

## **Ellan Vhow, Loch Lomond**

### **Preliminary Report on Site Work during October 2013**

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**Ellan Vhow Preservation Fund**

#### **Introduction**

A programme of conservation and archaeological work was undertaken on the island of Ellan Vhow Loch Lomond during the period 21-23 October 2013. Ellan Vhow is a Scheduled Ancient Monument (Index No. M11073) and the work was undertaken with Scheduled Monument Consent. The grant of Scheduled Monument Consent dated 10 April 2013 (Case ID 201208180) followed on from on-site consultation with Dr Oliver Lewis, Inspector of Ancient Monuments and Hugh McBrien, West of Scotland Archaeology Service representing Loch Lomond and The Trossachs National Park on 7 August 2012

The objective of the Ellan Vhow Preservation Fund, which is funding the ongoing programme of work, is to promote 'archaeological study, preservation and maintenance of the castle, buildings and site.'

The island, its archaeological remains and work done to date are described in the previously circulated report *Ellan Vhow, Loch Lomond, Argyll and Bute Archaeological Survey Report, Conservation Recommendations and Proposed Works* by Fiona Baker and James Wright with contributions by Tom Addyman, Bruce McFarlin and Katherine McFarlin. March 2013.

Ellan Vhow castle is under threat due to significant vegetation growth consisting of saplings growing in the wall heads, dense ivy growth and, in particular, an elm tree growing out of the vaulted cellar. The dense ivy cover restricted a full assessment of the actual condition of the walls. The programme of work undertaken in October 2013 had the specific objectives of:

1. Felling of the elm tree (*Ulmus glabra*) growing out of the vaulted cellar in order to reduce its weight and vigour and so that the tree's energy will go into new growth which can be managed by coppicing and reduce further root penetration into the masonry.
2. Felling of saplings growing in the wall heads and outwards for the walls without disturbing their roots so that growth is curtailed and the weight and stress on the wall heads is reduced.
3. Hard trimming back of the ivy growth on all walls to reduce the weight and stress on the walls and restrict the spread and vigour of the ivy. The main stems were not cut so the ivy will grow back.
4. Standing building recording of all tower elevations by scale drawing and photogrammetry (as per the Phase 2 works described in the March 2013 report).
5. Topographic survey of the whole island.

The October 2013 field team comprised:

Ellan Vhow Preservation Fund: Bruce McFarlin

Archaeologists: Fiona Baker, Tom Addyman and David Connolly

Wildlife and Bats: Helen Lundie, Wild Surveys

Tree Surgeons: Liam MacKenzie assisted by Derek Triplett

Loch Lomond and The Trossachs National Park Ranger: Myles Maydew

### **Bat Survey**

A bat and wildlife survey was undertaken on Ellan Vhow at the request of Loch Lomond and The Trossachs National Park before any site works that disturbed the vegetation on the ruins took place. The wildlife and bat surveys were undertaken by Helen Lundie of Wild Surveys in July and August 2013. A copy of the report, *Ellan Vhow Protected Species Survey Report, October 2013* has been circulated to Historic Scotland, Loch Lomond and The Trossachs National Park and West of Scotland Archaeology Service.

Helen Lundie was present on Monday 21 October to check if any bats were in residence in the castle and to provide advice to the archaeologists and tree surgeon on what to do if bats were encountered. A single Pipistrelle soprano bat had been observed roosting in the ruin in August 2013. No bats were in residence and the tree survey, ivy trimming and archaeological recording were able to proceed.

### **Tree Felling and Pruning**

The tree surgery was undertaken by Liam MacKenzie assisted by Derek Triplett.

The main tree felling objective was the Scot's Elm tree growing out of the accessible vaulted cellar (W side of the tower, the probable vaulted cellar on the E side is not accessible and its entrance is obscured by collapse). The roots of this tree have penetrated the vault and are causing considerable stress on the roof of the vault. The tree has been felled by chainsaw to a stump approximately 30cm above ground level from which it will regenerate. The root plate has been left intact so the tree remains alive but the new growth can be maintained by coppicing and it is hoped that as the growth has been curtailed the root plate will not increase.

The tree was felled by chainsaw initially by removal of its limbs which were lowered on ropes and then by sectional felling of the trunk with the sections of trunk lowered on ropes. The rigging system employed to dismantle the elm was also utilised to assist with the removal of adjacent small trees. The ground surface was protected by tarpaulins and brash. The felling operation proceeded smoothly and all limbs and sections of the trunk were successfully lowered to the ground on ropes in a controlled manner.

All of the saplings growing out of the wall heads and projecting from the walls were felled at the base of the main stem and the root plates left in place. These saplings may regenerate but their growth has been curtailed and the weight and stress this placed on the wall heads has been reduced.

The large sections of trunk and major limbs were carried away from the tower and removed from the island by boat. The smaller brash was distributed around the island subject to possible future removal following consultation of the Park Ranger with colleagues. It is noted that trees are being felled on the island by campers for use as firewood.

No felling of saplings (less than 10cm diameter for which SMC is not required) was undertaken during the October works due to time constraints. It is proposed that saplings growing out of the island's enclosure wall (Feature 20) and the other buildings are cut back to stumps to curtail root growth during future site works.

