



ALUMASC ROOFING

Roof Condition Report

Project:
Brynglas House

Project ID: SP143935
Date of issue: 14/01/2025



technical@alumascroofing.com



01744 648400



www.alumascroofing.com

Project information

Project: Brynglas House
Location: Newport
Area 1: Roof Area Highlighted in Red A & B
Area 2: Roof Area Highlighted in Yellow
Area 3: Roof Area Highlighted in Green
Area 4: Roof Area Highlighted in Blue
Project ID: SP143935
Date of issue: 14/01/2025

Client information

Prepared for: Newport Norse
Contact: Chris Gosling
Email: Chris.Gosling@newportnorse.co.uk

Alumasc Contact

Author: Sam Powell
Telephone: 07720 883 625
Email: S.powell@alumascroofing.com

Head Office

Address: Alumasc Building Products Ltd
White House Works, Bold Road
Sutton, St Helens
Merseyside WA9 4JG

Telephone: 01744 648400
Email: technical@alumascroofing.com
sales@alumascroofing.com



SURVEY INFORMATION

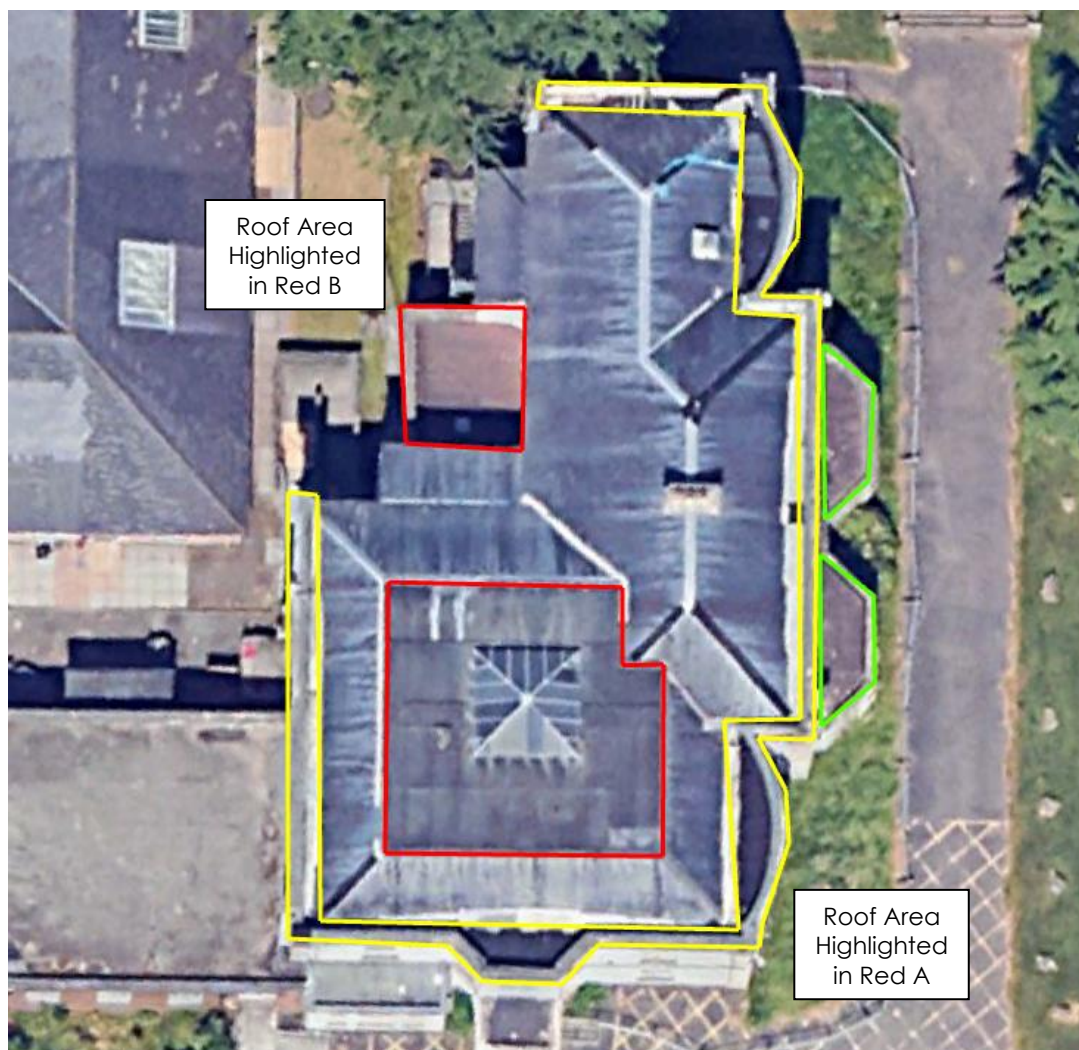
Alumasc has carried out a detailed survey to ascertain the existing roof structure and condition of the flat roof/s. This report identifies to what extent (if any) the roof is suffering from inherent system faults, and what remedial action is required to ensure the integrity of the building.

