Case information

Reference/Case ID	201507576

Scheduled Monument	Stirling Castle		
Index no	M90291	**Grid Ref**	NS788941 278800.0000 694100.0000

Date of Application	25 February 2016	**Application Received**	01 March 2016
Summary of proposed works	In-situ testing of timber roof structures of the Palace and King's Old Buildings to identify internal decay		

1. Summary recommendation

This report recommends that approval for the in-situ testing of timber roof structures of the Palace and King's Old Buildings to identify internal decay be granted without conditions.

2. Background

The monument comprises Stirling Castle and its immediate setting. Stirling Castle is a strongly-fortified royal castle occupying a volcanic outcrop which commands the upper Forth valley. The defences define three main enclosures: the outer defences (on the main line of approach), the main enclosure (at the summit of the rock) and the nether bailey (to the N). The principal buildings for royal occupation at the summit of the rock form a square enclosed by the King's Old Building, the Great Hall, the Chapel Royal and the Palace.

The buildings that are the subject of this application are the King's Old Building (built by James IV in the 1490s) and the Palace (built by James V in the 1530s and 1540s), and these form the west and south sides of the square on the summit of the rock. The monument is cared for by HES Conservation Directorate and is operated as a visitor attraction.

The works form part of a PhD research looking at the architectural conservation of 17th and 18th century Scottish built heritage, with a focus on timber roof structures. The research aims to increase awareness about the extent, value and nature of

historic timber roofs in Scotland, and develop a methodology for their initial assessment in order to contribute towards improving conservation best practice.

HES Heritage Management Directorate has undertaken pre-application discussions with the applicant and with HES Conservation Group regarding the scope, timing, and practicalities of works, and this application accords with the outcome of those discussions.

3. Proposals

Consented works – In-situ testing of timber roof structures of the Palace and King's Old Buildings to identify internal decay.

The proposals comprise:

- Removal of splinters to identify timber species.
- Insertion of hygrometer probes into three frames per roof. This involves an electrode with two 60mm long probes each 2mm in diameter being driven into the timber.
- Resistance microdrilling in areas where internal decay is subsequently identified as being highly likely to be present. This involves a 3mm diameter borehole being drilled through timbers, and the energy consumed by this operation is then used to establish a density profile of the timber.
- For completeness, the works also include other non-invasive survey works for which SMC is not required, such as background temperature and humidity readings, visual strength grading of the timbers, mapping of visual material degradation, the sounding of timber using a rubber mallet, ultrasound testing, the use of a thermal camera, and the use of a snake camera to see inaccessible elements of the structure.

4. Representations received

No third party representations were received.

5. Report

a) Policy considerations

The application should be viewed with the following legislative and policy considerations in mind:

Ancient Monuments and Archaeological Areas Act 1979

Part 1 Section 2 - Control of works affecting an ancient monument.

Part 1 Section 2 (3) – authorises works where Scottish Ministers or Historic Environment Scotland Have granted consent (scheduled monument consent) for the execution of the works where the works are executed in accordance with the terms of the consent and of any conditions attached to the consent.

Part 1 Section 2 (4) – allows consent to be granted with conditions.

The Scottish Historic Environment Policy

3.14. Scottish Ministers include a monument in the Schedule to secure the long-term legal protection of the monument in the national interest, in situ and as far as possible in the state it has come down to us. Scheduled monuments have an intrinsic value as monuments, not related to any concept of active use. It is the value of the monument to the nation's heritage, in terms set out in the section on Scheduling in Chapter 2 of SHEP, that is the primary consideration in determining applications for scheduled monument consent.

3.16. Works on scheduled monuments should therefore normally be the minimum level of intervention that is consistent with conserving what is culturally significant in a monument.

3.18. Scheduled monument consent applications must be considered in terms of the cultural significance of the monument and the impact that the proposals would have upon this cultural significance. The more important particular features of the monument are to its cultural significance, the greater will be the case against interventions which modify these features.

3.20. Where change is proposed, it should be carefully considered, based on good authority, sensitively designed, properly planned and executed, and where appropriate in the context of an individual monument, reversible.

b) Assessment

The works involve the in-situ testing of timber roof structures of the Palace and King's Old Buildings to identify internal decay.

The physical impact of these works on the monument and its cultural significance will be negligible, but the potential benefits to the long term preservation of the monument will be significant.

The removal of the splinters will mean that the roof fabric used for testing is not material that contributes to the structural integrity of the roof, and this has been confirmed by the HES structural engineer. The insertion of the hygrometer probes and the resistance microdrilling will result in a minor loss of historic fabric, but this will not affect the structural capacity of the roof.

The works will be supervised by a member of HES MCU, with involvement from the HES engineer where required.

The works will inform on the level of internal decay to the roof timbers, and will help guide future conservation works at Stirling Castle and well as support similar conservations works elsewhere.

c) Other material considerations, including impact of the works on Protected Species and Places

No impact on Protected Species and Places considered likely – see PP&S assessment.

d) Conclusion

The proposed works will be of benefit to the long term preservation of the monument as they will help inform best practice conservation work on the roof at Stirling Castle, as well as contribute towards research that will aid in the conservation of other historic roof structures.

The works involve a negligible loss of historic fabric, and have been designed in such a way that targets damaged fabric (the splinters) and/or has little impact on the integrity of the roof structure.The works can therefore be considered as the minimum level of intervention that is consistent with conserving what is culturally significant in a monument, and thus compliant with SHEP 3.16.

The works are also being done to elements of the monument in such a way that their impact on the cultural significance of the monument is minor, and as such the application is compliant with SHEP 3.18.

The works are well planned with identified funding, have the support from the managers of the monument, and as such the application is compliant with SHEP 3.20.

6. Recommended decision

The works proposed are considered acceptable in meeting the terms of national policy for scheduled monuments, and also accounting for other material considerations.

I recommend consent is **granted without conditions.**

7. Conditions

None.

8. Approval

Officer	**Oliver Lewis**	**Date**	**22/03/2016**
Approved by	**George Findlater**	**Date**	**22/03/2016**

Annex A – list of supporting documents

- General location map – A1
- Location and pictures of loose splinters to be collected for the timber species identification – A2
- Location of other in situ tests – A3
- Hygrometer technical sheet – B1
- Resistograph technical sheet – B2
- Email from HES engineers to applicant dated 26 February 2016 providing advice on scope of works.