**Refer to specific Purcell Albert Memorial NBS Document - OTH-PUR-EE-ES-SPE-A-0031 for specification details**

**Proposed Repairs (including key Albert Memorial NBS references):**

**1.1.0 Remove/ overhaul** NBS Specification Reference - C40/143B, C41/411-412B
Remove existing mesh from the rear of the tracery panels to the spire gablets and make good the masonry to the rear.Remove any plant growth by removing plant and roots in their entirety from stonework and joints. Existing 4no. perimeter lamps to be restored and upgraded according to ARUP lighting design information and requirements. Includes retaining and refurbishing lamp columns and replacement of top lamp housings to historic design. Lightning conductor system to be serviced according to ARUP specification.

**2.1.0 Clean** NBS Specification Reference - C40
Undertake conservation cleaning of stonework of memorial according to trial and control samples carried out at commencement of project.

**3.1.0 Descale stone** NBS Specification Reference - C41/456-459
Carefully rationalise failing stone surfaces by hand.

**3.2.0 Decorative stonework consolidation** NBS Specification Reference - C41/461B
Carefully remove loose scaling and powdered stone from surface of decorative stonework. Extent of surface removal to be advised by conservator / specialist mason.

**4.1.1 Existing Granite Steps:** NBS Specification Reference - C41/310, C41/151B-170B, C41/250, C41/284B-286
Carefully record, remove and store on site existing granite steps around the base of the monument. Following removal allow for an inspection by the Conservation Architect in order to ascertain any repairs required to the assumed brickwork construction to the rear. Prepare granite steps and reinstate in original positions. Re-point steps, including at abutments.

**4.1.2 Refix existing Angel to South Elevation Gable** NBS Specification Reference - C41/310, C41/151B-170B, C41/250, C41/284B-286
During the inspection of the monument it became apparent that the angel to the head of the South Gable was exhibiting signs of movement and was considered to be unstable. As a result the Angel was carefully removed to refixing as part of the main works.

**4.1.3 Rebuilding existing corner pinnacles:** NBS Specification Reference - C41/310, C41/151B-170B, C41/250, C41/284B-286
Allow for a high level inspection by the Design Team and the Conservation Planner to ascertain the fixing details of the pinnacles. Carefully dismantle 1no. existing pinnacle with a watching brief from the Design Team inc Structural Engineer. All ferrous cramps to be recorded and removed where discovered and replaced with Phosphor bronze to match original. Condition, size and bedding orientation to be recorded prior to removal and condition of the stones noted. Once the pinnacle has been dismantled and the construction method understood, allow for removal of the 20th century structural support. Carefully record and remove the existing statues including any support at the base. Remove the plain stone bases that were installed at the time of undertaking the structural repairs. Once this has been undertaken and the fixing methods and defects understood, allow for dismantling and rebuilding the remaining 3no. pinnacles following the insertion of the new structural support in accordance with 12.1.4.

**5.1.0 Crack stitching / Repair** NBS Specification Reference - C41/611B-693
Repair cracked stone where appropriate to retain in situ.

**6.1.0 Stone Replacement / Repair** NBS Specification Reference - C41/220-349B C41/460B for re-carving of inscriptions, C41/241B
Where a stone is showing evidence of failure and/or an element of stonework has been replaced with an inappropriate repair this will be removed and the stone replaced in its entirety. Where a section of decorative stone has decayed to such an extent that the original design intent and form has been lost this will be replaced with either a stone indent or a replacement stone section carved to the original profile. Where a stone element has lost a functional element such as a drip mould this will also be replaced with a stone indent to match the original profile. All ferrous cramps to be recorded and removed where discovered and replaced with Phosphor bronze to match original. Any new stone details to be carved to match original Worthington archive drawings. Where this is not possible, stone detail to match extant repeated detail to original profile

**7.1.0 Stone Indents** NBS Specification Reference - C41/349B
In general where a stone is to be indented this should be replaced with sufficient bed depth to enable the indent to be compression fixed with joggle joints and bronze dog cramps where required. All voids to be grouted and joints pointed using lime mortar.

**7.1.1 Indent fine decorative stone details** NBS Specification Reference - C41/353B
Where a fine stone detail indent is required which may not meet the required size to allow compression fixing, joggle joints should be used where possible and the use of carbon rods for dowels. Indent should not rely on adhesives for retaining the stone.

**8.1.0 Mortar Repairs** NBS Specification Reference - Z21, C41/509-555
Mortar repairs only to be undertaken in accessible areas and to small areas of stonework which do not warrant an indent repair.

**9.1.0 Brick Replacement**
This is to be assessed during the re-bedding of the stone steps.

**10.1.0 Repointing and regrouting** NBS Specification Reference - Z21, C41/611B-862B, C41/390B, C41/290-300B
All joints to be carefully raked out and complete repointing of monument to be undertaken in lime mortar throughout.
Open joints to projecting cills, copings and to plinth to be undertaking using lead caulking on lead wire infill to plinth and using temporary lead shuttering to projecting stone details.

