

Schedule of Works Vehicular Ramp



Schedule of Works
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1.0 Introduction

This document contains a description of the 'work items' that are to be undertaken as part of the project and it is to be read in conjunction with the Preliminaries and Specification.

A **Work Item** is either; a single operation, a series of operations or a complete element of the project and the cost for each 'work item' is to be entered in the Schedule of Works.

The **Schedule of Works** quantifies many of the 'work items' contained in this document; reference should be made to separate accompanying pricing document.

The **Specifications** 'Conservation & NBS' contain specifications and method statements, references are provided across drawings, schedules, specifications, documents etc. To be used as reference documents.

The **Drawings** that accompany the LBC / tender documentation have, where appropriate, been annotated with the 'work item' references used in this document.

1.1 Definitions

EMPLOYER'S REPRESENTATIVE means the person nominated in the Contract as Employer's Representative, Architect, Contract Administrator or Project Manager.

CA means both Contract Administrator/Accredited Professional. Inspections and approvals are to be dealt with by said representative individual.

REMOVE means disconnect, dismantle as necessary and remove the stated element, work or component and all associated accessories, fastenings, supports, linings, and bedding materials, and dispose of unwanted materials. It does not include removing associated pipework, wiring, ductwork, or other services.

KEEP FOR REUSE means during removal prevent damage to the stated components or materials and clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer or for use in the Works as instructed.

REPLACE means remove the stated existing components, features, and finishes. Provide and fit in lieu new components, features or finishes which, unless specified otherwise, must match those which have been removed. Make good as necessary.

REPAIR means carry out local remedial work to components, features and finishes as found in the existing building, resecure, or refix as necessary and leave in a sound and neat

condition. It does not include:

- Replacement of components or parts of components.
- Redecoration.

MAKE GOOD means carry out local remedial work to components, features and finishes which have been disturbed by other, previous work under this Contract and leave in a sound and neat condition. It does not include:

- Replacement of components or parts of components.
- Redecoration.

The meaning of the term shall not be limited by this definition where used in connection with the defects liability provisions of the Contract.

EASE means make minor adjustments to moving parts of the stated component to achieve good fit in both open and closed positions and ensure free movement in relation to fixed surrounds. Make good as necessary.

TO MATCH existing means, use products, materials and methods to match closely all visual characteristics and features of the existing work, with joints between existing and new work as inconspicuous as possible, all to approval of appearance.

APPRAISE means the contractor is to appraise and carry out own independent assessment of the works detailed here within and update the scope of works as is necessary through consultation with the Architect.

SALVAGED refers to materials that have been removed and kept for reuse on this job: no second-hand or reclaimed material are to be used on this project.

CONSOLIDATION means the contractor is to make something physically stronger and solid. Returning / combing items into a single / coherent whole. Rake out and repoint / build with an NHL mortar. Return to match original profiles. Rebuild in association with structural ties / wall core gravity grouting etc

1.2 Precedence

General: Where, and to the extent that, documents conflict the following orders of precedence apply:

The contractor must read in association with all Landscape Architect, Structural, MEP & Civil Engineering packages. Separate landscaping, structural, MEP and civil engineering proposals take precedent over indicative architectural information, illustrated across architectural drawings.

2.0 General

2.1 Project Background

- 2.1.1 The combined project focuses on a number of areas within Science & Industry Museum complex. The Science and Industry Museum is located to the north-west of central Manchester, to the east of the River Irwell and within the Castlefield Conservation Area.
- 2.1.2 This schedule of works, focuses on the removal of the Vehicular Ramp located in the Lower Yard which once provide vehicular / pedestrian traffic from the Lower Yard to the Upper Yard. The works will involve the removal of the modern ramp and subsequent fabric repairs / making good, post removal.
- 2.1.3 The ramp is not specifically Listed and is located within the Lower Yard, interfacing with the north masonry wall to the Undercroft and Viaduct.
- 2.1.4 The site is within close proximity to Deansgate, Spinningfields and the Castlefield Basin. The site is well connected with Deansgate train station and Metrolink approximately 550m away. Refer to separate Design and Access Statement for detailed location information.

2.2 Familiarisation

- 2.2.1 The contractor must fully familiarise themselves with the buildings / assets and their construction, as well as site wide access and logistics, prior to submitting their tender.

