Roof slope 21 & 23

Description of Existing Roof Configuration :
Large faceted glazed lantern roof flanked by asphalt flat roof channels. Lantern is formed with a slate pitched roof apex flanked with segmented glazed roof slopes. Grey slates with socketed clay ridge roof. Timber fascia boards terminates slate roof. Black uPVC gutters fixed to fascia boards discharges rainwater directly onto asphalt cheeks on east end of roof. Each end of the slate roof terminates onto brick gables with stepped lead flashing. Single glazed segmented aluminium framed glass lights cover over original glass lights as secondary glazing. Original lights are fixed between asphalt coated primary rafters/trusses. Raised asphalt coated parapets terminates secondary glazing light/panelled roof slope. Each end is capped with solid stepped aluminium panels/cheek which terminates the glazing panels on the side. Brick gable with cut sandstone coping stones with cementitious pointing and return walls to south of roof along with asphalt coated cheeks butted up at each side. West end of roof terminate with asphalt covered cheeks and brick gable. Brick services block sits on gable end with small timber panelled door and steel stair mounted to one of the cheeks providing access.

Condition:
Asphalt roof generally in satisfactory condition although signs of stress evident at changes of direction. Some larger cracks present in these areas. Pooling water indicates inadequate falls. Some open joints to coping stones with inappropriate mastic used in places. Stonework generally in good condition. Brickwork generally in satisfactory condition although inappropriate pointing evident in places to south gable. Modern glazing system generally in good condition but vegetation present to glazing bar cappings. Duck boards and cable trays impede free flow of rainwater off the roof.

Scope of Repairs:
- Carefully remove all vegetation and rake out failed mortar joints to masonry walls and coping stone and repoint using appropriate lime based mortar.
- Allow to clad 4no. asphalt cheeks and roof to services room in lead to appropriate detail in accordance with LSTA guidance and recommendations.
- Allow to provide new aluminium rainwater goods.
- Allow to strip carefully redundant lead work from original roof lights.
- Allow to prepare and redecorate fascia boards (tucked behind fascia boards).
- Clean off vegetation growth and weather stains to aluminium frames and caps/cheeks.
- Allow to replace slipped and damaged slates on pitched roof with matching slates. Allow for 10% replacement.
- Re-fix bottom slate cover flashing to entire length of north slope.
- Re-bed clay ridge tiles to slate roof, allow for 15% replacement to match existing.

Roof slope 27 & 28

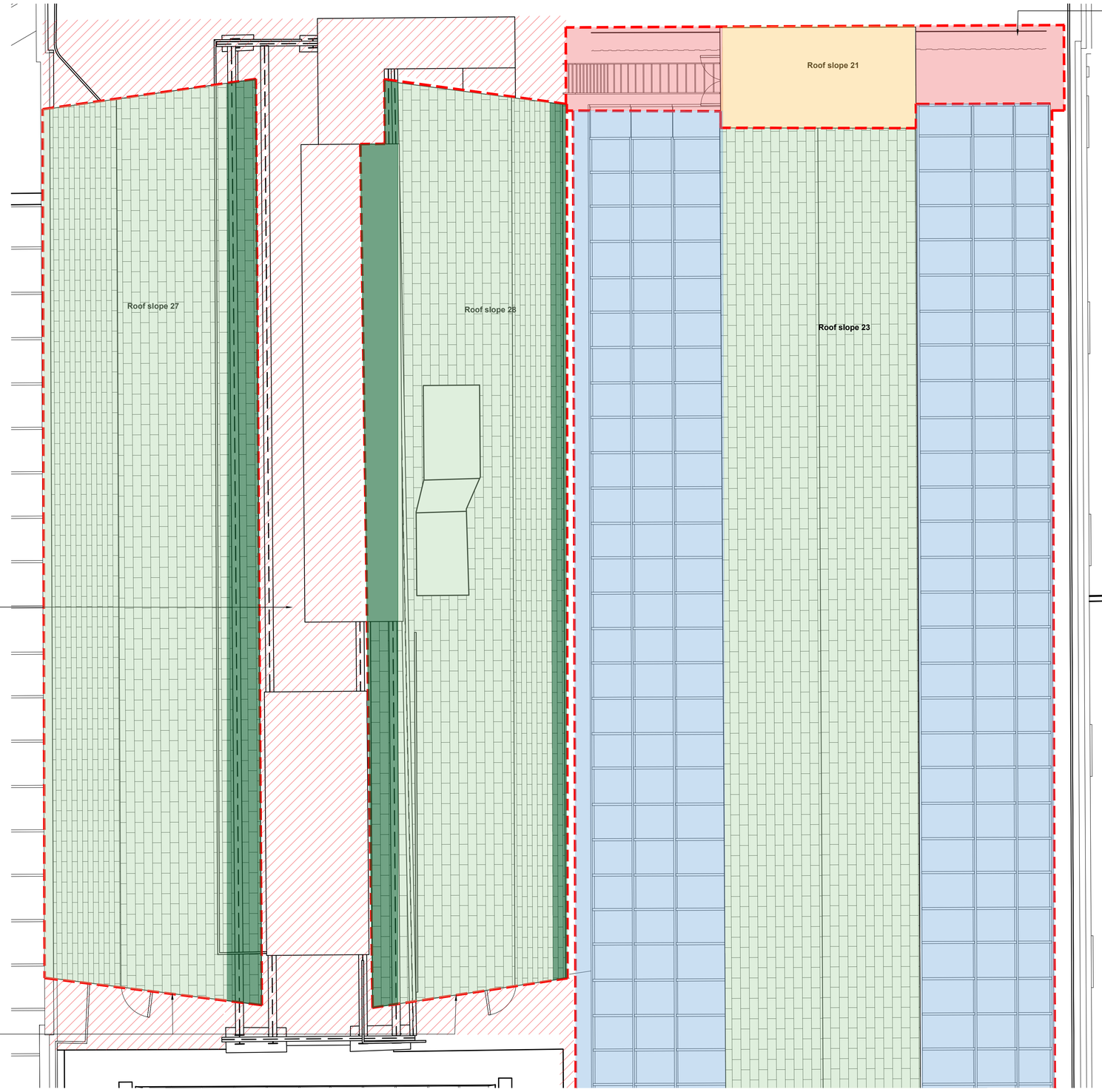
Description of Existing Roof Configuration :
Generally, configuration as R18/R19. 2no. asymmetrical roofs linked by an area of flat roof. Slate work present to both north and south roof slopes of both roofs. Roof slates to steeper roof slopes appear earlier than slates to shallower roof slopes. Ridges to both roofs consist of clay socketed ridge tiles. Both ridges have been bedded on extensive mortar and deviate from a true line along their lengths. The verge detail to both roofs differs from R18/R19. A building sheet is present beneath the slating battens and this projects 50mm or so from the brick gable. The gap between boards and slate is pointed with cementitious mortar. Timber verge boards to all four gables return to eaves boards at termination of shallow roof slopes, steeper roof slopes are flashed over surrounding flat roof (R28) and directly into metal gutter (R27). Large air handling services present to significant steel deck raised off flat roof between R27 and R28. Lead clad dormers to both shallower roof slopes provide bearing for steel at mid-span of deck and provide cable access from within R27 roof space. Access possible into roof space of R28 confirms earlier presence of glass to shallower roof slopes and use of blinds on pulleys to control light levels. Roof void now created by blanking off lay light at lower level providing services access for air input and extract. These ducts are fed from above via single large opening to South roof slope of R28 and extracted through opening in west gable. Lightning tapes present to both roofs. There is a water point to West gable of R28.

