

Helland Bridge, Cornwall
Archaeological recording and
watching brief



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Cornwall Archaeological Unit

Cornwall Council

Pydar House, Pydar Street, Truro, Cornwall, TR1 1XU

Tel: (01872) 323603

Email: enquiries@cau.org.uk Web: www.cau.org.uk

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The Project Manager was Jo Sturgess.

The views and recommendations expressed in this report are those of Cornwall Archaeological Unit and are presented in good faith on the basis of professional judgement and on information currently available.

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Cover illustration:

The damaged section of wall taken from the south bank of the river.

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Abbreviations

CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
HE	Historic England
HER	Cornwall and the Isles of Scilly Historic Environment Record
NGR	National Grid Reference
OD	Ordnance Datum – height above mean sea level at Newlyn
OS	Ordnance Survey

1 Summary

Cornwall Archaeological Unit was commissioned by Cormac Solutions Ltd to carry out archaeological recording work and supervision prior to, during and following emergency repairs to Helland Bridge, at Hellandbridge near Bodmin located at NGR: SX 06520 71500. The bridge is a Grade I Listed Building which is presumed to date from the early 15th century (List Entry Number: 1327910) and has long been regarded as an excellent example of medieval bridge building in Cornwall. Partial rebuilding of an area of walling on the western side of the bridge was necessary due to significant structural damage caused by an HGV which crashed into the bridge in December 2021.

Conditional Listed Building Consent for the dismantling and rebuilding of the damaged section of walling (application number: PA22/05523) has now been granted. Condition 4 of the Listed Building Consent required a programme of archaeological work to be undertaken which included archaeological recording of the damaged area of the bridge before and during dismantling and following its reconstruction.

Helland Bridge is thought to date from the early 15th century. It has undergone various historic phases of extension and alteration including repairs in the mid 19th century following flood damage. The parapet walls with their chamfered granite coping may be a 17th century addition but have been extensively rebuilt and repaired in the 19th, 20th and 21st centuries.

Recording, dismantling and rebuilding work was concentrated on an area of walling approximately 5m in length over the southernmost arch on the western side of the bridge. Here the parapet wall and walling below it was taken down to a level with the top of the keystone of the arch below.

The parapet wall had clearly been rebuilt, presumably in the 19th century. However, the walling below it was undisturbed and bonded purely with earth mortar, indicating that it is likely to be part of the original structure. Sealed below the modern Tarmac road surface and underlying layers on the bridge deck, part of a surviving, historic cobbled road surface was clearly visible in section. The cobbled surface was left intact and not impacted by the rebuilding works.

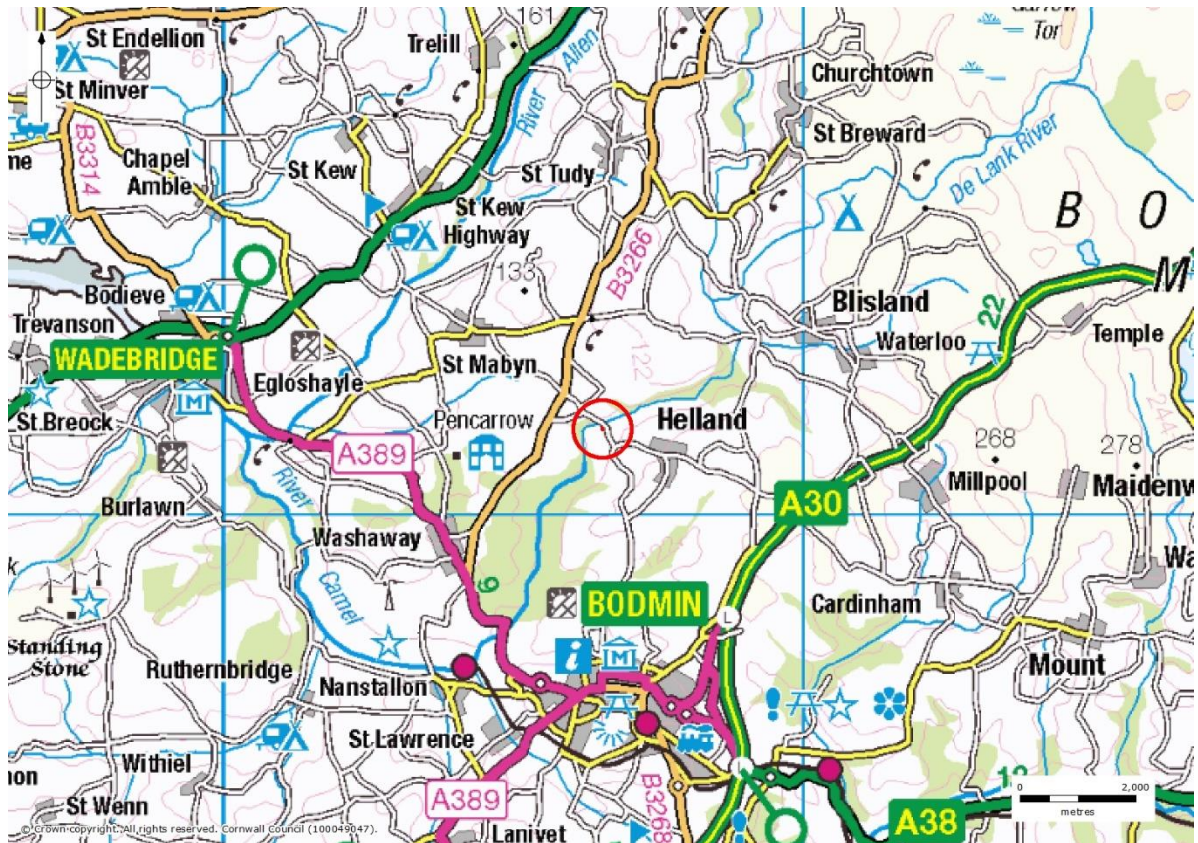


Fig 1 Location map (Hellandbridge circled in red).



Fig 2 Grade I Listed bridge in red with area of repair circled in blue.

2 Introduction

2.1 Project background

In December 2021 an area at the southern end of the western side of the bridge was pushed outwards over the river when a lorry carrying scaffolding collided with it whilst crossing the bridge (see Figs 16-26).

Due to the Grade I Listed status of the bridge, which had also previously been designated as a Scheduled Monument, Historic England were consulted at first to determine a way forward and methodology for the recording and repair work.

Phil McMahon (Inspector of Ancient Monuments, Historic England) advised that two stages of archaeological work would be required; one prior to dismantling, and the other during dismantling. He requested that before any dismantling began, a rapid photographic record should be made of the damaged elevation to record a) the damage, b) extent of rebuild and c) the general lay and style of build in order to guide the reconstruction. He also advised that a record the copings and staples should be made prior to dismantling, so that they could easily be reassembled in their original order. The second stage of archaeological work was the supervision and recording of the controlled dismantling of the damaged elevation in order to record the bridge elements uncovered, especially the fill.

CAU were then commissioned by Cormac Solutions Ltd to undertake the work and produce a Written Scheme of Investigation (see Appendix 3).

Following discussions between Historic England and the Senior Development Officer (Historic Environment, Cornwall Council) (SDOHE), the overseeing of the of the works was passed from Historic England to the SDOHE and a submission for Listed Building Consent was then requested.

Conditional Listed Building Consent for the repairs to the Grade I Listed bridge (application number PA22/05523) was granted prior to the works being undertaken. Condition 4 of the Listed Building Consent is as follows:

A) The development shall take place in strict accordance with the Written Scheme of Investigation (Cornwall Archaeological Unit, Helland Bridge, Cornwall, WSI for archaeological recording and supervision JS, Rev 01, 06/01/22).

B) The development shall not be used publicly until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under condition (A) and the provision made for analysis, publication and dissemination of results and archive deposition has been secured

C) The archaeological recording condition will normally only be discharged when ALL elements of the WSI including on site works, analysis, report, publication (where applicable) and archive work has been completed. Reason: To ensure that provision is made to record finds of archaeological interest in accordance with the aims and intentions of Policy 24 of the Cornwall Local Plan Strategic Policies 2010-2030 and paragraphs 194 and 205 of the National Planning Policy Framework 2021.

