 2. Refer to any pre-existing CDM Health and Safety File.
- 3. Refer to CDM Construction Phase Plan where applicable.
- 4. Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- 5. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared. Ensure all end grains sealed.
- 6. Substrates: Sufficiently dry in depth to suit coating.

7. Efflorescence salts: Remove.
8. Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
9. Surface irregularities: Remove.
10. Joints, cracks, holes and other depressions: Fill flush with surface, to provide smooth finish.
11. Dust, particles and residues from preparation: Remove and dispose of safely.
12. Water based stoppers and fillers
 - 12.1. Apply before priming unless recommended otherwise by manufacturer.
 - 12.2. If applied after priming: Patch prime.
13. Oil based stoppers and fillers: Apply after priming.
14. Doors, opening windows and other moving parts
 - 14.1. Ease, if necessary, before coating.
 - 14.2. Prime resulting bare areas.

420 Fixtures and fittings

1. Removal: Before commencing work remove: ironmongery, cover plates, grills, signage..
2. Replacement: Refurbish as necessary, refit when coating is dry.

425 Ironmongery

1. Removal: Before commencing work: Remove ironmongery from surfaces to be coated.
2. Hinges: Remove
3. Replacement: Refurbishment as necessary; refit when coating is dry.

430 Existing ironmongery

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

440 Previously coated surfaces generally

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

461 Previously coated wood

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

481 Uncoated wood

1. General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
 - 1.1. Preparation: Lightly sand surface and then ensure surfaces are clean, dry and free from dust/grease/other contamination prior to application.
2. Heads of fasteners: Countersink sufficient to hold stoppers/fillers.
3. Resinous areas and knots: Apply two coats of knotting.
4. End Grain: Ensure all sealed with product compatible with coating system.

490 Previously coated steel

1. Defective paintwork: Remove to leave a firm edge and clean bright metal.
2. Sound paintwork: Provide key for subsequent coats.
3. Corrosion and loose scale: Take back to bare metal.
4. Residual rust: Treat with a proprietary removal solution.
5. Bare metal: Apply primer as soon as possible.
6. Remaining areas: Degrease.

521 Uncoated steel – manual cleaning

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

631 Previously painted window frames

1. Paint encroaching beyond glass sight line: Remove.
2. Loose and defective putty: Remove.
3. Putty cavities and junctions between previously painted surfaces and glass: Clean thoroughly.
4. Finishing
 - 4.1. Patch prime, reputty as necessary, and allow to set.
 - 4.2. Seal and coat as soon as fully set.

640 External pointing to existing frames

1. Defective sealant pointing: Remove.
2. Joint depth: Approximately half joint width; adjust with backing strip if necessary.
3. Sealant
 - 3.1. Manufacturer: See clause C49

Application

711 Coating generally

1. Application standard: In accordance with BS 6150, clause 9.

2. **Conditions:** Maintain suitable temperature, humidity and air quality during application and drying.
3. **Surfaces:** Clean and dry at time of application.
4. **Thinning and intermixing of coatings:** Not permitted unless recommended by manufacturer.
5. **Overpainting:** Do not paint over intumescent strips or silicone mastics.
6. **Priming coats**
 - 6.1. **Thickness:** To suit surface porosity.
 - 6.2. **Application:** As soon as possible on same day as preparation is completed.
7. **Finish**
 - 7.1. Even, smooth and of uniform colour.
 - 7.2. Free from brush marks, sags, runs and other defects.
 - 7.3. Cut in neatly.
8. **Doors, opening windows and other moving parts:** Ease before coating and between coats.
9.
 - Coating manufacturer's application methodologies
 - and guidance should be followed with particular focus on avoiding cold coatings (should typically
 - be above 15°C at application), correct film thickness and appropriate drying techniques/ conditions.
 - Coatings should be thoroughly cured in a moisture and temperature controlled environment and in line
 - with coating manufacturer's guidelines.

720 Priming joinery

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

730 Workshop coating of concealed joinery surfaces

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

740 Concealed metal surfaces

1. **General:** Apply additional coatings to surfaces that will be concealed when component is fixed in place.
 - 1.1. **Components:** Window frames.
 - 1.2. **Additional coatings:** Black paint to BS 1070

780 Bead glazing to coated wood

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

790 Linseed oil putty glazing

1. **Setting:** Allow putty to set for seven days.
2. **Sealing**
 - 2.1. Within a further 14 days, seal with a solvent-borne primer.
 - 2.2. Fully protect putty with coating system as soon as it is sufficiently hard.
 - 2.3. Extend finishing coats on to glass up to sight line.

800 Glazing

1. **Etched, sand blasted and ground glass:** Treat or mask edges before coating to protect from contamination by oily constituents of coating materials.

811 Maintenance and Recoating

1. **Redecoration**

With factory-finished joinery, little preparation is necessary – just give a light abrasion to provide a key for the paint, wipe down and apply one or two top coats with a long-haired synthetic brush.

Use a water-based micro-porous acrylic paint.

You won't need to decorate tricky areas that aren't exposed to the sun.

Any bare wood should be primed before top-coating.

If there is any resin exudation, do not try to remove it when it's fresh and sticky; wait for it to oxidise and brush it off.

2. Ensure maintenance is carried out within the recommended cycles offered by the system manufacturer. This is likely to be 6-8years.

Ω End of Section



Specification created using NBS Chorus