



# Draynes Bridge, Cornwall

## Historic building record



## Historic Environment Projects



# **Draynes Bridge, Cornwall**

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<b>Report author(s)</b>	<b>Nigel Thomas</b>
<b>Checked by</b>	<b>Jacky Nowakowski</b>
<b>Approved by</b>	<b>Andrew Young</b>

Historic Environment Projects

Environment Directorate, Cornwall Council

Fal Building, County Hall, Treyew Road, Truro, Cornwall, TR1 3AY

Tel: (01872) 323603

Email: [hes@cornwall.gov.uk](mailto:hes@cornwall.gov.uk) Web: [www.cornwall.gov.uk](http://www.cornwall.gov.uk)

## **Acknowledgements**

This study was commissioned by Ben Parr of Parsons Brinckerhoff (on behalf of Cormac Solutions Ltd) and carried out by Historic Environment Projects, Cornwall Council.

The author carried out initial fieldwork and recording of the bridge and surroundings. Colin Buck undertook a second site visit to the bridge during strengthening works.

The Project Manager was Nigel Thomas.

The views and recommendations expressed in this report are those of Historic Environment Projects and are presented in good faith on the basis of professional judgement and on information currently available.

## **Freedom of Information Act**

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.



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Institute for Archaeologists

## **Cover illustration**

Draynes Bridge, viewed from the south (downstream) side, November 2012

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## **Abbreviations**

CRO	Cornwall County Record Office
EH	English Heritage
HER	Cornwall and the Isles of Scilly Historic Environment Record
HE	Historic Environment, Cornwall Council
MCO	Monument number in Cornwall HER
NGR	National Grid Reference
OD	Ordnance Datum – height above mean sea level at Newlyn
OS	Ordnance Survey
RIC	Royal Institution of Cornwall

## **1 Summary**

Draynes Bridge is a four span granite lintel bridge carrying a minor road over the River Fowey in southeast Cornwall. This bridge is listed at Grade II and strengthening proposals designed by Parsons Brinckerhoff and Cormac Solutions Ltd (on behalf of Cornwall Council's Highways) prompted a programme of historic building recording both before and during the works.

Although a bridge existed here in earlier centuries the present structure was built in 1876, as commemorated by prominent date stones on each parapet. The bridge has spans carried on quarried granite lintels linking the abutments and cutwaters (a technical development of the 'clapper bridge' principle). This form of bridge construction is relatively common throughout Cornwall, although examples of multi-span bridges on larger rivers are less frequently encountered.

Detailed examination revealed that the bridge contains elements that pre-date 1876, particularly granite lintels in the easternmost span. The St Neot Tithe Map of c1840 shows a ford running across the Fowey to the south of the present bridge site, with a narrow packhorse bridge or footbridge also spanning the river. An embankment running alongside the western approach to the present bridge appears to be a remnant of the earlier bridge causeway. The approaches to the ford on each side of the river are also still visible.

Draynes Bridge historic building record



Fig 1 Location map

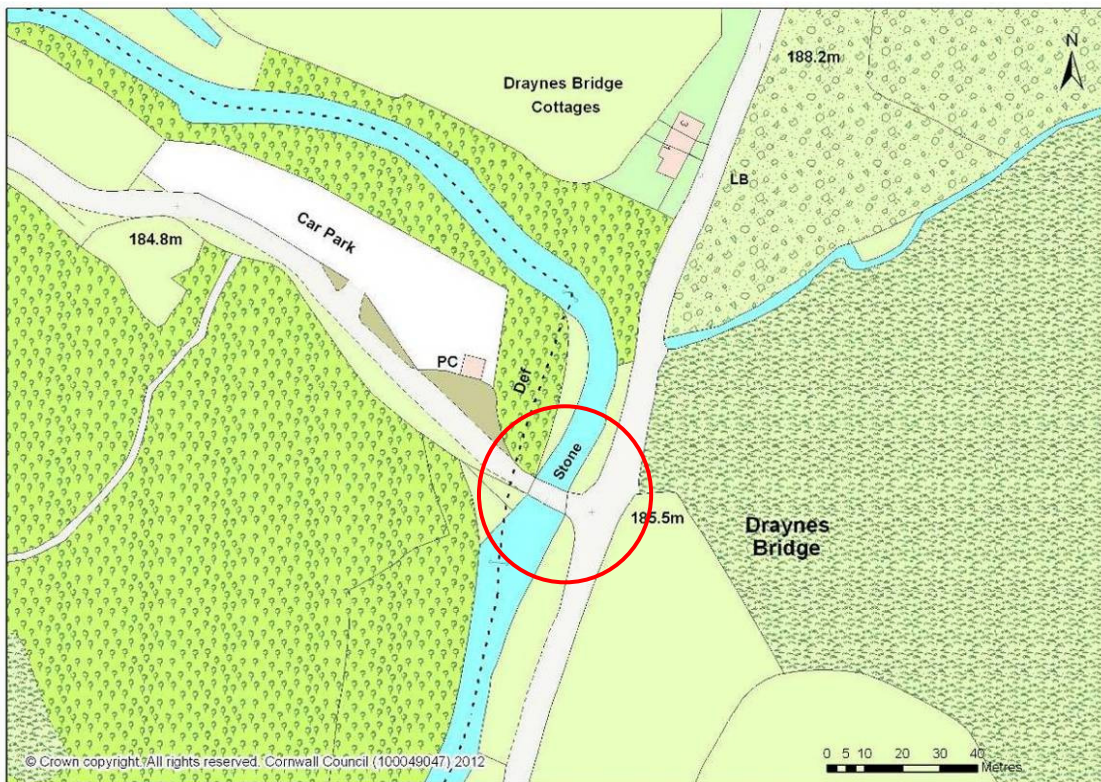


Fig 2 OS MasterMap digital mapping 2012



## 2 Introduction

### 2.1 Project background

Draynes Bridge is a four span granite lintel bridge carrying a minor road over the River Fowey near the hamlet of Redgate in southeast Cornwall. This bridge lies on the boundary between St Neot and St Cleer parishes. The structure is listed at Grade II and its description says:

Bridge over the River Fowey. Rebuilt and dated 1876. Slatestone rubble with granite dressings. The bridge has 4 spans with 3 piers with cutwaters on the upstream and downstream sides. Date stone set centrally and projecting above the parapet wall on the downstream side. Parapet walls about one metre high, with roughly hewn granite copings. The bridge is about 14 metres long and about 4 metres wide. Draynes Bridge is similar in construction to Ashford Bridge (q.v.).

(Source: Heritage Gateway website [www.heritagegateway.org.uk](http://www.heritagegateway.org.uk))

The bridge has a limited carrying capacity for modern traffic weights so Cornwall Council has proposed a programme of strengthening works. As the bridge is of historic significance Phil Copleston, the local Historic Environment Planning Advice Officer, provided a brief setting out requirements for recording the structure in advance of and during strengthening works (see Appendix 1). Ben Parr of Parsons Brinckerhoff, acting on behalf of Cormac Solutions Ltd (and Cornwall Council Highways), approached Historic Environment Projects to undertake the recording of the bridge. Following agreement of the costs, a project design/Written Scheme of Investigation (WSI) was prepared and agreed (see Appendix 2).

### 2.2 Aims

The principal aim of the study was to provide a more detailed understanding of the historical development of the river crossing and the existing bridge. The objectives were to obtain a photographic and descriptive record of the site prior to alterations, and also to make observations during the course of strengthening works, and record any structural details temporarily revealed.