In addition to the initial requirements for archaeological recording, set out by Phil McMahon of Historic England, one further stage of work requiring a photographic record of the structure once rebuilt was requested by Phil Copleston (SDOHE).

2.2 Aims

The principal aims of the archaeological work were to create a record of the damaged area of the bridge prior to any repair works, to monitor the dismantling works and create an archaeological record of features/material uncovered, and to create a photographic record following the completion of repairs.

The objectives are to:

- Obtain an archaeological record of the bridge prior to and following repairs.
- To record all archaeological features, layers and finds uncovered during the course of the works.
- To identify any artefacts relating to the construction of the bridge.
- Store the long-term conservation of the project archive in appropriate conditions.

2.3 Methods

All recording work was undertaken according to Chartered Institute for Archaeologists (CIfA) (CIfA 2020) and Historic England (2016) guidance.

2.3.1 Desk-based assessment

During the desk-based assessment 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. The main sources consulted were as follows:

- Cornwall HER, accessible via the Heritage Gateway.
- Images of England online Listed Buildings database.
- Early maps and photographs (see Section 9.1).
- Published histories (see Section 9.2).
- Websites (see Section 9.3).

2.3.2 Fieldwork

Prior to dismantling a rapid record of the whole bridge was made with a more detailed record of the damaged area.

A measured plan of the granite coping stones on the western side of the bridge was created, so that the coping stones and cramps could be numbered and reset in their original locations as part of the reconstruction. Notes were made along with annotations to the drawings to provide details of both historic development and fabric.

A rapid photographic record was made of the damaged walling to record a) the damage, b) extent of rebuild and c) the general lay and style of build in order to guide the reconstruction.

The dismantling works were undertaken under archaeological supervision. This included taking down part of the existing parapet and walling below to a level immediately above the keystone of the southernmost arch.

Following dismantling, section drawings were created to show the extent of the dismantled area, road surfaces and make-up, and the parapet wall.

Colour photographs of all elevations and sections along with architectural details were taken with a digital camera (at a resolution of 10 million pixels or higher). These form the archive. Photograph included a metric scale bar, except where Health and Safety considerations made this impractical. The photographic archive is listed in Appendix 2.

Descriptions of the damaged walling were made in note form and by annotation of drawings to record fabric and construction, phased development through time and architectural details. Context numbers were given to deposits associated with the bridge deck and these are given in Appendix 1.

Following the completion of the rebuilding work, a further photographic record was made (see Appendix 2).

2.3.3 Post-fieldwork

All site materials were prepared for long term storage. This included:

- Finalisation of measured drawings.
- Archiving of drawings, photographs, paperwork and digital files.
- Filing of digital colour photographs and limited image editing (eg, composition, lighting) where appropriate.
- Creation of an archive report.
- Completion of the Historic England OASIS record (online access to archaeological investigations).
- Preparation of CAU archive.

3 Location and setting

Helland Bridge is located in the small settlement of Hellandbridge approximately 4km to the north of Bodmin at NGR: SX 06520 71500 (Figs 1 and 2). The bridge carries a minor road over the River Camel, the river forming the boundary between St Mabyn parish to the north and Helland parish to the south. On either side of the bridge there are a few houses which form the settlement of Hellandbridge. The river valley here is relatively narrow and quite densely wooded.

Vegetation in this area appears to have grown significantly during the last century; when the bridge was photographed by Henry Coates in the 1920s, the valley was fairly open with occasional trees along the riverside (Henderson and Coates 1928). Since then, the river banks have become filled with trees. Coates' photograph also shows that in the 1920s the bridge was largely covered with ivy and that there were saplings growing in the river at the base of the piers.

The geology of the area is Middle Devonian grey slates overlain with alluvium (bgs.ac.uk). The rock type is evident throughout the structure of the bridge indicating that the masonry was quarried locally.

4 Designations

Helland Bridge is located within the Camel and Allen Valleys Area of Great Landscape Value (AGLV). It also lies within a Site of Special Scientific Interest (SSSI) and a Special Area for Conservation (SAC) associated with the River Camel. The bridge is a Grade I Listed Building, the Listing description is as follows:

Summary of Building

Four-arch bridge, dating from the early-C15, partially rebuilt in the mid-C19, altered in the late-C19. Repaired in the C20 and C21.

Reasons for Designation

Helland Bridge, near Bodmin, dating from the early-C15 with C19 alteration and rebuilding and later repairs, is listed at Grade I for the following principal reasons:

Architectural interest:

As a well-documented early-C15 bridge which, although the parapets have been repaired and rebuilt, retains a good proportion of its early fabric;

The principal structure is well-constructed using local materials including granite and slatestone, and the different phases of construction are evident.

Historic interest:

It forms part of a historic route north from Bodmin to the coastal hinterland of the Camel estuary;

Repair and alterations in the C19 can be related to specific factors and contribute to its special interest.

History

Helland Bridge stands on an early route north out of Bodmin towards the village of St Mabyn and onwards to the coastal hinterland north-east of the Camel estuary. The River Camel marks the boundary of the parishes of St Mabyn to its north and Helland to its south. The bridge is located in a small hamlet with the same name and usually spelled Hellandbridge.

Helland Bridge was first mentioned in the Patent Rolls of 1381, which record that Stephyne Dyer of 'Helland Brigge' with others broke down a salmon weir on the Aleyne (Allen) at Dynemore (Dunmere). The bridge itself was first described by John Leland, the King's Antiquary, in around 1535 as 'the first memorable bridge on the Alane (Allen) is called Helham Bridge'; Allen is the historic name of the River Camel. In around 1580 John Norden recorded 'Helenbr.' on his map of Trigg Hundred, showing the river crossing and houses on the St Mabyn bank. It is named 'Hellandbridg' on further maps of 1699 and 1748. It is likely that there was a crossing point in this location prior to it first being recorded.

On the first Ordnance Survey (OS) of 1813, buildings are depicted grouped around the north and south approaches to the bridge. The 1842 Tithe map for St Mabyn shows the bridge in detail and depicts piers with triangular refuges. To the north of the bridge is a mill, and its head and tail races are also shown on the map. It is likely that by this date a further arch had been added to the north end of the bridge to accommodate these. On 16 July 1847, a flash flood swept down the River Camel, damaging Helland Bridge and rising over its parapets, but not causing the total destruction it wrought on most other bridges along the valley. The strongly-pointed arch north of centre and the adjacent cutwater were reconstructed following the incident. The 1881 OS map shows the mill, then for corn, along with its water system. A dump channel from the headrace passes under the bridge's northern arch, cutting across what appears to be an earlier and abandoned channel further east along the headrace. It is likely that the two northern arches of the bridge were designed to span this earlier channel and may have been lengthened in response to the mill's requirements, possibly replacing a causeway and floodwater-arch over the floodplain. The 1907 OS map shows that little had changed by the early years of the C20.

In the 1920s Helland Bridge was visited by the historian Charles Henderson and Henry Coates, a photographer. Henderson noted that the bridge was probably early C15 (by a comparison of styles) and was in perfect condition, although one arch had been rebuilt. He proclaimed it as 'one of the finest old bridges in the west'.

The road across Helland Bridge lost its importance in the post-medieval period, with the preferred crossing point on the River Camel being downstream at Dunmere Bridge. Helland Bridge therefore became a secondary route.

Details

Four-arch bridge, dating from the early-C15, partially rebuilt in the mid-C19, altered in the late-C19. Repaired in the C20 and C21.

MATERIALS: slatestone rubble with slate voussoirs and granite copings.

DESCRIPTION: Helland Bridge spans the River Camel north to south with four arches, and is about 40m long and 3m wide. Each arch has a span of approximately 5m, between which are three piers with triangular cutwaters which continue up to road-level to form refuges. The central cutwater projects about 1.5m and the others slightly less. The southern arches are alike and have single rings of slate voussoirs flush with the sides of the bridge. The two arches to the north have two rings of slate voussoirs, the inner slightly recessed from the outer; the second arch from the north was rebuilt with a very pointed arch and there is disturbed masonry in the adjacent piers where replacement voussoirs have been inserted. The arches spring from a level up to 1m above the waterline. At the extreme north-end of the bridge is a smaller early-C19 round-headed arch constructed over the tailrace for the adjacent mill. The river channel is more silted-up beneath these northern arches, and this probably relates to the historic dump-channel from the mill.

