

Rutherford Building

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Interim Issue - Construction



M60

Painting/clear finishing

Coating systems

1 To be read with:

1. External finishes plans, details and Schedule
2. Internal finishes plans, details and Schedule

2 To be read with Preliminaries / General Conditions

110 High Performance Trade Matt Emulsion Wall Finishes reference - W5

1. **Description:** Clean Extreme Clean Air Scrubbable Matt - Air Purifying offers a finish that is 100% more stain resistant compared to conventional matt vinyl emulsion. It has superior cleaning capabilities which do not compromise the integrity or finished appearance of the paint film. New and aged stains can be cleaned away returning surfaces to an "as new" condition.

A true flat matt with 10,000 scrub durability which has been independently tested to ISO 11998 Class 1 scrub resistance.

2. **Manufacturer:** [Crown Trade, product of Crown Paints Ltd](#)

2.1. Contact details

2.1.1. Address: PO Box 37

Crown House
Hollins Road
Darwen
Lancashire
BB3 0BG

2.1.2. Telephone: +44 (0)330 0240310

2.1.3. Web: <https://www.crownpaintsprofessional.com/>

2.1.4. Email: info@crownpaintspec.co.uk

2.2. Product reference:

[Crown Trade Clean Extreme Stain Resistant Scrubbable Matt](#) **Wall Finish reference : W5**

3. **Finish:** Matt.
4. **Pigment:** Titanium dioxide, coloured pigments and extenders.
5. **Binder:** Acrylic polymer.
6. **Solvent:** Water.
7. **Drying time:** Recoatable after four hours under normal drying conditions.
8. **Wet film thickness (minimum):** 71 micrometres at 14 m²/ litre.
9. **Dry film thickness:** 25 micrometres at 14 m²/ litre.
10. **VOC content:** EU limit value for this product (cat.A/a): 30 g/L (2010). This product contains maximum 30 g/L VOC.
11. **Coverage:** Up to 14 m²/ litre on smooth surfaces.
12. **Surfaces:**
 - 12.1. **Preparation:** Preparation:
Crown Trade Fungicidal Solution - Use to remove organic growth from surfaces.

Primer - new and unpainted surfaces:
Crown Trade Clean Extreme Stain Resistant Scrubbable Matt thinned with 40% clean water
- Porous surfaces.

Crown Trade Covermatt Drywall Primer - Evens out the surface porosity on new dry lined walls and ceilings, also suitable for use on new plaster surfaces, where access to water may be limited on site.

Crown Trade PX3 All Purpose Primer - Powdery, polished plaster or dense surfaces.

Crown Trade PX4 All Purpose Primer - Powdery, polished plaster or dense surfaces.

Crown Trade PX3 All Purpose Primer - A primer for new and bare PVC-U surfaces.

Crown Trade PX4 All Purpose Primer - A primer for new and bare PVC-U surfaces.

Previously decorated surfaces (overall priming):

Crown Trade PX3 All Purpose Primer - A solvent-borne, adhesion-promoting and stain-blocking primer.

Crown Trade PX4 All Purpose Primer - A quick-drying, adhesion-promoting and stain-blocking primer.

Previously decorated surfaces ('patch' primer for bare and filled areas):

Crown Trade PX3 All Purpose Primer.

Crown Trade PX4 All Purpose Primer.

Bring forward ('patch' primed previously decorated areas):

Crown Trade Clean Extreme Stain Resistant Scrubbable Matt.

120 Eggshell finishing coats to internal woodwork

1. **Manufacturer:** [Crown Trade, product of Crown Paints Ltd](#)

1.1. **Contact details**

1.1.1. **Address:** PO Box 37

Crown House
Hollins Road
Darwen
Lancashire
BB3 0BG

1.1.2. **Telephone:** +44 (0)330 0240310

1.1.3. **Web:** <https://www.crownpaintsprofessional.com/>

1.1.4. **Email:** info@crownpaintspec.co.uk

1.2. **Product reference:** [Crown Trade Acrylic Eggshell \(New variant\)](#)

2. **Sheen:** Satin.

3. **Colour:** TBC by Architect

4. **Drying time:** Recoatable after four hours under normal drying conditions.

