Scheduled Monument Consent:
Report on Handling

Case information

Reference/Case ID	201507374

Scheduled Monument	Sorbie, Old Tower of		
Index no	M2024	**Grid Ref**	NX450470 245000.0000 547000.0000

Date of Application	21 February 2016	**Application Received**	22 February 2016
Summary of proposed works	Emergency repairs to stair jamb internal wall		

1. Summary recommendation

This report recommends that consent be granted.

2. Background

Sorbie Tower is a late 16th century tower-house, standing virtually complete to the wall-head. The tower is built to an L-shaped plan; above a vaulted basement there are three storeys with an attic. The masonry is rubble with undressed quoins and simple chamfered sandstone dressings.

The upper floors would have been reached by a large circular stair corbelled out in the re-entrant angle, although the stair treads have been robbed out. Each of the upper floors of the main block was divided into two unequal chambers with separate access from the stair. There would have been further accommodation in the wing.

Despite areas of collapse, the tower remains substantially complete. Stabilisation works were conducted following an application for scheduled monument consent in 2002.

An original application for masonry repairs to a threshold, post and surrounding masonry in the stair jamb at third floor level followed pre-application discussions with Historic Environment Scotland (HES) initiated in October 2015. The application was designed to address concerns about the stability of masonry between the main block and the stair jamb. The proposals were amended following comments in March 2016.

Scaffolding has since been erected (which did not require SMC). This has allowed close inspection of the affected area and the identification of further issues with the

structure's stability. In particular, there is now doubt whether a supporting arch at second floor level would provide adequate support for the proposed consolidation.

As a result further amendments to the proposals have been discussed in May 2016. These include for providing structural support below the arch in order to ensure it does not collapse due to the additional weight the original proposals would add.

3. Proposals

Consented works
Emergency repairs to stair jamb internal wall

Description of works
It is proposed to rebuild a threshold and supporting central post at the aperture between the stair and main block on the third floor. The post would support the existing stone lintels above the aperture, which are in danger of collapse. There would be masonry infill below the rebuilt threshold and above the existing lintel.

A detailed plan and specification has been produced and sets out the Masonry Works as follows:

- Careful raking out of defective joints until a firm bed is reached and avoiding damage to adjacent stones.
- Re-pointing with mortar to match previous work.
- Building up of new masonry above the arch and below the threshold to match adjacent work.
- Fitting of a new sandstone threshold across the width of the aperture; built in without disturbing original fabric.
- Building up a new central post to match original profile; expected to comprise stone with chamfered opposite edges.
- Rebuilding of missing pocket of masonry above lintel to match adjacent.

It is also noted:

- A digital photographic archive would be taken of the areas as existing and completed. This would be lodged with Historic Environment Scotland at completion.
- New work would be differentiated by either recessing the face (by 15mm) or using a contrasting buff sandstone.
- The final details for the above item, and for the profile, size and method of fitting the threshold, would be agreed with Historic Environment Scotland before relevant works.
- Any required propping would be agreed with a structural engineer and designed to avoid any damage to original fabric.

Following detailed inspection in May 2016 it has been noted that the proposed new threshold is shorter than the relieving arch below. Consequently, the conservation architect and structural engineer have concluded that the arch may not be able to support the increased weight of the new threshold and column above. The weight may be sufficient to cause collapse.

To mitigate this it is proposed that lintels should be reintroduced below the arch to provide further support (lintels would once have been present here). The required span is assessed as being too large for the lintel to be unsupported stone (a supporting central column would presumably have once been present).

Therefore, it is proposed to install two Robeslee concrete lintels beneath the arch in order to bear the increased load. There would be masonry packing (as per the specification above) between the lintels and the arch. It is proposed that space would be left to either side of the concrete beams for stone lintels to be introduced at a subsequent phase of consolidation.

4. Representations received

No representations have been 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.

