

The Garland Company UK, Ltd.

Roof Asset Management Programme



Shire House, Lower Flat Roofs Condition Survey

Prepared By
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Prepared For
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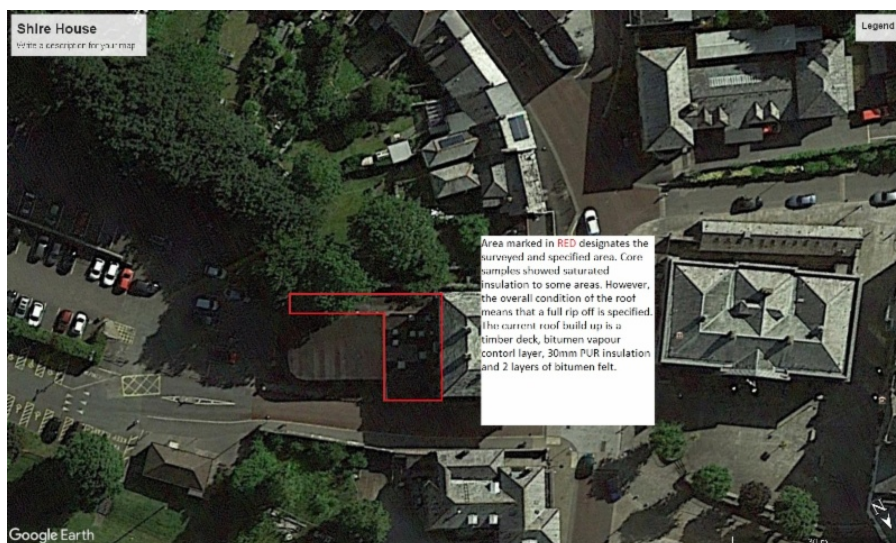
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Shire House / Lower Flat Roof Sections / Inspection: Jan 31, 20195

Client: RTP Surveyors

Facility: Shire House



Facility Data

Address 1	Shire House
Address 2	Mount Folly Square
City	Bodmin
County	Cornwall
Postal	PL31 2DQ
Type of Facility	Other
Square Meters	1,000
Contact Person	Sue Wilton

Asset Information

Name	Date Installed	Square Meters	Roof Access
Lower Flat Roof Sections	1984	250	Stairs



Construction Details

Client: RTP Surveyors

Facility: Shire House

Roof Section: Lower Flat Roof Sections

Information

Year Installed	1984	Square Meters	250
Slope Dimension	< 3 degrees	Eave Height	Single Storey
Roof Access	Stairs	System Type	Built Up Roof (BUR)



Inspection Report

Client: RTP Surveyors

Facility: Shire House

Report Date: 31/01/2019

Roof Section: Lower Flat Roof Sections

Inspection Information

Inspection Date	31/01/2019	Core Data	Yes
Inspection Type	Core Analysis	Leakage	Yes
Deck Conditions	Good		

Flashing Conditions

Perimeter	Failed	Wall	Fair
Projections	Poor	Counterflashing	Poor

Miscellaneous Details

Brick Chases	Fair	Debris	Yes
Control Expansion Joints	N/A	Ponding Water	Moderate
Parapet Wall	N/A	Coping Joints	N/A

Overall

Rating	Failed
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Condition

The roof sections surveyed are part of the original construction of this part of the building in 1984. The roof build up is a plywood deck, bituminous vcl, 30mm polyurethane insulation with 2 layers of bitumen felt waterproofing.

The felt was initially covered with a mineral surface which would have acted as a protector from UV light. However, over the years this has been worn away leaving the bitumen surface exposed. UV light dries the bitumen membranes out and takes away a number of the properties from the felt. It becomes brittle and fragile and more susceptible to splits, cracks and lap issues as thermal and building movement put it under excessive stress.

The system has lasted well at 35 years old and has simply come to the end of its serviceable life. Sections of ponding water have accelerated the degradation in some areas and any new system would be designed to minimise the amount of water on the roof system.

Patch repairs have been attempted but these are already failing with blisters appearing across the surface even under the latest patch repairs.

Edge details are poor. One area has completely slumped away from its upstand and is no longer providing an effective detail. The lead work into the main building is poor and needs replacing. However, due to the building status there will be no requirement to raise these flashings. Existing chases can be used and re cut if necessary as a gutter is formed along this section.

The outlets are blocked and therefore not working effectively but there are a suitable number on the roof surface and these will be refurbished and the points re used.

The kitchen extraction unit is in a poor state and is a poor penetration detail also. It has been suggested that this is being replaced as part of the scope of works. A suitable curb detail will be required.

Core samples showed the roof to have areas that are saturated and some that are dry. The build up gives the roof a current u value of 0.65w/m2k. Current building regulations require a u value of 0.18w/m2k. The new scheme will achieve this and offer energy savings of approximately 16%.

The skylights on the roof do not meet current thermal or safety standards and will also be replaced with new UPVC triple skinned units to comply with both.

A full specification will be prepared to allow Garland approved contractors to price the works and offer a fully guaranteed system.



Photo 1

Overviews of the roof for reference



Photo 2

Velux lights are suitably high to leave in place



Photo 3



Photo 4

Internal mansard details will have slates and ridge tile removed, the area boarded and felted with termination over the ridge prior to the ridge tile being reinstated on top.



Photo 5

The felt membranes are splitting and coming off their laps across all sections



Photo 6



Photo 7



Photo 8

Lower courses will be removed, felt dressed up to a minimum of 150mm above the roof surface prior to lower courses being re instated.



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13

Ponding water will be removed with tapered insulation



Photo 14



Photo 15



Photo 16

Repairs are poor and are failing



Photo 17



Photo 18

Upstand completely slumped away and failed



Photo 19



Photo 20



Photo 21

Core sample showing insulation and roof build up



Photo 22



Photo 23



Photo 24