DESIGN & ACCESS STATEMENT

SOAS University of London

Philips Building & College Building
Recovering of Roof Areas

May 2024

TERMS OF REFERENCE

This Design and Access Statement has been prepared by Neville Bruton Design on behalf of the School of Oriental and African Studies (SOAS), to support an application for listed building consent for essential roof resurfacing works to the Grade II* Philips Building, and Grade II College Building, SOAS University of London, Thornhaugh Street, London, WC1H 0XG.

It should be read in conjunction with other application documentation.

VISION & OBJECTIVES

The application for listed building consent is in relation to the SOAS Grade II* listed Philips Building and Grade II College Building, situated within the Russell Square, University of London campus, which sits within the Bloomsbury Conservation Area.

The proposals include essential roof waterproofing works to areas of both buildings as identified by the red boundary on the below roof level plan.

Please also refer to drawing: SOS-PBCB-RL-001P Rev A (1:200 @ A1) Roof Plan & Elevation

The proposals form Phase 1 of SOAS planned roof maintenance works and have been prioritised to address areas of roof most in need of recovering and that have reached the end of their serviceable lifecycle. Later phases, will address the main Philips Building Library rooflights and remaining areas of the College Building Roof, including the Research Block and West Courtyard Infill.

The proposed works covering an approximate area of 2,700SQM are required to maintain the integrity and on-going serviceability of the roof areas.

The proposals do not seek to increase the building's area or introduce significant changes in design or material finish.

SOAS are committed to the preservation of its listed assets. The challenge is to design and specify a scheme which respects the integrity and maintains the preservation of the building.

Phase 1 proposed works comprise:

- Stripping existing flat roof, canopy and terrace coverings, back to their structural concrete decks, allowing any necessary concrete repairs to be undertaken.

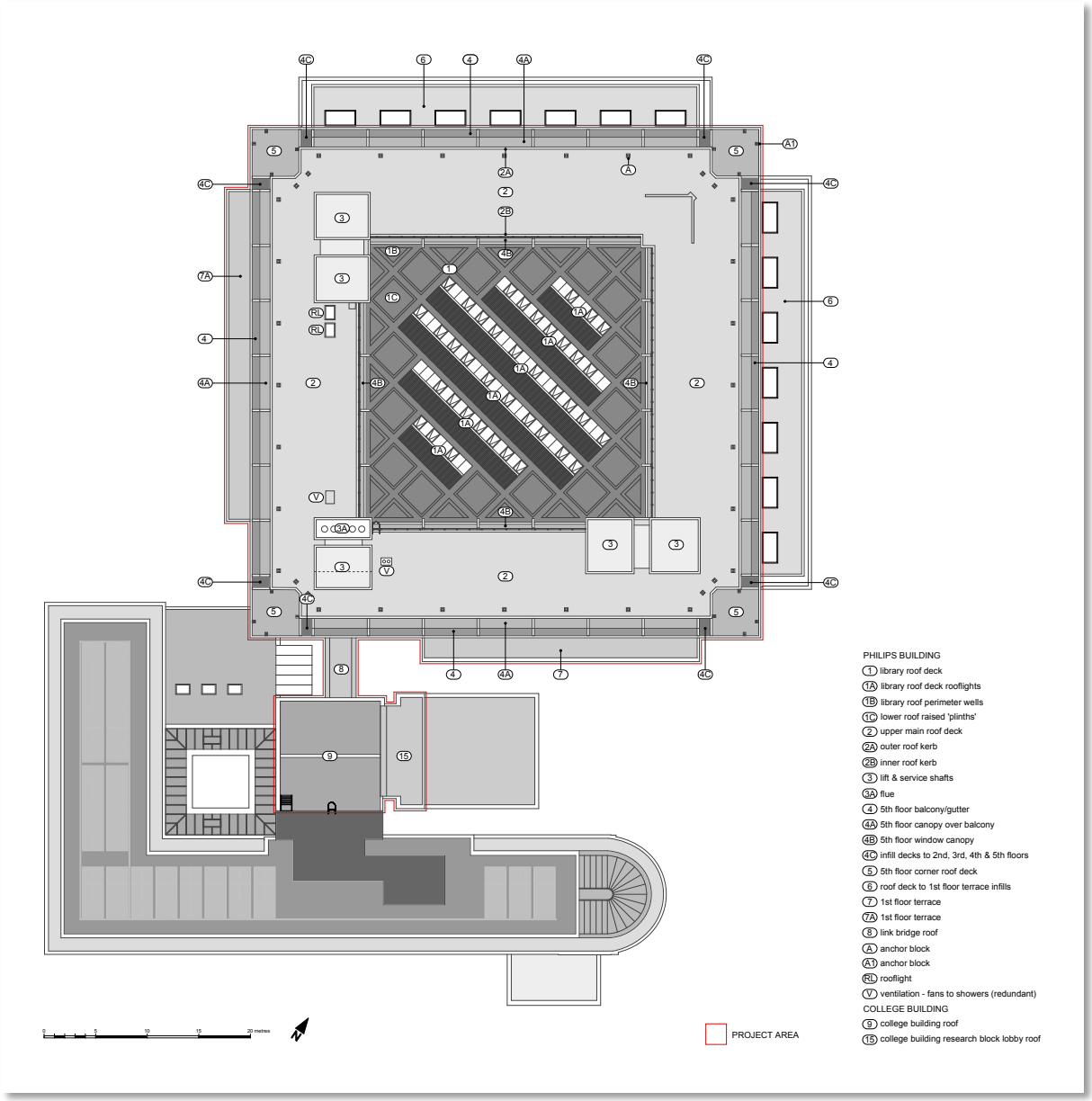
- Renewal of roof areas, integral gutters and flashings, trims, etc. generally on a like for like basis but increasing the thickness of integral insulation, adapting falls to improve drainage to gutters, to assist in drainage of the roof.

- Repair of render fillets and mortar joints

- Reinstatement of temporarily removed concrete paving slabs to terrace areas

- Replacement of two rooflights
- Removal of redundant anchor points for window cleaning cradle (never installed)
- Redecoration of perimeter guardrail and balustrades
- Reinstallation of lightning protection

ROOF PLAN (Philips Building & College Building)