The distance between the parapets is almost 3m wide near the centre of the bridge, gradually widening towards each end before splaying out to the width of the modern roadway (approximately 12m). This is particularly evident at the north end above the added early-C19 arch, but the parapet walls were all rebuilt in the late-C18 or early-C19 to accommodate the approach road at each end. The north end of the west parapet wall is supported by a large granite slab on granite corbels; these may be C20 in date and replace a series of bonded-in slabs. The parapet at the far north-east end is topped with C19 wrought-iron railings.

The parapet walls are approximately one-metre high and have chamfered granite coping stones, some with iron cramps, and may have been added following the 1847 flood. Parts of the parapet have been rebuilt following vehicular damage to the bridge. On the roadside of the parapet, at ground level, are some lengths of C20 granite kerbs and a series of granite kick-stones; early examples are rounded. At each end there are C21 traffic-calming measures.

5 Site history

Although Helland Bridge is not recorded until the late 14th century it seems reasonable to assume that there had been crossing point here for some time prior to this. Although the river can be deep and fast flowing, it may have been possible to ford it during the summer months. A slightly wider section of the river immediately downstream of the bridge would probably have made the most convenient fording point (Thomas 2000).

Place-name evidence points to two early settlements in the vicinity. Helland (whose place-name contains the Cornish elements *hen* 'old' and *lann* 'enclosed cemetery') was first recorded in 1284. Tredethy, on the St Mabyn side of the river, was documented in 1350. The *tre* element meaning 'estate, farmstead' suggests a pre-Conquest origin for the settlement (Padel 1985, 223; 1988, 96).

The first record of a bridge at Helland comes from the Patent Rolls of 1381, when a Stephyne Dyer of Helland Brigge, who with others broke down a salmon weir on the Aleyne (the historic name of the River Camel) at Dynemore (Dunmere) (Henderson and Coates 1928, 111). John Leland's Itinerary (c1540) noted 'the first memorable bridge on Akane is caullid Helham Bridge' (Chope Pearce 1918, 15). John Norden in the late 16th century recorded Helanbr on his map of Trigg Hundred and shows the crossing there, with a small group of houses on the St Mabyn side of the river (Fig 3). Gascoyne also showed the bridge on his 1699 map and named it Hellandbridg (Fig 4), as did Martyn in 1748 (Fig 5) (Thomas 2000).

Helland Bridge was first surveyed by the Ordnance Survey in the early years of the 19th century (OS 1805); the published map indicates a large group of houses to the north of the bridge, with further buildings on the approach from the south (Margary 1977; Thomas 2000).

The Tithe Maps of Helland and St Mabyn parishes, c1840 (Fig 6), both show Helland Bridge, but only the St Mabyn map (1842) depicts the bridge in more detail, showing the triangular cutwaters. A mill leat and tailrace, associated with a mill immediately to its north is also shown, suggesting that by this date another arch had been added for the mill leat at the northern end of the bridge (Thomas 2000).

In 1847 a flash flood heavily damaged many of the bridges along the river Camel, with the bridge at Hellandbridge being only partially damaged, although the adjacent mill building to the north was almost entirely washed away (Royal Cornwall Gazette – Friday 16 July 1847). Immediately following the flood 'the only road for carriages and horses [was] by way of Helland-bridge' (Bristol Mercury 1847, 8). The bridge was still damaged however with 'a small part... washed away' (Royal Cornwall Gazette 1847, 2), and the arch over the mill leat required repair after the damage (West Briton and Cornwall Advertiser 1847, 2).

The kickstones protecting the parapet walls of the bridge from vehicle damage have been present in some form since at least 1871 'the bridge is a very narrow one, and there are a number of small posts on either side to protect the wall from carriages' (West Briton and Cornwall Advertiser, 3).

The c1880 and c1907 OS maps (Figs 7 and 8) both show the footprint of the bridge as it exists today with the corn mill still *in situ* immediately north of the bridge.

Helland bridge was visited in the 1920s by the historian Charles Henderson and his photographer friend Henry Coates. Henderson noted (from comparison of architectural styles) that the bridge was probably early 15th century. He described it as being 'one of the finest old bridges in the west and is in perfect condition' although he noted that one arch had been rebuilt (Henderson and Coates 1928, 111).

Modern mapping indicates some changes to this area in the 20th century. The corn mill building immediately north of the bridge has been demolished but the leat and tailrace are still extant.

6 Bridge description

Helland bridge is approximately 40m long and 3m wide along the roadway but splays out at either approach (Figs 9 to 15). It is constructed from local randomly coursed slatestone rubble, parts of which have been repointed with cement or lime mortar. It has five arches in total. The main part of the bridge has four arches with the southernmost two, which span the river, being alike. These have four-centred arches with a single course of slatestone voussoirs. The two arches to the north of them, over the flood plain, are of different construction, suggesting different phases. That to the north is a four-centred arch but has two courses of slatestone voussoirs rather than one. The arch immediately south of this is pointed and also has two courses of slatestone voussoirs. There are clear signs that this is a replacement arch. There are three piers between the four main arches with triangular refuges that project out over the cutwaters by approximately 1m on either side (see Fig 13). To the north of the four main arches there is a fifth, smaller arch which appears to have been constructed as an addition to serve a leat for a former corn mill on the north side of the river.

The parapet walls vary in height between approximately 0.5m and 0.9m and appear to be mostly later rebuilds. They are topped with chamfered granite coping stones along the entire length on either side. These coping stones may be a 17th century addition and they are now tied together with 19th or 20th century iron cramps, some of which are now missing. At the southern end of the west elevation, the parapet wall appears to be a 19th century replacement, reusing the earlier granite coping

stones. There are small sections of more recent rebuilding and repairs on both parapet walls to the north of the damaged area which date to the 20th and 21st centuries. At the north end of the bridge there are iron railings on top of the granite coping stones where the bridge crosses the mill leat. The road on the bridge deck now has a modern Tarmac surface and modern granite kerbs and cobbling have been added recently where the bridge widens onto the southern approach. Historic white painted kickstones have been placed along both the inner faces of the parapet walls to protecting them from vehicle damage.

7 Initial recording work

(Figs 9-26).

Prior to dismantling the damaged section of walling a photographic record was made along with descriptive notes to record the damage as well as the style of construction and materials used in the existing build in order to guide the reconstruction. A measured plan was also created of the granite coping stones and iron cramps along the southern half of the western parapet wall so that it could be used to ensure that these would be replaced in the same positions during reconstruction (Fig 9).

8 Watching brief during dismantling

(Figs 27-33).

The watching brief was undertaken over two days when a section of the western parapet wall and walling below it was taken down. The existing road surface and deck were not impacted by the work and were left *in situ*.

The area of walling removed measured approximately 5.2m in length by 1.2m in height. It was taken down to a level of approximately 0.45m below the present road surface reaching a level at the top of the keystone of the arch below. The removed area stretched from the southern end of the southernmost refuge, southwards to a straight joint in the bridge walling directly above the edge of the river bank (see Figs 9 and 10).

On top of the parapet wall granite coping stones with flat chamfers on either side of the upper face were carefully removed first and set aside in sequence so that they could be replaced in the same locations following rebuilding. Each of the coping stones was secured to the next with an iron cramp. In order to remove the cramps from the coping stones an initial attempt was made to remove a cramp from its socket but fears that this would break the granite coping stone led to an alternative method of cutting one end of each of the iron cramps below the visible face.