These proposals relate to the roof waterproofing area only. They do not include associated work to be carried out by other trades, which may be required to complete a satisfactory refurbishment.

It is recommended that the installing contractor is to conduct their own survey to confirm these findings and acquaint themselves with the extent of the works and the conditions under which they are to be executed to enable accurate estimation.

Date of survey:	03/12/2024
Building type:	Commercial
Weather at time of survey:	Dry
Approx. area (m ²):	205

ROOF PLAN



GENERAL INFORMATION

Roof name:	Roof Area Highlighted in Red A & B		
Approx. area (m ²):	100	Slope:	Low
Height:	9 m	Exposure:	Low
Roof access via:	Internal building access	Ceiling type:	Plasterboard

ROOF DETAIL/FINDINGS

System build-up type:	Cold roof		
Existing build-up:	Roof A - Plywood deck, two-layer felt Roof B - Plywood deck, VCL, 50mm PIR insulation, two-layer felt (assumed)		
Substrate:	Plywood deck		
Perimeter detail type:	Check kerb		
Drainage type:	Valley gutter onto lower roof		
Existing to be retained:	Roof A - Yes Roof B - No	Target u-value where applicable:	0.18 W/m ² K

Door threshold/s:	☐	Window threshold/s:	☐	Cladding abutment/s:	☐
Render abutment/s:	☐	Pitch roof abutments/s:	☒	Change in level:	☐
Verge detail/s:	☐	Eave detail/s:	☐	External gutter/s:	☐
Internal gutter/s:	☒	Pipe penetration/s:	☐	Movement joint/s:	☐
Rooflight/s:	☒	Handrail/Fall arrest:	☐	Services/Plant:	☐
Miscellaneous:	N/A				
Safe2Torch Req.	N/A				

CORE SAMPLE/S

Core samples taken identify the existing build-up and its condition at the sample locations only.

Core 1 - Location:	Roof Area Highlighted in Red		
Core 1 - Condition:	Dry	Core 1 - Probe reading:	12%



GENERAL FINDINGS

Existing waterproofing type: Bituminous Roofing

- Our inspection of roof area highlighted in Red (Roof A) indicates that the existing waterproofing system is in suitable condition to be overlaid.
- Our inspection of roof area highlighted in Red (Roof B) indicates that the existing waterproofing system is in poor condition and should be stripped back to the deck, and the deck removed where defective. Natural ageing has played a principal part in the deterioration of the bituminous membrane roofing system.
- Blisters are evident throughout which are a raised area where there is a loss of adhesion between layers caused by entrapped air and/or moisture within the existing system which expands as the temperature rises. If left undisturbed blisters do not necessarily indicate the failure of a system, however, they do present a greater risk of water ingress problems in the future and can also interfere with drainage.
- Defects have been repaired using a liquid coating. In our experience, this type of remedial can only be considered a short-term solution.

Roof Drainage & Falls

- Existing falls are minimal but appear to be working sufficiently.

Upstands

- Cracks and splits between the roof and wall are evident throughout.
- At the pitched roof abutment, the bottom two or three courses of tiles will need to be removed and safely set aside. A new lay board may be required to achieve a 150mm upstand above the finished roof level. Once the waterproofing is complete the tiles must be reinstated and/or replaced. NB ensure that any breather membrane/undertile felt is also modified accordingly to standard construction methods.

Perimeter Check Kerb

- Existing upstand heights are likely to be compromised by the installation of the refurbishment due to the increased thickness in system build-up. Provision must be made to raise the upstand heights at these locations to achieve a 50mm upstand above the finished roof level.

Rooflights

- Rooflight is still in use and shall remain in situ, the client has stated they will carry out the repair work and bring it back to a suitable condition.



Photographic Detail



Overview of Roof A - The current system appears to be in a reasonable condition with minor repairs visible.



General overview of the existing roof area, opposite side.



Overview of Roof B - The current system has reached the end of its serviceable life. The redundant mushroom vent should be removed from the roof prior to the commencement of works.