5. **Dry film thickness:** 22 micrometres at 16 m²/ litre.

6. **Wet film thickness (minimum):** 63 micrometres at 16 m²/ litre.

7. **VOC content:** EU limit value for this product (cat A/b): 100 g/L (2010). This product contains maximum 4 g/L VOC.

130 Satin finishing coats to internal woodwork

1. **Manufacturer:** [Crown Trade, product of Crown Paints Ltd](#)

1.1. **Contact details**

1.1.1. Address: PO Box 37
Crown House
Hollins Road
Darwen
Lancashire
BB3 0BG

1.1.2. Telephone: +44 (0)330 0240310

1.1.3. Web: <https://www.crownpaintsprofessional.com/>

1.1.4. Email: info@crownpaintspec.co.uk

1.2. Product reference: Acrylic Satin Finish

2. Sheen: Satin.
 3. Colour: TBC by Architect
 4. Drying time: Recoatable after 16 hours under normal drying conditions.
 5. Wet film thickness (minimum): 71 micrometres at 14 m²/L.
 6. Dry film thickness (minimum): 25 micrometres at 14 m²/L.
 7. VOC content: 2.9 g/L (maximum).
 8. Pigment: Titanium dioxide.
 9. Binder: Acrylic polymer.
 10. Solvent: Water.
 11. Coverage: Up to 14 m²/L on smooth surfaces.
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M60 PAINTING/ CLEAR FINISHING

To be read with Preliminaries/ General conditions.

COATING SYSTEMS

141 LINSEED PAINT, colour: _____TBC_____

- Manufacturer: BROUNS & CO, Unit 1 Bypass Park Estate, Sherburn-in-Elmet, Leeds, LS25 6EP, United Kingdom, tel +44(0)1423 500 694, sales@linseedpaint.com, www.linseedpaint.com
- Product reference: LINSEED PAINT
- Surfaces:
 - o New and existing timber surfaces, interior and exterior
- Preparation: On previously painted substrates, remove as much of the existing paint as possible, follow clause 440, 456, 461-490, 630, 651, 720.

Application on timber:

- Initial coats: (only on untreated new pine or other softwood): 2 coats of shellac knotting primer on knots. Supplier: BROUNS & CO, Unit 1 Bypass Park Estate, Sherburn-in-Elmet, Leeds, LS25 6EP, United Kingdom, tel +44(0)1423 500 694, sales@linseedpaint.com, www.linseedpaint.com. For application on exotic hardwoods, please contact Brouns & Co.
- Number of coats: 3
 - Undercoats: 1 primer coat to the mixture of 50% linseed oil paint, 35% raw linseed oil, 15% Balsam Turpentine.
 - Finishing coats: 2: Linseed paint to colour of choice, finished in 2 coats. Application between mid-March to mid-September, depending on the weather. Or in a controlled workshop. Application in very thin coats by brush. Paint needs to be worked into the substrate, then laid off using a finishing brush. One coat always needs to be dry to the touch before applying a new coat.

Application on existing metal roof trusses:

- Number of coats: 4
 - Undercoats: 2 primer coats of Linseed Paint Iron Oxide Primer.
 - Finishing coats: 2: Linseed paint to colour of choice, finished in 2 coats. Application between mid-March to mid-September, depending on the weather. Or in a controlled workshop. Application in very thin coats by brush. Paint needs to be worked into the substrate, then laid off using a fine brush. One coat always needs to be dry to the touch before applying a new coat.

- CAUTION: any cloths or rags used should be soaked under the tap before throwing in the bin to prevent self-combustion.

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, to provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Water based stoppers and fillers:
 - Apply before priming unless recommended otherwise by manufacturer.
 - If applied after priming: Patch prime.
- Oil based stoppers and fillers: Apply after priming.
- Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 - Prime resulting bare areas.

420 FIXTURES AND FITTINGS

- Removal: Before commencing work remove: _____ .
- Replacement: Refurbish as necessary, refit when coating is dry.

425 IRONMONGERY

- Removal: Before commencing work remove ironmongery from surfaces to be coated.
- Hinges: _____ .
- Replacement: Refurbish as necessary; refit when coating is dry.