Dismantling of the parapet wall here showed that much of it was likely to be a 19th century rebuild, constructed from randomly coursed slatestone rubble bonded with lime mortar in the northern half and a mix of earth mortar with patches of lime mortar in the southern half. The parapet wall here measured 0.35m wide by 0.7m high down to the present road surface (Fig 28). However, it was clear that the parapet wall extended below the present road surface by a further 0.35m where it had been constructed on top of the bridge arch and spandrel walls (Figs 29 and 33). The spandrel walls had a greater width of 0.45m and comprised much larger blocks of slatestone than the parapet wall which were randomly coursed and bonded with a mid yellowish brown silty clay earth mortar (Compare Figs 29 and 30).

Following the dismantling of the damaged area of walling, a section was exposed showing the make-up below the modern Tarmac road surface (see Figs 27, 30, 31 and 32). In the exposed, west facing section the modern Tarmac road (101) was seen to be approximately 0.1m deep and overlay a compact layer of crushed slatestone fragments in a dark grey silt matrix containing occasional patches of lime (102) approximately 0.09m deep. This in turn overlay a layer of mid greyish brown

clayey silt containing frequent small pebbles and small fragments of slatestone (103), 0.12m deep. Directly below (103) in the northern half of the section were the remains of a former cobbled road surface (104) at a depth of approximately 0.3m below the present road surface. The average dimension of a cobble was 0.05m x 0.07m x 0.1m. Adjoining the south side of the cobbled surface was a thin layer of slatestone fragments 0.06m deep (105). This had possibly been laid as a repair of the cobbled surface (104). Both (104) and (105) overlay bridge fill (106), a mid greyish brown clayey silt containing frequent small slatestone fragments and small stones. The bridge fill (106) was visible to a depth of approximately 0.26m but continued below this level.

9 Recording following rebuilding

Much of the dismantled masonry was found to have decayed to a point where it could not be reused in the new walling. However, all of the original stone which was found to be sound was reused to create the external faces of the rebuilt walling with some new locally-sourced stone used to replace the decayed masonry.

The new walling was bonded and pointed with lime mortar and the granite coping stones replaced in their original positions.

Following the reconstruction, a photographic record was made of the new area of walling (see Figs 34-37).

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Bristol Mercury - Saturday 17 July 1847

Royal Cornwall Gazette - Friday 16 July 1847

West Briton and Cornwall Advertiser – Friday 22 October 1847

10.3 Websites

<http://www.heritagegateway.org.uk/gateway/> Online database of Sites and Monuments Records, and Listed Buildings



Fig 3 Hellandbridge shown on Norden's Map of Cornwall c1597.



Fig 4 Hellandbridge shown on Gascoyne's Map of Cornwall c1699.



Fig 5 Hellandbridge shown on Martyn's Map of Cornwall 1748.



Fig 6 The bridge as shown on the St Mabyn parish (top) and Helland parish (bottom) Tithe Maps of c1840.

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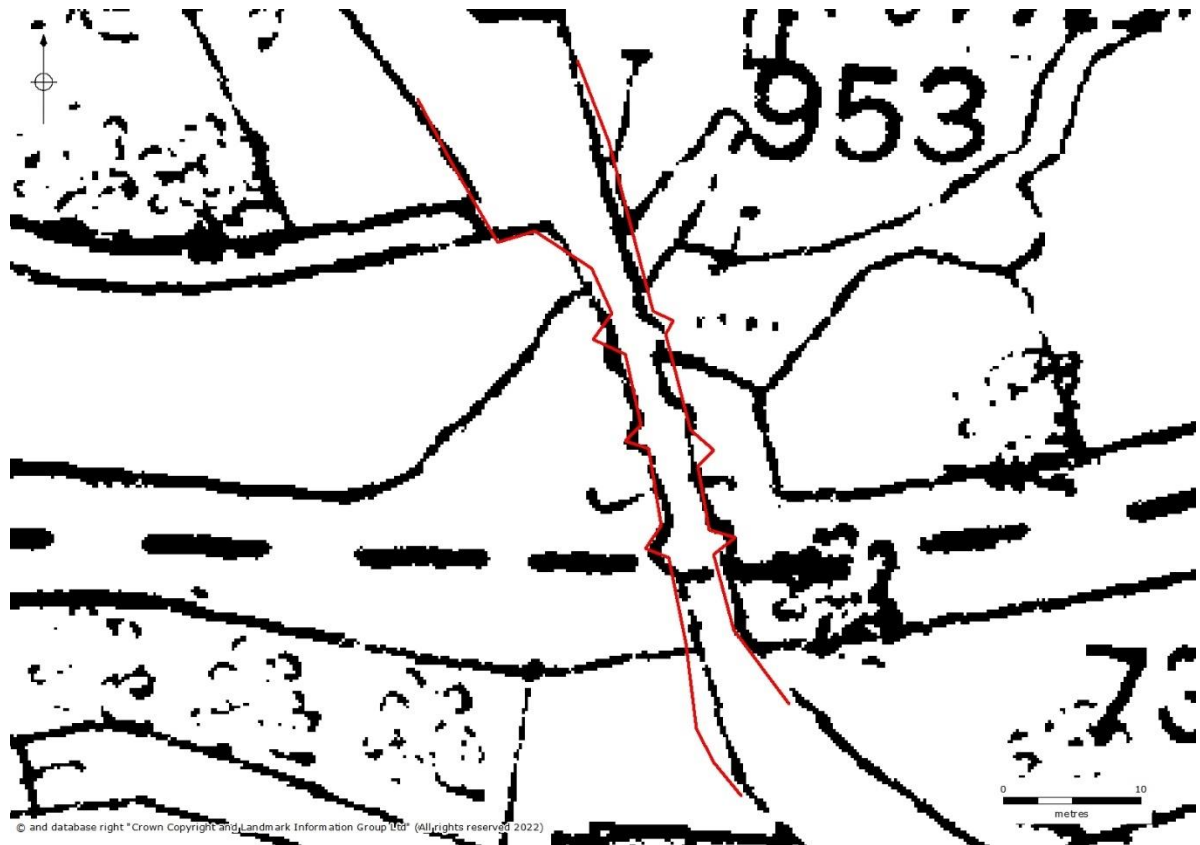


Fig 7 Helland bridge shown on the First Edition OS map of c1880.



Fig 8 Helland bridge shown on the Second Edition OS map of c1907.

