Archaeological Assessment including;

an intra-riverine survey and detection survey in advance of repair work Farnanes Bridge, (Farnanes/Drumdrasdil townlands), Co. Cork

Dive licence 22D008 (intra-riverine), Detection licence 22R0043

By

Maurice F. Hurley, *D.Litt, MA, FSA, MIAI*

Consultant Archaeologist

6 Clarence Court

St. Luke's

Cork

For

Mott MacDonald

5 Eastgate Avenue

Eastgate

Little Island

Cork

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INTRODUCTION

Cork County Council have appointed Mott MacDonald to undertake the design of repair works to Farnanes Bridge. The bridge carries the L4612 over the River Bandon (Figure 1 &2).

Following a structural inspection, it was decided that the existing bridge was structurally defective and requires replacing.

The demolition of the existing Farnanes Bridge (Bridge Ref: CC-L4612-002.00) along the L4612 will be undertaken and replaced with a precast concrete portal frame culvert bridge. The precast units are to be founded on reinforced concrete spread foundations. Steel parapets and vehicle restraint system will be added to the bridge structure (Figure 3). Resurfacing and regrading of the approach roads along the L4612 will also be undertaken (Plates 1-2).

Mott MacDonald, the contractors, on behalf of Cork County Council, have engaged Maurice Hurley to carry out an Archaeological/Architectural impact assessment to accompanying a Part 10 application for the works. The aim of the survey was to address any potential impacts that the works may have to the historic fabric or archaeological integrity of the bridge, associated features/structures and its cultural context.

As part of the assessment, I undertook a riverine survey of c. 20m upstream and downstream of the bridge with a c. additional 20m surveyed on both sides of the river to the west (upstream) of the bridge (Plates 12-14) to assess any evidence that may have been present in the river for earlier structures (earlier bridge, fording points, etc). To that end a licence to carry out a Dive Survey (wade and search) of the riverbed as well as licence to use a detection device was obtained; both licences were issued by the Department of Housing, Heritage & Local Government (National Monuments Service) following consultation; ***Dive licence 22D008, Detection licence 22R0043.*** The results of both surveys are outlined below as part of this archaeological assessment.

Plate 1. Farnanes Bridge looking S. at the point where the L4612 crosses the River Bandon

Plate 2. Farnanes Bridge looking N. at the point where the L4612 crosses the River Bandon. A ridge of rock lies c. 50m to the north of the floodplain.

DESCRIPTION OF THE BRIDGE

Farnanes Bridge is a single-span structure which carries the L4612 over the River Bandon to the northwest of Dunmanway (Figure 1).

The structure is a steel beam - concrete infill slab bridge with reinforced concrete abutments. The parapets are a mixture of reinforced concrete and steel railings. The current bridge is of twentieth century construction possibly the 1920s/1930s and probably replaced an earlier bridge that may have been washed away by floods or blown-up in the 'troubles' of 1920-1922, a time when many rural bridges in County Cork were destroyed, particularly in the Civil War. The mass concrete structure of the bridge abutments/piers (north and south banks of the river) and the overhead steel girders and concrete slabs are clearly of early to mid-twentieth century date and there is no trace of earlier stone-built piers, abutments or foundations either within the river channel or on either bank of the river.

The parapet walls are of mass concrete construction, that on the upstream side being solid (Plated 1 & 4) and that on the downstream side being composed of three solid units and two open areas wherein steel railings form the parapet (Plate 3 & 16); each unit has three railings.

The span length is 5.75m. The bridge crosses the river at 90 degrees. The out-to-out width is 4.56m and the carriageway width is 2.82m (Plates 3-5).

The concrete slabs of the single span bridge are carried on steel girders. The girders have sagged of late and are now supported by Acros (a temporary solution to support the sagging element of the bridge), but flooding when the river is in high spate has washed away some of the temporary supports, only two of of which now remain in place, one is collapsed in the river and one or two are lying by the riverbank. The structural issues with the bridge are not in doubt and repair/replacement is essential.

Plate 3. Looking west from the downstream side looking upstream

Plate 4. Looking east (downstream), the channel is characterised by the growth of water-crowfoot which is particularly characteristic of the River Bandon (Angel, 1981).

Plate 5. The concrete slabs of the single span bridge are carried on steel girders. The girders have sagged on late and are now supported by Acros, only two of which now remain in place, one is collapsed in the river and one or two lying by the riverbank.