430 EXISTING IRONMONGERY

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

440 PREVIOUSLY COATED SURFACES GENERALLY

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

451 PREVIOUSLY COATED SURFACES - BLAST CLEANING

- Operatives:
 - Trained/ experienced in blast cleaning.
 - Submit evidence of training/ experience on request.
 - Dust and nuisance: Minimize.
- 456 PREVIOUSLY COATED SURFACES - BURNING OFF
- Risk assessment and method statement: Prepare, and obtain approval before commencing work.
 - Adjacent areas: Protect from excessive heat and falling scrapings.
 - Exposed resinous areas and knots: Apply two coats of knotting.
 - Removed coatings: Dispose of safely.
 - For safe paint removal (including lead paint) on existing timber and metal surfaces, use the Speedheater Cobra or Speedheater RS1100.
 - Supplier: BROUNS & CO, Unit 1 Bypass Park Estate, Sherburn-in-Elmet, Leeds, LS25 6EP, United Kingdom, tel +44(0)1423 500 694, sales@linseedpaint.com, www.linseedpaint.com
- 461 PREVIOUSLY COATED WOOD
- Degraded or weathered surface wood: Take back to provide suitable substrate.
 - Degraded substrate wood: Repair with sound material of same species.
 - Exposed resinous areas and knots: Apply two coats of Shellac knotting primer.
Supplier: BROUNS & CO, Unit 1 Bypass Park Estate, Sherburn-in-Elmet, Leeds, LS25 6EP, United Kingdom, tel +44(0)1423 500 694, sales@linseedpaint.com, www.linseedpaint.com

Pretreatment: Etching primer, if recommended by coating system manufacturer.

- 631 PREVIOUSLY PAINTED WINDOW FRAMES
- Paint encroaching beyond glass sight line: Remove.

- Loose and defective putty: Remove.
- Putty cavities and junctions between previously painted surfaces and glass: Clean thoroughly.
- Finishing:
 - Patch prime, re-putty as necessary, and allow to harden. Putty manufacturer: BROUNS & CO, Unit 1 Bypass Park Estate, Sherburn-in-Elmet, Leeds, LS25 6EP, United Kingdom, tel +44(0)1423 500 694, sales@linseedpaint.com, www.linseedpaint.com
 - Seal and coat as soon as sufficiently hard and repaint as per clause 140.

640 EXTERNAL POINTING TO EXISTING FRAMES

- Defective sealant pointing: Remove.
- Joint depth: Approximately half joint width; adjust with backing strip if necessary.
- Sealant: LINSEED PUTTY
 - Manufacturer: BROUNS & CO, Unit 1 Bypass Park Estate, Sherburn-in-Elmet, Leeds, LS25 6EP, United Kingdom, tel +44(0)1423 500 694, sales@linseedpaint.com, www.linseedpaint.com

APPLICATION

711 COATING GENERALLY

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

1.

160 Decorative woodstain/ varnish/ preservative

1. **Description:** Existing internal timber doors, joinery, linings, frames
2. **Manufacturer:** Fiddes and son
 Florence works
 Brindley road
 Cardiff
 CF11 8TX
 +44 (0) 2920 340323
 +44 (0) 2920 343235
 info@fiddes.co.uk
 - 2.1. **Product reference:** Fiddes Premier SP Water Based Lacquer
3. **Surfaces:** Joinery
 - 3.1. **Preparation:** Degrease and provide key
 Ensure surfaces are clean and dry Remove all loose and defective coatings
4. **Initial coats:** As recommended by manufacturer
 - 4.1. **Number of coats:** 1
5. **Finishing coats:** Fiddes Premier SP Water Based Lacquer
 - 5.1. **Number of coats:** 2

170 Decorative paint finish to timber glazed screens in academic workspaces

1. **Description:** Internal timber joinery, linings, frames to glazed screens in academic workspaces
2. **Manufacturer:** Morrells
 Wellington Works
 Mill Lane
 Woodley
 Stockport SK6 1RN
 Tel : 0161 406 5300
 Email : hello@morrells.co.uk
 - 2.1. **Product reference:** Morrells 120
 Fastmatch Acid-catalyst lacquer