The internal gutter is holding a significant amount of ponding water. Regular maintenance should be implemented to prevent any future blockages.



Blistering is visible throughout the roof, indicating raised areas where adhesion between layers has been lost due to trapped air and/or moisture. These pockets expand as the temperature increases. Before refurbishment, all blisters will need to be cut out.



Certain sections of the detailing have started to debond. If not addressed, they will inevitably lead to water ingress.



Roof Condition Report

Project: Brynglas House
Project ID: SP143935
Date of issue: 14/01/2025
Pages: 7 of 22



Liquid repairs are evident across the roof area, these should only be considered as short-term solution.



Redundant supports are being removed during the refurbishment works.



The access hatch will need to be re-detailed and cover reinstated, as part of the scope of works.



The rooflight is still in use and shall remain in situ. The client has stated that they will carry out the restoration work and bring it back to a suitable condition



At the pitched roof abutment, the bottom two or three courses of tiles will need to be removed and safely set aside, to allow for the new system to be installed.



GENERAL INFORMATION

Roof name:	Roof Area Highlighted in Yellow		
Approx. area (m ²):	60	Slope:	Low
Height:	9 m	Exposure:	Low
Roof access via:	Internal building access	Ceiling type:	Plasterboard

ROOF DETAIL/FINDINGS

System build-up type:	Cold roof		
Existing build-up:	Timber deck, geotextile membrane with lead		
Substrate:	Timber deck		
Perimeter detail type:	Parapet wall		
Drainage type:	Through wall chutes		
Existing to be retained:	No	Target u-value where applicable:	N/A

Door threshold/s:	☐	Window threshold/s:	☐	Cladding abutment/s:	☐
Render abutment/s:	☐	Pitch roof abutments/s:	☒	Change in level:	☐
Verge detail/s:	☐	Eave detail/s:	☐	External gutter/s:	☒
Internal gutter/s:	☐	Pipe penetration/s	☐	Movement joint/s:	☐
Rooflight/s:	☐	Handrail/Fall arrest:	☐	Services/Plant:	☐
Miscellaneous:	N/A				
Safe2Torch Req.	N/A				

CORE SAMPLE/S

No core samples were taken during the time of the survey due to no access. Prior to the commencement of the works access will be required to cut core samples.



GENERAL FINDINGS

Existing waterproofing type: Lead

- Our inspection indicates that the existing is in poor condition and should be stripped back to the existing timber. The lead can be collected and weighed in for scrap recycling. Ensure that the lead is properly sorted and free from contaminants before being taken to a certified scrap metal recycler for accurate valuation.
- Numerous repairs have been carried out to areas of the roof. These have proved to be ineffective likely due to a combination of inadequate preparation, poor quality materials being used, and unsatisfactory application.

Roof Drainage & Falls

- Existing falls are minimal but appear to be working sufficiently.
- The existing Hooper and downpipes were found to be in poor condition and will need to be replaced as part of the refurbishment works.

Upstands

- Cracks and splits between the roof and wall are evident throughout.
- The repointing of brickwork is required as sections have deteriorated or are missing. Joints are to be raked out to a minimum depth of 15mm and made good using a new mortar mix.
- At the pitched roof abutment, the bottom two or three courses of tiles will need to be removed and safely set aside. A new lay board may be required to achieve a 150mm upstand above the finished roof level. Once the waterproofing is complete the tiles must be reinstated and/or replaced. NB ensure that any breather membrane/undertile felt is also modified accordingly to standard construction methods.

Parapet

- The parapet walls are in poor condition with areas of spalling brickwork and open joints between the overlying coping stones.
- Coping stones to the perimeter are in poor condition with open joints and poor pointing. The integrity of the DPC is also questionable.



Photographic Detail



Overview of the existing roof area.



General overview of existing roof area, opposite side.



Further overview of the existing roof area.



Large scale temporary repairs were installed, but these have now started to fail re-exposing the issue.



The existing detailing is poor.



The existing rainwater goods are in poor condition and should be renewed during the refurbishment.





At the pitched roof abutment, the bottom two or three courses of tiles will need to be removed and safely set aside. This is to allow for the new system to be installed correctly.



Damaged sections of the pitched roof area are to be included within the scope of works. Lead or appropriate replacement tiles is to be used.



Redundant cables should be permanently removed from the roof area.