### 2.3 Methods

The work comprised a study equivalent to an English Heritage Level 2 record (photographic and descriptive survey; see English Heritage 2006). It comprised a desk-based search of readily available sources, followed by site visits. Results were then archived, analysed and summarised in this report.

#### 2.3.1 Desk-based research

In advance of site visits historical databases and archives were consulted in order to obtain information about the history of the site and the structures and features that were likely to survive. A full list of the sources consulted appears in the References (Section 9).

#### 2.3.2 Fieldwork

Two site visits were undertaken. The first (by the author) took place on 30<sup>th</sup> October 2012 in order to record the bridge in advance of the proposed strengthening works. The principal recording medium was photography, using both film-based monochrome photographs and colour digital images.

The full methodology for the photography is set out in the project design (see Appendix 2). Monochrome photographs were taken with a Pentax 35mm film camera mounted on a tripod. Colour photographs were taken using an Olympus digital camera having a resolution of ten million pixels.

Descriptive notes were also made, and recorded on a copy of a measured survey provided by Parsons Brinckerhoff.

A second site visit was made by Colin Buck on 31<sup>st</sup> January 2013 to record the structure of the roadway during the initial stages of the strengthening works. After removal of the existing road surface the exposed bridge deck was cleaned. Further photography was undertaken, and a measured sketch plan was made of the bridge lintel structure.

### **2.3.3 Post-fieldwork**

A professional laboratory processed the film-based photographs. Negatives and prints were then archived according to the requirements of the Cornwall HER. Digital photographs were downloaded and stored on Cornwall Council's computer network. Images were processed as necessary using Adobe Photoshop Elements software, and a selection of these images appear in this report.

Labels and additions were made to the measured survey as necessary, using AutoCAD software.

## **3 Location and setting**

Draynes Bridge is situated in a picturesque valley on the parish boundary between St Cleer and St Neot parishes at NGR SX 22822 68914 (Figs 1 and 2). The bridge lies at approximately 180m OD and carries a minor road over the River Fowey that heads westwards towards Draynes hamlet, the road branching off the Redgate-Bolventor route.

The bridge is located where the river flows off the higher ground of Bodmin Moor and into a wooded valley that contains the picturesque Golitha Falls. Not far upstream from the bridge the river meanders from the northwest and the bridge crosses the river where the valley is oriented northeast – southwest.

This moorland area is part of the Bodmin Moor igneous granite intrusion. Over the centuries the valley of the River Fowey has been extensively worked for alluvial tin and the characteristic heaps and hollows of streamworking are visible in the woodland below the bridge.

Aside from the listing of the bridge itself the beautiful landscape surrounding it carries several planning designations, including:

- Area of Outstanding Natural Beauty
- Area of Great Scientific Value
- Area of Great Historic Value (west side of bridge)
- County Wildlife Site (NE of bridge including Bulland Downs)
- Site of Special Scientific Interest (both banks of the river to the south of the bridge)
- National Nature Reserve (west side of river south of the bridge)
- Regionally Important Geological/Geomorphological Site (west side of river on the downstream side of the bridge)
- Tree Preservation Orders (applies to the strip of woodland west of the river on the downstream side of the bridge)

## **4 History**

The place-name of 'Draynesbriggs' is first recorded in 1362 (Gover 1948, ICS Index). John Leland described Draynes Bridge as 'of flat more stones' when he visited it in

c1549 (Chope 1918, 45). A bridge is shown on Gascoyne's 1698 survey, Martyn's map of 1748 (Fig 3) and the OS First Edition One Inch Survey (c1813, see Fig 4). At this time, the road or track east of the bridge crossed the moor by Trekieve Mill and on towards the Caradon area.

The river crossing is first shown at large scale on the parish Tithe Maps c1840. The St Cleer Tithe Map (Fig 5) shows a bridge over the river and also shows that the principal road to the east of the bridge was now the road along the Fowey valley towards Bolventor. The St Neot Tithe Map also shows a bridge; at this time a forded crossing was also evident (Fig 6).

The 1876 bridge was in existence by the time the OS surveyed the area at large scale (Fig 7) and little change has been recorded since that time (Figs 8 and 2). A former smithy recorded on the HER and located west of the bridge c1907 is still extant, the building now converted into a toilet block for visitors to Golitha Falls car park.

In the 1920s Charles Henderson, the Cornish historian, recorded Draynes Bridge as a 'clumsy structure of moorstone blocks, with four square openings. The bridge carries a road over the River Fowey on what is considered an ancient track running from Caradon towards Bodmin...' (Henderson and Coates 1928, 71).

## **5 Bridge description**

### **5.1 Pre-works site visit**

A site visit was undertaken to record details and the character of the bridge before the intended commencement of strengthening works.

The bridge has an overall length (at the roadway) of 15.8m and is 5.69m wide within the river (measured to the tips of the cutwaters). There are four rectangular openings varying from 1.88m to 2.10m wide which extend up to 2.07m above the river bed. The spans are separated by cutwaters with triangular ends on both the upstream and downstream sides. The roadway is generally about 3.7m wide between the parapets but the parapet walls splay outwards to a maximum width of 4.9m at the ends. The parapet height at the centre of the bridge is 0.94m and the parapet walls are 0.57m wide (Figs 23 and 24).

Construction of the abutments and cutwaters is of roughly squared granite pieces brought to course (semi-ashlar, see Fig 12). The parapet walls are generally of poorer stone, being of granite rubble construction (Figs 17 and 22). Architectural features (of better quality grey-white quarried granite) include the lintels, parapet coping blocks and three surviving parapet end posts. On both upstream and downstream sides are large granite wedge-shaped blocks bearing the incised date of 1876 (Fig 14). On the inside of the parapet on the downstream side is an incised OS bench mark (612.3 ft OD according to the 1880 OS map). The benchmark does not appear to have been disturbed as there is only very minor damage to the parapets; some stones at the east end of the downstream parapet appear to have slightly moved (traffic collision damage) and the eastern out-turned end of the upstream parapet wall has been rebuilt with grey quarried granite.

The coping blocks of the parapet are only roughly dressed square (see Figs 15, 16 and 17). These blocks retain the majority of their iron cramps, which linked the stones to create a stronger structure. Drill marks are very evident on the larger granite blocks (see Fig 17) and the sizes of the drill holes are consistent with a later 19<sup>th</sup> century build. There is also evidence of reused granite, as some lintel stones in the eastern spans have wedge marks, which would date the quarrying of the stones before c1800 (Fig 18).

The original bedding mortar in the bridge is lime-based, as would be expected in a later 19<sup>th</sup> century structure. Some 20<sup>th</sup> century repairs have been undertaken using cement-based mortar.

## **5.2 Results of watching brief**

The programme of strengthening works commenced in January 2013. The intention of the design was to fit orthotropic steel plates over the existing lintels, so that stresses created by heavier vehicles would be carried more evenly over the structure.

A Cormac team removed the existing road surface and exposed the lintel structure beneath. After the debris was cleared away by the contractors the bridge was re-examined by the archaeologists, re-photographed and a sketch plan made of the lintels (Figs 21, 22 and 23). No traces of earlier road surfaces were revealed, as the bridge deck has a very shallow fill above the lintels. A series of horizontal iron pins was exposed in the structure; these had been used to tie the base of the road surface to the parapet masonry, affording greater strength.