**Proposed Alterations:**

**11.1.0 New weatherings / drainage** NBS Specification Reference - C41/137B, C41/710B
Existing water disposal arrangements to be surveyed by Design Team and contractor at commencement of project. Allow to apply discreet mortar flaunchings/weathering to exposed surfaces showing signs of water retention and delamination due to water ingress. Allow for existing drainage chutes to pinnacles to be have existing linings removed and new Code 4 lead linings provided to ensure water is shed away from the monument. Existing drainage routes leading from statue plinth and discharging onto stone steps at base to be cleared to reinstate working order. Allow to reline with lead and catchment grates added at plinth level. New lead gutters/linings to be provided to rear of pinnacles leading into drainage chutes. Co-ordinate with ARUP (Public Health) and Ramboll (sub-surface drainage) as necessary.

**12.1.1 Alterations to existing lighting columns and lamp housings**
As per ARUP specification

**12.1.2 Installation of proposed lighting to Monument** NBS Specification Reference - M60, Z11
As per ARUP specification. Includes integration of lighting systems to new railings and existing stone steps.

**12.1.3. Restoration of historic railing to the base of the statue** NBS Specification Reference -C41/135B
Refer to drawing OTH-PUR-EE-ZZ-DWG-A-7107. To incorporate new lighting systems as per ARUP specfication

**12.1.4 Construction of new structural support to pinnacles**
With good documentary evidence of the original stone verticals (all four mouldings) and the decorative stone plinth, the proposal is to remove and replace the 3no columns to each corner in a non-ferrous metal, to follow exactly (in silhouette) the original intent. The proposal is to construct a new welded swayframe "table" constructed from stainless steel, the surface of which would be etched to get a suitable "dull" finish to adhere to it. The current proposal is that the corner supports will be designed as three tubes pushed out closer the back of the original granite verticals in the location of the original columns. The head of the "table" will be redesigned to remove the horizontal table top which currently obscures the light to the statues reducing their visibility and creates much a lower soffit over the statues than was originally intended. This re-positioning will improve the view of the statues to what is seen today and will restore the original design intent for these statues. Final specification and fabrication information to be confirmed upon investigation and liaison with Ramboll (structural engineers).

**12.1.5 Prepare surfaces and remove defective residues and restore decorative finishes to lamps, railings and spire finial.**
This will be informed by paint sampling and microscopic analysis from lamp standards, remaining railing stubs in steps and finial. Allow 15no. samples for lamps, 5no. for railing stubs, 6no. for finial. Allow to re-gild finial as existing.Refer also to ARUP lighting specification and requirements. NBS Specification Reference - M60/130B plus associated clauses as required.

## EXTERNAL REPAIRS KEY

**1.1.0 Remove/overhaul as per scope, NBS & pricing schedule**

**2.1.0**
**Clean as per scope, NBS and pricing schedule**
**2.1.1** Doff clean and bristle brush to remove algae growth, moss and grime 100%
**2.1.2** Allow to carry out solvent-based clean to all limestone/marble statuary elements as indicated on drawing and as per pricing schedule
**2.1.3** Allow for targeted ammonium carbonate poulticing of pollution crusts as identified on site as indicated on drawing and as pricing schedule
**2.1.4** Remove bird guano where encountered 100%