Condition:
Generally, the slate work to both roofs is in satisfactory condition. There is some evidence of slipped slates and a number of cracked slates. Otherwise roof surfaces appear relatively sound. These works probably date from the 1990's formation of the temporary exhibition galleries below. Verges are in poorer condition with cracking present to mortar pointing and redecoration required to timber verge boards. Pointing to gables is a mixture of lime and cementitious pointing and should be consolidated. Some unsympathetic openings and damaged bricks present. Modern concrete lintol present where air handling extract/inlet duct present. Mortar fillet to top of asphalt upstands is beginning to deteriorate. A lead cover flashing should be considered. Asphalt flat roof between R27 and R28 generally in good condition but water pooling and build-up of sediment identifies inappropriate falls. Corrosion present to a number of exposed elements to air handling unit but an assessment of its condition falls outside the remit of this survey.

Scope of Repairs:
- Allow to rake out and repoint all brickwork to gables using appropriate lime mortar to specification.
- Allow to provide/consolidate cover flashing to surrounding flat roof areas.
- Allow for replacing of cracked and relocating of slipped slates, allow total number of 20.
- Allow to provide new flat roof membrane (see drawing 2232) and to consolidate falls below services installations to maximise ability for roof to shed water.
- Allow to prepare and redecorate all timber verge, soffit and eaves boards.
- Allow to upgrade lightning protection to current standards.

Key

- Asphalt roof covering
- Modern aluminium framed glazing over traditional glazing below. Clean off vegetation growth and weather stains to aluminium frames and caps/cheeks. Strip redundant lead work from original roof lights.
- Cart offsite existing loose timber decking. Existing asphalt roof covering to be retained and prepared to support new roof covering as shown on drawing 2232.
- Slate roof covering -- Replace slipped and damaged slates on pitched roof with matching slates; allowance for 10% replacement
- slate roof covering -- allow to carefully lift up bottom three rows of slates in situ to enable installation of new flat roofing membrane. Where lifting is not practicable, carefully take off and set aside for refitting with clips following completion of flat roofing works.
- Liquid Applied Roof Covering



1 - Roofslope 21, 23, 27 & 28 - Roof Plan as Existing
Scale 1:50 @ A1

N

0 0.5 1 2.5
Scale 1:50 m

Notes
1. Any dwg format drawing is to be read in conjunction with and at the scale of the accompanying pdf.
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Drawing Status
- F Feasibility
- S Sketch Design
- P Planning
- B Building Control
- D Developed Design
- M Measurement
- T Tender
- C Construction
- R Record

Rev	Date	Dwn	Auth	Revision
6	22-10-20	FXS	MTO	roof 23 repair scope updated, roof 27/28 slate adjustments for flat roofing works updated, key updated
5	17-09-20	FXS	MTO	stripping note to roof 21 added
4	04-09-20	FXS	MTO	annotations updated to reflect technical design, issue for costing
3	24-06-20	HXD	EJ	Amended to suit survey information
2	03-06-20	HXD	EJ	Annotation updated
1	01-05-20	HXD	EJ	Annotation updated
0	24-02-20	HXD	EJ	Initial Issue

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Roofslope 21, 23, 27 & 28
Roof Plan As Existing

Project	No
WAGL.01	1232

Scale (A1)	Status	Revision
1:50	D	6