## **6 Chronology**

The historic maps together with the physical examination of the bridge have helped to provide a useful chronology of development of the site. Draynes is clearly an ancient river crossing, as shown by the pre-19<sup>th</sup> century maps. A major change occurred in the later 19<sup>th</sup> century with the construction of the present bridge. The 1876 bridge however contains some pre-1800 stonework, hinting at what may have previously existed there. The depiction of a footbridge or narrower packhorse bridge, as shown the St Neot Tithe Map is clear in the local topography, as a revetted embankment parallel with the road is still extant on the west side of the bridge (Fig 19). The slopes of the ford are also still evident, particularly on the west side (Fig 11).

## **7 Statement of significance**

Draynes Bridge was built in 1876 to replace both a narrower earlier bridge and a ford, probably reflecting the need to provide better vehicular access to the local farms. The design of the present bridge also appears to show that it was an upgrading of the pre-existing crossing; the evidence of the wedge-marked lintels would strongly suggest the previous bridge was also a lintelled structure, albeit of narrower proportions. It is clear that a decision was made to replace the old bridge entirely, as the present structure is not merely a widening of the earlier one.

Bridges of lintelled construction are relatively commonplace in Cornwall, particularly for bridges crossing minor streams. Many of them date to the 19<sup>th</sup> century but there are also earlier examples, mostly dating to the later 18<sup>th</sup> century. Some present day bridges represent widenings of earlier ones. The use of lintelled construction on multi-span bridges is much less common and examples of these are usually found in the moorland areas. Ashford Bridge in St Cleer parish is of similar date and construction to Draynes Bridge and Delphy Bridge near St Breward is probably one of the best known multi-span lintel bridges). Draynes Bridge has seen very little alteration since it was constructed and there is very little evidence of damage to the parapet, confined to small areas of impact damage at the eastern end, where vehicles need to turn to make their approach. It shows that when the bridge was constructed in 1876 it was very much fit for purpose and has served well ever since.

## 8 References

### 8.1 Primary sources

- Margary, H, 1977. *The Old Series Ordnance Survey Maps, Vol II: Devon, Cornwall and West Somerset Lympne* (Reproduction of OS 1st Series 1 Inch Map, 1813)
- Martyn, Thomas, 1748. *Map of Cornwall at One Inch Scale* (microfiche copy at HES)
- Ordnance Survey, c1880. *25 Inch Map* First Edition (licensed digital copy at HE)
- Ordnance Survey, c1907. *25 Inch Map* Second Edition (licensed digital copy at HE)
- Ordnance Survey, 2012. *Mastermap Digital Mapping*
- Ravenhill, WLD, 1972. *John Norden's Manuscript Maps of Cornwall and its Nine Hundreds* Facsimile reproduced by University of Exeter
- Ravenhill, WLD and Padel, OJ, 1991. *Joel Gascoyne's Map of the County of Cornwall* Facsimile reproduced by Devon and Cornwall Record Society Vol. 34
- Tithe Map and Apportionment, c1840. *Parish of St Cleer* (microfiche copy at HE)
- Tithe Map and Apportionment, c1840. *Parish of St Neot* (microfiche copy at HE)

### 8.2 Publications

- Chope, R Pearse, 1918. *Early Tours in Devon and Cornwall* 1967 Reprint by David and Charles, Newton Abbot
- English Heritage, 2006. *Understanding Historic Buildings: A guide to good recording practice*. English Heritage, Swindon
- Henderson, CG and Coates, H, 1928. *Old Cornish Bridges and Streams* Bradford Barton reprint 1972, Truro
- Kentley, E, 2005. *Cornwall's Bridge and Viaduct Heritage* Twelveheads Press, Truro

### 8.3 Websites

- <http://www.heritagegateway.org.uk/gateway/> English Heritage's online database of Sites and Monuments Records, and Listed Buildings

## 9 Project archive

The HE project number is **146192**

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration.
2. Electronic drawings stored in the directory R:\Historic Environment (CAD)\CAD Archive\Sites D\Draynes Bridge HBR
3. Black and white photographs archived under the following index numbers: GBP 2267
4. Digital photographs stored in the directory R:\Historic Environment (Images)\SITES.A-D\Draynes Bridge HBR
5. English Heritage/ADS OASIS online reference: cornwall2-159661

This report text is held in digital form as: ..\Historic Environment\Projects\Sites\Sites D\Draynes Bridge HBR\report\Draynes Bridge HBR report.doc



