



# RIDGE

**BUILDING SURVEYOR'S REPORT  
- EXTERNAL CONDITION  
SURVEY AT THAME MUSEUM  
THAME TOWN COUNCIL  
04.09.2019**



# **THAME**

## **Town Council**

### **EXTERNAL CONDITION SURVEY AT THAME MUSEUM THAME TOWN COUNCIL**

04.09.2019

#### **Prepared for**

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#### **Prepared by**

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**1. VIEW OF FRONT ELEVATION**



## 2. INTRODUCTION

### 2.1. Client's Name and Address

Andrea Oughton, Thame Town Council, Town Hall, High Street, Thame, Oxfordshire OX9 3DP.

### 2.2. Property Address

Thame Museum, 79 High Street, Thame, Oxon OX9 3AE.

### 2.3. Brief and Scope of Survey

Ridge and Partners LLP were instructed to carry out an external condition survey, focusing on the roofing and associated rainwater elements and advise on tenant reports of water ingress to the main exhibition room. Our inspection and report has been prepared in accordance with our fee quotation of 10<sup>th</sup> May 2019. This report is not intended to be a full Building Survey or Planned Maintenance report.

We have summarised our findings from our survey on 22<sup>nd</sup> August 2019 below. The weather conditions at the time of our inspection were overcast with no rainfall as such we were unable to witness the effectiveness of rainwater goods. The building was used for museum exhibition at mainly ground floor with a double height exhibition space. The central heating system was not running due to the warm summer weather.

The non-intrusive survey to external roofs and gutters was carried out with a three-meter surveyor's ladder from ground floor level. Safe access to the first floor roof was not possible and was inspected with an 8m pole camera.

Budget costs are given based on our recommendations and for indicative purposes only and are not based upon detailed specifications of the work required or contractor quotations.

### 2.4. Brief Description of Building Surveyed

Thame Museum is a Grade II listed single storey town centre building with a double height first floor exhibition space constructed 1861. For the purpose of this report we have assumed the principal elevation of the building face due south.

Thame Museum is of traditional build with clay brick and lead covered flat roof to the rear and slate covered pitched roofs to the side and front. Metal gutters and rainwater downpipes are located to the south and east elevations with flat roof parapets walls to the north and west elevations. To the south and east elevations windows are single glazed decorated timber framed vertical sliding sashes with stone cills. To the north elevation flat roof there is a single glazed timber framed roof lantern.

Internal accommodation to the ground floor comprises museum exhibition, offices and WCs.

Museum tenants reported water ingress and staining over recent months. Historic attempts to repair the roof appear to have failed.

## 3. FINDINGS AND OBSERVATIONS

Based on our visual inspection we believe the single glazed timber framed roof lantern and lead cover flashings to the double height first floor exhibition space are causing ongoing water ingress and damp staining to internal ceiling decorations and plasterwork.

### 3.1. Single Glazed Timber Framed Roof Lantern

To the rear of Thame Museum there is a single glazed timber framed roof lantern providing natural light to the double height museum exhibition space below as shown blue on the appended roof plan. A decorated timber frame surrounds Georgian wire single glazing with lead covered roof and lead cover flashings dressed over the lead flat roof below. See photograph 5.

There is evidence that defective glazing putty, timber frame and lead cover flashings are believed to be contributing to water ingress during periods of heavy rainfall in conjunction with the prevailing wind. We were not able to determine the construction detail and robustness of the lead cover flashings in this area with safe access to the first floor roof not possible, however evidence of staining and inadequately dressed and lifting lead flashings at the roof lantern and flat roof junction suggest either an historic or ongoing defect. See photographs 6, 7 and 8.

We recommend further investigations to the roof lantern and lead cover flashings junction by forming temporary scaffold followed by an invasive inspection to determine the condition of construction details whilst hopefully carrying out corresponding repairs so as to make full use of the scaffold.

### 3.2. Lead Covered Flat Roof

To the middle and rear of Thame Museum is a lead covered flat roof with perimeter upstand as shown red on the appended roof plan. Presumed code 5 lead covers the flat roof laid to falls with mopstick detail and dressed perimeter lead cover flashings to the perimeter.