2.3 Preliminaries and General Particulars

- 2.3.1 The contractor must include for all necessary scaffolding, temporary public access, building / asset protection, perimeter hoarding to all scaffold / storage and welfare facilities, internal access provisions etc. Include for protection of historic features and fabric accordingly. Include for all necessary access provisions, taking into account that the site complex is a live environment and may require alteration to said access components at any given time. Prior to submitting a price, the contractor must have visited the site to assess the logistics and access requirements.

2.4 Drawings

- 2.4.1 All dimensions are in millimetres unless noted otherwise.
- 2.4.2 The existing general arrangement base drawings (plans, sections, and elevations) are based upon 2010 data and in some instances, may not reflect the current arrangement. Dimensions and arrangements must be checked for accuracy onsite by the contractor, prior to any works commencing, ordering or manufacture / fabrication of any elements or components.
- 2.4.3 Any discrepancies / irregularities must be reported to the CA immediately. No work shall commence until any such discrepancies have been resolved.
- 2.4.4 In any project involving fabric repairs, the tendered drawings may have been prepared well in advance of the contract period and are reflective of the condition / arrangement at the time of survey.
- 2.4.5 The marked-up drawings are based upon surveys from ground level and other accessible vantage points only.
- 2.4.6 The contractor and/or subcontractor must allow a period of two weeks in their programme, to reappraise the drawings and confirm the scope of works to each identified area, once appropriate and safe access has been provided.
- 2.4.7 All areas for repair are to be marked up from the drawings onsite by the contractor and agreed with the Architect, prior to commencing any works.
- 2.4.8 Quantities / areas identified are for tender purposes only.

- 2.4.9 Specific drawing references are provided against each of the work items throughout this schedule, however the contractor must read and appraise all drawings, schedules and specifications provided, against those specifically referenced. If the contractor believes that they are not in possession of the correct and/or relevant information, they must advise and report to the CA immediately.

2.5 Limitations

- 2.5.1 The drawings are based upon existing data and no concealed and / or hidden spaces have been exposed and / or opened up for inspection, unless specifically highlighted. Therefore, the arrangement and interfacing illustrated across details are purely indicative / approximate only. The accuracy of the survey data graphically presented cannot be confirmed. These drawings are for tender purposes only.
- 2.5.2 Limited and focused opening up works have been undertaken, to inform build-ups as existing. All detail arrangements and build-ups beyond external visible surfaces are purely indicative / approximations only with suggested construction and interfacing arrangements. The contractor must check all existing build-ups once appropriate safe access has been provided and will advise the Architect of any discrepancies.
- 2.5.3 No hidden or concealed spaces have been assessed or opened up, unless otherwise noted.

2.6 Fabric Repairs, Specifications Generally

- 2.6.1 The schedule of works must be read in conjunction with separate Architectural Specifications, as follows:
- 2.6.2 Architectural Conservation Specification ref: **9488-BUT-CP-XX-SP-A-00004**
- 2.6.3 The conservation specific content of which are summarised by the following (BUT**) headings and document references:

BUT01 General

BUT02 Specific Requirements

BUT03 Access Scaffolding

BUT05 Demolition / Removal

BUT07 Mortar and pointing

BUT08 Brick repair

BUT09 Pointing of brickwork

BUT10 Removal of organic growth

BUT16 Hotworks

C40 Cleaning Masonry

Note: Cleaning of masonry surfaces, stonework repairs, lead work, re-slatting etc can all be found within the accompanying NBS section references.

2.7 Internal 'dilapidation' inspection of work areas

- 2.7.1 In order to record the condition of each internal work area:
- 2.7.2 Immediately prior to the work commencing in an area, undertake an inspection with the CA in order to record the existing

condition of the areas. The inspection is to be limited to the space in and around the work area and the routes to and from the work area.

2.7.3 Provide a report of any significant defects together with a photographic record for each area.

2.7.4 Confirm the scope of work within each area with the CA and agree how any anomalies will be dealt with e.g. occupiers' fixtures and fittings, partition abutments, etc.

2.8 External 'dilapidation' inspection of work areas

2.8.1 Prior to the commencement of any work on site including the erection of scaffolding the contractor is to allow to undertake an inspection with the CA in order to record the existing condition of the existing building (areas not subject to change in particular) including roofs, footpaths, road and other external paved areas.