5305/520	30% Sheen White Acid Catalyst
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 9 parts lacquer : 1 part catalyst by volume
3. **Colour::** To be confirmed by the Architect to match the patina of the existing historic metalwork
4. **Surfaces:** Joinery
 - 4.1. **Preparation:** Degrease and provide key
 Ensure surfaces are clean and dry Remove all loose and defective coatings

Denibbing

5. **Primer ::** Spray primer
 - 5.1. **Number of coats::** 1
6. **Initial coats:** As recommended by manufacturer
 - 6.1. **Number of coats:** 1
7. **Finishing coats:** 75g/m² per coat over primers
5005/600, 5005/619 or 5005/900
 - 7.1. **Number of coats:** 2

181 Solvent-based finishing coats to all existing / new rainwater goods, external railings and balcony balustrading

1. **Manufacturer:** [Dulux Trade, brand of AkzoNobel](#)
 - 1.1. **Contact details**
 - 1.1.1. **Address:** AkzoNobel Decorative Paints
Wexham Road
Slough
Berkshire
SL2 5DS
 - 1.1.2. **Telephone:** +44 (0)333 222 7070
 - 1.1.3. **Web:** www.duluxtradepaintexpert.co.uk
 - 1.1.4. **Email:** project.support@akzonobel.com
 - 1.2. **Product reference:** [Dulux Trade Metalshield Gloss](#)
2. **Composition:** Alkyd.
3. **Sheen:** Gloss.
4. **Colour:** Black.
5. **Execution:** Applying coating.
6. **System code:** M2300ALK - Aluminium / M2331ALK - Ferrous.
Metal Shield Primer applied to Manufacturer's recommendations to suit substrate.
7. **Form:** Liquid.
8. **Capacity:** 5 L.

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.

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.

300 Control samples

1. **Sample areas of finished work:** Carry out, including preparation, as follows:
2. Types of coating Location
3. M60/
4. **Approval of appearance:** Obtain before commencement of general coating work.

320 Inspection by coating manufacturers

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

Preparation

400 Preparation generally

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

420 Fixtures and fittings

1. **Removal:** Before commencing work remove:
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:**
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.

451 Previously coated surfaces – blast cleaning

1. **Operatives**
 - 1.1. Trained/ experienced in blast cleaning.
 - 1.2. Submit evidence of training/ experience on request.
2. **Dust and nuisance:** Minimize.

456 Previously coated surfaces – burning off

1. **Risk assessment and method statement:** Prepare, and obtain approval before commencing work.
2. **Adjacent areas:** Protect from excessive heat and falling scrapings.
3. **Exposed resinous areas and knots:** Apply two coats of knotting.
4. **Removed coatings:** Dispose of safely.

461 Previously coated wood

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

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.

560 Uncoated concrete

1. **Release agents:** Remove.

570 Uncoated masonry/ Rendering

1. **Loose and flaking material:** remove.

580 Uncoated plaster

1. **Nibs, trowel marks and plaster splashes:** Scrape off.
2. **Overtrowelled 'polished' areas:** Key lightly.

590 Uncoated plasterboard

1. **Depressions around fixings:** Fill with stoppers/ fillers

611 Wall coverings

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

622 Organic growths

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

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:**
 - 3.1.1. **Product reference:**
 - 3.2. **Preparation and application:** As section Z22.

645 Sealing of internal movement joints

1. **General:** To junctions of walls and ceilings with architraves, skirtings and other trims.
2. **Sealant:** Waterborne acrylic.
 - 2.1. **Manufacturer:**
 - 2.1.1. **Product reference:**
 - 2.2. **Preparation and application:** As section Z22.

651 Existing gutters

1. **Dirt and debris:** Remove from inside of gutters.

2. **Defective joints:** Clean and seal with suitable jointing material.

Application

711 Coating generally

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

720 Priming joinery

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

730 Workshop coating of concealed joinery surfaces

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

770 External doors

1. **Bottom edges:** Prime and coat before hanging doors.

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.

