Potter Raper Ltd

UCL

SW2215 UCL Kathleen Lonsdale Building -Specialist Gas Supply

NBS Specification 13-03-2023

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C10 Site survey

Surveys

125 Site survey

- 1. Description: To determine services located in the lightwell.
- 2. Area to be surveyed: To determine services located in the lightwell.
- 3. Objectives
 - 3.1. General: Establish/ record positions, dimensions and levels including services located in the concrete.
 - 3.2. Features: Record positions, dimensions and levels including Drainage manhole covers and invert levels, Gullies, Kerbs, roads, power, gas, etc..
- 4. Methodology: Do not use intrusive survey techniques.
 - 4.1. Permissible survey techniques: Contractor's choice
- 5. Control points: Establish and record measuring stations/ targets to facilitate future remeasuring.
 - 5.1. Standards: To BS 5964-1 and -2.
 - 5.1.1.Type: Contractor's choice
- 6. Dimensional accuracy
 - 6.1. Horizontal: -/+ 10mm
 - 6.2. Vertical: -/+ 10mm
- 7. Site survey report: Submit.
 - 7.1. Timing: Before the commencement of the works.

Survey techniques

420 Unforeseen hazards

1. Unrecorded hazards and hazardous materials: Give notice when found. Do not disturb.

440 Protection

1. Protect the following: The existing air con units, located at the base of the ramp and within the lightwell.

Completion

910 Documentation – paper

- 1. Description: For services survey
- 2. General format: Submit proposals
- 3. Photographs: Integrated
 - 3.1. Size: A4
- 4. Drawings: Integrated
 - 4.1. Size: A4
 - 4.2. Scale: Submit proposals

C20 Demolition

To be read with preliminaries/ general conditions.

5 Desk study/ survey

- 1. Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
 - 1.1. the structure or structures to be deconstructed/ demolished,
 - 1.2. the site on which the structure or structures stand, and
 - 1.3. the surrounding area.
- 2. Report and method statements: Submit, describing:
 - 2.1. Form, condition and details of the structure or structures, the site and the surrounding area.
 - 2.1.1.Extent: Concrete steps and ramp landing.
 - 2.2. Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures or by noise, vibration and/ or dust generated during deconstruction/ demolition.
 - 2.3. Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
 - 2.4. Proposed programme of work, including sequence and methods of deconstruction/ demolition.
 - 2.5. Details of specific pre-weakening required.
 - 2.6. Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
 - 2.7. Arrangements for control of site transport and traffic.
- 3. Format of report: Digital

13 Groundworks

- 1. Old foundations, slabs and the like: Break out in locations and to the extents stated.
- 2. Contaminated material: Remove, and carry out remediation required by the Enforcing Authority.

20 Features to be retained

1. General: Keep in place and protect the following: Railings, Boundary walls, structures.

25 Location of services

- 1. Services affected by deconstruction/ demolition work: Locate and mark positions.
- 2. Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
 - 2.1. Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

35 Live foul and surface water drains

- 1. Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings
 - 1.1. Protect and ensure normal flow during deconstruction/ demolition work.
 - 1.2. Make good any damage arising from deconstruction/ demolition work.
 - 1.3. Leave clean and in working order at completion of deconstruction/ demolition work.

45 Services to be retained

- 1. Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
- 2. Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

50 Workmanship

- 1. Standard: Demolish structures in accordance with BS 6187.
- 2. Operatives
 - 2.1. Appropriately skilled and experienced for the type of work.
 - 2.2. Holding, or in training to obtain, relevant CITB Certificates of Competence.
- 3. Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

55 Site hazards

- 1. Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.
- 2. Dust: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
- 3. Site operatives and general public: Protect from health hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

60 Adjoining property

- 1. Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
- 2. Defects: Report immediately on discovery.
- 3. Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
- 4. Support to foundations: Do not disturb.

76 Asbestos-containing materials – unknown occurrences

- 1. Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
- 2. Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

78 Unforeseen hazards

- 1. Discovery: Give notice immediately when hazards, such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
- 2. Removal: Submit details of proposed methods for filling, removal, etc.