Historic Environment Scotland Policy Statement (2016):
3.4. Scheduled monument consent is required for any works that would demolish, destroy, damage, remove, repair, alter or add to the monument or to carry out any flooding or tipping on the monument. It is a criminal offence to carry out any of these works without consent.

3.14. A monument is included 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 this policy statement, 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 are being proposed because a condition summary and conservation management plan have highlighted considerable concerns about the condition of the wall between the main block and the stair jamb.

Specifically, at third floor level, the opening is topped by unsupported cantilevered lintels with cracking to adjacent mortar joints. The conservation architect and structural engineer state there is a risk of collapse, which would lead to significant loss of fabric and a clear risk to the safety of visitors.

The works now proposed are intended to stabilise the structure and minimise the risk of collapse. This would be achieved by reinstatement of a central masonry post to support the lintels. The former presence of the post is demonstrated by an imprint in the soffit of the lintels above. In turn, the post would be supported by reinstating the threshold at the foot of the opening.

The relieving arch below is not considered sufficient to support the weight of the threshold so it is also proposed to insert concrete lintels below the arch. Masonry packing would be used to fill gaps underneath the arch and threshold. This would also be used to infill a pocket in the existing wall above the existing lintels.

The proposed works have been designed in order to prevent a severe impact on the monument's cultural significance were the wall to collapse. They appear to have been carefully considered and properly planned, with the aim of minimising impact on historic fabric while supporting the wall and apertures.

The post, threshold and lintels to be inserted represent reinstatements of original elements that are now missing from the structure. The lintels are proposed to be concrete, as unsupported stone would not be sufficient. While this would be clearly apparent as a modern intervention, and hence may have an adverse effect on the monument's appearance, they are intended to be masked by stone at a later date. In any event this intervention would be reversible and is the minimum necessary to prevent collapse.

The other elements of the consolidation are, as far as possible, like-for-like replacements.

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

The application site does not lie close to any SSSI, SPA or SAC designation. National Biodiversity Network GIS data sets indicate no evidence for Protected Species in the relevant 100m grid squares.

d) Conclusion

The proposals have been designed to provide support to masonry that is in danger of collapse by installing a post, lintels, threshold and infill. Where possible this is in keeping with the existing structure and would utilise stone and mortar intended to match the existing fabric. However, new work would be distinguished by a method to be confirmed with HES (shallow recessing or use of a different colour of stone). The details of the threshold would also be agreed with HES prior to installation.

The new lintels designed to provide support to a relieving arch are not in keeping with the existing structure. However, they would be placed in order to leave room for stone lintels to be placed on their exterior to mask them at a later date. Such works do not form part of the current application but the proposed works are necessary to avoid collapse and are reversible.

Any small scale impacts to surrounding masonry would be mitigated by creation of a photographic record showing the fabric before and after the work.

It is concluded that the proposed works would have the minimal impact possible while mitigating the risk of a structural collapse. If they are not undertaken there would be a considerable risk of the permanent loss of a substantial part of the monument's fabric and hence its cultural significance. Therefore, the works are not inconsistent with the policy statement's paras 3.16 and 3.18. They should contribute positively to the long term preservation of the monument (para 3.14).

The proposals appear to be carefully considered, sensitively designed and properly planned and should accord with the policy statement para 3.20. They should also contribute to enhanced public appreciation and understanding of the monument by removing a safety risk that we understand is presently restricting access.

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.

7. Conditions

Granted without conditions.

8. Approval

Officer	**Simon Stronach**	**Date**	**7/06/2016**
Approved by	**John Raven**	**Date**	**07/06/2016**

Annex A – list of supporting documents

Plans as existing ref 16003/001
Section AA and detailed elevation ref 16003/002
Emergency repair notes to stair jamb wall, Asher Associates
Location of temporary supports, Sketch No AA4008/SK01, Asher Associates
Location of temporary supports, Sketch No AA4008/SK02, Asher Associates
160307 email to architect, acknowledging confirmation of photographic recording
Email from PDA (6 May 2016)
Sorbie Emergency Works Sketch (6 May 2016)