GENERAL INFORMATION

Roof name:	Roof Area Highlighted in Green		
Approx. area (m ²):	40	Slope:	Low
Height:	9 m	Exposure:	Low
Roof access via:	No access	Ceiling type:	Plasterboard

ROOF DETAIL/FINDINGS

System build-up type:	Warm roof		
Existing build-up:	Plywood deck, VCL, 50mm PIR insulation, two-layer felt (assumed)		
Substrate:	Plywood deck		
Perimeter detail type:	Parapet wall		
Drainage type:	External hooper and downpipes		
Existing to be retained:	No	Target u-value where applicable:	0.18 W/m ² K

Door threshold/s:	☐	Window threshold/s:	☐	Cladding abutment/s:	☐
Render abutment/s:	☐	Pitch roof abutments/s:	☐	Change in level:	☐
Verge detail/s:	☐	Eave detail/s:	☐	External gutter/s:	☒
Internal gutter/s:	☐	Pipe penetration/s:	☐	Movement joint/s:	☐
Rooflight/s:	☐	Handrail/Fall arrest:	☐	Services/Plant:	☐
Miscellaneous:	N/A				
Safe2Torch Req.	N/A				

CORE SAMPLE/S

No core samples were taken during the time of the survey due to no access. Prior to the commencement of the works access will be required to cut core samples.



GENERAL FINDINGS

Existing waterproofing type: Bituminous Roofing

- Our inspection indicates that the existing waterproofing system is in poor condition and should be stripped back to the existing deck, and the deck removed where defective. Natural ageing has played a principal part in the deterioration of the bituminous membrane roofing system.
- Defects have been repaired by the bonding of additional pieces of bituminous cap sheet to the roof surface. In our experience, this type of remedial can only be considered a short-term solution.

Roof Drainage & Falls

- The existing external gutters, hoppers, and downpipes were found to be in poor condition and will need to be replaced as part of the refurbishment works.

Upstands

- There are areas where the detailing has failed and is no longer adequate to provide waterproof protection. Cracking, blistering, distortion, or slumping are all signs that the waterproofing has deteriorated.
- Existing flashings to the perimeter details are in poor condition and should be replaced and/or repaired.
- At the abutment to the existing render system, this will need to be cut back to accommodate the increased thickness in system build-up and achieve a 150mm upstand above the finished roof level. A new stop bead/termination detail will need to be formed, and the render made good to match the original.

Parapet

- The parapet walls are in poor condition with areas of spalling brickwork and open joints between the overlying coping stones.
- Coping stones to the perimeter are in poor condition with open joints and poor pointing. The integrity of the DPC is also questionable.

Penetrations

- Details are in poor condition with deterioration of the waterproofing evident.
- The increased thickness of system build-up will require the soil and vent pipe/s to be extended to achieve a 150mm upstand above the finished roof level and the fitting of any secondary weathering collars.

Services

- All services including air conditioning units, plant, surface mounted equipment that will impede the works are to be set aside for the duration of the project by appropriately skilled labour.
- Where no longer required redundant or defective plant equipment should be removed prior to works.



Photographic Detail



Overview of the existing roof area. The current system has reached the end of its serviceable life.



The existing rainwater goods are in poor condition and should be replaced during the refurbishment.



The existing brickwork is inadequate and should be repaired/repointed.



The damaged render is likely contributing to water ingress and should be replaced as part of the re-roofing works to ensure a watertight and durable finish.



Significant water ingress has caused mould to occur. This indicates that water is penetrating the current waterproofing.



Further evidence of water ingress.



GENERAL INFORMATION

Roof name:	Roof Area Highlighted in Blue		
Approx. area (m ²):	5	Slope:	Low
Height:	6 m	Exposure:	Low
Roof access via:	No access	Ceiling type:	No ceiling

ROOF DETAIL/FINDINGS

System build-up type:	Cold roof		
Existing build-up:	Plywood deck, two-layer felt membrane (assumed)		
Substrate:	Plywood deck		
Perimeter detail type:	Parapet wall		
Drainage type:	External gutters		
Existing to be retained:	Yes	Target u-value where applicable:	0.18 W/m ² K

Door threshold/s:	☐	Window threshold/s:	☐	Cladding abutment/s:	☐
Render abutment/s:	☐	Pitch roof abutments/s:	☐	Change in level:	☐
Verge detail/s:	☐	Eave detail/s:	☐	External gutter/s:	☒
Internal gutter/s:	☐	Pipe penetration/s	☐	Movement joint/s:	☐
Rooflight/s:	☐	Handrail/Fall arrest:	☐	Services/Plant:	☐
Miscellaneous:	N/A				
Safe2Torch Req.	N/A				

CORE SAMPLE/S

We were unable to carry out any core samples during the time of the survey, as there was no access to the roof area.



