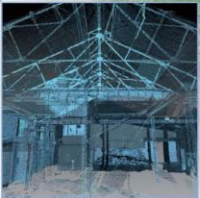
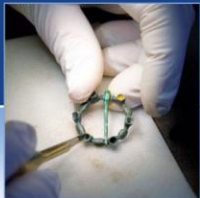


Inverfarigaig Bridge Survey Report

AOC 21847

18th March 2011



ARCHAEOLOGY

HERITAGE

CONSERVATION

Inverfarigaig Bridge

Laser Scan Survey

On Behalf of: **Forestry Commission Scotland**
1 Highlander Way
Inverness Business Park
Inverness

National Grid Reference (NGR): **NH 52175 23849**

AOC Project No: **21847**

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Illustration by: **Gemma Hudson**

Date of Fieldwork: **28th Feb - 1st Mar 2011**

Date of Report: **18th March 2011**

This document has been prepared in accordance with AOC standard operating procedures.

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Inverfarigaig Bridge

Survey Report

1. Introduction

1.1 Severe winter weather in 2010/2011 caused further significant damage to the Wade Bridge at Inverfarigaig, Loch Ness (NH 52175 23849), beyond that which had already been sustained by the time of the listing of the bridge in 1971 (Category B, HB Number 1870). Almost the entirety of the southern, west-facing spandrel of the bridge has now collapsed, leaving the arch unstable and exposing the gravel core of the bridge. A laser scan survey was undertaken and photographic record compiled on behalf of the Forestry Commission on 28th March/1st February 2011.

2. The Bridge

2.1 Inverfarigaig Bridge was built in 1732, towards the end of General Wade's campaign of road and bridge building in the Highlands (Curtis 1980:477). The bridge is a typical single-arched structure, spanning the River Farigaig and now by-passed by a new bridge, serving the modern B852 Inverness- Fort Augustus road. Wade's original route followed closely the path of the modern B852, and Inverfarigaig represents one of the rare points along at which the original road deviates from the modern route. The bridge was in use as the main crossing point for the road until the mid 20th century, when the modern replacement bridge was built. Both Roy's map of 1755 (Figure 2) and the Ordnance Survey First Edition map (Figure 3) show the road now known as the B852 using Wade's bridge as the crossing point of the River Farigaig.

2.2 The Wade bridge spans 10.75m (35ft 4in), and has a carriage width of 3.58m (11ft 8in). The features of the bridge are typical of Wade's construction: the spandrels, where surviving, are near vertical, although less usually the parapet is not level, rising to the higher ground on the south side of the river (cf. Curtis 1980:481). The arch stands 5.6m above the river, and is constructed from edge-set slabs, averaging c.0.4 by 0.4 by 0.1m. The wall faces of the bridge have been partly rendered with lime mortar: this was occasionally carried out for the purposes of waterproofing (*ib id*), although it is not certain when this was applied to the Inverfarigaig bridge. Buttresses have been added to the NW and SE spandrels, the latter in stone and of unknown date but the former in concrete blocks, almost certainly added at the time of the modern bridge construction.

2.3 Condition

2.4 Parts of the western parapet had already collapsed by the time of the listing of the bridge in 1971, although a photograph taken by the RCAHMS in 1975 suggests that this collapse was relatively minor (Figure 4). The area of collapse newly exposed in 2010/11 has extended the unstable area of the bridge to the SW, so that the majority of the levelling overburden retained within the walls of the bridge has been lost. This collapse has left the main arch badly compromised, and although around half of the width of the arch still stands, this is in very fragile condition and is in imminent danger of collapse. A large area of stonework fell from the bridge during the survey, demonstrating that the collapse is ongoing, and it seems probable that without urgent remedial works the arch will collapse completely.

2.5 The remainder of the bridge is generally in good condition, although saplings have taken root in several places along the parapet and in parts of the surviving walls.

3.0 Laser Scanning

- 3.1 A laser scan survey of the bridge was undertaken on 28th February/1st March 2011. A Trimble GS101 laser scanner was used to scan the bridge from five positions, as close to the bridge as it was safe to access. The survey was controlled using spherical and flat reflective targets, located to a local coordinate grid using a Trimble S6 total station.
- 3.2 The scan data was processed using Trimble Realworks 6.5, before being exported to AutoCAD 2009 for the production of 2D linework and to Pointools for the production of orthoimagery and animations.
- 3.3 The data is supplied as an archive in Realworks .rwp, Pointools .pod and raw ASCII text file format, comma delimited with the structure X, Y, Z, Intensity, R, G, B, Normal X, Normal Y, Normal Z.