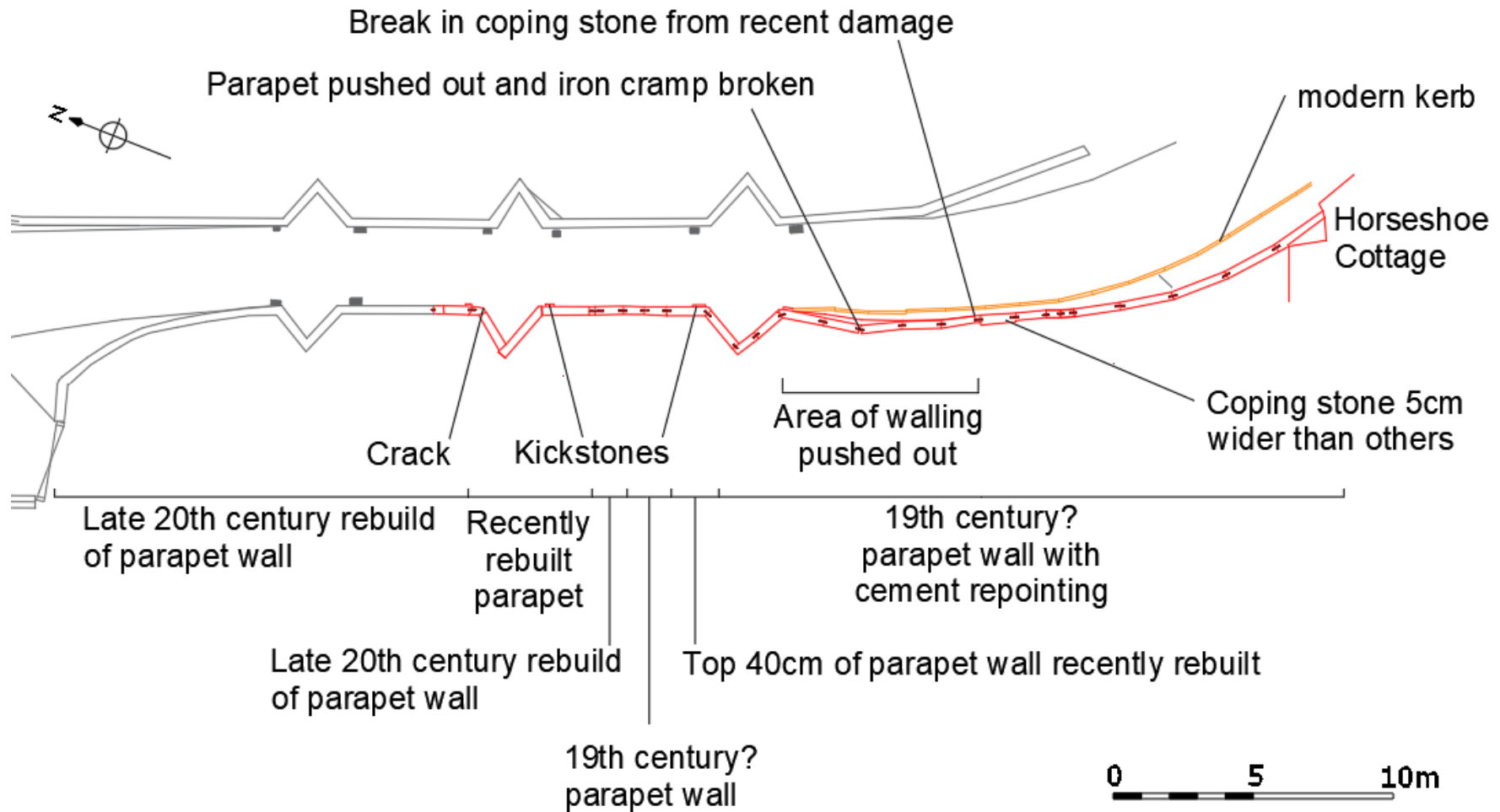


Fig 9 Plan of bridge prior to works with coping stones shown within and either side of the damaged area of wall.

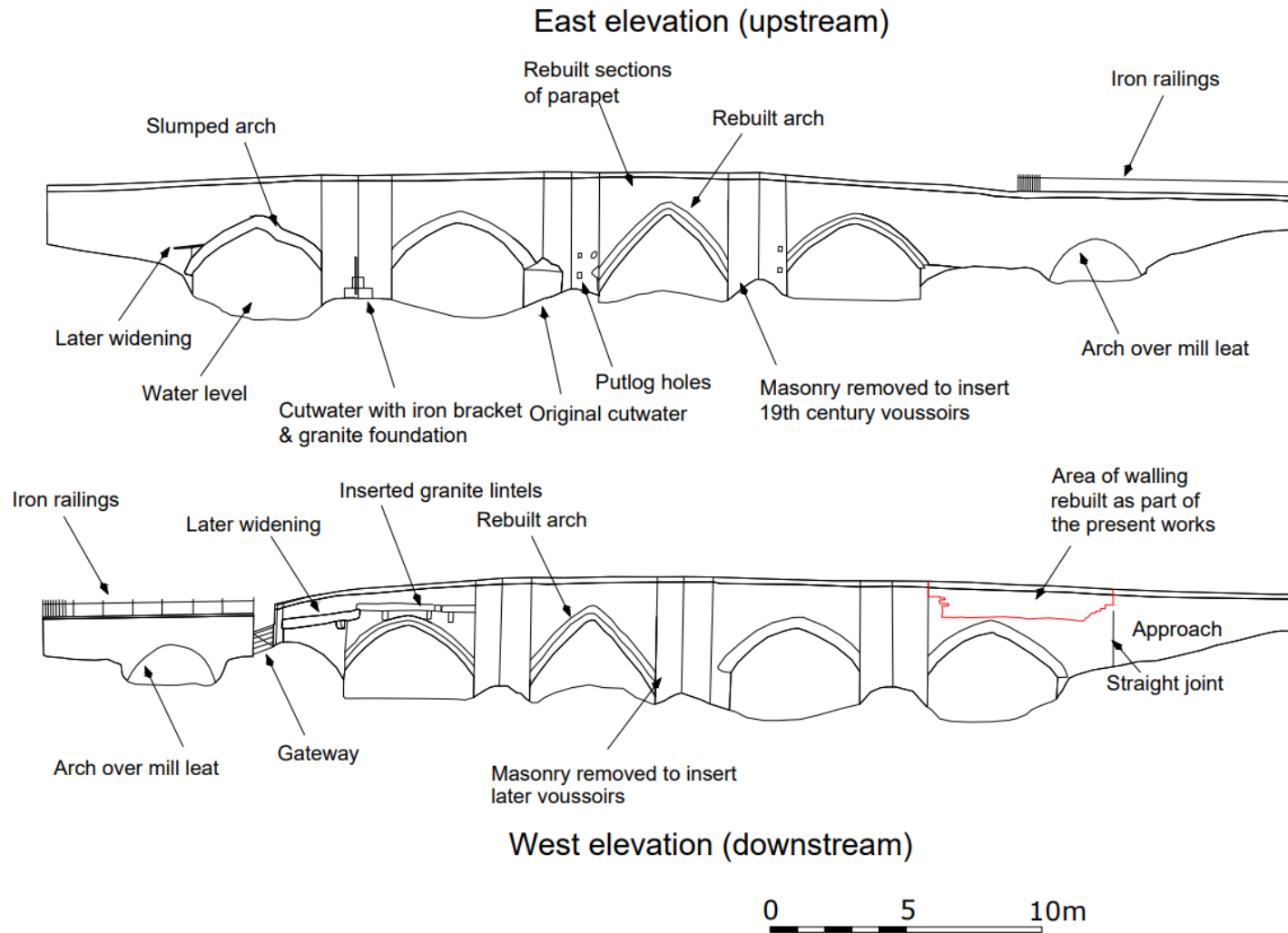


Fig 10 Elevation drawings of the bridge after Thomas, N, 2000 showing area of damaged walling.



Fig 11 (19) The southern approach to the bridge looking north.



Fig 12 (27) Looking north along the bridge.



Fig 13 (05) Southern part of the west elevation showing pushed out walling over the arch and straight joint to the right.



Fig 14 (35) The west elevation of the bridge looking south.



Fig 15 (34) East elevation of the bridge looking north.



Fig 16 (01) South end of the west elevation showing pushed out walling over the arch.

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Fig 17 (07) South end of the west elevation showing pushed out parapet wall.



Fig 18 (10) Close up of pushed out parapet wall.



Fig 19 Gaps created by the collision on either side of the modern kerbing adjacent to the pushed out parapet wall.



Fig 20 (23) Southern end of the east elevation of the damaged area of parapet wall.



Fig 21 (24) East elevation of the damaged area of parapet wall immediately north of Figure 20.



Fig 22 (25) East elevation of the damaged area of parapet wall immediately north of Figure 21.



Fig 23 (26) East elevation of the damaged area of parapet wall immediately north of Figure 22.



Fig 24 (28) East elevation of the damaged area of parapet wall immediately north of Figure 23.



Fig 25 (31) Recently repaired (2021) parapet wall in the refuge immediately north of the damaged area.



Fig 26 (14) View looking south along the top of the damaged parapet wall.

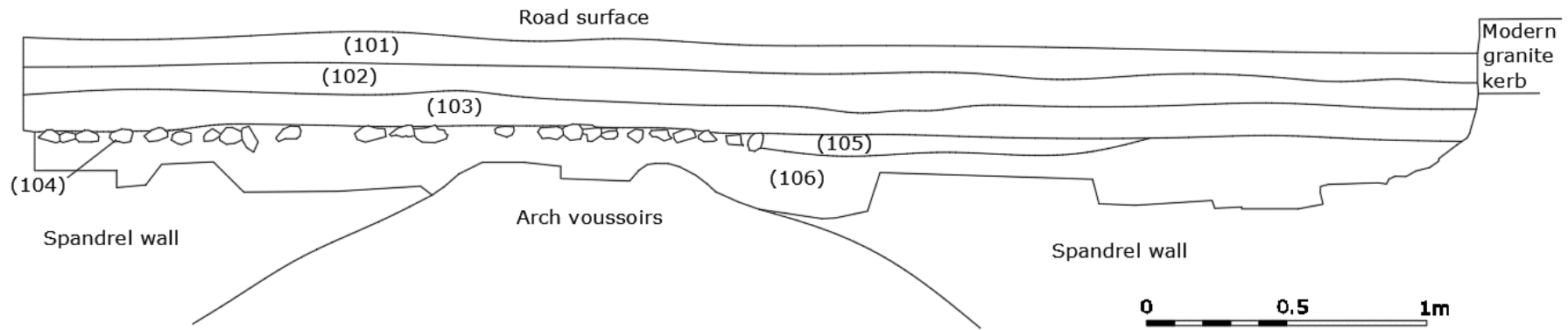


Fig 27 West facing section through road and bridge deck exposed after dismantling.