GENERAL FINDINGS

Existing waterproofing type: Bituminous Roofing

- We were unable to gain access to the roof area and had to take photos from within the building.
- The existing waterproofing system appears to be in poor condition and should be stripped back to the existing deck.

Roof Drainage & Falls

- The existing external gutters and fascia boards were found to be in poor condition and will need to be replaced as part of the refurbishment works.

Upstands

- Codes of Practice dictate that the continuity of the waterproofing is to be maintained for a vertical height of 150mm above the finished roof level at all abutments. Where applicable appropriate rectification will need to be made. Care must be taken to ensure that the position of any DPC/cavity tray is not compromised.
- The repointing of brickwork is required as sections have deteriorated or are missing. Joints are to be raked out to a minimum depth of 15mm and made good using a new mortar mix.

Parapet

- The parapet walls are in poor condition with areas of spalling brickwork and open joints between the overlying coping stones.
- Coping stones to the perimeter are in poor condition with open joints and poor pointing. The integrity of the DPC is also questionable.



Photographic Detail



Overview of the existing roof area.



The existing parapet wall is significantly damaged. This should be encapsulated by the new waterproofing.



The external gutters are in poor condition and should be removed and replaced during the refurbishment works.

Conclusion / Recommendation

Following our roof inspection, the option/s for refurbishment are outlined below.

It is recommended that the building owner considers several other matters in parallel, including but not limited to:

- The practicality of the site works.
- The suggested timescale for remedial.
- The anticipated remaining life of the roof and what future effect any defect found may have.
- Whether taking the opportunity to introduce other improvements, such as upgrading the thermal performance, is a benefit that may provide future cost savings.
- Whether safe access, egress, and edge/fall protection which complies with the Workplace (Health, Safety and Welfare) Regulations are in place throughout its life cycle.
- The remounting and positioning of roof services/plant above the finished covering.
- The structural capacity of the roof to receive the imposed loading of the proposed works.
- The load-bearing capacity of the structure if the material is to be stored at roof level during the refurbishment.

Conclusion

Suggested Timescale for Remedial

Roof Name	Condition	Immediately
Roof Area Highlighted in Red	Suitable condition to be overlayed	Option 1
Roof Area Highlighted in Yellow	Strip existing to deck	Option 1
Roof Area Highlighted in Green	Strip existing to deck	Option 1
Roof Area Highlighted in Blue	Strip existing to deck	Option 1

Option 1

- From the inspection carried out the existing waterproofing system is in a poor condition and has exceeded its serviceable life and should be considered for immediate refurbishment.

Option 2

- From the inspection carried out the existing waterproofing system would appear to be reaching the end of its life and should be considered for refurbishment at the earliest opportunity to avoid any future problems from occurring.

Option 3

- From the inspection carried out the existing waterproofing system is in a reasonable condition. However, as identified in the report some localised patch repairs are to be carried out as a short term solution to prolong its service life and avoid the imminent risk of water entry.

Option 4

- From the inspection carried out the existing waterproofing system is currently in reasonable condition with minimal defects found. We suggest a planned maintenance schedule at this time would be a prudent course of action to extend its life. A further inspection should be made in approx. 5 Years to reexamine its condition.