There is evidence of ongoing ponding to the roof with corresponding damp staining to internal ceiling finishes, as shown in the area with the black arrow on the appended roof plan, however we believe water ingress is likely caused by the roof lantern and lead cover flashings rather than the lead flat roof. See photographs 8, 9 and 10.

We were not able to determine the construction detail and robustness of the lead covering in this area with safe access to the first floor roof not possible, and believe it sensible to address the visible defects to the roof lantern and lead cover flashings first.

### 3.3. South Elevation Rainwater Goods

The front of the Museum faces the public highway. The ground floor pitched roofs discharge into decorated metal gutters and downpipes leading to below ground surface water drainage.

Internally, a museum exhibition area with decorated plaster ceiling and walls, timber skirtings and timber suspended floor structure with carpet tile finish.

There is evidence that blocked or leaking rainwater goods are causing rainwater to overflow the gutter system and cascade down the south elevation during periods of heavy rainfall. While this was not witnessed at the time of our inspection, evidence of efflorescence salts, vegetation growth and internal damp staining suggest either an historic or ongoing gutter defect. See photographs 11 and 12.

### 3.4. East Elevation Ramp

To the side of the Museum there is ramped access providing level threshold access to the building reception area as shown green on the appended plan. The ramp is finished with natural stone paving slabs flanked by

Aco drain channel. Metal handrails are secured with below ground sockets. There is a half landing with level threshold access and powered timber door. See photograph 13.

Internally, a museum exhibition area with decorated plaster ceiling and walls, timber skirtings and timber suspended floor structure with carpet tile finish. See photograph 14.

At the junction between the ramp and clay brick elevation we would typically anticipate seeing a vertical DPC with suitable cover flashing or weather detail. Efflorescence and defective pointing to brick masonry and stone paving display signs of ongoing saturation.

A vertical DPC and weather detail were not present potentially resulting in ongoing saturation through the solid wall construction and causing penetrating damp. We were not able to determine the effectiveness of the drainage in this area which may be blocked or damaged for example.

To the internal wall there is evidence of damp staining and blistering, measuring approximately 1m<sup>2</sup>. Internal defects correspond with the location of external ramp. Damp timber skirting and plaster demonstrate continual saturation from an ongoing water ingress defect which may be caused by the lack of a vertical DPC at the block paved ramp abutment.

### 3.5. General Maintenance

We take this opportunity to highlight the following minor defects not associated with the damp staining identified internally and their remedy would be beneficial to the fabric of the building.

1. Slipped and cracked slates to pitched roofs in multiple location with ridge tiles loose. Slates should be replaced and ridge tiles re-bedded. See photographs 15, 16 and 17.
2. Vegetation growth to rainwater goods to the perimeter of the Museum suggest a blocked or overflowing gutter system during heavy rainfall. Inspection and cleaning should be included in the building's maintenance cycle. See photograph 18.

## 4. SUMMARY OF FINDINGS AND RECOMMENDATIONS

We believe it is likely defective waterproofing details to the single glazed timber framed roof lantern and lead cover flashings to the double height first floor exhibition space are likely allowing water to ingress and cause the visible defect.

As a next step, we recommend further investigations whilst hopefully carrying out the corresponding repairs so as to make full use of the scaffold.

Roof lantern and lead cover flashings – scaffold access and further investigations to the lead cover flashings. While temporary access is provided we suggest engaging with a suitable contractor to repair and redecorate the timber framed roof lantern the lead cover flashings.

Rainwater goods – inspect and clear rainwater gutter system.

Ramp – construct a vertical DPC with weather detail between the brick masonry elevation and ramp to prevent saturation to internal surfaces.

Summary of estimate costs for suggested remedial works.

Scaffold access to flat roof/ roof lantern	£5,000
Ridge inspection and report to flat roof/ roof lantern junction	£450
Roof lantern repair and redecoration	£2,500
Roof lantern lead cover flashings repair	£5,000
Rainwater goods and redecoration	£1,000
Ramp and redecoration	£2,000
	£15,950 (excluding VAT, access and professional fees)

**5. THIRD PARTY CLAUSE**

In accordance with our standard practice we must state this report is confidential to the party to whom it is addressed and their professional advisers.