Ω End of Section

R10

Rainwater drainage systems

General

110 Existing gravity rainwater drainage system to be investigated, retained and refurbished

1. **Rainwater outlets:** All existing rainwater goods are to be investigated in detail into their suitability and condition prior to refurbishment
2. **Gutters:** All existing gutters are to be investigated in detail into their suitability and condition prior to refurbishment
3. **Pipework:** All existing pipework is to be investigated in detail into their suitability and condition prior to refurbishment
4. **Below ground drainage:** All existing below ground drainage is to be investigated in detail into their suitability and condition prior to refurbishment
5. **Disposal:** All existing disposal systems are to be investigated in detail into their suitability and condition prior to refurbishment
6. **Finish :** All existing rainwater goods are to be painted in external gloss black paint - refer M60

System performance

210 Design

1. **Design:** Complete the design of the rainwater drainage system.
2. **Standard**
 - 2.1. To BS EN 12056-3, clauses 3–7, Annex A and National Annexes.
 - 2.2. To BS EN 12056-5, clauses 3, 4, 6 and 11.
3. **Proposals:** Submit drawings, technical information, calculations and manufacturers' literature.

221 Collection and distribution of rainwater

1. **General:** Complete, and without leakage or noise nuisance.

230 Design parameters - general

1. **Roof and gutter construction and finish:**
2. **Design rate of rainfall:** As BS EN 12056-3, National Annex NB.2.
 - 2.1. **Category:**
3. **Design life of building:**
4. **Available capacity of existing below ground drainage (maximum):**

Products

315 Cast iron gutters

1. **Standard:**
2. **Manufacturer:**
 - 2.1. **Product reference:**
3. **Profile:**
4. **Jointing type:**
5. **Nominal size:**
6. **Finish as supplied:**

- 7. Brackets:
 - 7.1. Fixings:
 - 7.1.1. Size:
- 8. Accessories:

380 Cast iron pipework - spigot and socket

- 1. Standard:
- 2. Manufacturer:
 - 2.1. Product reference:
- 3. Type:
- 4. Nominal size:
- 5. Finish as supplied:
 - 5.1. Fixings:
 - 5.1.1. Size:
- 6. Accessories:

390 Copper pipework

- 1. Standard:
- 2. Manufacturer:
 - 2.1. Product reference:
- 3. Shape:
- 4. Wall thickness:
- 5. Nominal size:
- 6. Finish:
- 7. Brackets:
 - 7.1. Fixings:
 - 7.1.1. Size:
- 8. Accessories:

450 Insulation to internal pipelines

- 1. Material:
- 2. Thermal conductivity (maximum):
- 3. Manufacturer:
 - 3.1. Product reference:
- 4. Recycled content:
- 5. Thickness:
- 6. Fire performance:
 - 6.1. Fire resistance:
 - 6.2. Reaction to fire:

Custom made products - Not Used

Execution

600 Preparation

- 1. Work to be completed before commencing work specified in this section

- 1.1. Below ground drainage. Alternatively, make temporary arrangements for dispersal of rainwater without damage or disfigurement of the building fabric and surroundings.
- 1.2. Painting of surfaces which will be concealed or inaccessible.

605 Installation generally

1. **Electrolytic corrosion:** Avoid contact between dissimilar metals where corrosion may occur.
2. **Plastics and galvanized steel pipes:** Do not bend.
3. **Allowance for thermal and building movement:** Provide and maintain clearance as fixing and jointing proceeds.
4. **Protection**
 - 4.1. Fit purpose made temporary caps to prevent ingress of debris.
 - 4.2. Fit access covers, cleaning eyes and blanking plates as the work proceeds.

610 Fixing and jointing gutters

1. **Joints:**
2. **Brackets:** Securely fixed.
 - 2.1. **Fixings:**
 - 2.1.1. **Fixing centres:**
 - 2.2. **Additional brackets:** Where necessary to maintain support and stability, provide at joints in gutters and near angles and outlets.
3. **Roofing underlay:** Dressed into gutter.

630 Installing rainwater outlets

1. **Fixing:** Secure. Fix before connecting pipework.
 - 1.1. **Method:**
2. **Junctions between outlets and pipework:** Accommodate movement in structure and pipework.