Plate 6 c. 20m downstream of Farnanes Bride where the water picks up speed. The channel appears to have been drained (and straightened?) from this point downstream; both banks are mounded with gravel upcast from the drainage that probably took place in the 1970's judging by the tree regeneration.

The bridge is **not a Recorded Monument** nor is it listed in the *National Inventory of Architecture*.

ARCHAEOLOGY MONUMENTS IN PROXIMTY TO THE BRIDGE AND THE POTENTIAL ARCHAEOLOGICCAL RESOURCE OF THE RIVER CHANNEL AND THE AREA

Two Recorded Monuments; a standing stone and *fulacht fia* are located upstream of the bridge on the north side of the river (Figures 4-6 and Plate 7-9).

A description of both monuments is given below.

CO107-006001-

Class: Standing stone

Townland: FARNANES (Carbery E. (W.D) By.)

Scheduled for inclusion in the next revision of the RMP: Yes

Description: In pasture on E-facing slope. Rectangular stone aligned NE-SW (H 2m; 0.9m x 0.5m).

Distance from the bridge: 55m

CO107-006002-

Class: Fulacht fia

Townland: FARNANES (Carbery E. (W.D) By.)

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Low circular mound (diam. 12m; H 0.5m) in level marshy land on N side of Bandon River. Depression (diam. 5m) in centre may indicate trough area.

Distance from the bridge: 73m

The above description is derived from the published *Archaeological Inventory of County Cork. Volume 1: West Cork* (Dublin: Stationery Office, 1992)

Plate 7. Looking SW(upstream of the bridge). To the west of the bridge the river is slow moving as it meanders through the floodplains having risen as the convergence of several mountain streams in the hills in the background. Recorded Monuments (CO107-006001 and CO107-006002) are on the plain, right hand-side of photo (see Plate 8 & 9, below).

Plate 8 Recorded Monument (CO107-006002, fulacht fiadh) looking E with Farnanes Bridge, c. 73m (background)

Plate 9. Recorded Monument (CO107-006001, standing stone) looking N/NEE. Farnanes Bridge is located at a distance of c. 55m

The occurrence of fulachta fiadh in stream side/riverside settings or adjacent to natural sources of water is well documented and the occurrence of at least one clearly visible fulactha fiadh on

the northwest side of the Bandon River at a distance of 55m from the bridge is indicative of a pattern of distribution of fulachta fiadh, and not necessarily relating to fording points of rivers. It is possible to cross the Bandon River on foot at numerous points in this area and there is no reason to suppose that the prehistoric or historic period would have been anymore restrictive. The natural lay of the land (Figure 5) with its east-west rocky ridges and drainage channels (including the upper reaches of the Bandon River) obviously provided some more topographically accessible crossing points and it is debatable whether markers such as the standing stone in the townland of Farnanes indicated an ancient crossing point; notwithstanding there is no specific evidence for an earlier crossing point to that recorded on the first edition Ordnance Survey map when the mountain road had already been laid out with a bridge on the same as the present bridge. The extensive road networks of West Cork are largely a product of the later eighteenth and nineteenth centuries.

THE SURVEY

The riverine survey (Licence 22D008) and metal detection survey (22R0043) focussed on the areas beneath the bridge and a c. 20m areas upstream and downstream of the bridge and well as an addition 20m on the riverbank to the west of the bridge.

Baselines were established to the east and west of the bridge to allow for the establishment of 2msq grid which was set out with ranging rods.

The detection device used was an all-terrain underwater metal detector. To the west of the bridge the river is slow flowing and the water level varied with some deeper pols on the southwestern side. C. 5m to the east of the bridge the water level speeds up considerably as the river was drained in the past (1960's/1970's) judging by the tree regeneration and the gravel mounded up on both sides of the river (Plate 6). Consequently, the riverbed to the east of the bridge is of modern origin. There was no evidence for drainage to the west of the bridge The only positive signals detected in the course of the survey relate to modern construction and repair of the bridge.

Plate 10. The survey underway to the west of the bridge (Northern bank)

Plate 11. The survey underway to the west of the bridge (centre of channel)

Plate 12. The survey underway to the west of the bridge (centre of the channel), looking SW

Plate 13 Riverbank detection survey looking NW

Plate 15. Downstream (northeast) riverbank detection survey, looking NE

Plate 16. Downstream (northeast) riverbank detection survey

Plate 17. The survey underway to the east of the bridge, looking NE.