### **Ivy Removal**

The dense ivy covering the tower's walls was cut hard back with hand tools but the main stems were left intact. The ivy at the top of the walls was only lightly trimmed back to reduce the weight but the wall heads themselves were undisturbed (apart from cutting back saplings). The wall heads are vulnerable and more subject to erosion than the walls and without a programme of consolidation works in place it is considered the best course of action is to leave them undisturbed.

The removal of the ivy allowed standing building recording of the tower's walls. The interior and exterior elevations were drawn at scale and the walls recorded by photogrammetry. The final drawings and photographs resulting from this work will be forthcoming in due course.

### **Building Recording**

The cutting back of the ivy and use of ladders allowed the walls of the tower to be fully inspected for the first time. Our initial impression is that the walls are in much better condition than might have been expected considering the dense ivy growth. The wall heads are unstable and require consolidation works to ensure they remain intact and apart from cutting the saplings no vegetation was removed from the wall heads as it is reducing water ingress into the wall core and the roots are actually holding the wall together at the wall head. Lime mortar repointing will also be required in places and these proposed consolidation works will be detailed in the forthcoming report on the standing building recording and condition survey.

Tom Addyman drew all interior and exterior elevations of the tower (except the exterior N wall) at a scale of 1:20 and details of architectural features at 1:50. The section lines and key points were surveyed in with the EDM. In addition photogrammetry was undertaken of all the tower's walls as well as a standard photographic record.

The elevation drawings and photographic survey will be forthcoming in due course.

### **Topographic Survey**

A topographic survey of the entire island was undertaken by David Connolly assisted by Fiona Baker using a Leica TC700 Series reflectorless Total Station tied to a

Rugged tablet running Penmap V2.4 survey software. Unfortunately the loch level was very high during the October works and it was not possible to access the shoreline to record the features previously observed (particularly during June 2012 when the loch level was exceptionally low). A return visit is proposed to record the shoreline features.

### **Proposals for further work**

Full proposals for further study and preservation works will be forthcoming on completion of the standing building analysis and topographic survey reports. The standing building recording and assessment will be accompanied by a detailed proposal for consolidation and preservation works. Any further consolidation works would be subject to a further application for Scheduled Monument Consent.

In the interim the project seeks a continuation of the existing Scheduled Monument Consent to:

- complete EDM surveying of the shoreline (low water level required, possibly late winter / after freezing temperatures)
- Scale drawing of the N exterior elevation of the tower
- Scale drawing of the interior of the vaulted cellar
- Scale drawing of the other buildings and walls on the island (NB Buildings 4 and 5 are partially inaccessible due to fallen trees lying on them, others are overgrown with moss making detailed assessment difficult. A further application for SMC to partially cut and remove the fallen trees lying on the buildings and clear moss to allow recording may be appropriate).
- Hand annotation of the EDM topographic survey map

There are also three trees growing out of collapsed stones located at the E end of the S wall (exterior) that it would be beneficial to fell. These trees (see photograph below) were not specifically identified in the current SMC and as their girth is greater than 10cm (perhaps 20cm – 30cm) they were not felled during the October work as it was felt this would have exceeded the agreed works. The trees are as tall as the tower and it is felt that before their roots extend any further towards / into the tower foundations it would be beneficial to fell them to stumps so that they can be managed by coppicing in the future.

### **Products of the work**

The products of the October 2013 works (full report forthcoming) are:

- Scale drawings of the interior and exterior elevations
- Photogrammetric survey of the interior and exterior elevations
- Topographic survey of the island
- Full photographic record of the works
- Written report on the standing building recording
- Identification of suitable consolidation and preservation works based on the standing building assessment (as per the Phase 3 works described in the March 2013 report).
- Updating of the existing report to incorporate the new field information and more detailed documentary research.