Fig 3 Extract from Thomas Martyn's 1748 survey



Fig 4 Extract from the OS First Edition One Inch map c1813

Note that the road or track past Trekieve Mill is not shown on later maps

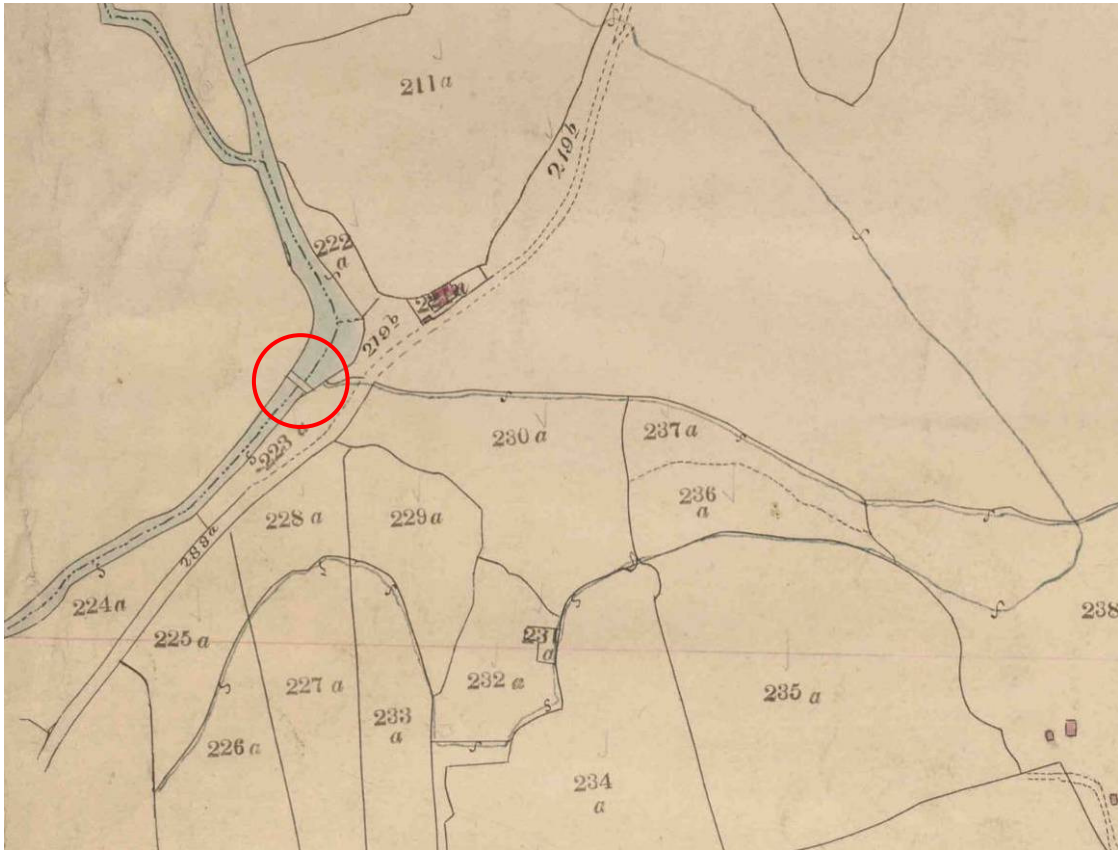


Fig 5 Extract from St Cleer Tithe Map c1840

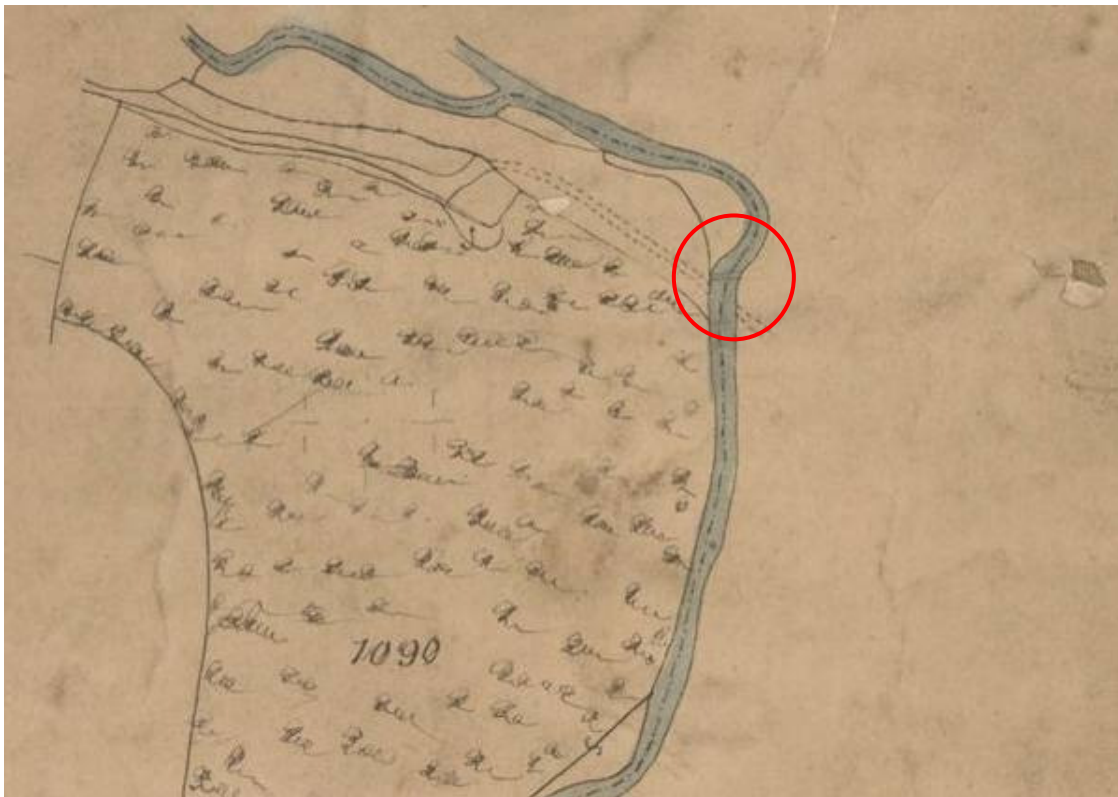


Fig 6 Extract from St Neot Tithe Map c1840  
Note the forded crossing as well as the bridge