Plate 18. The survey underway to the east of the bridge.

Plate 19. The survey underway to the east of the bridge, centre of channel

IMPACT OF THE PROPOSAL

The new bridge will be built of precast units. The units will be founded on reinforced concrete spread foundations. Steel parapets and vehicle restraint system will be added to the bridge structure. The detail of the proposal are outlined in Figure 3.
There will be no work on or within the river channel, and access to create the new foundations for the north and south piers will from the road itself. The only access point close to the river will be from the field to the southwest (background in Plates 11-12).

There will be no activity whatsoever in the field to the northwest of the bridge where the monuments are located (Plate 8-9) of either to the north and south where the gravel banks are located (Plate 6). Therefore, there will be no impact on the known monuments from the proposed works due to the distance of the monuments from the bridge and because the lands to the northwest of the bridge will not be accessed during the works.

There will be no impact on the archaeological resource of the site or its environs. The bridge itself is a modern structure and there is no indication of an earlier bridge structure. An earlier

bridge evidently did exist as the river was crossed in the early nineteenth century (Figure 6) and this must have been byway of a bridge as a ford is not named on the first edition Ordnance Survey map. Simple single or multiple span clapper bridges were common constructed on the smaller rivers and mountain streams in West Cork but these structures were generally replaced from the mid nineteenth century. The stone from the earlier bridges was often incorporated within later structures or used to fill the abutments leading to the later bridges. There is no visible evidence of ay earlier structural elements at Farnanes Bridge.

RECOMMENDATIONS

There are no reasons pertaining specifically to riverine survey or metal finds (or finds or features of any particular material) present in the riverbed that would warrant further mitigation There in no reason, in my opinion the works should not proceed as proposed without further restriction relating to archaeology.