635 Fixing pipework

1. **Pipework:** Fix securely, plumb and/ or true to line.
2. **Branches and low gradient sections:** Fix with uniform and adequate falls to drain efficiently.
3. **Externally socketed pipes and fittings:** Fix with sockets facing upstream.
4. **Additional supports:** Provide as necessary to support junctions and changes in direction.
5. **Vertical pipes**
 - 5.1. Provide a loadbearing support at least at every storey level.
 - 5.2. Tighten fixings as work proceeds so that every storey is self supporting.
 - 5.3. Wedge joints in unsealed metal pipes to prevent rattling.
6. **Wall and floor penetrations:** Isolate pipework from structure.
 - 6.1. **Pipe sleeves:** As section P31.
 - 6.2. **Masking plates:** Fix at penetrations if visible in the finished work.
7. **Expansion joint pipe sockets:** Fix rigidly to buildings. Elsewhere, provide brackets and fixings that allow pipes to slide.

640 Fixing vertical pipework

1. **Bracket fixings:**
2. **Distance between bracket fixing centres (maximum):**

645 Fixing low gradient pipework

1. **Bracket fixings:**
2. **Distance between bracket fixing centres (maximum):**

650 Jointing pipework and gutters

1. **General:** Joint with materials and fittings that will make effective and durable connections.
2. **Jointing differing pipework and gutter systems:** Use adaptors intended for the purpose.
3. **Cut ends of pipes and gutters:** Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.
4. **Jointing or mating surfaces:** Clean and, where necessary, lubricate immediately before assembly.
5. **Junctions:** Form with fittings intended for the purpose.
6. **Jointing material:** Strike off flush. Do not allow it to project into bore of pipes and fittings.
7. **Surplus flux, solvent jointing materials and cement:** Remove.

655 Jointing internal pipework

1. **Jointing:**

660 Jointing external pipework

1. **Jointing:**

675 Cutting coated pipework and gutters

1. **Cutting:** Recoat bare metal.

680 Fixing insulation to internal pipelines and gutters

1. **Fixing:** Secure and neat. Provide continuity at supports and leave no gaps. Fix split pipe insulation with the split on 'blind' side of pipeline.
 - 1.1. **Method:**
2. **Timing:** Do not fit insulation until completion of pipe airtightness or leakage testing.

685 Identification of internal rainwater pipework

1. **Standard:** In accordance with Water Regulations Advisory Scheme (WRAS) Information and guidance note 9-02-05 and BS 8515.

690 Electrical continuity - pipework

1. **Joints in metal pipes with flexible couplings:** Clips (or suitable standard pipe couplings) supplied for earth bonding by pipework manufacturer to ensure electrical continuity.

695 Electrical continuity - gutters

1. **Joints in metal gutters:** Purpose made links supplied by the gutter manufacturer to ensure electrical continuity.

700 Access for testing and maintenance

1. **General:** Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.
2. **Access fittings and rodding eyes:** Position so that they are not obstructed.

Completion

900 Testing generally

1. **Dates for testing:** Give notice.
 - 1.1. **Period of notice (minimum):**
2. **Preparation**
 - 2.1. **Pipework:** Complete, securely fixed, free from defects, obstruction and debris before testing.
3. **Testing**
 - 3.1. Supply clean water, assistance and apparatus.
 - 3.2. Do not use smoke to trace leaks.
4. **Records:** Submit a record of tests.

905 Internal pipework test - England, Wales, Ireland and Northern Ireland

1. **Preparation:** Temporarily seal open ends of pipework with plugs.
2. **Test apparatus:** Connect a 'U' tube water gauge and air pump to pipework via a plug.
3. **Testing:** Pump air into pipework until gauge registers 38 mm.
4. **Required performance**
 - 4.1. Allow a period for temperature stabilization, after which the pressure of 38 mm is to be maintained without loss for at least 3 minutes.

906 Internal pipework test - Scotland

1. **Standard:** To BS EN 12056-2, National annex NG.

910 Gutter test

1. **Preparation:** Temporarily block all outlets.
2. **Testing:** Fill gutters to overflow level and after 5 minutes closely inspect for leakage.

915 Maintenance instructions

1. **General:** At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation, including full details of recommended inspection, cleaning and repair procedures.

920 Immediately before handover

1. **Construction rubbish, debris, swarf, temporary caps and fine dust which may enter the rainwater system:** Remove. Do not sweep or flush into the rainwater system.
2. **Access covers, rodding eyes, outlet gratings and the like:** Secure complete with fixings.

Ω End of Section