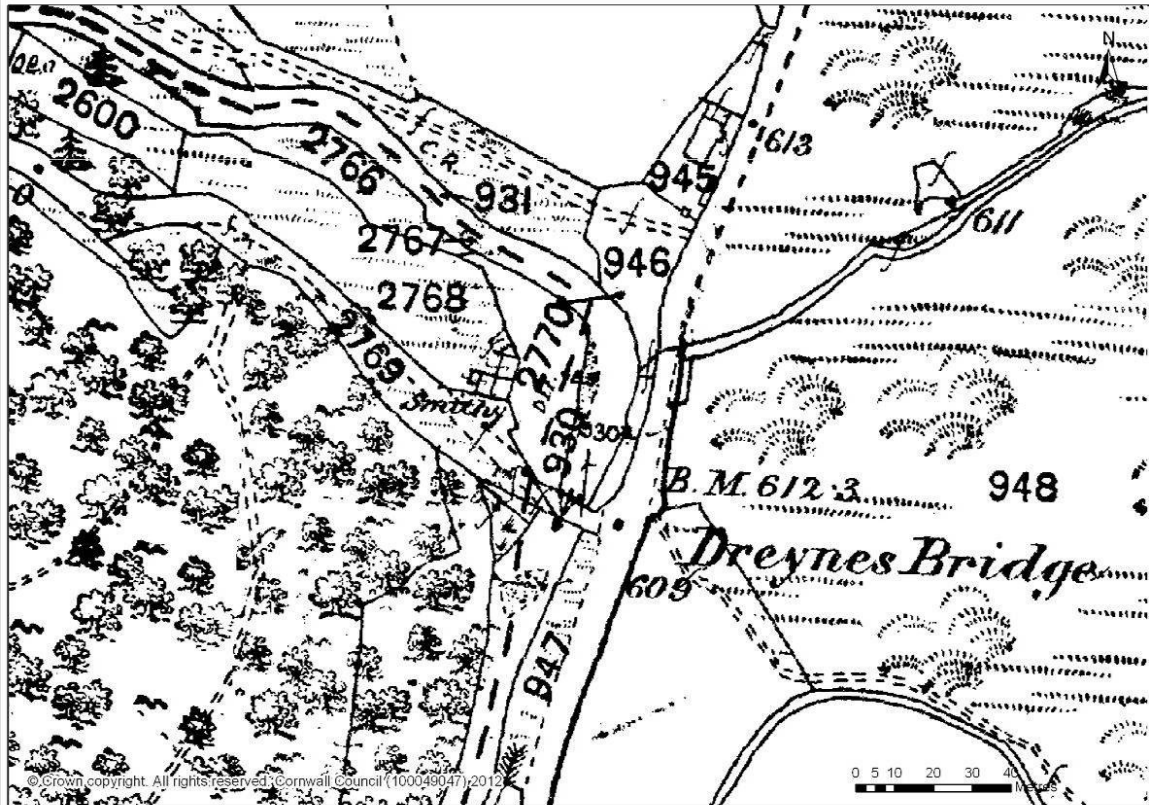


Fig 7 OS First Edition 25 Inch Map, c1880

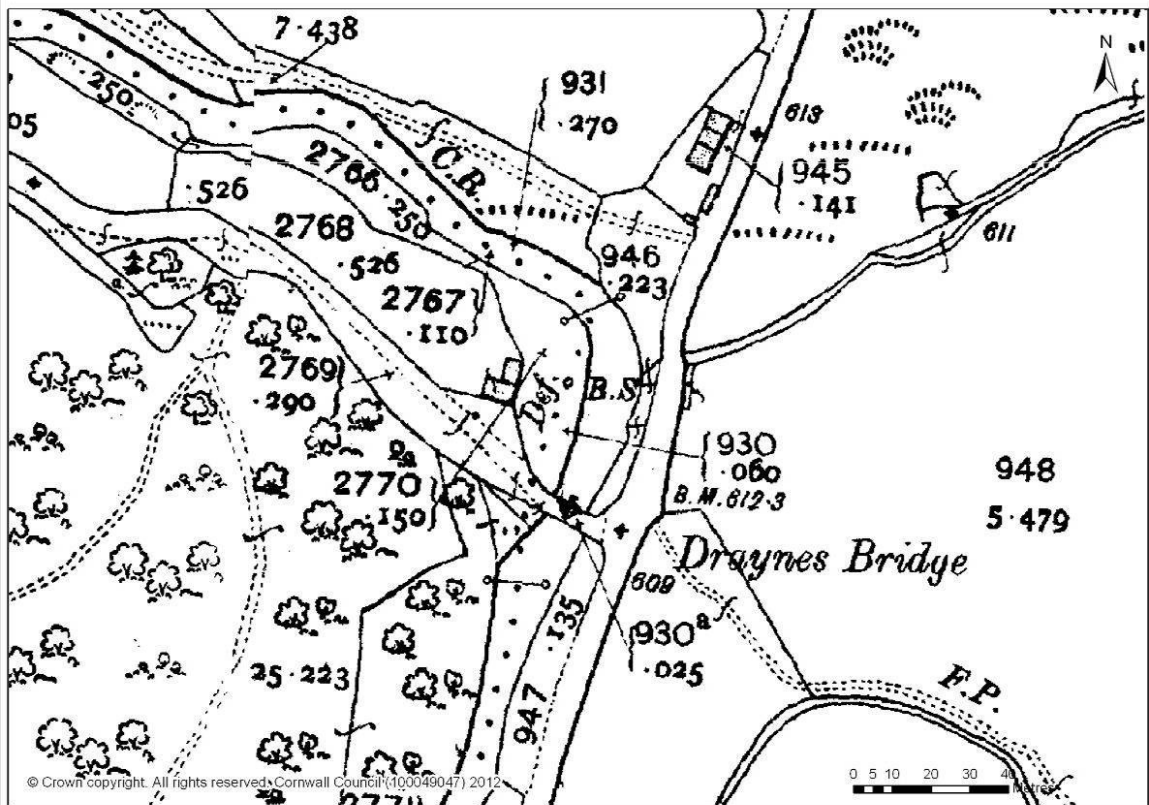


Fig 8 OS Second Edition 25 Inch Map, c1907





*Fig 9 The approach to the bridge from the east*



*Fig 10 The approach to the bridge from the west*



Fig 11 Draynes Bridge from the south (downstream side)  
A former ford approach is visible to the left



Fig 12 Draynes Bridge from the south (downstream side)



*Fig 13 North (upstream) side of Draynes Bridge*



*Fig 14 Date stone recording the renewal of Draynes Bridge in the later 19<sup>th</sup> century*



Fig 15 Rough granite coping stones fastened with iron cramps on south parapet



Fig 16 Rough-hewn granite coping stones on north parapet



*Fig 17 Rough-hewn granite coping stones on north parapet  
Drill marks (indicating 19<sup>th</sup> century tare-and-feather splitting) are clearly evident*



*Fig 18 The eastern span of the bridge has evidence of pre-1800s wedge splitting*



Fig 19(a) and (b) The revetted embankment behind the ranging pole appears to be the surviving causeway to a former footbridge indicated on the St Neot Tithe Map (Fig 6)



*Fig 20 An old signpost – a granite pillar with wrought iron support for a wooden sign (located above the riverbank on the east side of Draynes Bridge)*



Fig 21 Draynes Bridge after removal of the road surface, January 2013 (looking E)  
The spirit level used as a scale is 6ft (1.83m) long



Fig 22 Draynes Bridge after removal of the road surface, January 2013 (looking SW)