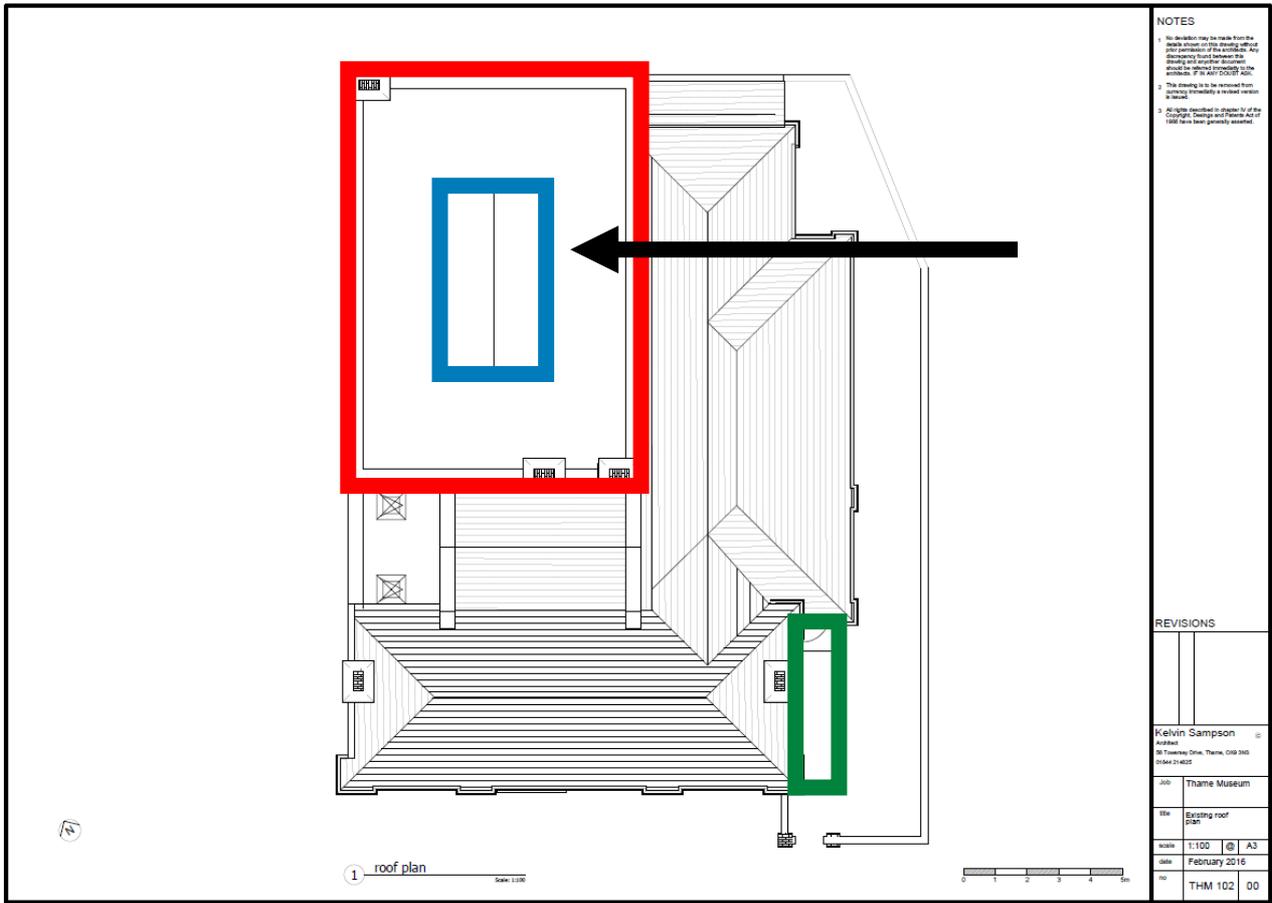


SIGNED: .....  
FOR RIDGE AND PARTNERS LLP

DATED: 04.09.2019

Ridge & Partners LLP  
September 2019

5.1. Appendix 1 – Building Plan



5.2. Appendix 2 – Photographs



Photograph 1 – Principal due south elevation.



Photograph 2 – Due north elevation.



Photograph 3 – Due east elevation.



Photograph 4 – Due west elevation.



Photograph 5 – Single glazed timber framed roof lantern.