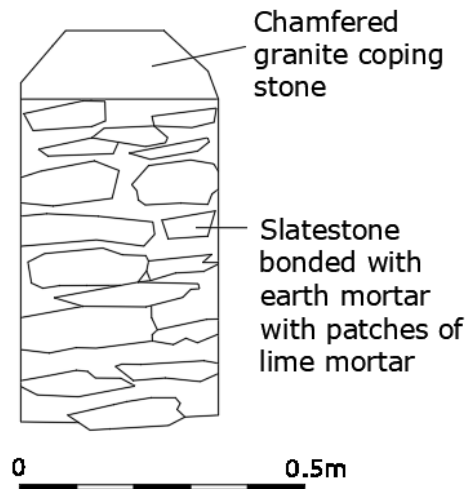


Fig 28 North facing section of parapet wall down to road surface level.



Fig 29 (36) South facing section of parapet wall.



Fig 30 (37) West facing section exposed beneath the road surface, showing former cobbled road surface.



Fig 31 (38) West facing section exposed beneath the road surface, also showing the top of the arch and spandrel walls.



Fig 32 (39) Area of removed walling looking north.

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Fig 33 (40) North facing section through parapet wall.



Fig 34 (41) East elevation of new parapet wall following reconstruction looking north west.

Helland Bridge, Cornwall, WSI for archaeological recording and supervision, JS, Rev 01



Fig 35 (42) East elevation of new parapet wall following reconstruction looking south west.



Fig 36 (43) West elevation of new parapet and spandrel wall following reconstruction looking south.



Fig 37 West elevation of new parapet and spandrel wall following reconstruction.

Appendix 1: List of contexts

Location	Context Number	Type (Cut/Deposit/Build)	Feature	Description
Helland Bridge	101	D	Road surface	Tarmac road surface 0.1m deep. Overlies (102).
Helland Bridge	102	D	Hardcore layer	Compact layer of crushed slatestone fragments in a dark grey silt matrix containing occasional patches of lime 0.09m deep. Below (101) and above (103).
Helland Bridge	103	D	Layer	Layer of mid greyish brown clayey silt containing frequent small pebbles and small fragments of slatestone 0.12m deep. Below (102) and above (104) and (105).
Helland Bridge	104	D	Road surface	Historic cobbled road surface. Average dimensions of a cobble: 0.1m x 0.07m x 0.05m. Below (103) and above (106).
Helland Bridge	105	D	Layer/surface	Thin layer of loose fragmented slatestone 0.06m deep. To the south of (104) and possibly contemporary. Below (103) and above (106).

Location	Context Number	Type (Cut/Deposit/Build)	Feature	Description
Helland Bridge	106	D	Bridge fill	Mid greyish brown clayey silt containing frequent small slatestone fragments and small stones. Seen to a depth of 0.26m. Below (104) and (105).

Appendix 2: Photographic archive

Archived with ADS Archaeology Data Service, York

Filename	Caption	Copyright Holder Organisation	Creation Date
1.JPG	South end of west elevation showing pushed out parapet wall	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
2.JPG	South end of west elevation	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
3.JPG	South end of west elevation	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
4.JPG	West elevation from south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
5.JPG	Distance photograph showing pushed out parapet	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
6.JPG	West elevation from south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
7.JPG	South end of west elevation showing pushed out parapet	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
8.JPG	South end of west elevation showing pushed out parapet	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
9.JPG	South end of west elevation showing pushed out parapet	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
10.JPG	South end of west elevation showing pushed out parapet	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
11.JPG	South end of west elevation	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
12.JPG	West elevation from south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022

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13.JPG	Pushed out parapet wall looking south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
14.JPG	Pushed out parapet wall looking south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
15.JPG	Pushed out parapet wall looking south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
16.JPG	Detail of pushed out parapet wall showing displaced cramp	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
17.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
18.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
19.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
20.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
21.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
22.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
23.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
24.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
25.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
26.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
27.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
28.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
29.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022

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30.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
31.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
32.JPG	Detail of pushed out parapet wall looking west	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
33.JPG	Detail of refuge	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
34.JPG	East elevation of bridge from the south	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
35.JPG	West elevation of the bridge from the north	Cornwall Archaeological Unit, Cornwall Council	10/01/2022
36.JPG	North section through wall during repair work	Cornwall Archaeological Unit, Cornwall Council	08/08/2022
37.JPG	Section revealed during repair work	Cornwall Archaeological Unit, Cornwall Council	08/08/2022
38.JPG	Section revealed during repair work	Cornwall Archaeological Unit, Cornwall Council	08/08/2022
39.JPG	Section revealed during repair work	Cornwall Archaeological Unit, Cornwall Council	08/08/2022
40.JPG	South section through wall during repair work	Cornwall Archaeological Unit, Cornwall Council	08/08/2022
41.JPG	Parapet wall after repair	Cornwall Archaeological Unit, Cornwall Council	26/08/2022
42.JPG	Parapet wall after repair	Cornwall Archaeological Unit, Cornwall Council	26/08/2022
43.JPG	Parapet wall after repair	Cornwall Archaeological Unit, Cornwall Council	26/08/2022
44.JPG	Parapet after repair, detail of cramp	Cornwall Archaeological Unit, Cornwall Council	26/08/2022

Appendix 3: Written Scheme of Investigation

Helland Bridge, Cornwall: Written Scheme of Investigation for archaeological recording and supervision

Client: Cormac Solutions Ltd

Project background

This document sets out a Written Scheme of Investigation (WSI) by Cornwall Archaeological Unit (CAU) on behalf of Cormac Solutions Ltd for a programme of archaeological recording and supervision at Helland Bridge, Hellandbridge, Cornwall NGR: SX 06520 71500, a Grade I Listed Building (List Entry Number: 1327910), in advance of and during planned emergency repair work (Figs 1 and 2).

Helland Bridge is a four-arch bridge, dating from the early 15th century. It was partially rebuilt in the mid 19th century, altered in the late 19th century and repaired in the 20th and 21st centuries. It is constructed from slatestone rubble with slate voussoirs and granite coping stones. It stands on an early route north out of Bodmin towards the village of St Mabyn and onwards to the coastal hinterland north-east of the Camel estuary. The River Camel marks the boundary of the parishes of St Mabyn to its north and Helland to its south. (List Entry Description for 1327910: https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=1327910&resourceID=5)

The proposed emergency repair work is necessary due to significant structural damage caused by an HGV which recently crashed into the bridge on its western side. Listed Building Consent for the repair works is not required as they will be carried out under an Emergency Repairs Notice. However, due to the Grade I Listed status of the bridge, Historic England will be advising on and approving proposals for the repairs and also the Written Scheme of Investigation (WSI) for archaeological supervision and recording before and during the works.

The repair works will involve dismantling the damaged area of the bridge and rebuilding it. This will include dismantling of the damaged section of western parapet wall along with the affected walling below and taking down the fill below the bridge deck where necessary.

Phil McMahon (Inspector of Ancient Monuments, Historic England) has advised that two stages of archaeological work will be required; one prior to dismantling, and the other during dismantling. He has requested that before any dismantling begins, a rapid photographic record should be made of the damaged elevation to record a) the damage, b) extent of rebuild and c) the general lay and style of build in order to guide the reconstruction. He has also advised that a record the copings and staples are made prior to dismantling, so that when numbered by Cormac, they can easily be reassembled in their original order. The second stage of archaeological work is the supervision and recording of the controlled dismantling of the damaged elevation in order to record the bridge elements uncovered, especially the fill.