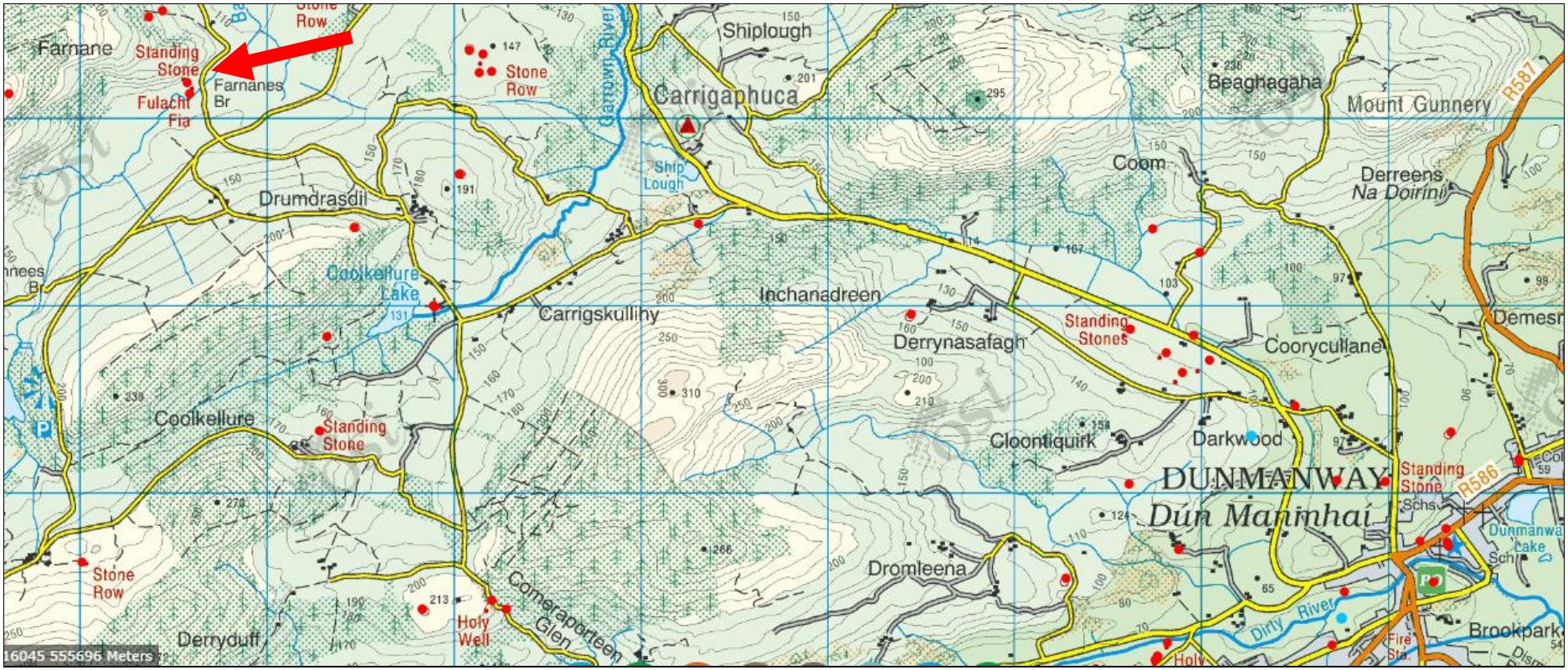

Figure 1. Site Location indicated with the red arrow

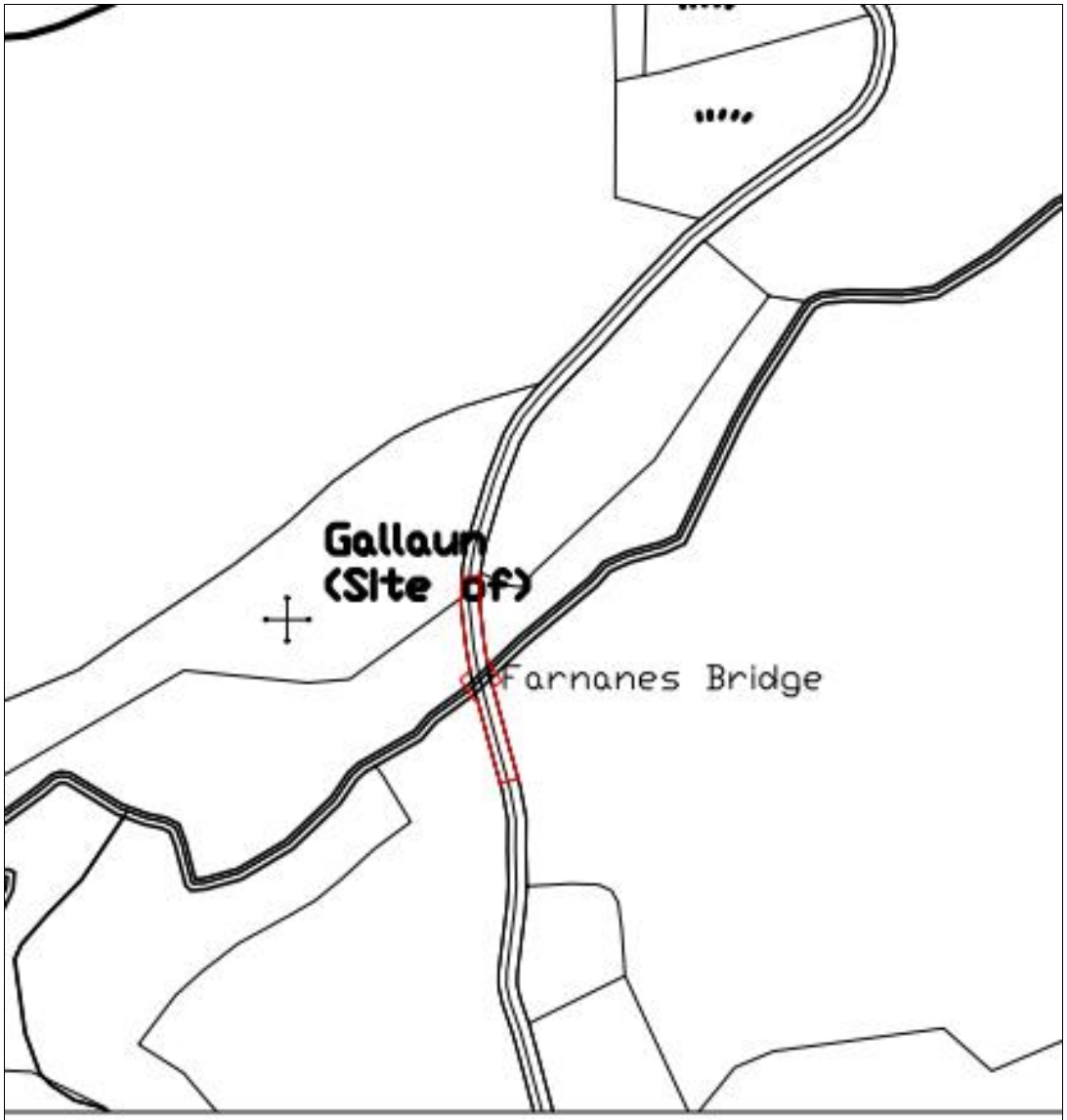

Figure 2

Site Boundary Plan
(Outline in Red)
Scale 1:2500