Photograph 6 – Roof lantern lead cover flashings dressed over lead flat roof below.



Photograph 7 – Roof lantern missing glazing putty, defective decorative finish and lead cover flashings.



Photograph 8 – Lead covered flat roof with evidence of ponding.



Photograph 9 – Lead covered flat roof with evidence of ponding.



Photograph 10 – Damp staining to internal ceiling finishes.



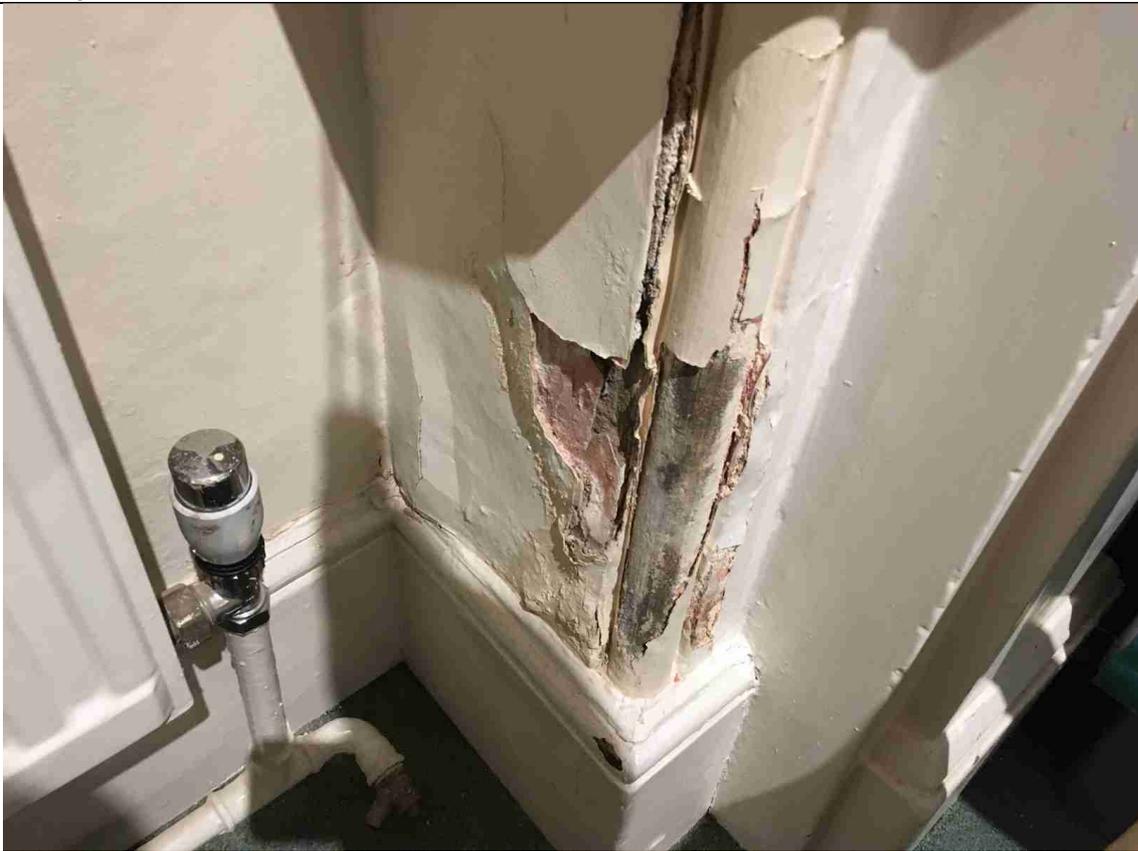
Photograph 11 - Efflorescence salts and vegetation growth to south elevation rainwater downpipe.



Photograph 12 – Ground floor internal damp staining corresponding to south elevation external rainwater downpipe.



Photograph 13 – Ramped access with Aco drain channel and metal handrail.