85 Site condition at completion

1. Debris: Clear away and leave the site in a tidy condition.

86 Site surface at completion

1. Levels: Grade the site to follow the levels of adjacent areas.

91 Employer's property

1. Protection: Maintain until these items are removed by the Employer or reused in the Works, or until the end of the Contract.

E05 In situ concrete construction generally

To be read with preliminaries/general conditions.

210 Contractor's structural design

- 1. Design responsibility: Concrete mix
- 2. Requirement
 - 2.1. Generally: As section B50.
 - 2.1.1.Modifications: None
 - 2.2. Structure: Complete the design and prepare reinforcement drawings and schedules in accordance with the designated code of practice and to satisfy the specified performance criteria.
 - 2.3. Additional requirements: Reinforcement
- 3. Member sizes and locations: Submit proposals
- 4. Design and production information: As preliminaries

290 Accuracy of construction

- 1. Setting out: To BS 5964-1.
- 2. Geometrical tolerances: To BS EN 13670, Tolerance Class 1
 - 2.1. Conflicts: Notwithstanding tolerances specified elsewhere, do not exceed requirements for compliance with the designated code of practice.

310 Surface regularity of concrete floors to BS 8204 – general

- 1. Standard: To BS 8204-1 or -2.
- 2. Measurement: From underside of a 2 m straightedge (between points of contact) placed anywhere on surface and using a slip gauge.

E10 Mixing/ casting/ curing in situ concrete

Clauses

15 Specification

- 1. Concrete generally: To BS 8500-2.
- 2. Exchange of information: Provide concrete producer with information required by BS 8500-1, clauses 4 and 5.

45 Properties of fresh concrete

1. Adjustments to suit construction process: Determine with concrete producer. Maintain conformity to the specification.

50 Premature water loss

- 1. Requirement: Prevent water loss from concrete laid on absorbent substrates.
 - 1.1. Underlay: Polyethylene sheet 250 micrometres thick.
 - 1.2. Installation: Lap edges 150 mm.

60 Placing and compacting

- 1. Surfaces to receive concrete: Clean, with no debris, tying wire clippings, fastenings or free water.
- 2. Timing: Place as soon as practicable after mixing and while sufficiently plastic for full compaction.
- 3. Temperature limitations for concrete: 30°C (maximum) and 5°C (minimum). Do not place against frozen or frost covered surfaces.
- 4. Compaction: Fully compact to full depth to remove entrapped air especially around reinforcement, cast-in accessories, into corners of formwork and at joints. Continue until air bubbles cease to appear on the top surface.
 - 4.1. Methods of compaction: To suit consistence class and use of concrete.

70 Curing and protecting

- 1. Evaporation from surfaces of concrete: Prevent throughout curing period.
 - 1.1. Surfaces covered by formwork: Retain formwork in position and, where necessary to satisfy curing period, cover surfaces immediately after striking.
 - 1.2. Top surfaces: Cover immediately after placing and compacting. Replace cover immediately after any finishing operations.
- 2. Curing periods
 - 2.1. Surfaces which in the finished building will be exposed to the elements, and wearing surfaces of floors and pavements: 10 days (minimum).
 - 2.2. Other structural concrete surfaces: 5 days (minimum).
- 3. Protection: Protect concrete from shock, indentation and physical damage.

L30A Stairs/ walkways/ handrails/ balustrades

To be read with preliminaries/ general conditions

50A Bespoke balustrade and handrail

- 1. Description: To match existing ramp handrail and balustrade.
- 2. Component material, grade and finish as delivered
 - 2.1. Handrails: Low-carbon steel
 - 2.1.1.Lower handrail: Not required
- 3. Workmanship
 - 3.1. Metalwork: Design to match existing handrail and balustrade.
- 4. Reaction to fire: To BS EN 13501-1, Class B or better
- 5. Other requirements: This new bespoke handrail and balustrade to be fabricated offsite. Fabrication drawings are to be submitted by the Contractor to the Contract Administrator, for approval.
- 6. Fixing: Fixed into concrete ramp and side fixed to wall. To match existing.