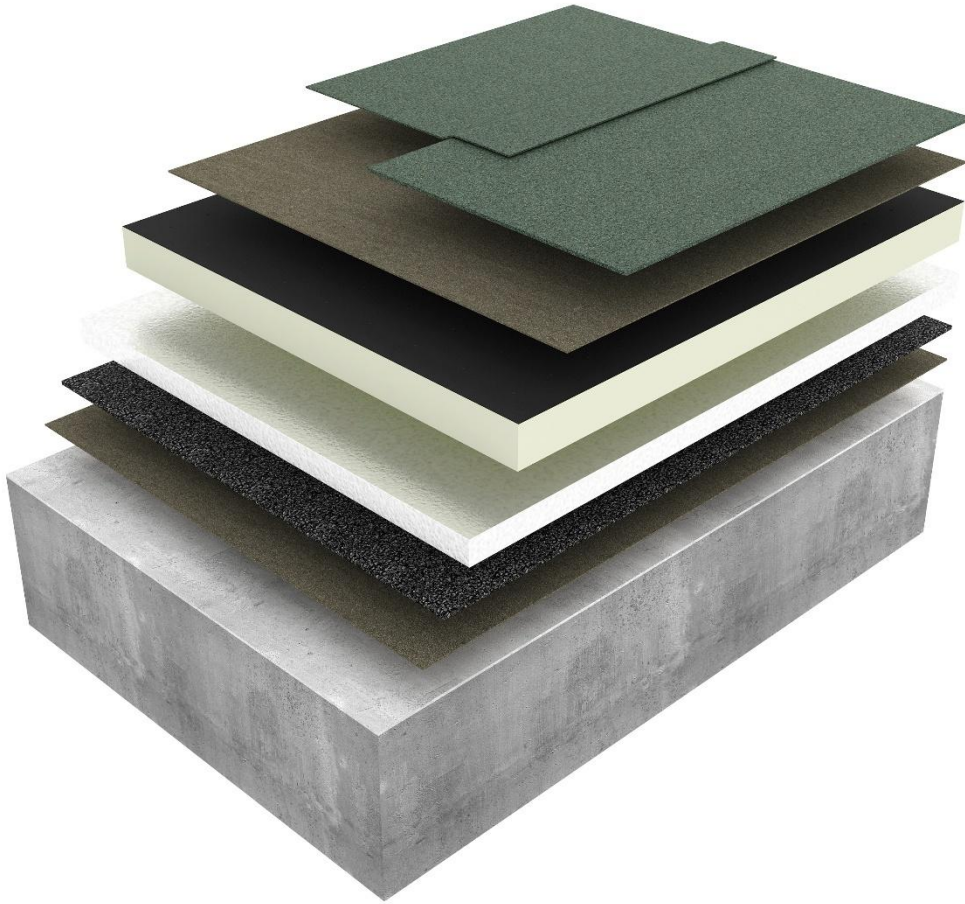


Recommendations

Roof Area Highlighted in Red Roof A

Overlay

- Based on our findings the existing was found to be in a suitable condition to receive an insulated overlay. The works would comprise removing all debris, preparing all surfaces to provide an acceptable base, apply a primer coat and overlaying with a new insulated waterproofing system. New upstands and flashings will be formed throughout and replacement of most, if not all ancillaries.



Our refurbishment specification proposal will be based on the use of our Derbigum Olivine high-performance waterproofing solution installed exclusively by Registered Approved Contractors, underpinned by AlumasC's extensive project support service, and covered by a single-source warranty.

Our proposal will also include a thermal upgrade to achieve a u-value of 0.18 W/m²K.

Site inspections will be made by AlumasC during the works to ensure that the installation is executed in accordance with the AlumasC warranty requirements and current Codes of Practice.

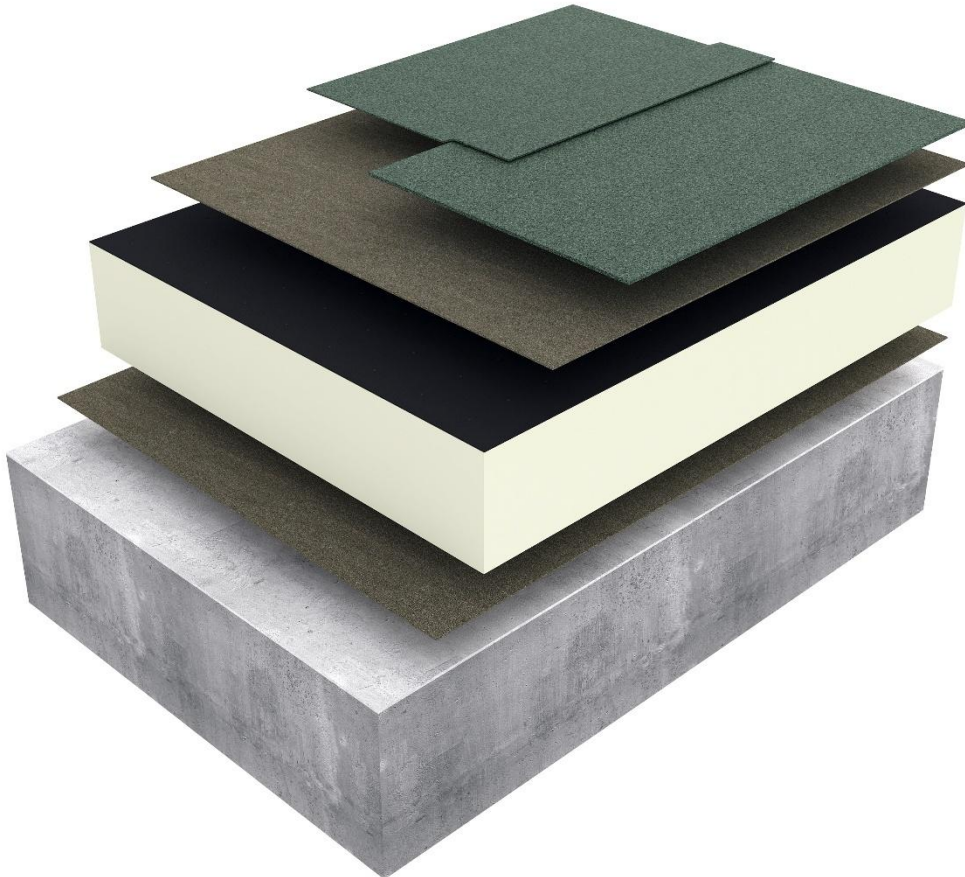
A specification detailing the full extent of the waterproofing works is to be provided under separate cover.



