Doc Name: Albert Memorial Pinnacle Replacement Metal Frames (Construction Issue)

Doc Reference: OTH-RAM-EE-ES-SKE-S-0275

Status: S4 – For Construction

Document Type: Sketch

OUR TOWN HALL PROJECT

REV.	DATE	DESCRIPTION OF CHANGE
C01	**10/11/2022**	**First Issue**

Purpose:	It is proposed to replace the 1970-80's crude metal framework (table) that supports and provides stability to the upper sections of the 4No. pinnacles, with an improved version that allows the statues within to be viewed as originally intended. No records have been found that provide any detail of this recent intervention. The current proposals are summarised (in brief) in the Albert Memorial Heritage Impact Assessment, dated 01/12/2020, OTH-PUR-XX-XX-RPT-A-0106, with the architectural aspects of the proposed metal frames now shown on OTH-PUR-EE-ZZ-DWG-A-7147, which has been developed with close collaboration with, and input from, Ramboll. When read in conjunction with OTH-PUR-EE-ZZ-DWG-A-7147, this Ramboll sketch pack provides all the structural input to the proposed pinnacle replacement metal frames. It is assumed that these Works are covered under **Purcell-EWN-000487 Albert Memorial – Validation Drawings** (which superseded Purcell-EWN-000481; Prince Albert Statue – Repairs
Location:	Albert Memorial in Albert Square
Documents affected:	This supersedes OTH-RAM-EE-ES-SKE-S-0234 (now withdrawn)
WP's affected:	Unknown (Bullen are the WP contractor)
Co-ordinated with: Purcell Ramboll Arup Planit Lendlease	 Yes (Jamie & Andrew Bailey) Yes No No No (originally developed with Steve Bloxham)

RAMBOLL

Documents included:

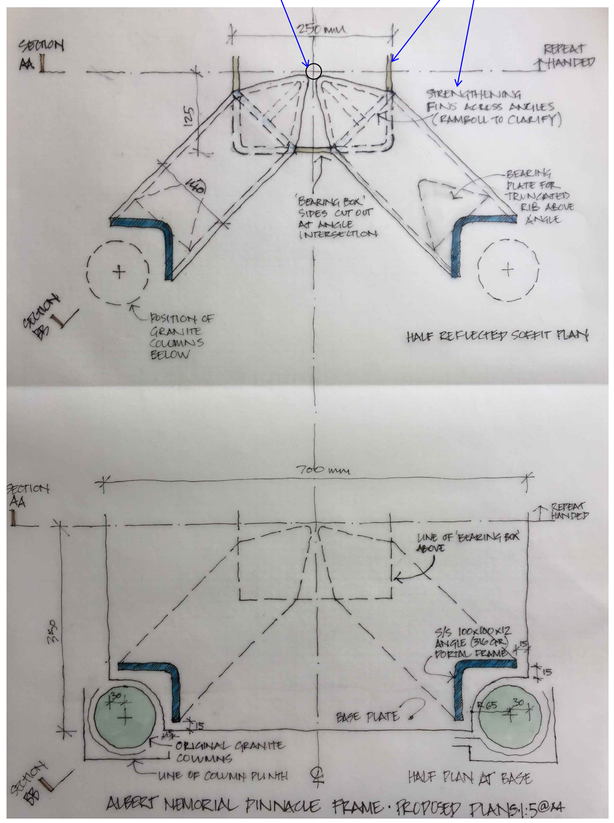
- OTH-PUR-EE-ZZ-DWG-A-7147 (with further annotation by Ramboll)
- Ramboll sketch arrangement of the top connection of the pinnacle frame

The above documents shall be read in conjunction with the following notes:

1. All works shall be in accordance with BS EN 1090-2:2018; Execution of Steel Structures and Aluminium Structures, Technical Requirements for Steel Structures.
2. All metalwork shall be austenitic stainless steel Grade 1.4401 (316).
3. The member sizes, as determined by Ramboll and now included on Purcell A-7147, are to be as follows:
   - Main members; 100x100x12 equal angle
   - Base-plate; 15mm thick
   - Cap-plate; 10mm thick
   - Trapezoidal & rectangular stiffeners immediately below the cap-plate; 10mm thick
   - “Kite-shaped” bearing plates to support truncated ribs of stone capital; 10mm thick
4. Weld requirements:
   - Cranked connections within main members: full strength penetration butt weld
   - Connection of main members to base-plate: 8mm continuous fillet weld
   - Connection of main members to underside of cap-plate: 10mm fillet weld to inside profile of angle
   - Connection of trapezoidal & rectangular stiffeners to underside of cap-plate 10mm fillet weld, and 8mm deep partial penetration butt weld to legs of main members ground flush to form a smooth/level external surface profile.
   - Connection of “kite-shaped” bearing plates to internal profile of main members; 6mm continuous fillet weld
5. The structural adequacy of the design has been determined based on the approximate dimensions and levels included on Purcell drawing A-7147, established from detailed measurement of one dismantled pinnacle. As defined by Purcell, the contractor is to confirm the geometry of the existing stonework for all pinnacles, including the profile of each of their stone canopies, to confirm the finer setting-out detail of the metalwork. The results from this survey is to be reported back to the Design Team via the fabrication drawing approval process, where comment/acceptance of the resulting finalised profiles, dimensions and levels will be given.
6. Refer to Purcell drawings for the surface finish and/or application of any coatings to the metalwork

30mm dia hole central in cap-plate and main members below to allow for the original dowel fixing of stone capital to framework to be reinstated

The extent of the original 250x250x225mm high box shown. Refer to Ramboll arrangement of the top connection of the pinnacle frame for the final coordinated detail

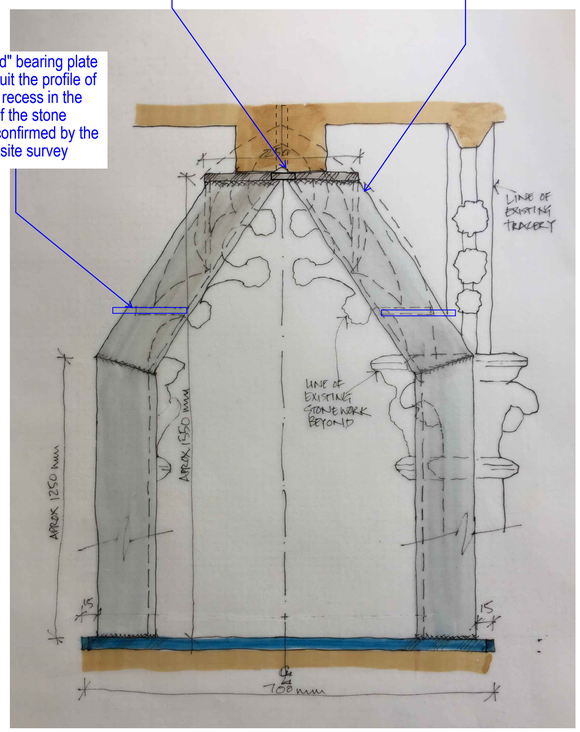


01 **Pinnacle Frame - Proposed Plans**
Scale: **1:5**

30mm dia hole central in cap-plate and main members below to allow for the original dowel fixing of stone capital to framework to be reinstated

Refer to Ramboll arrangement of the top connection of the pinnacle frame for the final coordinated detail

"Kite-shaped" bearing plate shaped to suit the profile of the existing recess in the underside of the stone capital, as confirmed by the contractors site survey