75 Priming/ Sealing/ Painting

1. Surfaces inaccessible after assembly/ installation: Before fixing components, apply full protective/ decorative treatment/coating system. See clause M60.

80 Installation generally

- 1. Fasteners and methods of fixing: To Section Z20.
- 2. Structural members: Do not modify, cut, notch or make holes in structural members, except as indicated on drawings.
- 3. Temporary support: Do not use stairs, walkways or balustrades as temporary support or strutting for other work.
- 4. Applied features (finishes, inserts, nosings, etc.): Substrates to be even, dry, sound and free from contaminants. Make good substrate surfaces and prepare/ prime as applied feature manufacturer's recommendations before application.

90 Inspection

- 1. Timing: Two weeks prior to date when contractor expects work to be practically complete
- 2. Period of notice (minimum): Three working days

M60A Painting

To be read with preliminaries/ general conditions.

18A Metal primer

- 1. Description: Metal cylinder cages and bottle holding brackets
- 2. Manufacturer: Hammerite, brand of ICI Paints/AkzoNobel
 - 2.1. Contact details
 - 2.1.1.Address: Wexham Road Slough Berkshire SL2 5DS
 - 2.1.2.Telephone: +44 (0)333 222 7070
 - 2.1.3.Web: www.hammerite.co.uk
 - 2.1.4.Email: project.support@akzonobel.com
 - 2.2. Product reference: Hammerite Red Oxide Primer
- 3. Composition: Manufacturer's standard.
- 4. Coverage: Brush (one coat): 12 m²/L.
- 5. Surfaces: Metal
 - 5.1. Preparation: Ensure surfaces are clean and dry. Remove all loose and defective coatings. Wash down and degrease.
- 6. Initial coats: Apply two coats of Hammerite red oxy primer.
 - 6.1. Number of coats: Two

18B Metal finishing coat

- 1. Manufacturer: Hammerite, brand of ICI Paints/AkzoNobel
 - 1.1. Contact details
 - 1.1.1.Address: Wexham Road

Slough Berkshire

SL2 5DS

- 1.1.2.Telephone: +44 (0)333 222 7070
- 1.1.3.Web: www.hammerite.co.uk
- 1.1.4.Email: project.support@akzonobel.com
- 1.2. Product reference: Hammerite Direct To Rust Metal Paint Satin Finish
- 2. Composition: Manufacturer's standard.
- 3. Sheen: Satin.
- 4. Colour: Black.
- 5. Execution: Brush application or Spray application.
- 6. Format: Contractor's choice.
- 7. Viscosity: 5,37 cm²/s.
- 8. Finishing coats: Mid sheen finish
 - 8.1. Number of coats: One

18C Anti-slip floor coatings

- 1. Description: To external ramp surface
- 2. Manufacturer: Watco UK Ltd
 - 2.1. Contact details
 - 2.1.1.Address: 195-205 Eastgate Court Guildford Surrey United Kingdom GU1 3AW
 - 2.1.2.Telephone: +44 (0)1483 418418
 - 2.1.3.Web: www.watco.co.uk
 - 2.1.4.Email: sales@watco.co.uk
 - 2.2. Product reference: Watco Safety Grip Cold Cure
- 3. Surfaces: External concrete ramp
 - 3.1. Preparation: Jet wash concrete surface
- 4. Finishing coats: One coat epoxy resin floor paint with quartz mixed in.

4.1. Number of coats: One coat with quartz mixed in.

22 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.

26A Surfaces to be cleaned before painting

1. Existing ramp surface to be jet washed prior to painting.

28 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.