2.8.2 The contractor is to provide report of any significant defects together with a photographic record of the external areas.

2.9 Photographs

2.9.1 Provide a photographic record of each individual repair with at least one photograph before, during and after. Complex areas such as major rebuilding works will require a series of photographs to record the work properly and fully.

2.9.2 Photographs do not need to be presented in a document; however, each file should be renamed to have a prefix that corresponds with the unique reference number provided on the drawing.

2.10 Cleaning upon completion of works

2.10.1 All parts of the elevations, working areas are to be thoroughly cleaned down on completion of the works. Prior to dismantling the scaffold ensure that it is cleaned and clear of any debris that could damage the face of the building. As the scaffold is dismantled remove debris and brush clean all sills, ledges, and the like.

2.10.2 Clean down all paintwork and windows.

2.10.3 This item is specifically for cleaning upon completion. Cleaning during the works as required for good housekeeping is to be costed elsewhere within the preliminaries.

2.11 Samples / trial works

2.11.1 Prior to the commencement of any works, there may be a requirement to provide samples / trial works in advance of progressing full packages of works.

2.11.2 These must be provided in a timely manner, as outlined within the separate Architectural Conservation Specification.

2.12 Sub-consultants, specialists

2.12.1 General: The schedule of works must be read in conjunction with all available sub consultant / specialists' information, including drawings, schedules, specifications, and reports. Any discrepancies / anomalies identified are to be brought to the attention of the Architect as soon as they become evident.

2.12.2 Separate Landscaping, Structural, Civil and MEP Engineers proposals take precedent over indicative architectural information.

2.13 Dimensions

2.13.1 Dimensions: Do not rely on scaled dimensions.

2.13.2 All dimensions relevant to the existing buildings and any other assets or features must be confirmed by the contractor before,

order, manufacture, and installation.

- 2.13.3 The contractor must undertake a survey(s) in order to ascertain sufficient information about the structures and their surroundings, prior to undertaking any works.

2.14 Architectural information:

- 2.14.1 All construction must be undertaken and completed in strict accordance with all drawings, specifications, schedules, statutory building and planning regulations, health and safety regulations, all relevant British Standards, codes of practice requirements and manufacturers recommendations, standards, and instructions.
- 2.14.2 Any discrepancies and/or anomalies across construction information must be reported immediately to the contract administrator prior to commencement of any works.

2.15 Schedule of works, drawings, specifications, and reports:

- 2.15.1 General: The specification must be read in association with all available drawings, schedules, specifications, and reports etc. Copies of which are issued with the tender documents.
- 2.15.2 Architect's drawings numbered: See drawing issue sheet(s) accompanying tender.
- 2.15.3 The Contractor must note that anything mentioned or shown on the aforesaid drawings that is not contained in the specifications and/or schedules or anything which is in the specifications and/or schedules which does not appear in the drawings shall be deemed to be included in the tender figure.
- 2.15.4 The Contractor must fully acquaint themselves with the drawings, specifications, schedules, reports, during the tender period and if there should be anything which is ambiguous or otherwise not clear, the Contractor is to obtain clarification from the Architect before submitting their tender.

2.16 Work Items

- 2.16.1 Work item headings and sub-headings.
- **100 Vehicular Ramp – removals & demolition**
 - 101 Vehicular Ramp
 - **200 Exterior Fabric Repair Works**
 - 201 Facades
 - 202 Hard Landscaping

3.0 Schedule of Works

Work Item	Description	£
100	Vehicular Ramp – removals & demolition	

101 Vehicular Ramp

The below works are to extend across the full extent of the Vehicular Ramp (*excluding top landing over Plant Room*).



- Read in conjunction with drawing(s): (01) 001, 002, 102, (02) 001, (03) 001, 101, (04) 002
- See **work item 201** for proposed fabric repair works.