Roof Area Highlighted in Red Roof B

Remove existing coverings and install a new Warm Roof System including Cut to Falls insulation

- Based on our findings because of the deteriorated condition of the existing the only course of action is to strip the existing layers back to the substrate and dispose of. Once cleared the works would comprise inspection and repair of the exposed substrate to provide an acceptable base, apply a primer coat and overlaying with a new insulated waterproofing system. New upstands and flashings will be formed throughout and replacement of most, if not all ancillaries.



Our refurbishment specification proposal will be based on the use of our Derbigum Olivine high-performance waterproofing solution installed exclusively by Registered Approved Contractors, underpinned by AlumasC's extensive project support service, and covered by a single-source warranty.

Our proposal will also include Cut to Falls insulation to improve drainage falls given the standing water which was evident following our inspection to achieve a u-value of 0.18 W/m²K.

Site inspections will be made by AlumasC during the works to ensure that the installation is executed in accordance with the AlumasC warranty requirements and current Codes of Practice.

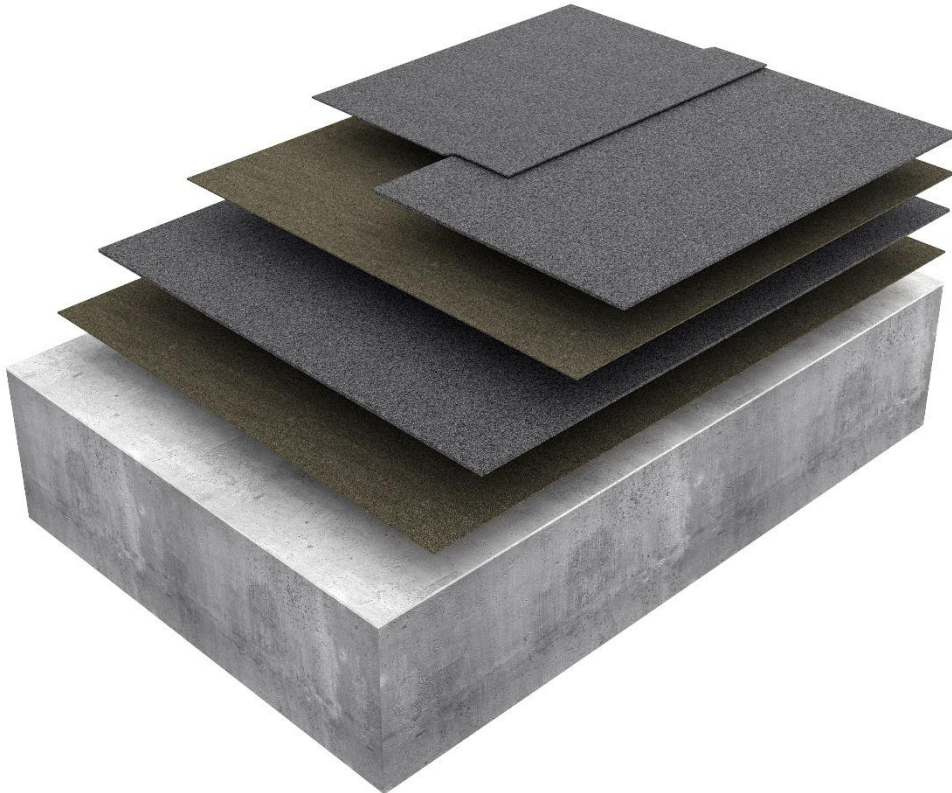
A specification detailing the full extent of the waterproofing works is to be provided under separate cover.



Roof Area Highlighted in Yellow

Remove existing coverings and install new waterproofing

- Based on our findings because of the deteriorated condition of the existing the only course of action is to strip the existing layers back to the substrate and dispose of. Once cleared the works would comprise inspection and repair of the exposed substrate to provide an acceptable base, apply a primer coat and new waterproofing system. New upstands and flashings will be formed throughout and replacement of most, if not all ancillaries.



