

1. Extent of repairs/replacement to existing roof deck and structure to be assessed following removals. Nominally allow for 10% replacement of existing sarking boards with new softwood boards to match existing.

1.1. Provisionally allow for opening-up 4m x 4m of existing roof boarding in 4no areas to effect structural repairs as directed by CA/Structural Engineer. Re-fix on completion.

2. Re-fix all existing sarking boards to secure, then diagonally overboard with new penny jointed softwood boarding. Provide and install new hollow core roll, sand-cast lead roof covering with swept ridge. Replace lead flashings at all abutments (including each turret). Stop rolls short to form back gutter detail around each turret. Allow for lead sleeves to roof penetrations (parapet brace anchors).

3. Construct new parapet gutter structures with modified falls to accommodate appropriate steps and abutment upstands. Form ventilation detail to drop edge. Board out and line with sand-cast lead. Install new sand-cast lead cover flashings at each abutment (including each turret).

3.1. See drawing DEM200 for provisional works to breakout concrete or masonry from each gutter base.

3.2. Provisionally allow for reforming levels of masonry in brick or tile set in lime mortar to achieve new falls to gutters as set out by contractor to CA approval.

3.3. Include prime cost sum of £300 per outlet for new sump inspection covers to all outlets.

4. Replace duck-boarding in parapet gutters with new in material to match existing, to suit form of renewed gutters.

5. Repairs to existing hoppers and downpipes. Extent to be assessed following completion of scaffold installation. Include for taking down all lead hoppers, repairing as found necessary, adapting for overflows and reinstating.

6. Commission specialist to design and install photovoltaic array on the north and south slopes. Framing for PV installation to be secured on integrated fixing points, incorporated into the new lead roof covering.

7. Protect stonework/surrounding surfaces. Clean back and redecorate all accessible ironwork - anti-climb spikes on each turret, parapet bracing etc - with zinc primer and top coats to match existing colour.

8. Replace existing ridge ladders with new, in material to match existing.

9. Replace turret doors in air dried, seasoned oak and new ironmongery, all to match existing.

10. Complete schedule of light touch masonry repairs/repointing throughout parapets and turret masonry (internally and externally on N&S, from internally only on E&W) and stair turrets where accessible from the roof or scaffold.

11. Internally, replace corroding mesh across all piercings of the turret with new welded 316 stainless steel mesh. High level internal access scaffold will be required.

See below for replacement of existing roof hatch, and creation of new opening and hatch at the east end of the roof.

**Side Chapel Roofs and South Porch** (to be undertaken sequentially based on priorities agreed with the CA).Scaffold to be installed to max two bays at any one time.)

12. Install new sub-structure to modified form, incorporating continuous ventilation at the gutter upstand and upper step, and cover with sand-cast lead. Replace lead flashings at all abutments.

13. Construct new parapet gutter structures to modified forms, board-out and line with sand-cast lead. Replace lead cover flashings at each abutment.

13.1. See drawing DEM200 for provisional works to breakout concrete or masonry from each gutter base.

13.2. Provisionally allow for reforming levels of masonry in brick or tile set in lime mortar to achieve new falls to gutters as set out by contractor to CA approval.

13.3. Include prime cost sum of £300 per outlet for new sump inspection covers to all outlets.

13.4. Include for taking down all lead hoppers, adapting for overflows and reinstating. This will require local access following removal of scaffolding.

14. Replace linings and associated flashing in buttress openings with new sand-cast lead.

Note: Electrical equipment/infrastructure in the roof space to remain accessible and in use during the works. This includes the fire detection and alarm systems, AV and microphone winches.

**Roof Space**

15. 4 no internal passage doors: allow provisional sum of £150/door for minor repairs or decoration, scheduled by CA.

16. Turret stairs: to be cleaned top to bottom; all dust removed during cleaning programme.

17. Internal winches project: main contractor to be aware of separate winches project (works by others) and to undertake CDM duties for construction phase with separate contractor directly appointed by employer.

18. Access to roofspace during works: contractor to operate a 'permit to work' system for all access to roofspace - including by employer or agents - from above or people coming up spiral stairs.

19. See drawing EN 200 for dusting/vacuuming throughout the roof space prior to commencement.

20. Existing access hatch into roof space at West End, this is the only access internally. Hatch to be lifted, and access platform to be erected internally with vertical safe access from inside to out for contractor.