**3.1.0**
**Descale stone as per scope, NBS & pricing schedule**

**3.2.0**
**Decorative stone consolidation as per scope, NBS & pricing schedule**

**4.1.0**
**Rebuild, Re-bed, Re-fix as per scope, NBS & pricing schedule**

**5.1.0**
**Crack stitching/repair as per scope, NBS & pricing schedule**

**6.1.0**
**Stone replacement/restoration of detail as per scope, NBS and pricing schedule**

**7.1.0**
**Decorative stone indents as per scope, NBS and pricing schedule**

**7.2.0**
**Moulded stone indents as per scope, NBS and pricing schedule**

**8.0**
**Mortar repairs as per scope, NBS and pricing schedule**

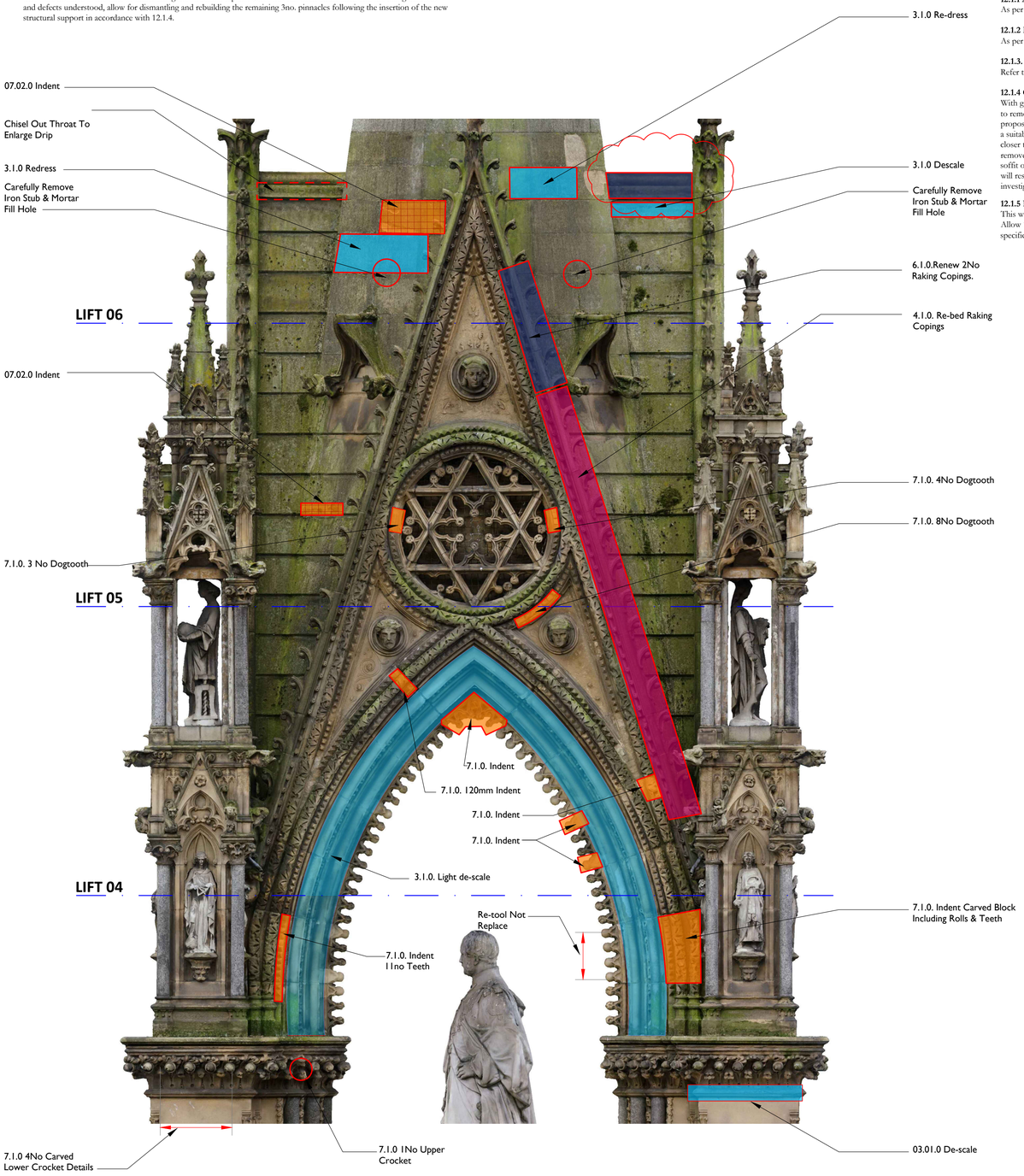
**9.0**
**Brick replacement as per scope, NBS and pricing schedule**
**9.1.1**Replace eroded clay bricks within sub-base of monument if required

**10.0**
**Re-pointing and re-grouting as per scope, NBS and pricing schedule**
**10.1.1** Complete repointing in lime mortar 100%. Rake out and repoint all joints to copings, cornices, hood moulds, string courses, ashlar and other areas indicated.
**10.1.2** Fill joint with lead caulking to reduce water ingress

**11.0**
**Fit New as per scope, NBS and pricing schedule**

**12.0**
**Proposed alterations as per scope, NBS and pricing schedule**

**NOTE: All repairs subject to site inspection of the monument from scaffold to enable repairs to be validated.**




01 **Mid Section - North Elevation**
Scale: **1:20**

**Scale Bars** to be used as guidance only - refer to sheet size below

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1:100 | mm | 1000 | | 3000 | | 5000 | | 7000 |
| 1:200 | mm | | 4000 | | 6000 | | 2000 | 8000 |
| 1:500 | M | 5 | | 15 | | 25 | | 35 |
| 1:1250 | M | 10 | | 30 | | 50 | | 70 | 90 |

**Notes:**
Drawings are based on survey data and may not accurately represent what is physically present.
Do not scale from this drawing. All dimensions are to be verified on site before proceeding with the work.
All dimensions are in millimeters unless noted otherwise.
Purcell shall be notified in writing of any discrepancies.

| ISSUE | DATE | APPROVED | DRAWN | DESCRIPTION |
|---|---|---|---|---|
| 02 | 14.08.2024 | AD | AB | Replacement ridge stone no longer omitted. |
| 01 | 19.05.2023 | JC | AB | Replacement ridge stone omitted from east gable |
| - | 18.03.2022 | AB | TJC | First Issue |

OUR TOWN HALL PROJECT

PURCELL

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| | |
|---|---|
| PROJECT STATUS | RIBA STAGE 5 |
| CLIENT | MANCHESTER CITY COUNCIL |
| PROJECT | OUR TOWN HALL |
| DRAWING TITLE | Albert Memorial Mid Section - North Elevation |
| SIZE & SCALE | A1: As indicated |
| DRAWING STATUS | FOR CONSTRUCTION |
| JOB NUMBER | 236959 |
| DRAWING NO. | OTH-PUR-EE-ZZ-DWG-A-7135 |
| REV | 02 |

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