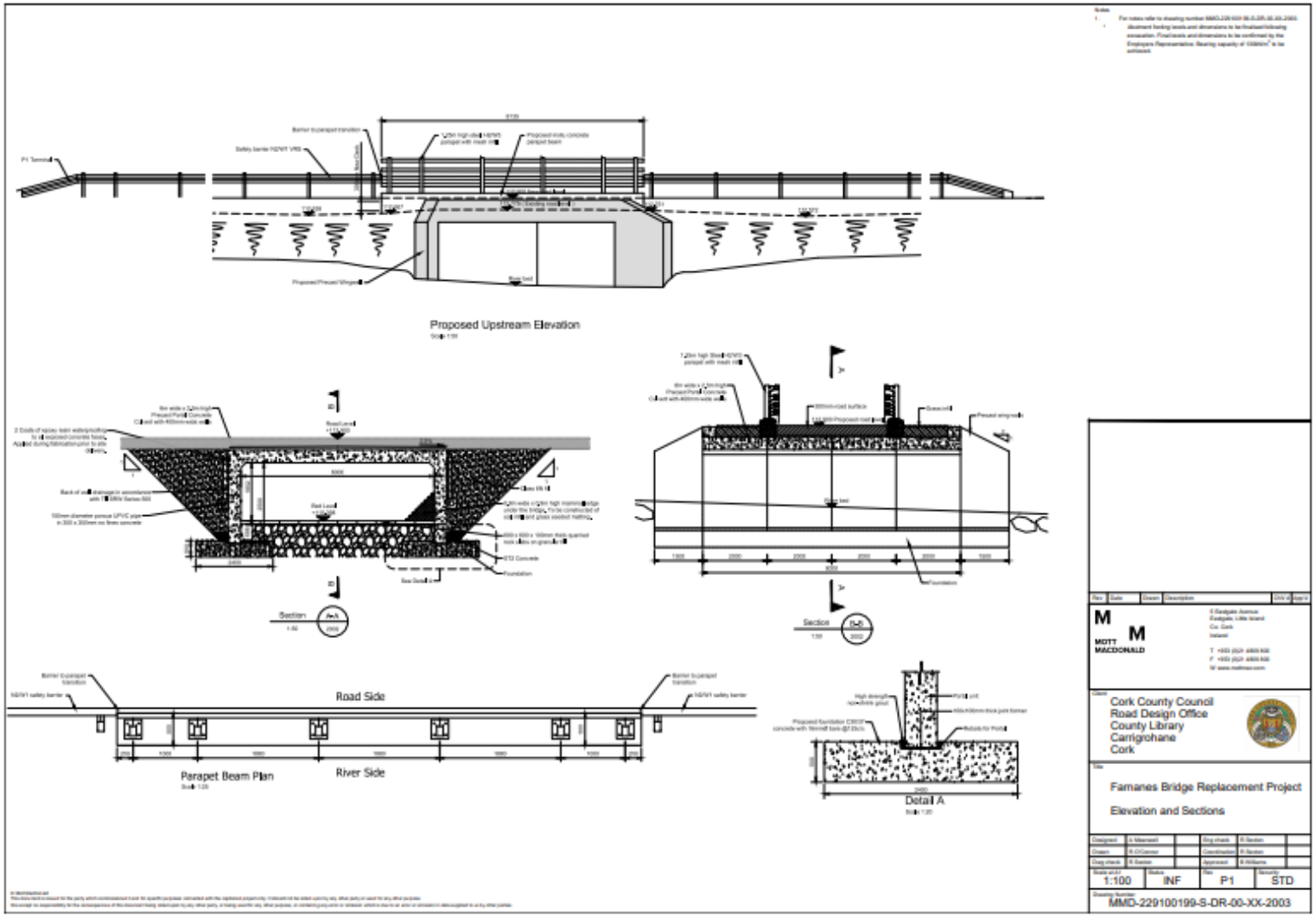

Figure 3. Detail of the proposed rebuilding of the bridge

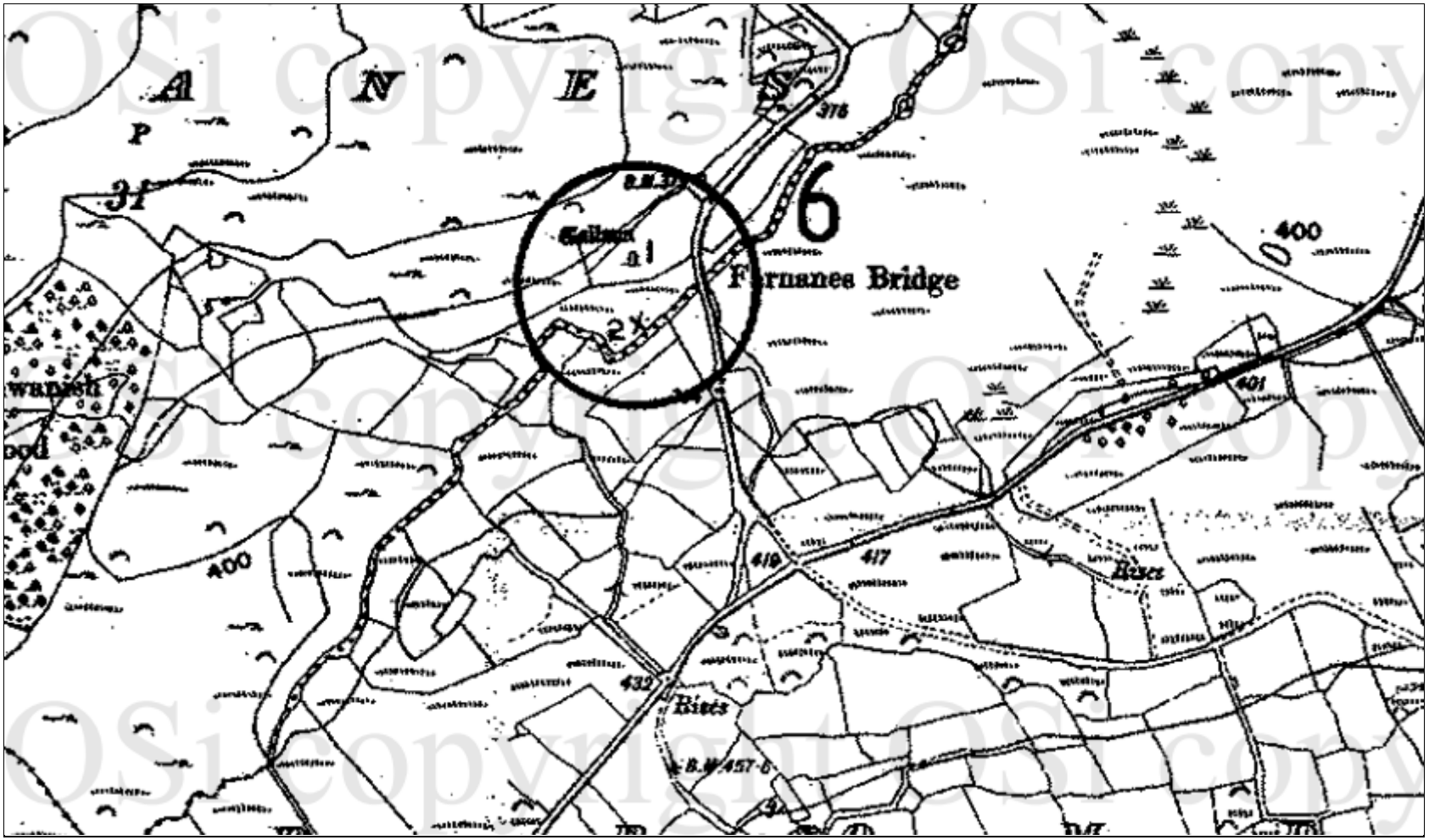

Figure 4. Record of Monument and Places Map showing the location of the standing stone (CO107-006001) and fulacht fia (CO107-006002)

Figure 5 Aerial photograph showing the terrain in area under review; woodland downstream, bog upstream (north) and agricultural land upstream (south).