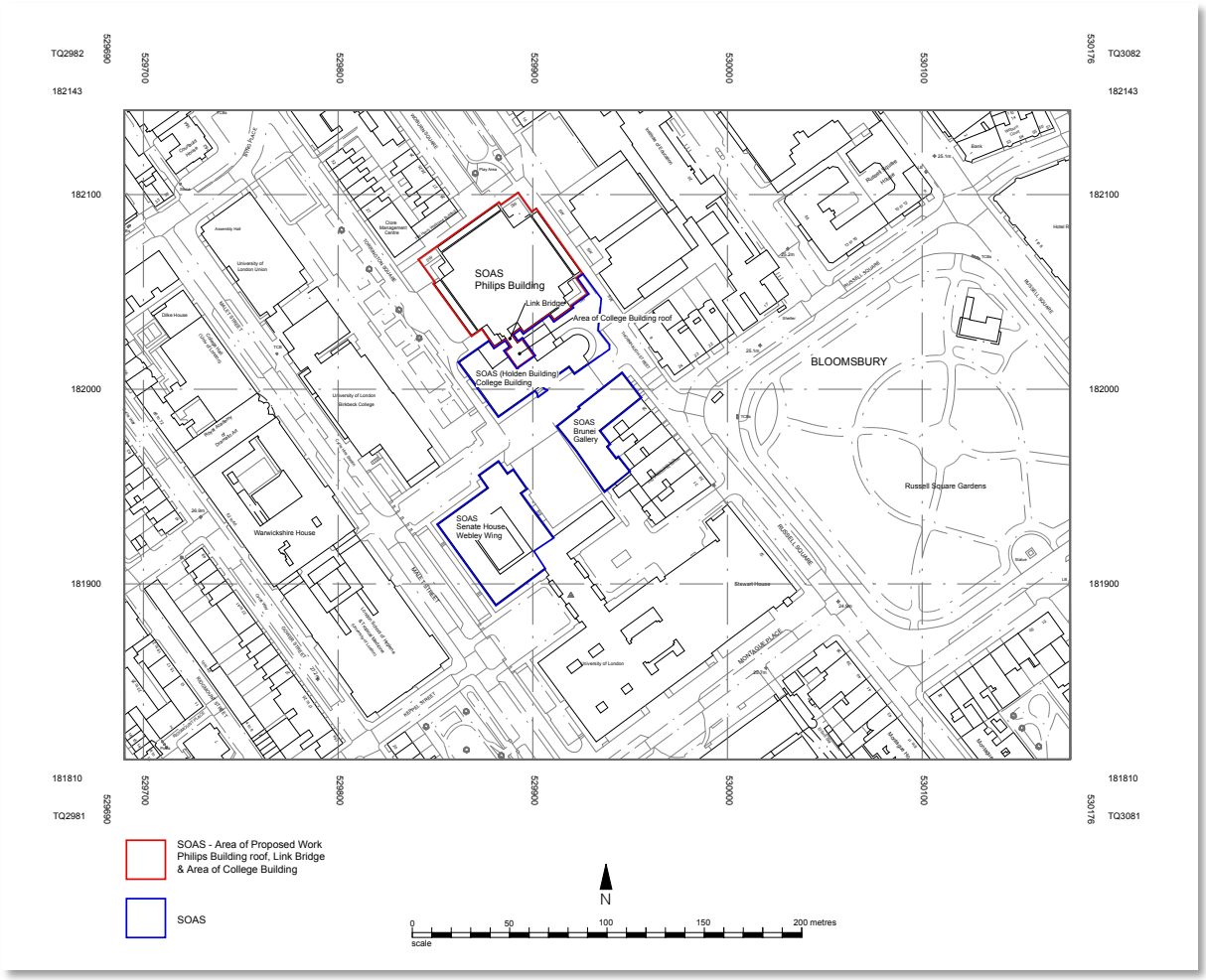


BACKGROUND

The Grade II* Philips Building forms part of the SOAS central London campus, associated to the University of London and includes, the (Holden Building) College Building (Grade II), the Brunei Gallery, the Paul Webley Wing of Senate House (Grade II*), which sit within Sub Area 3 of the Bloomsbury Conservation Area and 53 Gordon Square (Grade II), which sits within Sub Area 2 of the Bloomsbury Conservation Area.

Please refer to the accompanying Philips Building and College Building Heritage Statements for further detail

Location Plan



SOAS is home to leading research and expertise on the global issues of today. Students engage with academics on these issues throughout their study.

It is uniquely placed to inform and shape current thinking about the economic, political, cultural, security and religious challenges of our world.

Its decolonial outlook on education allows it to strive for a more equal and just world through its teaching and research. It is committed to building bridges within the global communities and forging equitable global partnerships.

It challenges perspectives, broaches debate, and empowers its students to question the global status quo and find solutions to the issues facing the world today.

Its programmes are taught by respected international academics with inter-disciplinary expertise. These scholars are engaged in fieldwork and research that influences governments, industries and communities across the world.
SOAS has a very diverse student base, from over a hundred different countries, and has a number of unique courses.

SOAS cater for approximately 6,145 students on campus with a further 2,140 off campus/distant learning students – Supported by 1,010 academic and professional services staff.

The Philips Building houses one of only five National Research Libraries in the UK, with over 1.5 million volumes, periodicals and audio-visual materials in 400 languages, focusing on Asia, Africa and the Middle East. It also provides teaching rooms, academic and administration offices and welfare facilities.

A full overview of the SOAS offer can be viewed at: https://www.soas.ac.uk

DESIGN BRIEF
The design brief issued by SOAS sets out their aspirations as follows:

SOAS propose to undertake essential works related to the renewal of waterproof coverings to roof areas of both the Philips Building, Link Bridge and College Building, which have reached the end of their serviceable life cycle.

The aim of the project is to replace the existing roof coverings ensuring the buildings long term and continued viability, by maintaining its assets through suitable and compliant interventions providing long-term and sustainable environments for its students and staff, which are fit for contemporary purpose and showcase the university and its facilities.

DESIGN APPROACH
The design approach has been based on the following principles:

- To sustain the significance of the listed buildings
- To maintain the viable use of the buildings
- To find solutions that do not adversely impact on either the interior or exterior of the building or its context within the site.
- To undertake modifications and repairs in a sensitive way, respecting the integrity of the original fabric with sympathetic use of new materials and finishes

POLICY CONTEXT
The proposals have been developed with reference to:

- English Heritage 'Conservation Principles, Policies and Guidance' 2008
- Planning (Listed Buildings and Conservation Areas) Act 1990
- National Planning Policy Framework 2021
- Camden Core Strategy 2010-2025 'Policy CS14 – Promoting high quality places and conserving our heritage
- Bloomsbury Conservation Area Appraisal and Management Strategy – Adopted 18 April 2011

Please refer to the accompanying Heritage Statements for further detail

DESIGN PRINCIPLES
The design proposals have been progressed through various studies, discussions and consultations with the SOAS and have been subject to further discussions, consultations and design amendments as the project has proceeded through the preparation of the listed building consent application.

The final design proposals show what can be summarised as the maximum change envisaged, taking into account the ambitions of the brief, the limitations of altering a listed building, the sensitivities of the site and the target costs.

The primary focus of the proposals is to address worn, damaged, deteriorating and failing roof finishes.

The layout of the building is to remain unchanged and the proposed works will not have an impact on the building and its surrounding environment.

USE
The use of the building will remain the same

APPEARANCE
It is felt that the majority of proposed works will not have a visual impact or dramatically alter the appearance of the building, especially when viewed from the ground.

The potential impact the proposed work will have, is detailed within the section 'Statement of Justification' later in this document.

ACCESS
The proposed scope of works is limited to the roof areas of the building and will therefore not impact on the buildings interiors.

The proposed scope of works to the exterior of the building do not represent a material change of use so do not require the wholesale upgrading of the building to comply with The Building Regulations Approved Document Part M except where material alterations are

made, however the Equality Act 2010 and the Equality (Disability) Regulations 2010 requires service providers to make reasonable adjustments to any physical features that might put a person with a disability at a "substantial disadvantage".

Primary access to the Philips Building is via the College Building and the Link Bridge connection. There is both stepped and ramped access with intermediate landing points to the main entrance of the College Building, with step free access also available to the rear of the College Building. Both entrances offer lift access to upper floor levels and the Link Bridge to the Philips Building.

The Link Bridge connection between the College Building and Philips Building has a shallow ramped floor, the double leaf fire doors at the head of the ramp are fitted with magnetic hold opens with fail release under fire condition.

SOAS do not propose to structurally alter any of existing access points as part of the proposals under this application.

EXISTING LAYOUT & FINISHES
Photographs showing the area of proposed works are included later within this document, which have been included to illustrate and record the current condition of the roof areas.

PHILIPS BUILDING EXISTING ROOF AREAS - GENERAL
The concrete roof decks to the main roof areas, service shaft roofs, balconies and terraces, are believed to be in a good condition, over which a Bauder waterproofing system is installed.

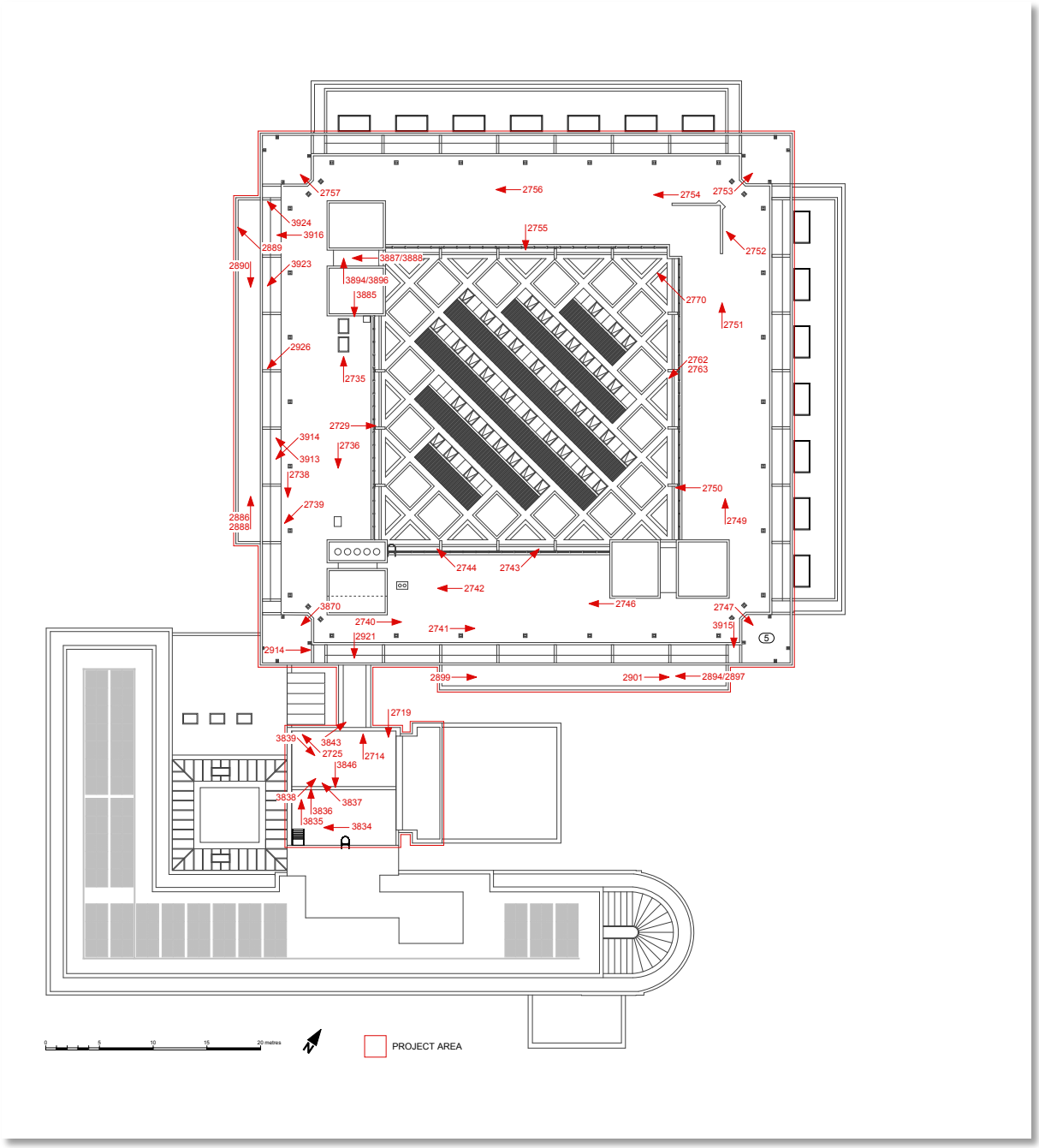
The existing waterproofing system on roof areas comprises of built-up bituminous membranes incorporating insulation and a vapour control layer, installed onto the concrete roof deck.