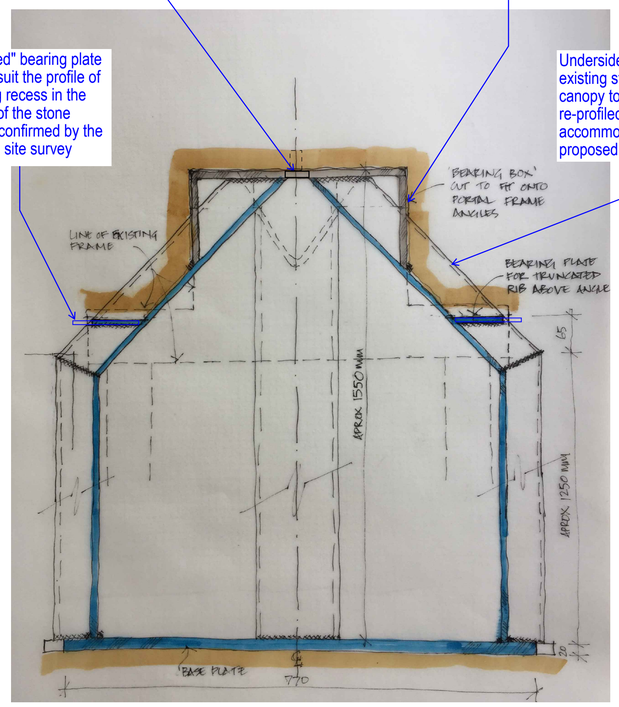
02 **Pinnacle Frame - Proposed Section AA**
Scale: **1:5**

30mm dia hole central in cap-plate and main members below to allow for the original dowel fixing of stone capital to framework to be reinstated

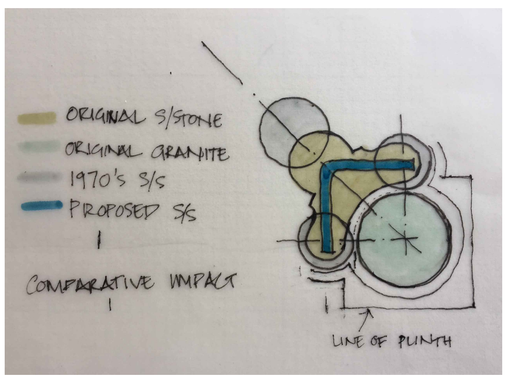
Refer to Ramboll arrangement of the top connection of the pinnacle frame for the final coordinated detail

"Kite-shaped" bearing plate shaped to suit the profile of the existing recess in the underside of the stone capital, as confirmed by the contractors site survey

Underside of existing stone canopy to be locally re-profiled to accommodate the proposed metal



03 **Pinnacle Frame - Proposed Section BB**
Scale: **1:5**



04 **Pinnacle Frame - Comparative Impact Diagram**
Scale: **NTS**

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

1:100 mm 1000 2000 5000 7000
1:200 mm 5000 8000 2000 6000
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.

General Notes:

Ramboll annotation (all in blue) added 10/11/2022
Read in conjunction with OTH-RAM-EE-ES-SKE-S-0275

ISSUE	DATE	APPROVED	DRAWN	DESCRIPTION
-	13/05/2022	JC	AB	

OUR TOWN HALL PROJECT
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PROJECT STATUS	**RIBA STAGE 5**
CLIENT	**MANCHESTER CITY COUNCIL**
PROJECT	**OUR TOWN HALL**
DRAWING TITLE	**Albert Memorial - Pinnacle Frame Proposals**
SIZE & SCALE	**A1: As Stated**
DRAWING STATUS	**FOR CONSTRUCTION**
JOB NUMBER	**236959**
DRAWING NO.	**OTH-PUR-EE-ZZ-DWG-A-7147**
REV	**-**