30 Preparation generally

- 1. Standard: In accordance with BS 6150.
- 2. Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
- 3. Risk assessments and method statements for suspected hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- 4. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- 5. Substrates: Sufficiently dry in depth to suit coating.
- 6. Efflorescence salts, dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
- 7. Surface irregularities: Provide smooth finish.
- 8. Organic growths and infected coatings
 - 8.1. Remove with assistance of biocidal solution.
 - 8.2. Apply residual effect biocidal solution to inhibit regrowth.

- 9. Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
- 10. Dust, particles and residues from preparation: Remove and dispose of safely.
- 11. Water-based stoppers and fillers
 - 11.1. Apply before priming unless recommended otherwise by manufacturer.
 - 11.2. If applied after priming: Patch prime.
- 12. Doors, opening windows and other moving parts
 - 12.1. Ease, if necessary, before coating.
 - 12.2. Prime resulting bare areas.

32 Previously coated surfaces generally

- 1. Preparation: In accordance with BS 6150.
- 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. Risk assessment and method statement for hazardous materials: Prepare for 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.
 - 7.2. Gloss-coated surfaces: Provide key.
- 8. Partly removed coatings
 - 8.1. Apply additional preparatory coats.
 - 8.2. Junctions: Provide flush surface.
- 9. Completely stripped surfaces: Prepare as for uncoated surfaces.

35 Fixtures and fittings

- 1. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- 2. Replacement: Refurbish as necessary, refit when coating is dry.

36 Ironmongery

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

39 Steel preparation

- 1. Areas of defective primer, corrosion and loose scale: Take back to bare metal. Reprime as soon as possible.
- 2. Defective paintwork: Remove to leave a firm edge and clean bright metal.
- 3. Sound paintwork: Provide key for subsequent coats.
- 4. Corrosion and loose scale: Take back to bare metal.
- 5. Residual rust: Treat with a proprietary removal solution.

- 6. Bare metal: Apply primer as soon as possible.
- 7. Remaining areas: Degrease.

61 Coating generally

- 1. Application: In accordance with BS 6150,
- 2. Conditions: Maintain suitable temperature, humidity and air quality.
- 3. Surfaces: Clean and dry at time of application.
- 4. Thinning and intermixing: Not permitted unless recommended by manufacturer.
- 5. Overpainting: Do not paint over intumescent strips or silicone mastics.
- 6. Priming coats: Apply 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.

P31 Holes, chases, covers and supports for services

Clauses

10 Holes, recesses and chases in masonry

- 1. Locations: To maintain integrity of strength, stability and sound resistance of construction.
- 2. Sizes: Minimum sizes needed to accommodate services. Insert fixings in mortar. DO NOT INSERT IN BRICKS.

Run pipes through stated areas (existing holes in windows and blanks glazed sections).

2.1. Holes (maximum): To be kept as small as possible. The Kathleen Longsdale Building is a Grade 2 Listed building.

40 Sealing around services

- 1. Service: Gas pipes
- 2. Location: Penetrations through windows.
- 3. Sealing material: Intumescent sealant
- 4. Method: Completely fill gaps with sealant and finish neatly
- 5. Requirements: Prevent insect ingress. Moisture vapour and airtight. Watertight.

S91A Specialist gas supply

General - Not Used

System performance

210A Specialist Contractor Design

1. Design: Contractor to design the specialist gas supply system and regulators.

They are to be stored in a cage to comply the following guidelines:

- The Health & Safety Executive
- CP44. The Storage of Gas Cylinders: 2016
- Guidance Safe Storage and Installation of Gas Cylinders
- 2. Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

220 Pipeline sizes

1. Sizing: ¹/₂ inch stainless steel pipework.

Products - Not Used

Execution - Not Used

Completion

910 Testing, commissioning and purging gas pipelines

1. Standard: To be undertaken to the relevant standard and evidence provided to the Contract Administrator.

920 Documentation

- 1. Manufacturers' operating and maintenance instructions: Submit for equipment and controls.
- 2. Record drawings: Submit drawings showing the location of circuits and operating controls.



Specification created using NBS Chorus