4.0 References

Curtis, G.R. 1980 'Roads and bridges in the Scottish Highlands: the route between Dunkeld and Inverness, 1725-1925', *Proc Soc Antiq Scot*, vol.110, pp.475-96

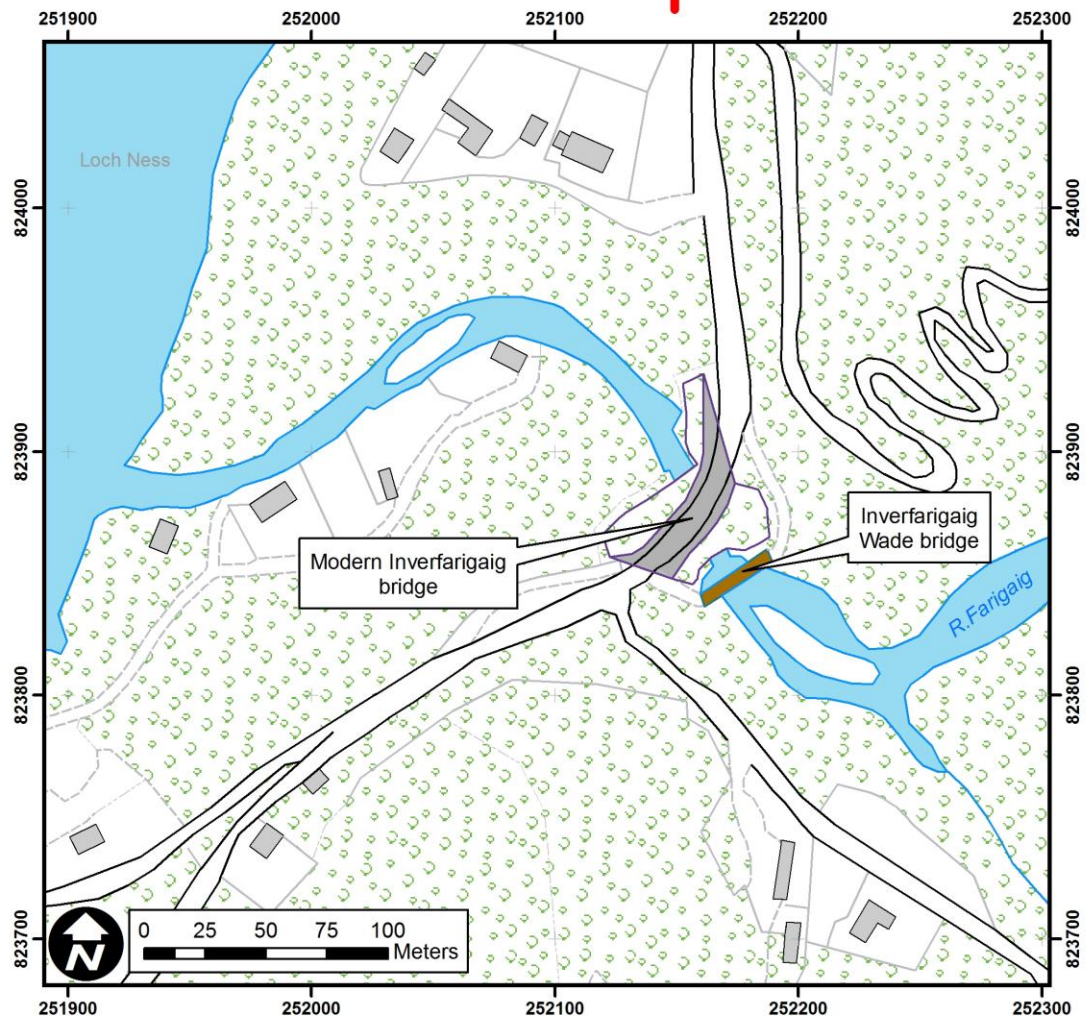
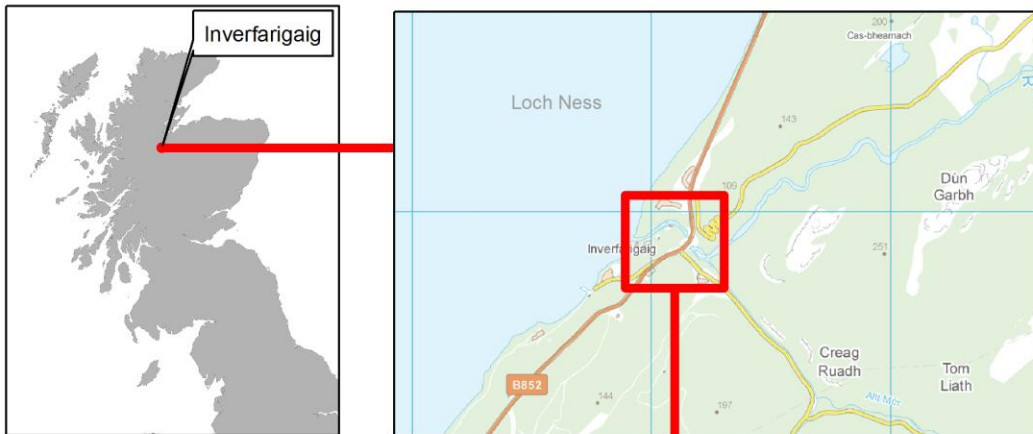