The existing Bauder waterproofing system installed circa.1996, is showing all the typical defects consistent with a covering of this age, including: water penetration, surface oxidation, cracks, splits, blisters, rucks and signs of historic repair.

The proposal is to remove the existing waterproofing system back to the concrete deck, which will provide the opportunity to identify and repair any defects within the concrete deck that may have contributed to interior water tracking and to increase the thickness of insulation from 50mm (t) PIR to 120mm (t) PIR, complying with current Energy Conservation Regulations and providing improved thermal performance.

The existing terraces and window canopy areas are simply dressed in an asphalt covering.

PHOTO SURVEY KEY



PHILIPS BUILDING - LIBRARY ROOF AREA 1 (Comprising areas 1A, 1B & 1C)

AREA 1A - Existing

The existing rooflights, comprising proprietary plastic glazing units and box profile metal roof sheet panelling are excluded from the scope of these proposals. Their replacement will form part of later phased roofing works, not covered under this application.

IMG_2729 (Area 1) Library Roof
Showing the six rows of roof lights (Area A1) which are excluded from the proposed works.

AREAS 1B - Existing

Perimeter sunken well sections incorporating drainage.

Moisture mapping of the roof has identified water ingress within these perimeter warm roof well areas, with evidence of entrapped water between layers.

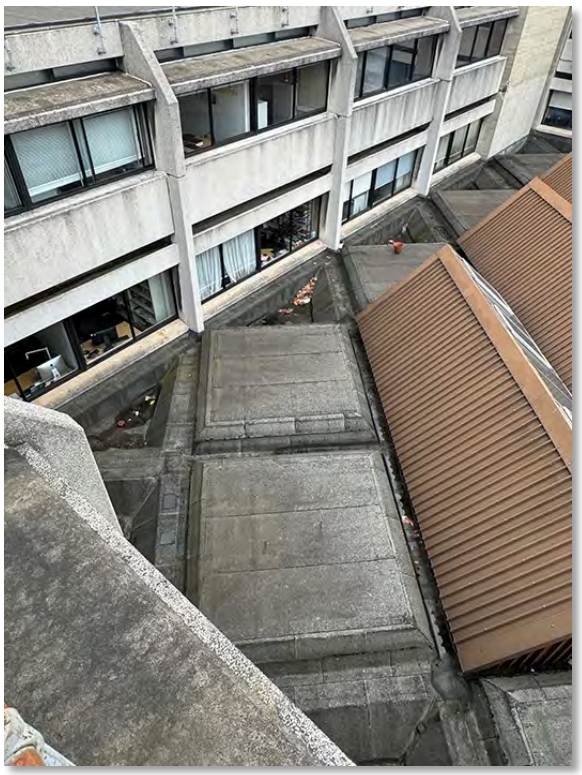
IMG_2770 (Area 1B) Library Roof
Showing perimeter sunken well section of roof with drainage outlet

AREAS 1B - Proposed
To remove the existing waterproofing and insulation within the roof well areas and replace with new 120mm FA-TE insulation, over coated with LiquiTOP three coat waterproofing system.

New Bauder insulated RWP outlets and leaf grilles to be fitted

Please refer to:
- SOAS-R-GD-001P Proposed General Roofing Details 1:5 @ A1 *(fig: 1 & 2)*
- Appendix A Bauder LuquiTOP specification summary

AREAS 1C – Existing
Raised plinth sections comprise built-up bituminous membranes on timber, with no insulation.



IMG_2744 (Area 1C) Library Roof
Showing raised 'pedestal' sections of roof

AREAS 1C – Proposed
Due to the complexity of the roof it is proposed to overlay the existing bituminous membranes with LiquiTOP waterproofing system.

Please refer to:
- Appendix A Bauder LuquiTOP specification summary

PHILIPS BUILDING - MAIN ROOF AREA 2 - Existing

The existing waterproofing system is constructed as a warm roof, comprising built-up bituminous membranes incorporating insulation and a vapour control layer, installed on to the concrete roof deck.

Galvanised steel termination bars are installed to the perimeter junctions between membrane upstands and concrete facings.

Low formed kerbs run around the internal and external perimeter of the roof, with sections of the outer kerb incorporating a formed concrete gutter.

A galvanised steel fall protection barrier is installed to the inner perimeter of the roof (overlooking library roof Area 1), which is to be retained.

Anchor blocks, part of the original buildings proposed window cleaning roof cradle system (thought never to have been installed) are positioned at regular intervals to the outer perimeter of the roof. The lead saddles (cappings) are defective with splits and holes. It is proposed to remove these non-compliant and redundant anchors to assist in maintaining the integrity of the new waterproofing system to be installed.

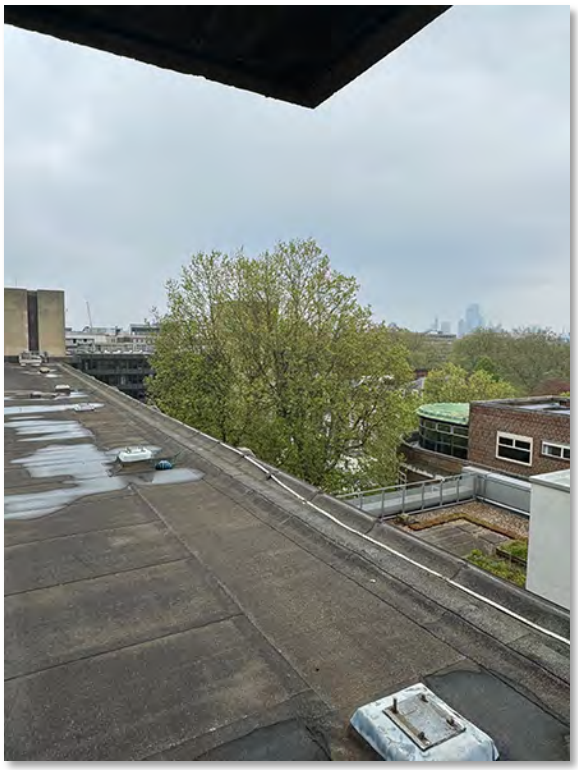
There are two small thermally inefficient Georgian wired single glazed rooflights which are proposed to be replaced due to failed seals and historical water ingress.

There are two redundant ventilation housings, originally linked to 5th floor facilities and which are now redundant. It is proposed to remove these and make good the concrete deck.

Existing lightning protection tapes are to be retained and refixed to the new waterproofing system.

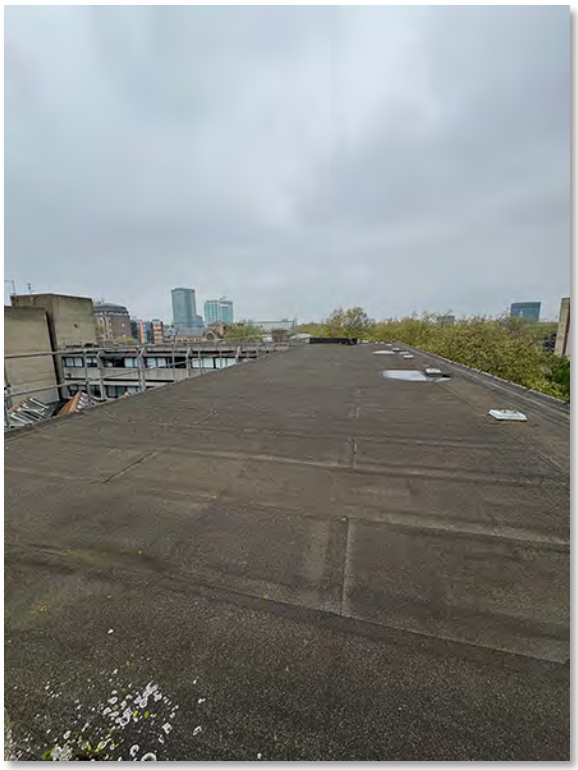
The roof mounted AC units are to be retained, temporarily removed during the installation of the new waterproofing system.