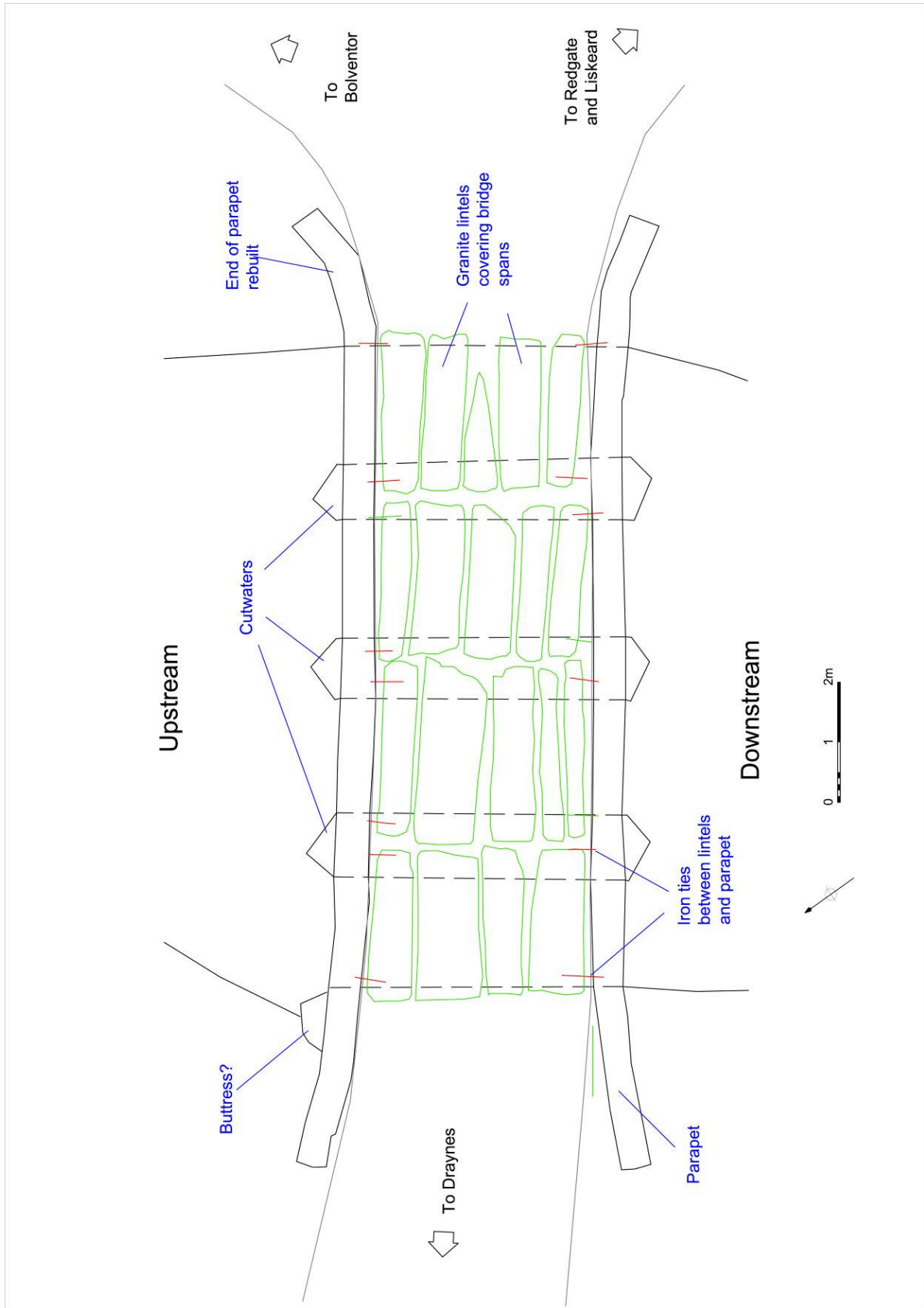


Fig 23 Plan of Draynes Bridge

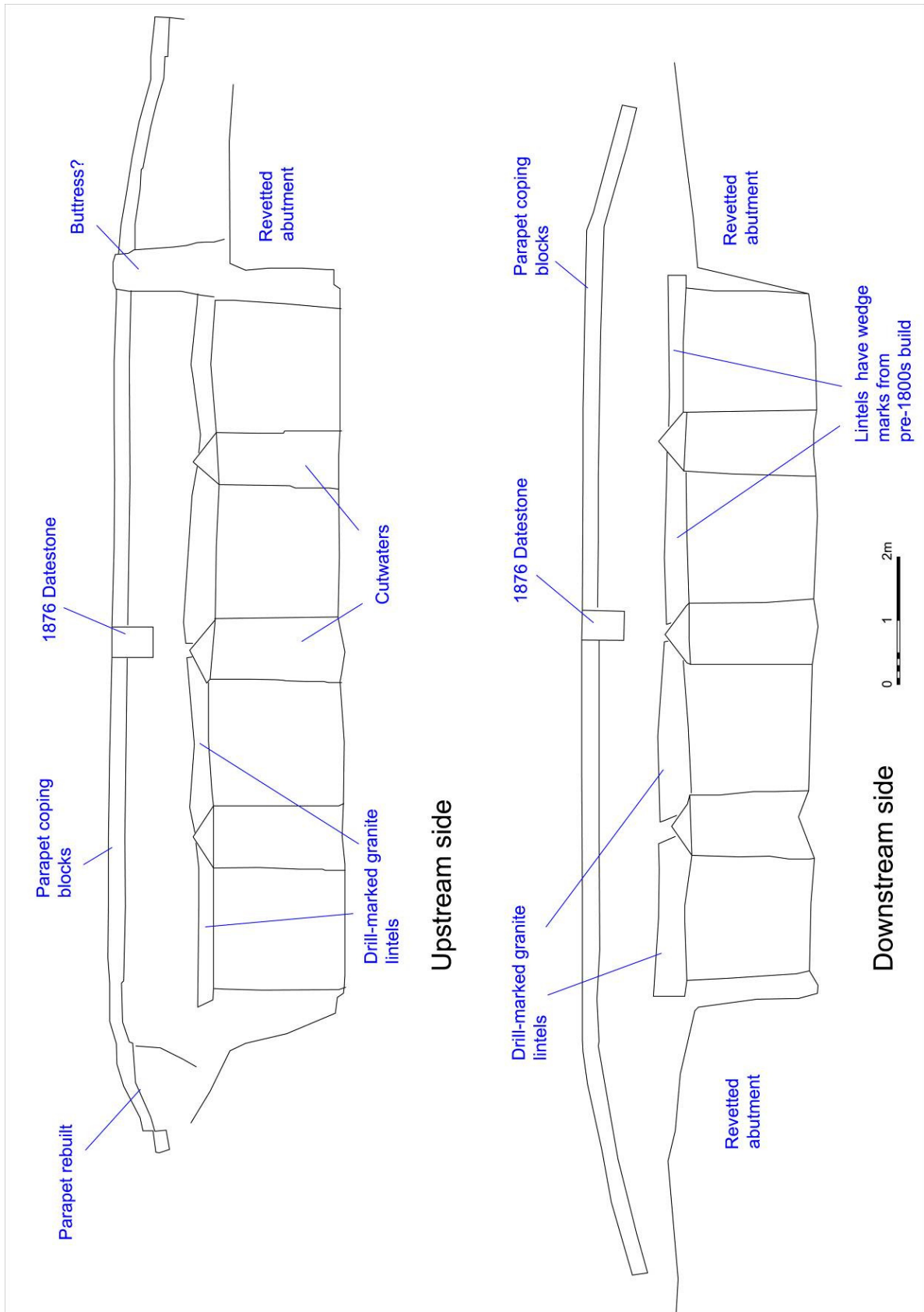


Fig 24 Elevations of Draynes Bridge

## Appendix 1 Planning Brief

### Cornwall Council – Historic Environment Service

#### BRIEF FOR HISTORIC BUILDING PHOTOGRAPHIC RECORDING

**Date:** 27 July 2012  
**Address:** Draynes Bridge (over the River Fowey), located on the U6159 minor road between Redgate and Draynes, near St Cleer, Cornwall  
**Agent:** Ben Parr, Engineer, Civil & Structures, Parsons Brinckerhoff, 11 High Cross, Truro, Cornwall, TR1 2AJ

**Historic Environment Planning Advice Officer:** Phil Copleston, Historic Environment Service, Cornwall Council, Room 82, Luxstowe House, Liskeard, Cornwall, PL14 3DZ

This brief is only valid for six months. After this period the Historic Environment Planning Advice Officer (HEPAO) should be contacted. Any written scheme of investigation (WSI) resulting from this brief shall only be considered for the same period. The contractor is strongly advised to visit the site before completing their WSI as there may be implications for accurately costing the project.

#### Contractors Written Scheme of Investigation (WSI)

No ground works are to be undertaken until the HEPAO and the Local Planning Authority (LPA) have approved the archaeological contractor's WSI.

#### **1 Introduction**

This brief has been written by the HEPAO and sets out the minimum requirements for archaeological recording at Draynes Bridge. This structure is first mentioned in 1362, rebuilt in 1876, and is recorded on the Ordnance Survey Map of 1880. Vernacular and transport infrastructural remains of earlier periods are becoming increasingly rare and are worthy of recording prior to alteration or change.

#### **2 Site Location and Description**

This bridge over the River Fowey is located on the U6159 minor road between Redgate and Draynes, north of St Cleer, centred on Ordnance Survey grid reference SX 2281768910.

#### **3 Planning Background**

This work is not subject to planning consent.

#### **4 Historic Building Background**

The Cornwall & Isles of Scilly Historic Environment Record records this bridge as:

MCO9553 DRAYNES BRIDGE - Medieval bridge, Post Medieval bridge. Draynes Bridge is recorded in 1362, when the name was spelt 'Draynesbrigge'. Leland described Draynes Bridge as 'of flat more stones' when he visited it in c1549. Henderson recorded it as a 'clumsy structure of moorstone blocks, with four square openings. The bridge carries a road over the River Fowey on what is considered an ancient track running from Caradon

towards Bodmin and was rebuilt and dated 1876 (datestone) and it measure approx 14m long and 4m wide. In 1987 EH [English Heritage] listed the structure and provided the following details: "Slatestone rubble with granite dressings. The bridge has 4 spans with 3 piers with cutwaters on the upstream and downstream sides. Datestone set centrally and projecting above the parapet wall on the downstream side. Parapet walls about one metre high, with roughly hewn granite copings.

This bridge is also a Grade II Listed structure, which is described as:

DCO2154 ST CLEER SX 26 NW 10/57 Draynes Bridge - II Bridge over the River Fowey. Rebuilt and dated 1876. Slatestone rubble with granite dressings. The bridge has 4 spans with 3 piers with cutwaters on the upstream and downstream sides. Datestone set centrally and projecting above the parapet wall on the downstream side. Parapet walls about one metre high, with roughly hewn granite copings. The bridge is about 14 metres long and about 4 metres wide. Draynes Bridge is similar in construction to Ashford Bridge. Sources : Henderson, C and Coates, H : Old Cornish Bridges and Streams, 1928. Listing NGR: SX2281768910

Listed Building Consent is not required in this instance. As far as is known, no specific archaeological recording has previously been made of this bridge or its location.

## 5 Requirement for Work

The present proposals will culminate in the potential destruction of material remains of part of Draynes Bridge. It is therefore important that this bridge is recorded to an appropriate level and that the results are made available to interested parties. In this particular instance an archive standard photographic record will be made together with a brief report. This recording work should be conducted in two parts:

- a) a photographic record of the whole of existing bridge and its landscape context prior to commencement of rebuilding works, and
- b) a photographic record be made of the internal structure of the bridge upon removal of the modern bridge deck and exposure of the earlier granite lintels.