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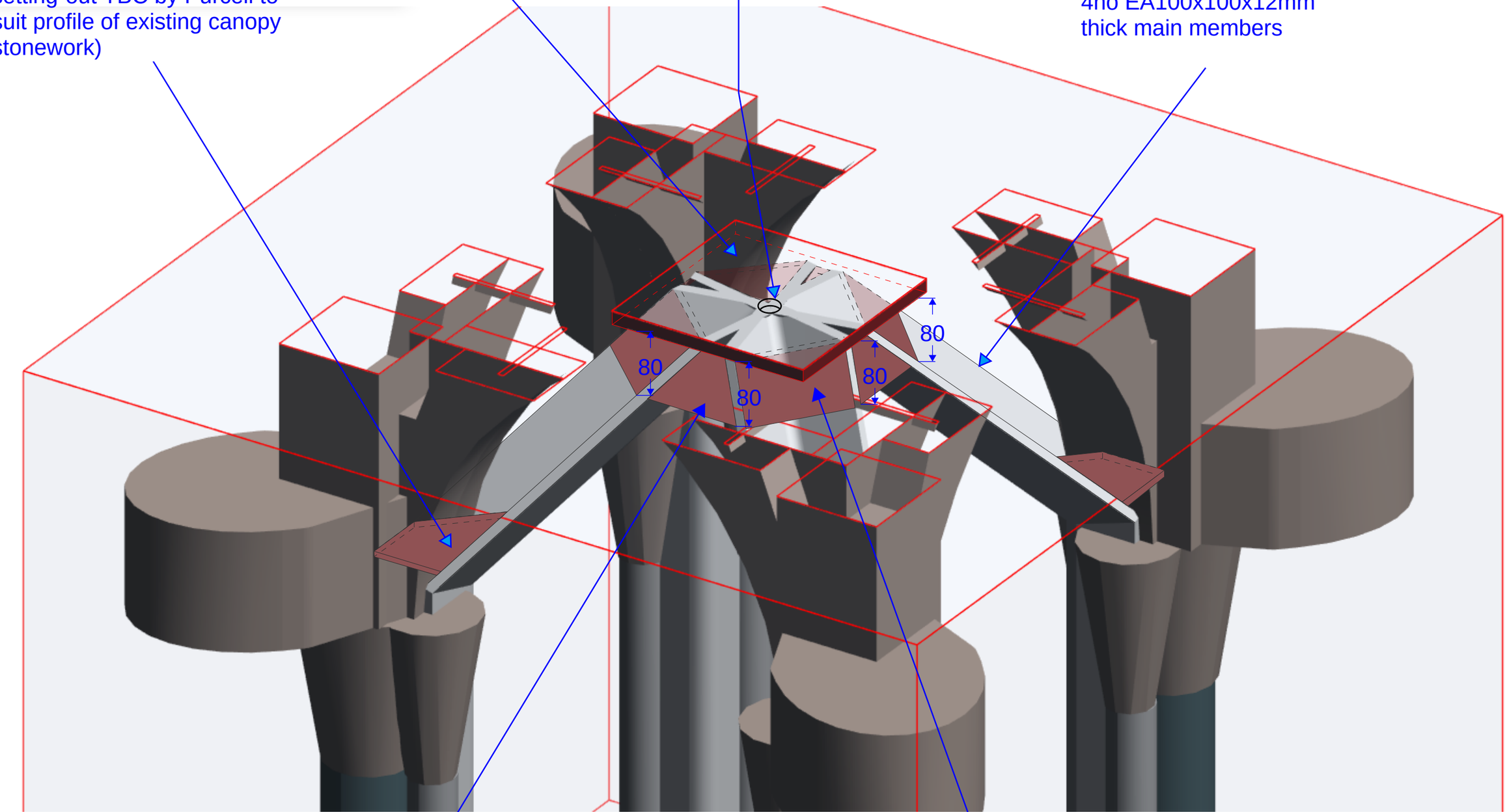
Ramboll sketch arrangement of the top connection of the pinnacle frame
Read in conjunction with OTH-RAM-EE-ES-SKE-S-0275

4no 10mm thick 'kite-shaped' bearing plates for to support the truncated stone rib of stone capital above (profile and setting-out TBC by Purcell to suit profile of existing canopy stonework)

250x250x10mm thick cap-plate

30mm dia hole central in cap-plate and main members below to allow for the original dowel fixing of stone capital to framework to be reinstated

4no EA100x100x12mm thick main members



4no 10mm th'k trapezoidal stiffeners between main members, of a depth 80mm vertically down from underside of cap-plate

4no 10mm th'k rectangular stiffeners between main members, of a depth 80mm vertically down from underside of cap-plate