20.1. Modify opening and edging to accommodate sufficient upstands following over-boarding.

20.1. Adapt hatch to include hinges; struts and locks. Prime cost for specially made heaving hinges: £500.

20.2. Adapt finish to terne-coated stainless steel, which will be lighter weight

21. Allow provisionally for forming similar new access hatch with all forming of opening trimming, edging at the east end of the roof. Clad in terne-coated stainless steel. PC ironmongery as above £500.

22. Trial application of Fertan to tie bars. Subject to approval by CA, apply to each tie bar.

**23. FIRE RISK MANAGEMENT. Read with MFP report and recommendations.**

23.1. Existing systems to be maintained by main contractor (and coordinated in risk management terms with operations of the live occupied spaces below, and to undertake drills to prove the operational handling of alarms, tests and alerts).

23.2. Additional fire detection of the works area within roofspace. Including beacons and or sounders for workforce.

23.3. Additional fire detection of the works area above the roof and within the temporary roof, including beacons and or sounders for workforce.

Scope of Work Roof Plan, 1:200 @A1

Scope of Work Roof Space Plan, approx 1:200 @A1

Mural passageways (both north and south sides):

24. Method Statement required for personnel access and sequencing of work in passageways mindful scaffolding will obstruct narrow access.

25. Brick paving to passageway. The passageway surface carries from fairly regular coursed brickwork to irregular stonework. The aim is not to 'tidy up' these spaces excessively, but to risk manage the most regularly trafficked surface used by visitors to the roofspace. Allow for carefully taking up and reinstating to an approved sample approximately 100 number matching red bricks: sample of brick and mortar to be provided in advance.

26. Recording of condition of wall plastering especially towards Eastern ends of the roofspace mural passageway to be drawn up by contractor for CA review and comment. Plaster work is historic and extremely fragile. Condition to be mapped on to long section drawings to be provided to the main contractor.

27. Once recorded, the following works are to be costed.

27.1. Very careful removal of debris from this area to the contract administrator's direction allow for 50 m2 of de-frassing.

27.2. Allow for 50 m2 of raking out and re-pointing of brickwork to both faces (internal or external) of passageway walls (again note the sequencing issues with scaffolding ties in the space).

27.3. Areas of re-pointing to be set out and marked by contractor following guidance given by CA.

27.4. Reinstatement of very thin, fine lime plaster to areas directed by the CA. Allow 50 m2 in various areas (ranging from small to large) to an approved sample to be prepared in advance.

Read with removals drawing DEM 200, BWIC drawing BW 200, scope of work sections drawing GA 300 and elevations drawing GA 400

27.5. Repairs (led by ICON registered conservator) to retained render including capping of edges of render and setting back and bonding by a specialist conservator. Provisionally allow for 50 m2 in locations to be agreed. Conservation works subject to tests and samples signed off by CA. Production of final issue of completed conservation work and report by conservator to be completed.

North Elevation

28. Re-fix downpipes above side chapel roofs B,C and G. Allow for renewal of fixings at each collar, over the full height of the downpipes. Include for MEWP access and landscape protections to facilitate the repairs. Max ground bearing pressures, as defined by Harrison Geotechnical Engineering, must not be exceeded.

29. North Porch: From local access, take down both rainwater downpipes and hoppers. Repair, adapt hopper for overflow and re-fix.

West Elevation

30. Replace missing section of flashing at sill-level with new code 6 sand-cast lead. Redress/re-fix adjacent flashings. Include for local scaffolding to facilitate the repairs.

Rainwater Harvesting

31. Refer to drawings and specification by Conisbee.

Rev.	Date	Dwn.	Chkd.	Description
01	19.02.22	GH	CAL	Notation for Mural Passageway repairs updated
02	08.04.22	GH	CAL	Ridge notation updated

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Key Plan

General notes:  
Never scale dimensions from this drawing. Use written dimensions only. Report any discrepancies. Ask if in doubt. Always use latest revision.  
Note that this drawing is based on dimensional surveys by others, therefore site verification of dimensional information is particularly important.  
Read in conjunction with other information from CAL and other consultants.

Notes:

Stage 4 - For Tender

Not for construction

CLIENT  
King's College, Cambridge

SCALE  
1:200@A1

PROJECT  
Roof Covering Renewal Project

DRAWING TITLE  
Scope of Work - Roof and Roof Space Plans

DATE  
04.02.22

CHECKED  
CAL

DRAWN  
GH

REVISION  
JOB NUMBER  
DRAWING NO.  
REVISION

099.4.1 GA 200

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