IMG_2740 (Area 2) Main Roof
Redundant ventilation housing to be removed



IMG_2741 (Area 2) Main Roof
Perimeter edge kerb and anchor blocks

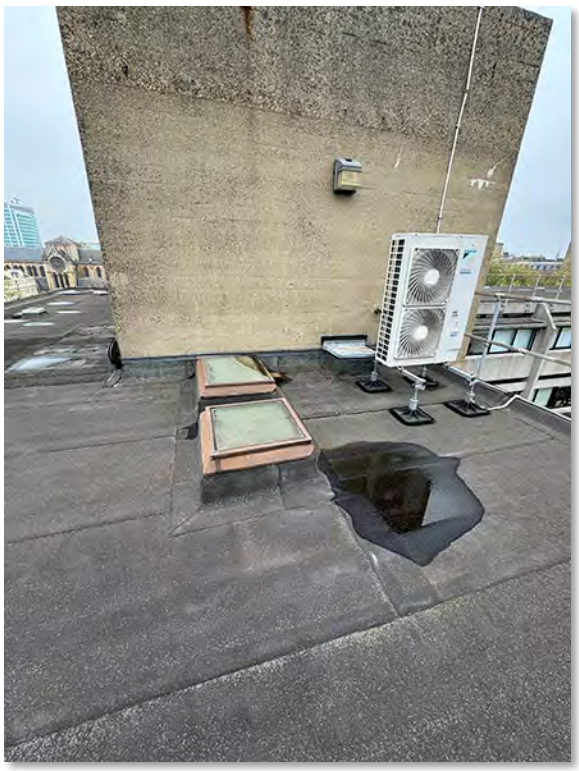
IMG_2746 (Area 2) Main Roof
Perimeter edge kerb & anchor blocks



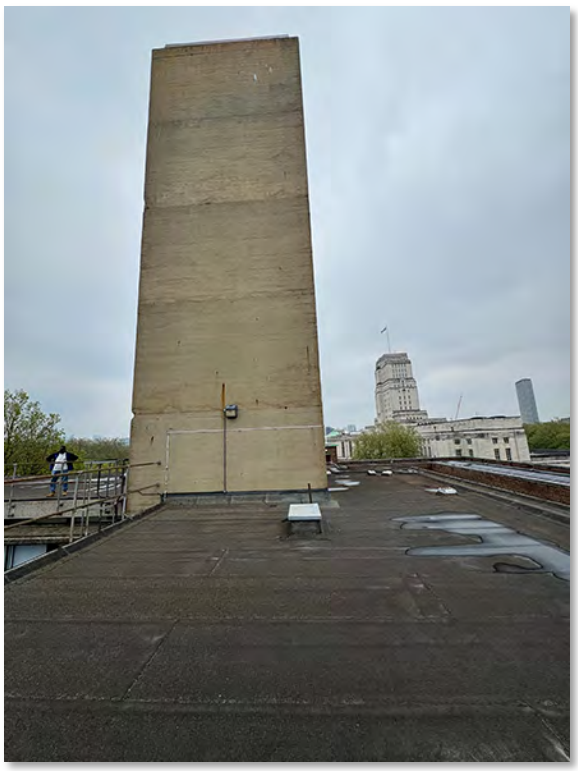
IMG_2749 (Area 2) Main Roof
Inner & outer perimeter edge kerbs

IMG_ 2754 (Area 2) Main Roof

IMG_2737 (Area 2) Main Roof
Fall protection barrier to the inner roof kerb to be retained



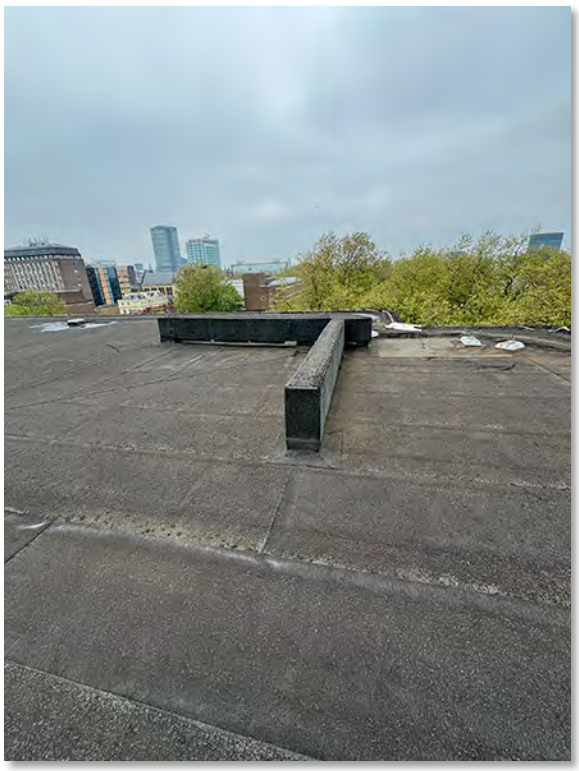
IMG_2735 (Area 2) Main Roof
2 x single glazed thermally inefficient roof lights proposed to be replaced



IMG_2736 (Area 2) Main Roof
To the foreground, lead capped redundant ventilation housing proposed to be removed

IMG_2739 (Area 2) Main Roof
Raised perimeter kerb with formed concrete gutter, perimeter anchor blocks, proposed to be removed & rainwater outlet to be upgraded

IMG_2742 (Area 2) Main Roof
Redundant ventilation housing proposed to be removed



IMG_2751 (Area 2) Main Roof
Concrete corner strap beam encased in waterproofing system

PHILIPS BUILDING - MAIN ROOF AREA 2 - Proposed
It is proposed to remove the existing waterproofing system and insulation back to the concrete deck and replace with a new Bauder Total Roof System, comprising reinforced bitumen membrane warm roof covering system including 120mm FA-TE insulation.

Two new Bauder Euroglaze rooflights are proposed to be installed to replace the two existing thermally inefficient and leaking Georgian wired rooflights. The rooflight replacements will be sized to fit the existing roof deck apertures.

Please refer to:

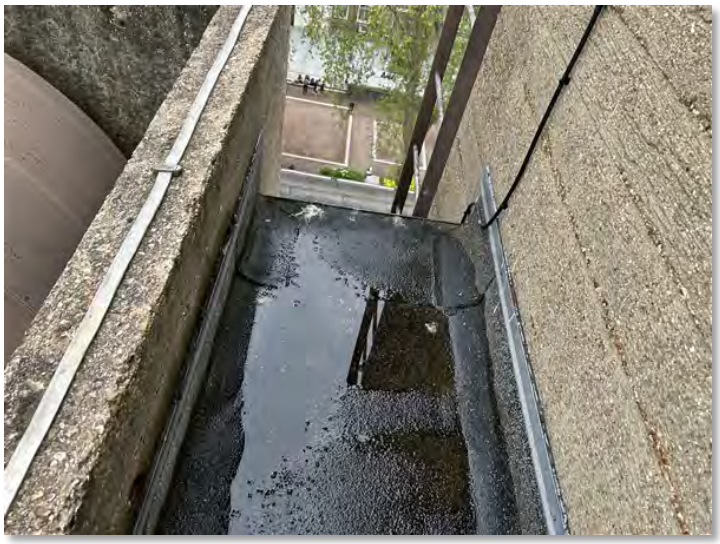
- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 3, 4, 5, 6, 7 & 21)*
- Appendix B Bauder Total Roof System specification summary
- Appendix F Bauder Euroglaze Rooflights

PHILIPS BUILDING – SERVICE SHAFT ROOF AREAS 3 – Existing
The existing waterproofing system is constructed as a warm roof, comprising built-up bituminous membranes incorporating insulation and a vapour control layer, installed on to the concrete roof deck.

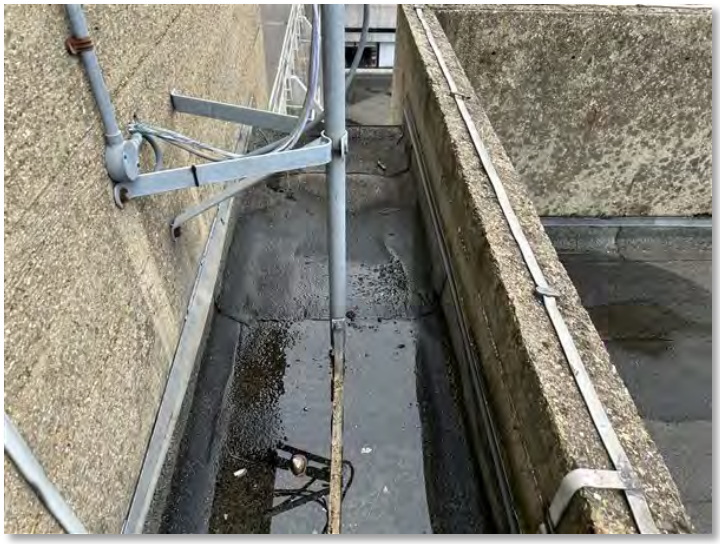
Galvanised steel termination bars are installed to the perimeter junctions between membrane upstands and concrete facings.