Field notes made during recording works may be added to the existing structural drawings (provided by the agent) as annotations, and included in the project report.

This recording should be conducted by a building archaeologist or architectural historian that will be able to 'read' the structure and record the important details. The recorder needs to consider:

- Site layout and organisation
- Function
- Materials, method of construction
- Internal arrangements
- Original fixtures and fittings
- Subsequent fixtures and fittings

- Evidence of use and status
- Date/period of initial build and subsequent alterations

## **6 General Methodology**

- 6.1 All stages of the investigation shall be supported by a written scheme of investigation (WSI).
- 6.2 The archaeological contractor is expected to follow the code of the Institute for Archaeologists (IfA).
- 6.3 Details including the name, qualifications and experience of the site director and all other personnel (including specialist staff) shall be included within the WSI.
- 6.4 All of the latest Health and Safety guidelines shall be followed on site.
- 6.5 The IfA's Standards and Guidance should be used for additional guidance in the production of the WSI, the content of the report and the general execution of the project.
- 6.6 Terminology will be consistent with the English Heritage Thesaurus.

## **7 Site Recording Methodology**

- 7.1 Prior to the commencement of on site works the Historic building contractor should familiarise themselves with the site by examining the information held by the Cornwall and Scilly Historic Environment record (HER), the Cornwall Records Office at Truro and the Cornwall Centre at Redruth, where appropriate.
- 7.2 Details of how all buildings and structures are surveyed and recorded shall be provided. The site plan will be tied to the national grid.
- 7.3 The photographic record shall be a comprehensive record to archive standard of the existing buildings and structures, both externally and internally. The photographs will be taken with black and white 35mm or medium format film producing archive quality prints and negatives. Colour photography may be utilised for general shots and where it is appropriate for detail shots (negatives and where appropriate CD shall be included in the archive). For both general and specific photographs, a photographic scale shall be included. The photographic record shall be accompanied by a photographic register detailing as a minimum, feature number, location and direction of shot.

## **8 Results**

- 8.1 The full report shall be submitted within a length of time (but not exceeding six months) to be agreed between the applicant and the historic building contractor, Cornwall Council Historic Environment Service and the Cornwall Records Office. A further digital copy shall be supplied on CD-ROM preferably in 'Adobe Acrobat' PDF format.
- 8.2 The archaeological contractor will undertake the English Heritage/ads online access to the index of archaeological investigations (OASIS).

8.3 This report will be held by the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation.

8.4 The report must contain:

- A brief history of the site.
- A concise non-technical summary of the project results.
- The aims and methods adopted in the course of the investigation.
- A location map, copies of any plans/drawings and photographs with appropriate annotation.
- A copy of the brief and approved written scheme of investigation (WSI) will be included as an appendix.

## 9 Archive Deposition

9.1 An ordered and integrated site archive will be prepared in accordance with Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006 upon completion of the project. The requirements for archive storage shall be agreed with the Cornwall Record Office. Please check the information on the Cornwall Record Office website <http://www.cornwall.gov.uk/default.aspx?page=24656>

9.2 The archive including a copy of the written report shall be deposited with the appropriate organisation within two months of the completion of the full report and confirmed in writing with the HEPAO.

9.3 Where there is only a documentary archive this will be deposited with the Cornwall Record Office as well as the Courtney Library of the Royal Institution of Cornwall.

9.4 A copy of the report will be supplied to the National Monuments Record (NMR) in Swindon.

9.5 A summary of the contents of the archive shall be supplied to the HEPAO.

9.6 Only on completion of 9.1 to 9.4 (inclusive) will there be a recommendation for the discharge of any archaeological recording condition.

## 10 Monitoring

10.1 The HEPAO will monitor the work and should be kept regularly informed of progress.



10.2 Notification of the start of work shall be given preferably in writing to the HEPAO at least one week in advance of its commencement.

10.3 Any variations to the WSI shall be agreed with the HEPAO, preferably in writing, prior to them being carried out.

10.4 If significant detail is discovered, all works must cease and a meeting convened with the client and the HEPAO to discuss the most appropriate way forward.

## Appendix 2 Written Scheme of Investigation

### Draynes Bridge, Project design for historic building recording

Client: Cormac Solutions Ltd  
Client contact: Ben Parr, Parsons Brinckerhoff  
Client tel:   
Client email: 

### Project Background

Draynes Bridge is a four span granite lintel bridge carrying a minor road over the River Fowey near Redgate. This bridge lies on the boundary between St Neot and St Cleer parishes and its entry in the Cornwall Historic Environment Record notes:

MCO9553 DRAYNES BRIDGE - Medieval bridge, Post Medieval bridge. Draynes Bridge is recorded in 1362, when the name was spelt 'Draynesbrigge'. Leland described Draynes Bridge as 'of flat more stones' when he visited it in c1549. Henderson recorded it as a 'clumsy structure of moorstone blocks, with four square openings. The bridge carries a road over the River Fowey on what is considered an ancient track running from Caradon towards Bodmin...

The structure is Listed at Grade II and its listing description says:

Bridge over the River Fowey. Rebuilt and dated 1876. Slatestone rubble with granite dressings. The bridge has 4 spans with 3 piers with cutwaters on the upstream and downstream sides. Datestone set centrally and projecting above the parapet wall on the downstream side. Parapet walls about one metre high, with roughly hewn granite copings. The bridge is about 14 metres long and about 4 metres wide. Draynes Bridge is similar in construction to Ashford Bridge (q.v.).

(Source: Heritage Gateway website [www.heritagegateway.org.uk](http://www.heritagegateway.org.uk))

The bridge has a limited carrying capacity for modern traffic weights so a strengthening programme is proposed by Cornwall Council. A brief setting out requirements for recording the structure has been provided by Phil Copleston, the local Historic Environment Planning Advice Officer. Historic Environment Projects were approached by Ben Parr, acting on behalf of Cormac Solutions Ltd (and Cornwall Council) to undertake the recording of the bridge. Following agreement of the costs this Written Scheme of Investigation was prepared to set out the approach, methods and standards to apply to the work.

### Project extent

The archaeological recording will cover the bridge which is located at NGR SX 22817 68910. The immediate landscape surrounding the bridge will also be rapidly assessed, to provide historic and topographical context.

## Aims and objectives

The principal aim of the study is to provide a more detailed understanding of the construction and subsequent history of the existing bridge (as well as noting any traces of predecessor fords or bridges on this river crossing).

The objectives are to obtain a historic building record of the site prior to alterations, and also to update the record during the course of strengthening works.

## Working methods

All recording work will be undertaken according to the Institute for Archaeologists *Standards and Guidance for Archaeological Investigation and Recording*. Staff will follow the IfA *Code of Conduct* and *Code of Approved Practice for the Regulation of Contractual Arrangements in Archaeology*. The Institute for Archaeologists is the professional body for archaeologists working in the UK.

The work will comprise a study which will be equivalent to an English Heritage Level 2 survey (descriptive survey). It will comprise a desk-based search of readily available sources, followed by two site visits, an initial visit to record the bridge before changes occur and a second to record the bridge during the course of strengthening works. Results will then be archived, analysed and summarised in a report.