Our refurbishment specification proposal will be based on the use of our Eurorof self-adhesive high-performance waterproofing solution installed exclusively by Registered Approved Contractors, underpinned by Alumasc's extensive project support service, and covered by a single-source warranty.

Site inspections will be made by Alumasc during the works to ensure that the installation is executed in accordance with the Alumasc warranty requirements and current Codes of Practice.

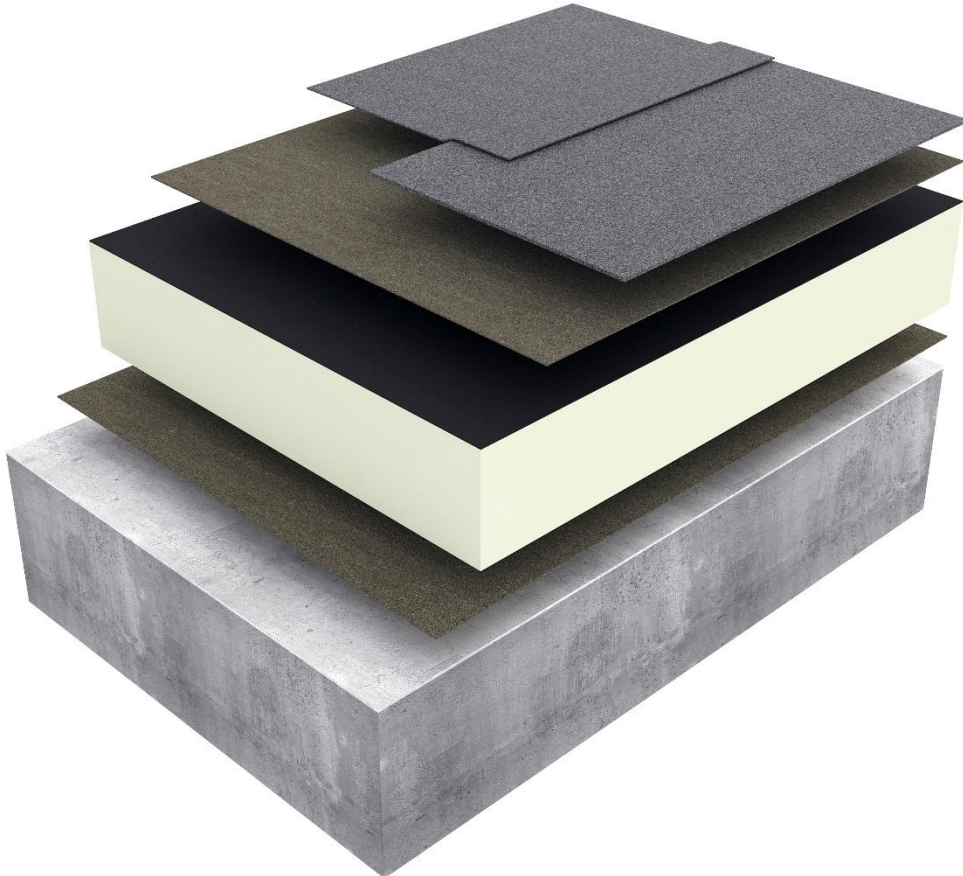
A specification detailing the full extent of the waterproofing works is to be provided under separate cover.



Roof Area Highlighted in Green

Remove existing coverings and install a new Warm Roof System including Cut to Falls insulation

- Based on our findings because of the deteriorated condition of the existing the only course of action is to strip the existing layers back to the substrate and dispose of. Once cleared the works would comprise inspection and repair of the exposed substrate to provide an acceptable base, apply a primer coat and overlaying with a new insulated waterproofing system. New upstands and flashings will be formed throughout and replacement of most, if not all ancillaries.



Our refurbishment specification proposal will be based on the use of our Eurorof Premium high-performance waterproofing solution installed exclusively by Registered Approved Contractors, underpinned by Alumasc's extensive project support service, and covered by a single-source warranty.

Our proposal will also include Cut to Falls insulation to improve drainage falls given the standing water which was evident following our inspection to achieve a u-value of 0.18 W/m²K.

Site inspections will be made by Alumasc during the works to ensure that the installation is executed in accordance with the Alumasc warranty requirements and current Codes of Practice.

A specification detailing the full extent of the waterproofing works is to be provided under separate cover.