The roof areas sit below the height of the concrete shaft enclosure, which forms the perimeter parapet.

IMG_3885 (Area 3) Service Shaft
Corner of service shaft roof



IMG_3887 (Area 3) Service Shaft
Connection between service shafts



IMG_3888 (Area 3) Service Shaft
Connection between service shafts

IMG_3894 (Area 3) Service Shaft
Pooling water, perimeter lightning tape & rainwater outlet to be upgraded

IMG_3896 (Area 3) Service Shaft Asphalt covering with upstand finished with galvanised capping strip.

PHILIPS BUILDING - SERVICE SHAFT ROOF AREAS 3 - Proposed
It is proposed to remove the existing waterproofing system and insulation back to the concrete deck and replace with a new Bauder Total Roof System, comprising reinforced bitumen membrane warm roof covering system including 120mm FA-TE insulation.

Please refer to:

- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 5, 6 & 7)*
- Appendix B Bauder Total Roof System specification summary

PHILIPS BUILDING – PERIMETER GUTTER AREA 4 - Existing
A deep formed gutter to the 5th floor outer perimeter of the building.

The existing waterproofing system comprising built-up bituminous membranes incorporating insulation and a vapour control layer. There is a plywood deck to the bed of the waterproofing system, raised up approximately 300mm off the concrete deck of the gutter to provide the requisite falls. A thin layer of insulation sits loosely within the void between the plywood and concrete deck of the gutter.

Large areas of the gutter waterproofing system have failed, with areas delaminating and peeling back from original connections. Large areas of pooling water sit within the base of the gutter, indicating that the formed plywood base is failing.

IMG_2926 (Area 4) Gutter

IMG_3923 (Area 4) Gutter

IMG_3924 (Area 4) Gutter

IMG_3916 (Area 4) Gutter

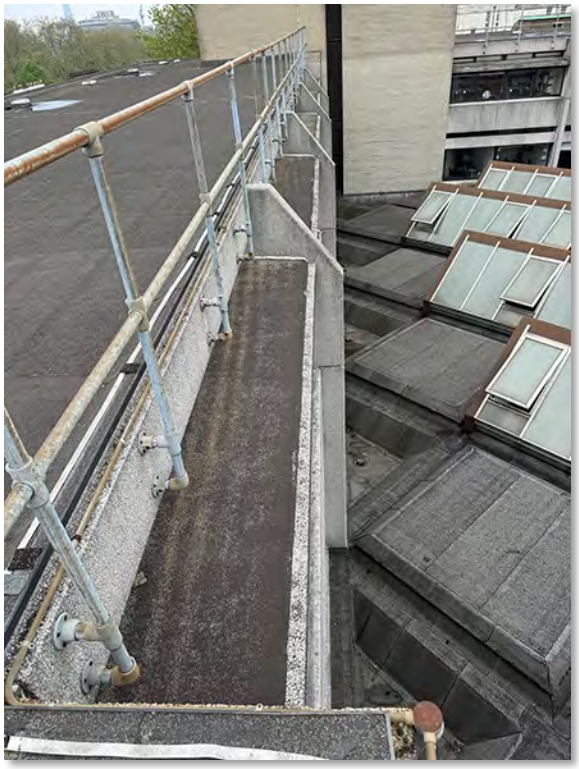
PHILIPS BUILDING – PERIMETER GUTTER AREA 4 - Proposed

It is proposed to remove the existing waterproofing system and plywood substructure back to the concrete deck and reform the gutter with new tapered insulation raised to create the required falls, topped with Bauder LiquiTOP waterproofing system.

Please refer to:

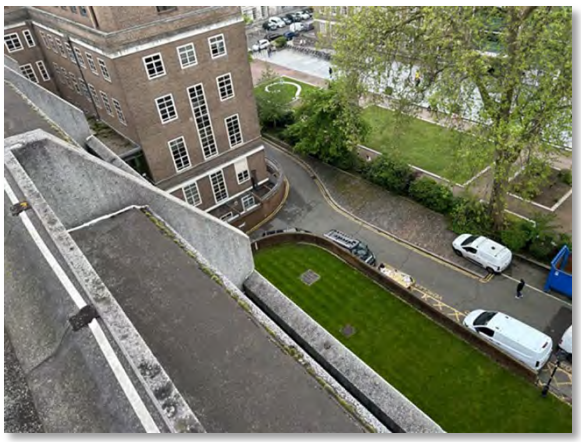
- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 8)*
- Appendix A Bauder LuquiTOP specification summary

PHILIPS BUILDING - PERIMETER WINDOW CANOPY AREAS 4A & 4B - Existing Concrete formed canopies with a bitumen cap showing signs of deterioration.

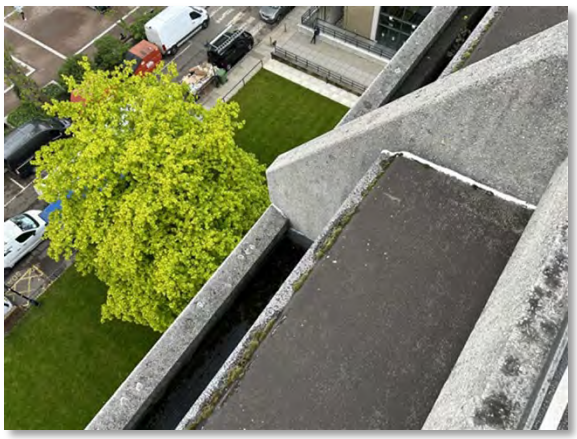


IMG_2762 (Area 4B) Canopies
5th floor concrete perimeter inner window canopies with bitumen cap

IMG_2763 (Area 4B) Canopies
5th floor concrete perimeter inner window canopies with bitumen cap



IMG_3914 (Area 4A) Canopies
5th floor concrete perimeter inner window canopies with bitumen cap



IMG_3913 (Area 4A) Canopies
5th floor concrete perimeter inner window canopies with bitumen cap

PHILIPS BUILDING - PERIMETER WINDOW CANOPY AREAS 4A & 4B – Proposed
It is proposed to strip the existing bitumen cap back to the concrete, with new Bauder LiquiTOP waterproofing system installed, to include new drip trim to the outside edge.

- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 9)*
- Appendix A Bauder LuquiTOP specification summary

PHILIPS BUILDING – PERIMETER DECK INFILLS AREA 4C - Existing
Outer corner perimeter infill concrete decks between vertical ribs located on the 2nd – 5th floors (adjacent to either side of corner roof decks Area 5).

The existing waterproofing system is constructed as a warm roof (decks form the dead ends within corridor areas beneath), comprising built-up bituminous membranes incorporating insulation and a vapour control layer, installed on to the concrete roof deck.

IMG_3915 (Area 4C) infill deck
Example of 2nd, 3rd, 4th & 5th floor deck infill

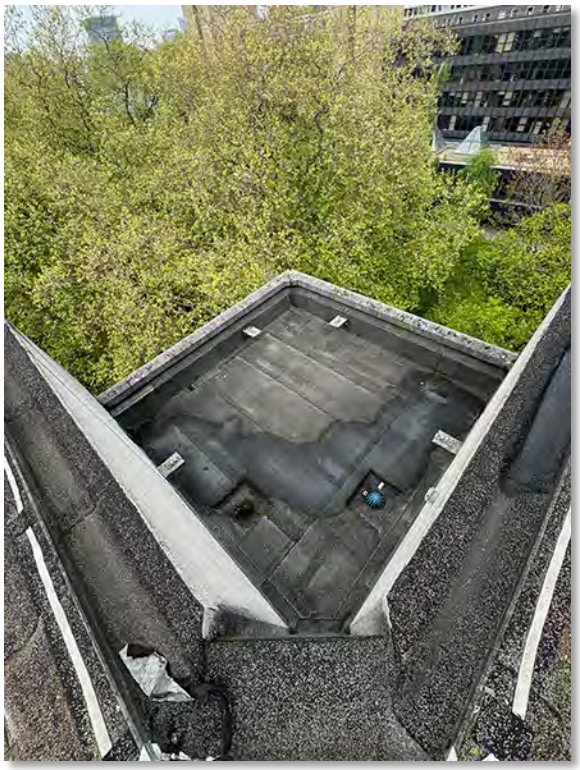
PHILIPS BUILDING - PERIMETER DECK INFILLS AREA 4C - Proposed
It is proposed to remove the existing waterproofing system and insulation back to the concrete deck and replace with a new Bauder Total Roof System, comprising reinforced bitumen membrane warm roof covering system including 120mm FA-TE insulation.