### Desk-based research

Rapid desk-based research will be carried out to inform the fieldwork stage. This will comprise:

- Published sources, including local histories
- Historic maps, to include:
  - Thomas Norden's maps of Cornwall (1580s)
  - Joel Gascoyne's map of Cornwall (1699)
  - Thomas Martyn's map of Cornwall (1748),
  - OS 1 inch survey (c1810)
  - parish Tithe maps (c1840),
  - 1<sup>st</sup> and 2<sup>nd</sup> Editions of the OS 25 inch maps (c1880 and c1907)
- Modern maps
- English Heritage's Listed Building database
- Charles Henderson and Henry Coates *Old Cornish Bridges and Streams* (1928)
- Edward Kentley *Cornwall's Bridge and Viaduct Heritage* (2005)
- Oxford Archaeology's database of Cornish bridges

### Fieldwork

Two site visits will be undertaken, with the second visit occurring in early November when the strengthening works are in progress. Fieldwork will include analysis of the building fabric (recorded as notes) to allow a description to be written up at the archive stage.

The brief requires that a detailed photographic record be made of the bridge and this will comprise:

- general views
- examples of structural and architectural detail.



The principal photographic record will be archive quality black and white photographs using a 35mm camera on fine grain film. Methodology for the archive standard photography is set out as follows:

- Photographs of details will be taken with lenses of appropriate focal length.
- A tripod will be used where appropriate to take advantage of slower exposures.
- Difficulties of back-lighting should be dealt with where necessary by balancing the lighting by the use of flash.
- A metric scale will be included in all views, except where health and safety considerations make this impractical.
- The monochrome photos will be accompanied by a photo register

Colour photographs will be taken with a digital camera (with a resolution of 8 million pixels or higher), to provide information that may not otherwise be recorded by the monochrome photos. A selection of the colour images will also be used to illustrate the report.

### **Creation of site archive**

To include:

- Archiving of black and white photographs to HER standards.
- Digital colour photographs (stored according to HER guidelines and copies of images made available to the client).
- A detailed building description.

### **Archive report**

A short written report will include:

- Summary
- Project background
- Aims and objectives
- Methodology
- Results of documentary research
- Bridge description
- Conclusions
- References
- Project archive index
- Supporting illustrations: location map, historic maps, plans, elevations/sections, photographs

A paper copy and a digital (PDF) copy of the report, illustrations and any other files will be held in the Cornwall HER. Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

### **Archive deposition**

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with HE standards.

The archiving will comprise the following:

1. All correspondence relating to the project, the project design, a single paper copy of the report together with an electronic copy on CD, stored in an archive standard (acid-free) documentation box

2. Archive standard negative holders and archive print holders, all to be stored in the archive standard box described above.
3. All black and white photographs are to be archived using captioned labels, appropriate record forms and location plans. Other photo records to be supplied with written captions and subject to appropriate batch archiving to be held in safe archival storage.
4. Archive Deposition. The archive will be deposited in a registered archive or museum, in accordance with their deposition guidelines.

## **Timetable**

The study is anticipated to be commenced during October and November 2012.

The archive report will be completed within 2 months of the end of the fieldwork. The deposition of the archive will be completed within 3 months of the completion of the archive report.

## **Project team**

The recording of Draynes Bridge will be undertaken by:

*Nigel Thomas BA MIFA*

Senior Archaeologist who has worked with HE and its predecessors since 1987. Responsible for management of projects relating to historic building recording and surveys of historic landscapes. Past work has included recording and structural analysis at Launceston and Restormel Castles, medieval chapels at Rame, Bodmin and Hall (Bodinnick), as well as landscape surveys at Lanhydrock park and Godolphin gardens. Project manager for historic building analyses at Tintagel Old Post Office, Cotehele House, St Michael's Mount summit complex and Trevice for the National Trust. Has recorded numerous industrial structures including Harveys Foundry, Loggans Mill (Hayle), Town Mills at St Columb Major, and china-clay area features including the waterwheel at Virginia CC Works, Greensplat engine house and Carrancarrow chapel. Project team leader for the Lostwithiel Town Characterisation Study. Member of the IfA's Buildings Group and Graphic Archaeology Group.

*Joanna Sturgess BA*

Archaeologist with HE, with a wide range of experience in recording historic buildings, landscapes, excavation and post-excavation. Past historic building works have included Cutmadoc Farmhouse, Lanhydrock; City Wharf, Truro; Harvey's Foundry, Hayle; Boswednack Serpentine works, Porthmeor farm and various mining sites. Other projects include Gwithian's past excavations, Lemon Quay excavation, Goonhilly Earth Station survey, Lower Boscawell and Trevesa in West Penwith landscape surveys. Expertise includes archaeological use of CAD software and survey.

## Historic Environment Projects

Historic Environment Projects is the contracting arm of Historic Environment, Cornwall Council (HE). HE employs some 20 project staff with a broad range of expertise, undertaking around 100 projects each year.

HE is committed to conserving and enhancing the distinctiveness of the historic environment and heritage of Cornwall and the Isles of Scilly by providing clients with a number of services including:

- Conservation works to sites and monuments
- Conservation surveys and management plans
- Historic landscape characterisation
- Town surveys for conservation and regeneration
- Historic building surveys and analysis
- Maritime and coastal zone assessments
- Air photo mapping
- Excavations and watching briefs
- Assessments and evaluations
- Post-excavation analysis and publication
- Outreach: exhibitions, publication, presentations

## Standards



HE is a Registered Organisation with the Institute for Archaeologists and follows their Standards and Code of Conduct.

As part of Cornwall Council, the HES has certification in BS9001 (Quality Management), BS14001 (Environmental Management), OHSAS18001 (Health, Safety and Welfare), Investors in People and Charter Mark.

## Terms and conditions

### Contract

HE Projects is part of Historic Environment, Cornwall Council. If accepted, the contract for this work will be between the client and Cornwall Council.

The views and recommendations expressed will be those of the HE projects team and will be presented in good faith on the basis of professional judgement and on information currently available.

### Project staff

The project will be managed by a nominated Senior Archaeologist who will:

- Discuss and agree the detailed objectives and programme of each stage of the project with the client and the field officers, including arrangements for health and safety.
- Monitor progress and results for each stage.

- Edit the project report.
- Liaise with the client regarding the budget and related issues.

Work will be carried out by HE field staff, with assistance from qualified specialists and sub-contractors where appropriate.

### **Copyright**

Copyright of all material gathered as a result of the project will be reserved to the Historic Environment, Cornwall Council. Existing copyrights of external sources will be acknowledged where required.

Use of the material will be granted to the client.

### **Freedom of Information Act**

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

HE will ensure that all information arising from the project shall be held in strict confidence to the extent permitted under the Act. However, the Act permits information to be released under a public right of access (a "Request"). If such a Request is received HE may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

### **Health and safety statement**

HE follows the Council's *Statement of Safety Policy*. For more specific policy and guidelines HE uses the manual *Health and Safety in Field Archaeology* (2002) endorsed by the Standing Conference of Archaeological Unit Managers and also the Council for British Archaeology's Handbook No. 6 *Safety in Archaeological Field Work* (1989).

Prior to carrying out on-site work HE will carry out a Risk Assessment.

### **Insurance**

As part of Cornwall Council, HE is covered by Public and Employers Liability Insurance, with a policy value of £50m. The Council also has Professional Negligence insurance with a policy value of £5m.

*Nigel Thomas*

*Senior Archaeologist*

*29<sup>th</sup> October 2012*

### **Historic Environment Projects**

*Cornwall Council*