Phase 1 works:

- a. Existing concrete sloped ramped deck panels including all associated elements and components are to be carefully removed.
- b. Existing steel framing beams which are embedded within the masonry north wall to the Undercroft are to be removed. The steel beams are to be cut, leaving a short length of beam where embedded within the masonry wall. The embedded sections are to be removed within the Phase 2 package.
- c. Existing steel framing columns which sit upon concrete base plinths are to be removed, down to the base plinth only. The concrete plinth is to be removed within the Phase 2 package.
- d. Following removal of ramp, allow for temporary installation of fall protection measures / barriers to the head of the ramp, to provide edge protection.
- e. Head of ramp is now exposed to the elements, following removal of sloped sections. Allow

Work Item	Description	£
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for the provision of temporary waterproofing system to mitigate water ingress to interior of plant room below retained ramp landing. Note: Proposed remediation of plant room deck / landing forms part of separate package of works.

Phase 2 works:

- a. Break out and remove concrete ramp base / former entry point including all associated elements and components.
- b. Break out and remove drainage channel to entry point to former ramp and cap.
- c. Break out and remove all redundant buried services, cabling to entry point to former ramp, following removal of previous light fixtures etc.
- d. Carefully lift and remove protruding cobble setts to former entry point of ramp, remove snots, clean, and set aside for potential reinstatement.
- e. Carefully lift and remove protruding stone pavers to former entry point of ramp, remove snots, clean, and set aside for potential re-use.
- f. Carefully break out and remove embedded former concrete base plinths (x5 total) to ramp columns, involving localised temporary removal of surrounding cobble setts at the interface of plinth. Extent of temp cobble removal as required by main contractor to facilitate plinth removal.
- g. Remove redundant metal railings and gate, adjacent to sub-station.
- h. Remove gravel fill within former fenced / gated zone.
- i. Carefully breakout and remove small section of exposed concrete slab.
- j. Carefully cut out all embedded remnants of metal framing beams. This will involve localised temporary removal of surrounding masonry to facilitate break out and removal of embedded steel within pocket. The exact fixing / embedment arrangement is unknown.

Work Item	Description	£
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200 Exterior Fabric Repair Works

201 Facades

The below works are to extend across the entire masonry external envelope.

- Read in conjunction with drawing(s): (04) 002, (05) 001, (06) 001
- a. Carefully remove all MEP items which are to be temporarily removed, allowing for unrestricted access to building fabric to undertake fabric repair works, tag & store within a safe location, ready for reinstatement. Reinstall and test all.
- b. Remove all surface residue, following sloped ramp removal.
- c. Carefully rake out defective, open mortar joints and repoint with a suitable mortar.
- d. Following removal of embedded steel framing members, consolidate masonry core and rebuild with facing masonry to match the existing brick in size, texture, and bond. Repoint with a suitable mortar.
- e. Carefully cut out defective / spalled masonry and indent new bricks to match existing in size, texture, profile (cant bricks), and bond.
- f. Carefully redress spalled / delaminating stonework.
- g. Carefully brush down all masonry / stonework to remove all friable, loose fragments.
- h. Carefully rebuild, consolidate loose and/or defective masonry, to match existing arrangement and repoint with a suitable mortar.
- i. Undertake a light conservation clean across heavily soiled locations.
- j. Remove moss and algae / lichen growth across masonry surface.
- k. Carefully remove all soft vegetation growth and repoint mortar joints with a suitable mortar.
- l. Carefully remove all well-established woody vegetation growths. Note: this may require localised masonry / core work removal to facilitate full remove of embedded growths. Remediate, consolidate, and make good. Repoint mortar joints with a suitable mortar.

Work Item	Description	£
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202 Hard Landscaping

The below works are to extend across localised / focused areas of the Lower Yard only.

- Read in conjunction with drawing(s): (04) 002, (06) 001
- a. Where base / former entry point of ramp has been removed, allow for new / reclaimed cobble setts to be laid, interfacing with surrounding existing cobble setts. Mortar fill all joints.
- b. Where x5 concrete plinth bases have been removed, allow for new / reclaimed cobble setts to be laid, interfacing with surrounding existing cobble setts. Mortar fill all joints.
- c. Following removal of gravel fill / concrete slab, allow for new / reclaimed cobble setts to be laid, interfacing with surround existing cobble setts. Mortar fill all joints.
- d. Allow for general localised fabric repair works within the footprint of former vehicular ramp, including rebedding, consolidation, renewal cobble setts and mortar joint fill.
- e. Allow for localised removal of soft vegetation growth within the footprint of former vehicular ramp.

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