Please refer to:
- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 5)*
- Appendix B Bauder Total Roof System specification summary

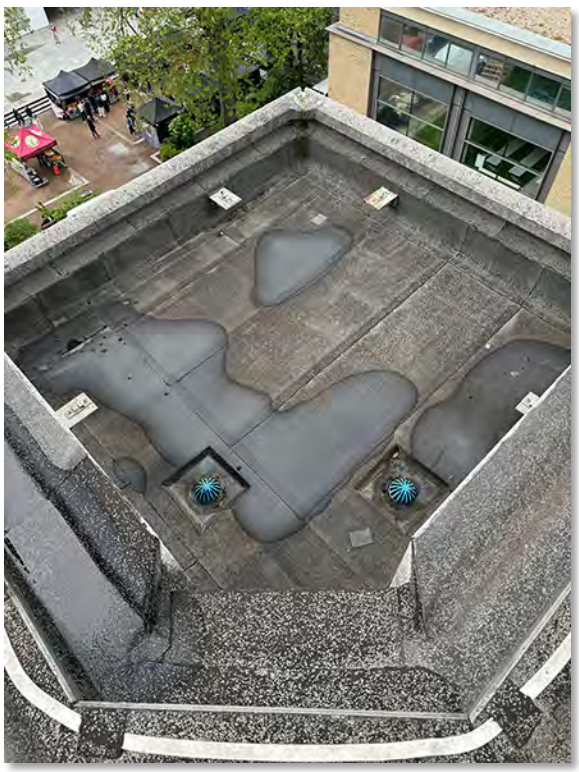
PHILIPS BUILDING - FIFTH FLOOR CORNER ROOF DECKS - Existing
The existing waterproofing system is constructed as a warm roof, comprising built-up bituminous membranes incorporating insulation and a vapour control layer, installed onto the concrete roof deck.

Original steel anchor blocks, for window cleaning equipment are installed to the perimeter of each of the corner decks. These are now redundant and are proposed to be removed to provide a clean installation of the replacement waterproofing system.

IMG_2747 (Area 5)
Showing redundant anchor blocks to perimeter upstand & wall, to be removed. Also showing formed gutter to roof Area 2

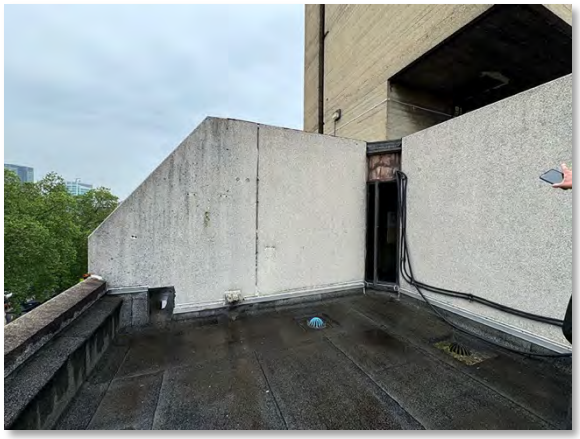


IMG_2753 (Area 5)
Showing redundant anchor blocks to perimeter upstand & wall, to be removed. Also showing formed gutter to roof Area 2



IMG_3870 (Area 5)
Showing redundant anchor blocks to perimeter upstand & wall, to be removed

IMG_2757 (Area 5)
Showing rainwater outlets. Also showing formed gutter to roof Area 2



IMG_2914 (Area 5)
Showing drainage chute run off from perimeter gutter Area 4

PHILIPS BUILDING - FIFTH FLOOR CORNER ROOF DECKS - Proposed
It is proposed to remove the existing waterproofing system and insulation back to the concrete deck and replace with a new Bauder Total Roof System, comprising reinforced bitumen membrane warm roof covering system including 120mm FA-TE insulation.

Please refer to:

- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 5, 6 & 10)*
- Appendix B Bauder Total Roof System specification summary

PHILIPS BUILDING - FIRST FLOOR TERRACE AREAS 7 & 7A - Existing
The existing waterproofing system is constructed as a cold roof, comprising built-up bituminous membranes over a 100mm sand cement screed, installed onto the concrete terrace deck. There is a formed bituminous lined gutter running to the outer perimeter.

600mm x 300mm concrete paviours have been bedded on top of the waterproof membrane with cement mortar joints.

A later addition tubular steel balustrade is fitted to the external perimeter of both terraces, which is proposed to be repainted.

IMG_2894 (Area 7)
Concrete paving over bituminous membrane system

IMG_2897 (Area 7)
Tubular steel balustrade to external perimeter of terrace

IMG_2899 (Area 7)

IMG_2901 (Area 7)
AC plant to be retained

IMG_2886 (Area 7A)

IMG_2888 (Area 7A)
Stepped access onto terrace

IMG_2889 (Area 7A)

IMG_2890 (Area 7A)

PHILIPS BUILDING - FIRST FLOOR TERRACE AREAS 7 & 7A – Proposed
It is proposed to carefully lift the concrete paviours and to overlay the existing bituminous felt waterproofing system with a two layer Bauder Total Roofing System (no insulation).

Existing concrete paviours are to be rebedded without mortar joints to assist in drainage.

Please refer to:

- SOAS-R-GD-001P Proposed General Roofing Details *(fig: 11 & 12)*
- Appendix C Bauder Total Roof System specification summary

LINK BRIDGE ROOF - AREA 8 - Existing
The existing waterproofing system is constructed as a warm roof, comprising built-up bituminous membranes incorporating insulation and a vapour control layer, installed on to the concrete roof deck.

The edge parapet has formed leadwork

IMG_3843 (Area 8)
Link Bridge warm roof with lead upstand incorporating drainage chute to downpipe

LINK BRIDGE ROOF - AREA 8 - Proposed
It is proposed to overlay the section of Link Bridge with Bauder LiquiTOP 3 coat insulated system. The rainwater chute being adapted to accommodate the increase in insulation height.

- SOAS-R-GD-002P Proposed General Roofing Details *(fig: 13 & 14)*
- Appendix D LiquiTOP 3 coat insulated system specification summary

COLLEGE BUILDING – AREAS 9 & 15 - Existing

The existing waterproofing system on roof areas is constructed as a warm roof, comprising built-up bituminous membranes incorporating insulation and a vapour control layer, installed onto the concrete roof deck.

The waterproofing system, is showing all the typical defects consistent with a covering of its age, including: water penetration, surface oxidation, cracks, splits, blisters, rucks and signs of historic repair.

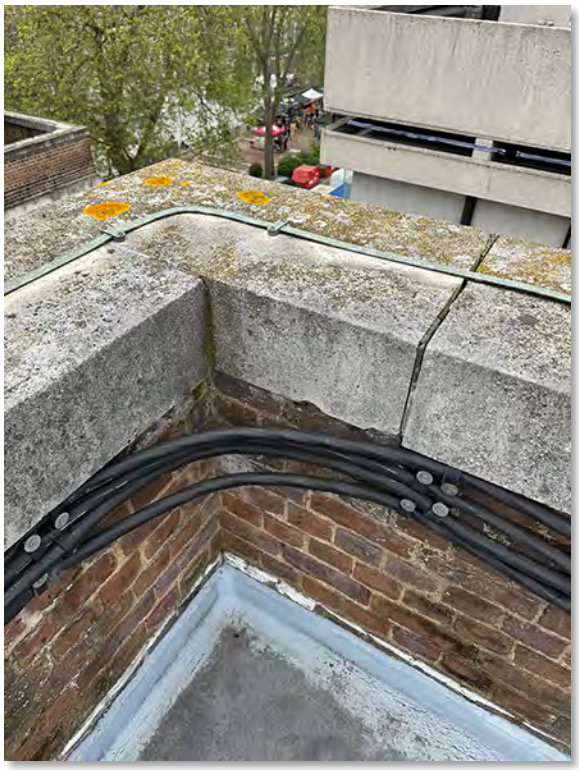
The proposal is to remove the existing waterproofing system back to the concrete deck, which will provide the opportunity to increase the thickness of insulation and to identify and repair any defects within the concrete deck that may have contributed to interior water tracking.

Roof Area 9 sits above the main stair of the College Building and has a brickwork parapet, with stone coping. The roof area accommodates AC plant (to be retained) supported on structural steelwork bedded into the parapet wall and supported off a central dwarf wall.

Roof Area 15 forms part of the Research Block extension to the College Building and has a rendered blockwork parapet with dressed lead flashing. The waterproofing system over this area of the roof has failed.

IMG_2921 (Area 9)
Viewed from the Philips Building, with Link Bridge in the foreground

IMG_2719 (Area 9)
Single ply membrane to upstand between roof Area 9 & 15



IMG_2725 (Area 9)
Mortar joint failure between coping stones

IMG_3846 (Area 9)
Upstand with

IMG_3834 (Area 9)
Plant support steels pocketed into brick upstand

IMG_3835 (Area 9)

IMG_3836 (Area 9)

IMG_3837 (Area 9)

IMG_3838 (Area 9 & 15)

IMG_3839 (Area 9)

COLLEGE BUILDING – AREAS 9 & 15 - Proposed

It is proposed to remove the existing waterproofing system and insulation back to the concrete deck and replace with a new Bauder Total Roof System, comprising reinforced bitumen membrane warm roof covering system including 120mm (Area 15) and 140mm (Area 9) FA-TE insulation. The increase in insulation thickness on roof Area 9, is to accommodate the roof gully.