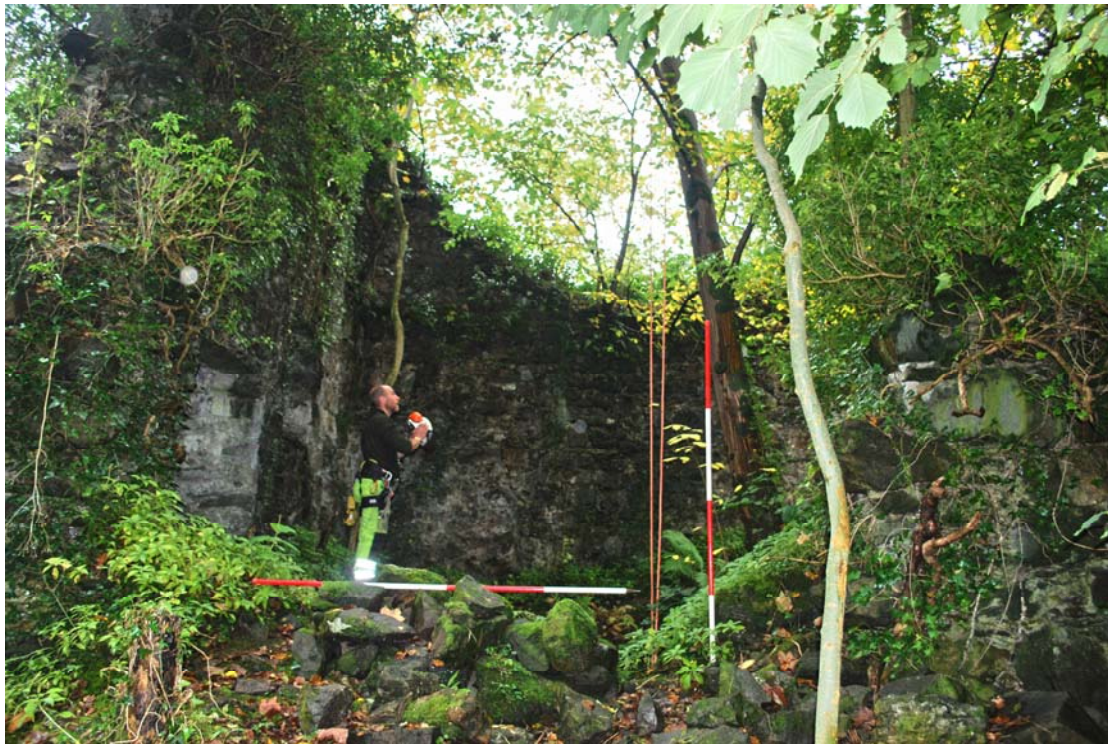
### **Acknowledgements**

The Ellan Vhow Preservation Fund wish to thank the many donors who have funded the work; Historic Scotland for granting Scheduled Monument Consent and supporting the project; Loch Lomond and the Trossachs National Park for their assistance and provision of transport and in particular Myles Maydew for his proactive support during the October work and the Squire Family for supporting the work and its objectives.

### **Photographs of the 21-23 October 2013 works in progress**

181 photographs were taken of the October 2013 works, a selection showing the main works in progress are below.

#### **Felling of the Scot's Elm growing in the vault**



View to S into interior of the tower with tree surgeon Liam MacKenzie and rigging attached to Scot's Elm prior to felling (2m scales).



View to SSW of the Scot's Elm growing out of the vault prior to felling.



View to WNW of the Scot's Elm growing out of the vault before felling.



View to SSW of tree surgeon Liam MacKenzie undertaking initial limb removal on the Scot's Elm.



View to the S of limb removal in progress on the Scot's Elm.





View to the S of Liam MacKenzie (in tree) and Derek Triplett lowering limbs from the Scot's Elm on a pulley system to avoid damage to the structure.



View to the S of sectional felling of the main trunk of the Scot's Elm, Liam MacKenzie in the tree lowering a section of trunk.



View to the S, Liam MacKenzie making the final angled cut to the stump of the Scot's Elm.



View to the W of the interior of the tower following the felling of the Scot's Elm (tree stump in foreground) and other small trees and saplings.



View to W of the entrance to the vault and stump of Scot's Elm after felling.

**Felling of saplings on the wall heads**



View to SE, felling of saplings on the E wallhead (Liam Mackenzie up ladder and Derek Triplett holding ladder)



View to ESE, Felling saplings on the S wallhead (Liam Mackenzie up ladder and Derek Triplett holding ladder).

**Hard pruning of the ivy on the tower's walls**

**North Wall**



View to the S, North Wall exterior prior to cutting back of saplings and ivy.



View to the S, North Wall exterior after cutting back of saplings and ivy.

**East Wall**



View to W of the exterior of E wall prior to ivy trimming.





View to W of the exterior of E wall with ivy trimming at bottom 1.5m completed.



View to NNW, Liam Mackenzie trimming back ivy on the E wall exterior.



View to W of the exterior of E wall after ivy trimming.

**South Wall**



View to NNW of the exterior of S wall prior to ivy trimming.



View to E of the exterior of S wall prior to ivy trimming.



View to NE of the exterior of S wall prior to ivy trimming.



View to W, Bruce McFarlin and Myles Maydew removing ivy from the S wall, ventilation slit to vaulted W cellar exposed.



View to N of the exterior of S wall after ivy trimming. The three trees at the right of the photograph are growing out of a heap of collapsed stones and we recommend these trees are also felled to stumps so that their roots do not increase and their energy is put into top growth that can be managed by coppicing.

### **West Wall**



View to E of the exterior of W wall prior to ivy trimming.



View to E, Bruce McFarlin cutting back ivy from the exterior of the W wall.



View to the E, the W wall exterior following cutting back of the ivy.



**Standing Building Recording**



View to the E, David Connolly and Tom Addyman recording the interior elevation of the E wall after elm, ivy and saplings removed. Note vegetation left on the wallheads to help protect the wall core.



View to the S, Tom Addyman recording the interior elevations after elm, ivy and saplings removed.

**Surveying**



David Connolly



Fiona Baker and David Connolly



View to the SE, general view of the tower with elm and saplings felled and ivy cut back.

**Progress!**



April 2007, the North Wall



October 2013, the North Wall.