Figure 1: Site Location Plan



Figure 2: Inverfarigaig as depicted on Roy's map of 1755.

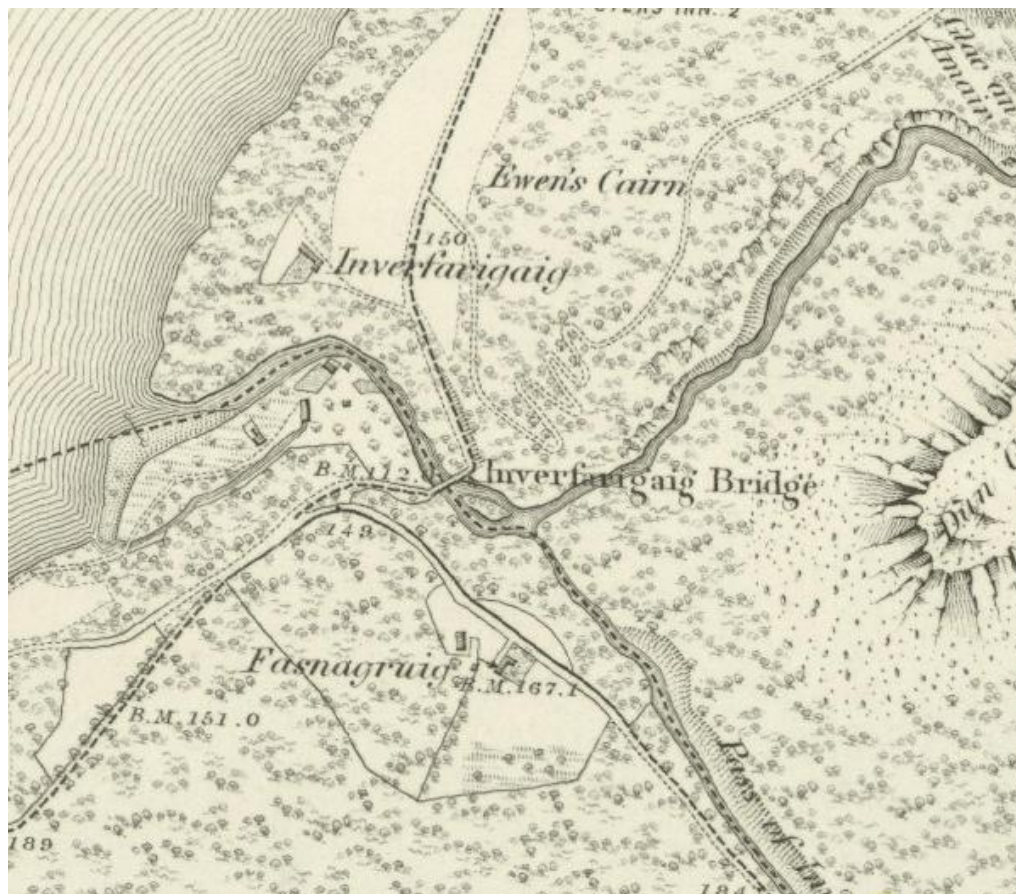


Figure 3: Inverfarigaig as depicted on the Ordnance Survey First Edition map (Sheet XLI, surveyed 1871, published 1875).









Figure 4: Photograph of the bridge taken by RCAHMS in 1975 (Image A15996, (C) RCAHMS).