Please refer to:

- SOAS-R-GD-002P Proposed General Roofing Details *(fig: 15 - 20)*
- Appendix E Bauder Total Roof System specification summary

PROCUREMENT

The proposed work will be procured by means of competitive tendering, with drawings and specifications and schedules of work. This process is important in order to maintain cost control within budgetary constraints and retain control over design quality, especially within the context of work to a listed building.

To comply with procurement policy 'equal and approved/equivalent' is required to be adopted during tendering of services, products and equipment. Details contained within this application therefore forms the basis of design intent and minimum performance requirements for the project.

STATEMENT OF JUSTIFICATION

The following issues have been considered during the preparation and development of the proposals.

- The importance of the building and its intrinsic architectural and historic interest on both a national and local level

  The buildings form part of the University of London campus which is an important and recognisable local landmark within Camden and which is recognised nationally.

  The proposals will not impact on the buildings intrinsic architectural or historical interest.

- Setting and contribution to the local scene

  The elements of the proposed works will have a positive impact on the interior of the building in preventing water ingress but will not impact on the buildings setting and contribution to the local scene.

- Substantial benefits to the community
  The proposed works are such that they will not bestow any additional benefits to those already provided to the local community or economic regeneration of the area.

  The maintenance and repair of the building however illustrates the continued investment and care by the SOAS of a locally important building.

APPENDIX A
Roof Areas 1, 1A & 1B, 4A & 4B

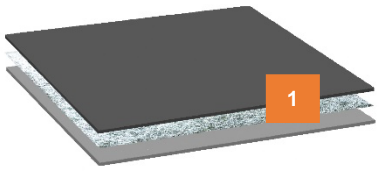
Bauder - LuquiTOP 3 Coat Waterproofing System Specification Summary

CLIENT: SOAS BUILDING
REF NO: B232554
PROJECT NAME: SOAS BUILDING
ROOF AREA NAME: ROOF AREAS 1, 1A & 1B, 4A & 4B
DATE: 07/06/2023

SPECIFICATION SUMMARY

System	LiquiTOP 3COAT Waterproofing System
Project plan	Refurbishment
Applicable Structural decks	Overlay existing felt waterproofing system
Roof construction	Uninsulated Roof
Surface finish	Exposed

Liquid applied uninsulated roof covering system - cold applied
Cold applied liquid, waterproofing system suitable for new build and refurbishment applications in cold roof and overlay scenarios.



Product	Description	thickness	weight
1 Bauder LiquiTOP PU	Cold applied liquid, moisture triggered curing polyurethane waterproofing resin; applied in 3 coats, reinforced with Bauder LiquiTOP Glass Fibre Mat.	2.0mm	3.6kg/m²
System Build up		**2.0mm**	**3.6kg/m²**

NOTE
Warm Roof Area 1B (Roof Wells) are to include the addition of 120mm thick Bauder PIR FA-TE Insulation.

SYSTEM OPTIONS

LIQUITOP PU COLOURS LiquiTOP PU Dark Grey (Approx. RAL 7011) is suggested as the top layer	
Dark Grey RAL 7011 (Approx.)	
Mist Grey RAL 7040 (Approx.)	

APPENDIX B
Roof Areas 2, 3, 4C & 5

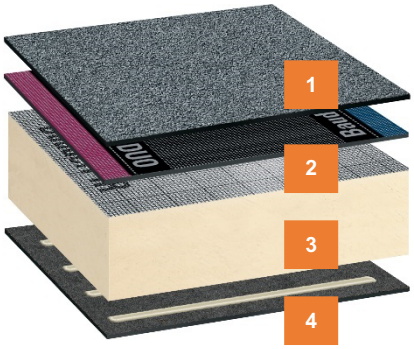
Bauder - Total Roof System Specification Summary

CLIENT: SOAS BUILDING
REF NO: B232554/1
PROJECT NAME: SOAS BUILDING
ROOF AREA NAME: ROOF AREAS 2, 3, 4C & 5
DATE: 07.06.2023

SPECIFICATION SUMMARY

Reinforced bitumen membrane warm roof covering system - self adhered

Two layer, self adhered, warm roof, bitumen membrane waterproofing system suitable for both new build and refurbishment applications. Option of using a root-resistant cap sheet for green roofs. Can be used in uninsulated and inverted roof scenarios. Torch free detailing for application in the vicinity of combustible construction materials.



Product	Description	thickness	weight
1 Bauder K5K Capping Sheet	Torch bonded, heavy duty elastomeric bitumen capping sheet; 250g/m² spunbond polyester reinforcement; fire retardant.	5.2mm	6.5Kg/m²
2 BauderTEC KSA DUO Underlayer	Self-adhesive elastomeric bituminous membrane; glass lattice reinforcement; 'DUO' lap technology.	3.0mm	3.5Kg/m²
3 BauderPIR FA-TE Flatboard Insulation	Thermally efficient, lightweight and zero ODP rated; foil faced on both sides for increased thermal efficiency.	120mm	4.56Kg/m²
4 Bauder Super AL-E Air and Vapour Control Layer	A robust, torch-applied, SBS elastomeric bitumen air and vapour control layer, featuring a tear resistant aluminium foil lining for vapour impermeability.	3.5mm	4.5Kg/m²
System Build up		**131.7mm**	**17.06Kg/m²**

SYSTEM OPTIONS

MEMBRANE COLOUR	
Charcoal grey 6.5Kg/m²	

INSULATIONS	BauderPIR FA-TE Flatboard	BauderPIR FA Tapered	Weight Loading
THICKNESS (mm)	Approx. 'U' VALUE (W/m²K) assuming concrete, metal or plywood deck		Kg/m²
120	0.17	0.17	4.56
130*	0.16	0.16**	4.94
140	0.15	0.15**	5.32
160	0.13	0.13**	6.08
180*	0.12	0.12**	6.84
200*	0.11	0.11**	7.6

* denotes thicknesses only available for orders over 1000m²
** denotes U-value based on the average thickness

APPENDIX C
Roof Areas 7 & 7B
Bauder - Total Roof System (No Insulation) Specification Summary

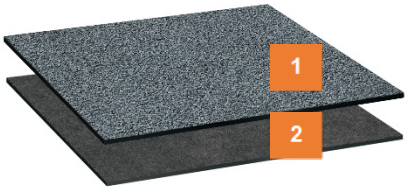
CLIENT: SOAS Building
REF No: B232554
PROJECT NAME: SOAS Building
ROOF AREA NAME: Terrace Areas 7 & 7A
DATE: 19.05.2024

SPECIFICATION SUMMARY

System	Bauder Total Roof System
Project plan	Refurbishment
Applicable Structural decks	Overlay existing felt waterproofing system
Roof construction	Uninsulated Roof – Client to advise if inverted insulation is to be considered

Reinforced bitumen membrane uninsulated roof covering system – torch applied

Two layer, torch applied, uninsulated roof, bitumen membrane waterproofing system suitable for both new build and refurbishment applications. Option of using a root-resistant cap sheet for green roofs. Can also be used in warm and inverted roof scenarios. Torch free detailing for application in the vicinity of combustible construction materials.



Product	Description	thickness	weight
1 Bauder K5K Capping Sheet	Torch bonded, heavy duty elastomeric bitumen capping sheet; 250g/m^2 spunbond polyester reinforcement; fire retardant.	5.2mm	6.5Kg/m²
2 BauderFLEX G4E Underlayer	A heavy-duty torch-applied SBS elastomeric bitumen underlayer with a strong woven glass reinforcement to provide an extremely high tensile strength.	4.0mm	4.8Kg/m²
System Build up		**9.2mm**	**11.3Kg/m²**

SYSTEM OPTIONS

MEMBRANE COLOURS	
Charcoal grey 6.5Kg/m²	

APPENDIX D
Roof Area Link Bridge
Bauder - LuquiTOP 3 Coat Waterproofing System Specification Summary

BAUDER
making roofs secure.

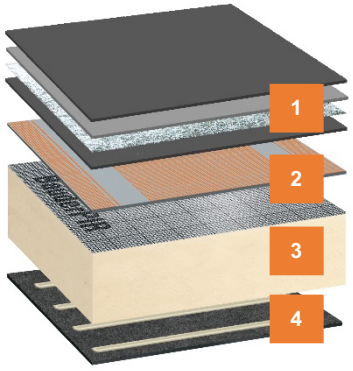
REF No: B232554/1 **PROJECT NAME: SOAS Building**

SPECIFICATION SUMMARY

System	LiquiTOP 3COAT Insulated System
Project plan	Refurbishment
Applicable Structural decks	Structural Concrete Deck
Roof construction	Warm Roof

Liquid applied warm roof covering system - cold applied

Cold applied liquid, waterproofing system suitable for new build and refurbishment applications in cold roof and overlay scenarios.