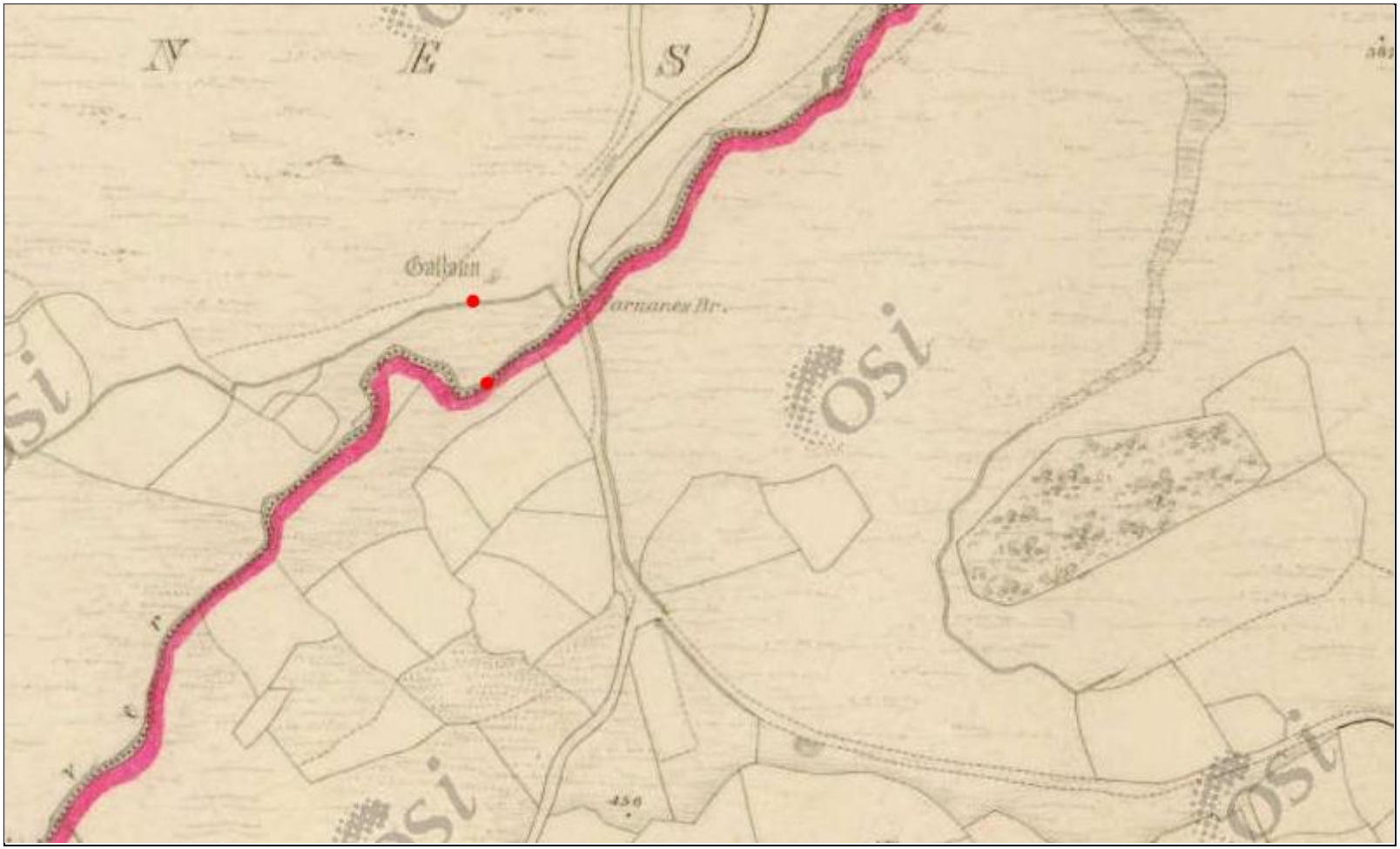

Figure 6 First edition Ordnance Survey Map showing a situation as today (see Figure 5)