Helland Bridge, Cornwall, WSI for archaeological recording and supervision, JS, Rev 01



Figure 1: Site location circled in red.



Figure 2: Grade I Listed bridge shown with yellow line.

Historical Background

The following history of the bridge is taken from the List Entry Description (https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=1327910&resourceID=5).

Helland Bridge was first mentioned in the Patent Rolls of 1381, which record that Stepayne Dyer of 'Helland Brigge' with others broke down a salmon weir on the Aleyne (Allen) at Dynemore (Dunmere). The bridge itself was first described by John Leland, the King's Antiquary, in around 1535 as 'the first memorable bridge on the Alane (Allen) is called Helham Bridge'; Allen is the historic name of the River Camel. In

around 1580 John Norden recorded 'Helenbr.' on his map of Trigg Hundred, showing the river crossing and houses on the St Mabyn bank. It is named 'Hellandbridg' on further maps of 1699 and 1748. It is likely that there was a crossing point in this location prior to the bridge first being recorded.

On the first Ordnance Survey (OS) of 1813, buildings are depicted grouped around the north and south approaches to the bridge. The 1842 Tithe map for St Mabyn shows the bridge in detail and depicts piers with triangular refuges. To the north of the bridge is a mill, and its head and tail races are also shown on the map. It is likely that by this date a further arch had been added to the north end of the bridge to accommodate these. On 16 July 1847, a flash flood swept down the River Camel, damaging Helland Bridge and rising over its parapets, but not causing the total destruction it wrought on most other bridges along the valley. The strongly-pointed arch north of centre and the adjacent cutwater were reconstructed following the incident. The 1881 OS map shows the mill, then for corn, along with its water system. A dump channel from the headrace passes under the bridge's northern arch, cutting across what appears to be an earlier and abandoned channel further east along the headrace. It is likely that the two northern arches of the bridge were designed to span this earlier channel and may have been lengthened in response to the mill's requirements, possibly replacing a causeway and floodwater-arch over the floodplain. The 1907 OS map shows that little had changed by the early years of the 20th century.

In the 1920s Helland Bridge was visited by the historian Charles Henderson and Henry Coates, a photographer. Henderson noted that the bridge was probably early 15th century (by a comparison of styles) and was in perfect condition, although one arch had been rebuilt. He proclaimed it as 'one of the finest old bridges in the west'.

The road across Helland Bridge lost its importance in the post-medieval period, with the preferred crossing point on the River Camel being downstream at Dunmere Bridge. Helland Bridge therefore became a secondary route.

Current Condition/vulnerability

The recent collision has caused an area of the western (downstream) parapet and walling below to be pushed outwards so that it now leans out over the river (Fig 4), it has also caused a vertical linear crack to appear on the bridge deck between the Tarmac road surface and an inserted 20th century kerb (Fig 3).

This structural damage has rendered the bridge unusable, and it is currently closed to all traffic.

Historic England are now keen to see dismantling works take place as soon as practicably possible given the real potential for loss of historic bridge fabric into the river.

Helland Bridge, Cornwall, WSI for archaeological recording and supervision, JS, Rev 01



Figure 3 Photographs of recent damage, looking north along the western side of the bridge.



Figure 4 Photograph of recent damage, looking south along the western side of the bridge showing the parapet and walling below pushed outwards.

Aims and objectives

The principal aims of the archaeological work are to create a record of the damaged area of the bridge prior to any repair works, and also to monitor the dismantling works and create an archaeological record of features/material uncovered.

The objectives are to:

- Obtain an archaeological record of the bridge prior repairs.
- To record all archaeological features, layers and finds uncovered during the course of the works.
- To identify any artefacts relating to the construction of the bridge.
- The long-term conservation of the project archive in appropriate conditions.

Working methods

All recording work will be undertaken according to the Chartered Institute for Archaeologists (CIfA) guidance (CIfA 2014a; 2014b; 2014c; 2017). Staff will follow the CIfA *Code of Conduct* (2014d). The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

Pre-fieldwork

In advance of the fieldwork CAU, will discuss and agree with the client:

- Working methods and programme.
- Health and Safety issues and requirements.

Desk-based assessment

A desk-based assessment will be carried out to inform the fieldwork stage.

This will be guided by CIfA's guidance on undertaking desk-based assessment (CIfA 2017) and as a minimum will comprise study of the following:

- Published sources.
- Historic maps, including:
 - Joel Gascoyne's map of Cornwall (1699),
 - Thomas Martyn's map of Cornwall (1748),
 - OS 1 inch survey (c1810),
 - Parish Tithe maps (c1840),
 - 1st and 2nd Editions of the OS 25 inch maps (c1880 and c1907).
- Modern maps.
- GIS data accessible to CAU via the Heritage Gateway.

Fieldwork: Pre-reconstruction recording

A rapid record of the whole bridge will be made with a more detailed record of the damaged area.

- No detailed plans and elevations of the bridge are available, but a measured plan of the granite coping stones on the western side of the bridge will be created, so that they can be numbered and reset in their original locations as part of the reconstruction. Measured detail will be added to the drawings along with annotations to provide details of both historic development and fabric.
- Rapid photographic record will be made of the damaged elevation to record a) the damage, b) extent of rebuild and c) the general lay and style of build in order to guide the reconstruction.
- Colour photographs of all elevations along with architectural details will be taken with a digital camera (at a resolution of 10 million pixels or higher). These will

form the archive. Photographs will include a metric scale bar, except where Health and Safety considerations make this impractical.

- Descriptions of the damaged walling and deck will be made in note form and by annotation of photographs to record fabric and construction, phased development through time and architectural details.

Fieldwork: Archaeological supervision and recording during dismantling

Phil McMahon (Inspector of Ancient Monuments, HE) has advised that archaeological supervision and recording should be undertaken during the dismantling of the damaged elevation in order to record the bridge elements uncovered, especially the fill. This work will be guided by CIfA's guidance on undertaking watching briefs (CIfA 2014b).

The dismantling works will be undertaken under archaeological supervision. This will include taking down part of the existing parapet and walling below, it will also include the removal of bridge fill to some extent. Should archaeological features be revealed, dismantling will be halted, and the exposed features cleaned by hand to determine their significance prior to either their recording or further removal. The developer will allow reasonable time for the exploration and recording of any features thus revealed. Where a temporary stop of work is required the site archaeologist will request this via the developer and the SDOHE and/or Historic England Inspector of Ancient Monuments.

During the archaeological recording the archaeologist will:

- Identify and record any archaeological features that are revealed; the level of recording will be appropriate to the character/importance of the archaeological remains.
- Site drawings (plans and sections) will be made by pencil (4H) on drafting film; all drawings will include standard information: site details, personnel, date, scale, north-point.
- All features and finds will be accurately located at an appropriate scale.
- All archaeological contexts will be described to a standard format linked to a continuous numbering sequence.
- Photographic recording will comprise colour photography using a digital SLR camera (with a resolution of 10 million pixels or higher; CAU will follow Historic England (2015) guidance on digital image capture and storage). Photographs will include a record of significant features and general working shots. A metric scale, site and context identifier, and a north arrow where appropriate, will be included in all record shots.

Treatment of finds

The fieldwork may produce artefactual material. The following recording and retention policies will be followed:

- In the event that objects containing precious metal(s) are encountered, the coroner will be informed as per the provisions of the Treasure Act 1996.
- Significant finds in stratified contexts will be plotted on a scaled base plan and recorded as small finds.
- All finds will be collected in sealable plastic bags which will be labelled immediately with the site code, the context number or other identifier, the type of material, and the finder's initials. The only exception to this policy will be that large assemblages of modern (post-1800) material may be representatively sampled.
- Modern (post-1800) finds may be disposed of at the cataloguing stage. This process will be reviewed ahead of its implementation.