Product	Description	thickness	weight
1 Bauder LiquiTOP PU	Cold applied liquid, moisture triggered curing polyurethane waterproofing resin; applied in 3 coats, reinforced with Bauder LiquiTOP Glass Fibre Mat.	2.0mm	3.6kg/m²
2 BauderTEC DBR 06 Carrier Membrane	Self-adhesive elastomeric bitumen membrane; foil faced upper surface for vapour impermeability.	0.6mm	0.6kg/m²
3 BauderPIR FA-TE Flatboard Insulation	Thermally efficient, lightweight and zero ODP rated; foil-faced on both sides for increased thermal efficiency.	120mm	4.56
4 BauderTEC KSD FBS Air and Vapour Control Layer	Self-adhesive elastomeric bitumen air and vapour control layer; mica finished upper surface for easy bonding of insulation in Bauder insulation adhesive.	2.5mm	2.5kg/m²
System Build up			

SYSTEM OPTIONS

LIQUITOP PU COLOURS LiquiTOP PU Dark Grey (Approx. RAL 7011) is suggested as the top layer	
Dark Grey RAL 7011 (Approx.)	

INSULATIONS	BauderPIR FA-TE Flatboard	BauderPIR FA G16 Tapered	Weight Loading
THICKNESS (mm)	Approx. 'U' VALUE (W/m²K) assuming concrete, metal or plywood deck		Kg/m²
120	0.17	0.17	4.56
130*	0.16	0.16**	4.94
140	0.15	0.15**	5.32
160	0.13	0.13**	6.08
180*	0.12	0.12**	6.84
200*	0.11	0.11**	7.6

* denotes thicknesses only available for orders over 1000m²

** denotes U-value based on the average thickness

APPENDIX E
Roof Areas 9 & 15
Bauder - Total Roof System Specification Summary

BAUDER
making roofs secure.

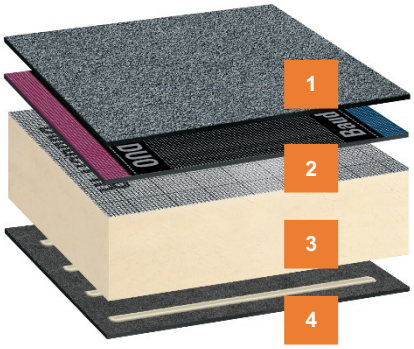
CLIENT: SOAS BUILDING
REF NO: B232554/1
PROJECT NAME: SOAS BUILDING
ROOF AREA NAME: LIBRARY ROOF AREA 9 & 15
DATE: 07.06.2023

SPECIFICATION SUMMARY

System	Bauder Total Roof System
Project plan	Refurbishment
Applicable Structural decks	Existing structural concrete deck.
Roof construction	Warm Roof

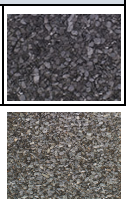
Reinforced bitumen membrane warm roof covering system - self adhered

Two layer, self adhered, warm roof, bitumen membrane waterproofing system suitable for both new build and refurbishment applications. Option of using a root-resistant cap sheet for green roofs. Can be used in uninsulated and inverted roof scenarios. Torch free detailing for application in the vicinity of combustible construction materials.



Product	Description	thickness	weight
1 Bauder K5K Capping Sheet	Torch bonded, heavy duty elastomeric bitumen capping sheet; 250g/m² spunbond polyester reinforcement; fire retardant.	5.2mm	6.5Kg/m²
2 BauderTEC KSA DUO Underlayer	Self-adhesive elastomeric bituminous membrane; glass lattice reinforcement; 'DUO' lap technology.	3.0mm	3.5Kg/m²
3 BauderPIR FA-TE Flatboard Insulation	Thermally efficient, lightweight and zero ODP rated; foil faced on both sides for increased thermal efficiency.	140mm	5.32Kg/m²
4 BauderTEC KSD FBS Air and Vapour Control Layer	Self-adhesive elastomeric bitumen air and vapour control layer; mica finished upper surface for easy bonding of insulation in Bauder insulation adhesive.	2.5mm	2.5Kg/m²
System Build up		**150.7mm**	**17.82Kg/m²**

SYSTEM OPTIONS

MEMBRANE COLOURS	
Charcoal grey 6.5Kg/m²	

INSULATIONS	BauderPIR FA-TE Flatboard	BauderPIR FA Tapered	Weight Loading
THICKNESS (mm)	Approx. 'U' VALUE (W/m²K) assuming concrete, metal or plywood deck		Kg/m²
120	0.17	0.17	4.56
130*	0.16	0.16**	4.94
140	0.15	0.15**	5.32
160	0.13	0.13**	6.08
180*	0.12	0.12**	6.84
200*	0.11	0.11**	7.6

* denotes thicknesses only available for orders over 1000m²
** denotes U-value based on the average thickness

APPENDIX F
Roof Areas 2 Replacement Rooflights
Bauder – Euroglaze Rooflights

BAUDER EUROGLAZE ROOFLIGHTS

The Bauder Euroglaze rooflight range represents the next generation of rooflight design, featuring many product innovations. The unique suite of interchangeable UPVC extrusions are designed to ensure both splayed and vertical kerbs are available to suit a precise height, enabling the kerb to be fixed direct to the roof deck no matter what thickness of insulation is used. The Euroglaze is made to order and the size can therefore be tailor made to fit any roof aperture. Many ventilation and glazing options are available to meet the demands of any particular project.

Bauder Euroglaze

Each project is measured and the rooflights fitted to suit the aperture size with dimensions between 600 x 600 mm up to 2400 x 1200 mm. Circular units with thermally broken metal upstands are also available up to 1800 mm diameter.

Glazing

The triple skinned polycarbonate, dome or pyramid profiled glazing can be supplied either completely clear, or with a diffused inner skin.

Flat double glazed toughened glass is also an option.

Fire Performance

Fire performance classifications of Bauder Euroglaze are as follows:

- BS476 Part 7 – Class 1
- Building Regulation classification - TPa.

Impact Resistance

Polycarbonate rooflights achieve Class B rating to ACR[M]001:2014, Glass options are available with a Class 2 "deemed to satisfy" specification in accordance with CWCT TN92.

Upstand

Bauder Euroglaze is supplied with an integral UPVC upstand in brilliant white. The upstand profile is dependent on the particular application and rooflight specification.

Security Frame

Euroglaze features a brilliant white metal security frame to conceal all glazing fixings, thereby improving the security of the rooflight unit.

Ventilation Options

Euroglaze is supplied as standard with closable "hit and miss" vents in two sides, but additional vents can be supplied if required. Rota vents are an available option.

Hinged, wormgear opening rooflights and units with a power fan incorporated into the glazing are also available.

Access Hatches

Bauder Euroglaze Access Hatches are available for applications where both daylight and access to the roof is required.

Thermal Performance

Bauder Euroglaze with its integral kerb and triple skin polycarbonate glazing achieves Ud Values as low as 1.6W/m^{2}K.

Lightning Protection

Bauder Euroglaze should be linked into any lightning protection systems that may present on the roof in accordance with requirements of BSEN62305.

Guarantee

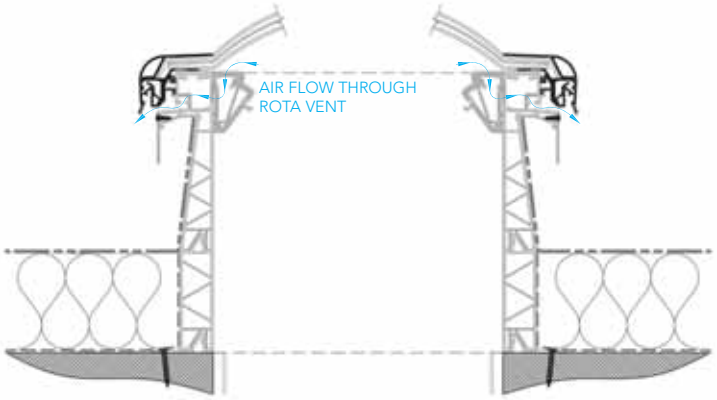
For peace of mind, Bauder Euroglaze is guaranteed for the same duration as the Bauder Roof System that it is incorporated into.

Euroglaze rooflights can be made to fit any roof opening size.

BAUDER EUROGLAZE ROOFLIGHTS

Example Configuration

Wormgear opening rooflight with splayed upstand



Section through rooflight with rota vent and vertical upstand

Ventilation

Hit and Miss Vent
Provides minimal background ventilation and is controlled by means of a small sliding shutter over slots in the kerb wall protected by the weather edge.

Rota
Unique all UPVC 'hopper' ventilator directs the airflow upward to reduce the risk of condensation forming on the glazing as well as preventing down draughts. The vent openings are fully protected reducing the risk of moisture, wind blown debris or grit entering the building.

Opening Rooflight (Manually Operated Wormgear)
The whole rooflight top hinges open on a continuous co-extruded UPVC hinge to allow large areas of ventilation through the open area.

Opening Rooflight (Electrically Operated Chain Drive Motor)
230 or 240 volt motor drives the unit open to provide large areas of ventilation through the opening.

BAUDER

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