Figure 5 : Inverfarigaig Bridge Plan

Key

| | | | |
|---|----------------------|---|---------------------------|
|  | first collapse phase |  | Inverfarigaig Wade Bridge |
|  | River Farigaig |  | modern buttress |
|  | parapet |  | parapet |

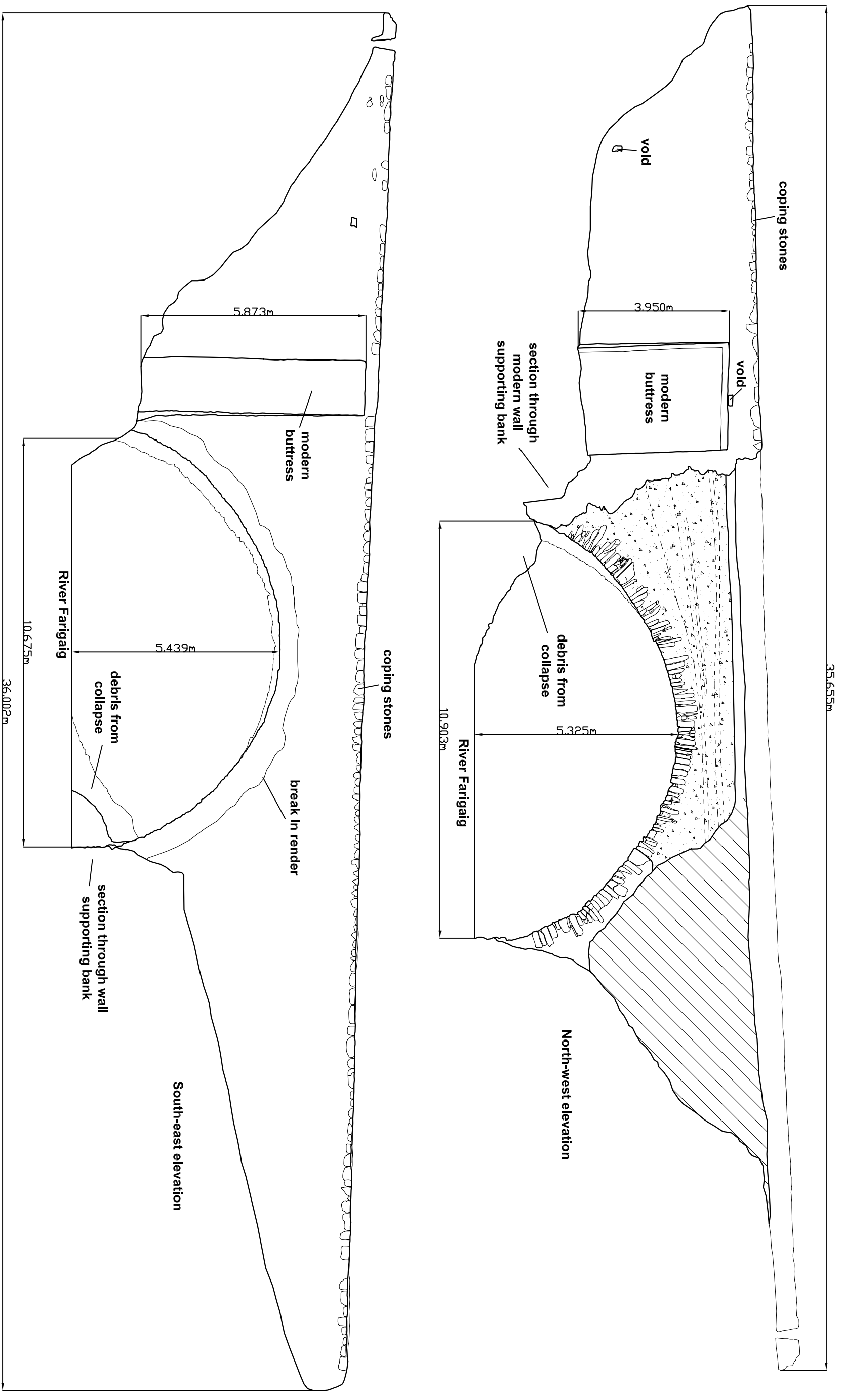


Figure 6 : North-west and south-east elevations

Key

- first collapse phase
- second collapse phase
- gravel layers

Plates



Plate 1: General view of the bridge from the NW.



Plate 2: General view of the bridge from the SW.



Plate 3: Detail of the recent collapse of the bridge.



Plate 4: View of the recent collapse from the W.



Plate 5: View of the arch from the SW.



Plate 6: View of the arch from the NW.



Plate 7: General view of the bridge from the SE.



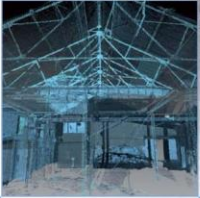
Plate 8: General view of the arch from the SE.



Plate 9: View of the SE buttress from the NE.



Plate 10: View of the E-facing elevation.



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