Treatment of samples

The fieldwork may produce mortar samples. The following collection, recording and processing policies will be followed:

- Sealed/undisturbed archaeological contexts that have the potential to contain palaeoenvironmental evidence and/or material suitable for scientific dating will be sampled.
- In the event that significant organic remains are encountered, advice may be sought from the Historic England Science Advisor (South West).
- All samples will be described to a standard format linked to a continuous numbering sequence.

Reporting

The results from the project will be drawn together and presented in a report. The scope of the report will be dependent on the scale and significance of the results from the project.

The report will include the following elements:

- Summary
- Project background
- Aims and objectives
- Methodology
- Location and setting
- Site history
- Phased historic development
- Bridge description
- Recording during dismantling results
- References
- Project archive index
- Supporting illustrations: location map, historic maps, plans, elevations, sections, photographs, photo direction plan for the historic building record
- The WSI will be added to the archive report as the final appendix.

Creation of the physical and digital archive

The results from the fieldwork will be collated as an archive.

This will involve the following.

- All records (drawings, photographs, etc) will be ordered, catalogued and stored in an appropriate manner (according to CAU guidelines).
- Colour digital images taken as part of the site archive will be deposited with the Archaeology Data Service (ADS).
- Annotated drawings/photographs will be created.
- Completion of the Historic England/ADS OASIS online archive index.
- All correspondence relating to the project, the WSI, and a single paper copy of the report, stored in an archive standard (acid-free) documentation box.
- Drawn archive storage (plastic wallets for the annotated record drawings).
- Additional digital data (survey, external reports, etc).

Archive deposition

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

- The project archive will be deposited initially at ReStore PLC, Liskeard and at CAU premises until a suitable repository is found.
- Digital data will be stored on the Cornwall Council network which is regularly and frequently backed up.
- Digital data (CAU reports, external reports, survey data, digital photographs, etc) forming part of the site archive will be deposited with the ADS.

CAU uses the following file formats for stored digital data:

- DOCX Word processed documents
- XLSX Spreadsheets
- PDF Exports of completed documents/reports/graphics

JPG	Site graphics and scanned information
DNG or TIF	Digital photographs
DWG	AutoCAD drawings, measured surveys
MXD	ArcView GIS (electronic mapping) data
AI	Adobe Illustrator graphics

Analysis

The structural and stratigraphic data and artefactual material will be reviewed with Historic England to establish whether further analyses and reporting is appropriate. The outline of the final report, and the work required to produce it will be determined.

In the event of significant remains being recovered (eg, medieval artefacts) it may be appropriate to:

- Liaise with the specialist teams (eg, artefacts) to arrange for assessment of the potential for further analysis and reporting.
- Consult with Historic England over the requirements for analysis and reporting.

Publication

In the event that significant remains are recorded, the scope and final form of the report will be reviewed; for example, in addition to an archive report the results should be published in an academic journal (eg, *Cornish Archaeology*, *Medieval Archaeology*)

Project accommodation and infrastructure

The project will be co-ordinated from CAU's Truro offices. CAU has a computer network running Windows 10. Report texts are generated in Microsoft Office Word. Mapping will derive from the OS Mastermap and historic maps via Arcview GIS. Line drawings will be generated using AutoCAD. The CAU team each have Dell laptop (i5). CAU has adequate photocopying, scanning and printing facilities.

Timetable

The work is anticipated to commence during January 2022.

The archive report will be completed within 3 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 review and monitoring

At each stage liaison will be kept up with the Historic England Inspector of Ancient Monuments and/or Cornwall Council's Senior Development Officer (Historic Environment, Planning) who will also monitor the project. Historic England and the SDOHE will be informed in advance of the intention to start the recording.

- The project manager will liaise with Historic England and/or SDOHE to advise on the programme and progress of work and agree site meetings if required.
- The project manager will notify Historic England and SDOHE upon completion of the fieldwork stage of these works.
- Monitoring will continue until the deposition of the site archive and artefacts, and the satisfactory completion of an OASIS report.
- In the event that significant remains are encountered an updated project design will be agreed with Historic England and the SDOHE.

References

CIfA, 2020a. *Standard and guidance for the archaeological investigation and recording of standing buildings or structures*, CIfA, Reading

CIfA, 2020b. *Standard and guidance for an archaeological watching brief*, CIfA, Reading

CIfA, 2020c. *Code of Conduct*, CIfA, Reading

CIfA, 2020d. *Standard and guidance for historic environment desk-based assessment*, CIfA, Reading

Henderson, CG and Coates, H, 1928. *Old Cornish Bridges and Streams* Bradford Barton reprint 1972, Truro

Historic England 2016. *Understanding Historic Buildings: A guide to good recording practice*. Historic England, Swindon

Historic England 2015. *Guidance note on Digital Image Capture and File Storage*. Historic England, Swindon

https://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=1327910&resourceID=5

Cornwall Archaeological Unit

Cornwall Archaeological Unit is part of Cornwall Council. CAU employs 10 project staff with a broad range of expertise, undertaking around 120 projects each year.

CAU 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
- Heritage Impact Assessments/Heritage Statements
- 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



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

<http://www.archaeologists.net/codes/ifa>

Terms and conditions

Contract

CAU is part of 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 CAU 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 Jo Sturgess who will:

- Discuss and agree the objectives and programme of each stage of the project with the client, Historic England, the SDOHE and other field officers, including arrangements for health and safety.
- Monitor progress and results for each stage.
- Liaise with the client, the SDOHE, Historic England regarding related issues.

Work will be carried out by CAU field staff. All staff will follow CAU's Health and Safety Policy and work in accordance with a site-specific risk assessment.

The project team is expected to include:

Jo Sturgess BA, MCIFA

Senior Archaeologist at CAU with a wide range of experience in recording historic buildings, landscapes, excavation, post-excavation and characterisation. Past historic building works have included Lanhydrock House (Cornwall), Port Eliot (Cornwall), Arlington Court (Devon), Bradley Manor (Devon), Buckland Abbey (Devon), Cutmadoc Farmhouse (Cornwall), the Piggery and Cider House at Godolphin (Cornwall), Poltesco

Mill House (Cornwall), Molenick Farmhouse (Tideford), City Wharf (Truro), Harvey's Foundry (Hayle), Boswednack Serpentine works; Porthmeor farm; Bartle's Foundry (Pool), Manor Tannery (Grampound) Duchy Palace (Lostwithiel) and variety of mine buildings, farm buildings, industrial buildings and bridges. Other projects include Devon Extensive Urban Survey, Gwithian's past excavations, Lemon Quay excavation, Goonhilly Earth Station survey, Lower Boscaswell and Trevesa in West Penwith landscape surveys. Expertise includes use of Total Station, CAD software and GIS. Holder of a CSCS card and qualified first aider.

Connor Motley BA (Hons)

Assistant Archaeologist Connor joined the team in 2019 after graduating from the University of York with BA (Hons) in Archaeology. Connor is experienced in archival research and has a good working knowledge of architectural and building history. He has a wide range of archaeological experience having partaken in surveys, excavations and post-excavation in England, Wales and Cornwall. Since joining he has been assisting with historic building projects, excavations and watching briefs and using software such as GIS and AutoCAD.

Report distribution

A digital copy of the report will be sent to the client. A paper copy can be supplied on request.

Once verified by Cornwall HER, a digital copy of the report will also be publicly available online via the Archaeology Data Service (ADS) Library.

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CAU 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 CAU may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

Health and safety statement

CAU follows Cornwall Council's *Statement of Safety Policy*.

Prior to carrying out on-site work CAU will carry out a site-specific Risk Assessment tailored to follow Covid-19 restrictions.

Insurance

CAU is covered by Cornwall Council's Public and Employers Liability Insurance, with a policy value of £50m. The Council also has Professional Negligence insurance with a policy value of £10m.

Jo Sturgess

Senior Archaeologist

06/01/2022

Cornwall Archaeological Unit

Helland Bridge, Cornwall, WSI for archaeological recording and supervision, JS, Rev 01

Cornwall Archaeological Unit

Pydar House, Pydar Street, Truro, Cornwall
TR1 1XU



(01872) 323603
enquiries@cau.org.uk
www.cau.org.uk