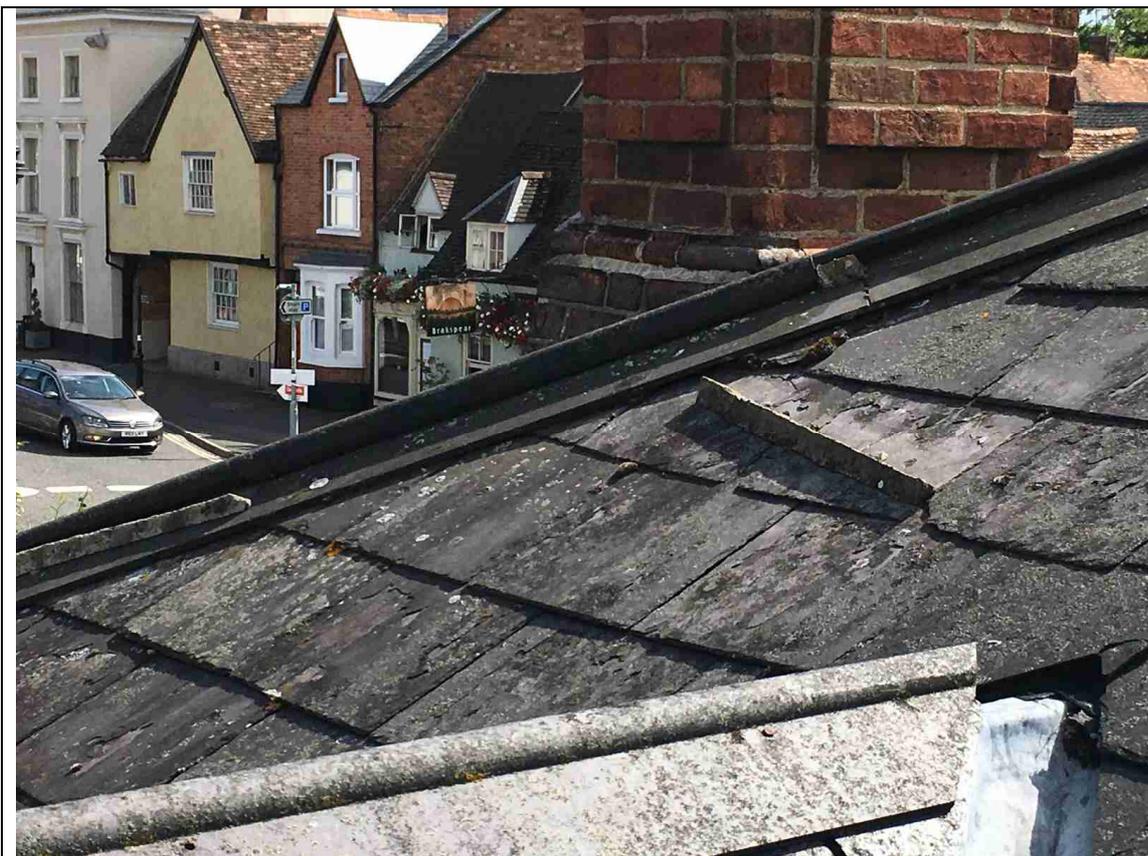
Photograph 14 – Ground floor damp staining corresponding to external ramp access.



Photograph 15 – Evidence of slipped roof slates to pitched roof.



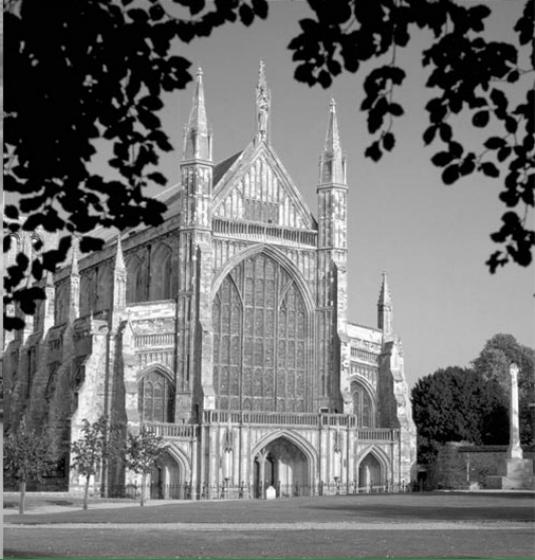
Photograph 16 – Evidence of slipped roof slates to pitched roof.



Photograph 17 – Evidence of defective bedding to ridge tiles.



Photograph 18 – Evidence of defective rainwater gutters.



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