# Puslinch Bridge, Yealmpton, Devon

## (NGR SX 57078 50990)

## Results of an archaeological watching brief

## Devon County Council planning reference DCC/3372/2012

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On behalf of:
Devon County Council

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AC archaeology

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CONTENTS

**Summary**

*An archaeological watching brief was carried out by AC archaeology in September and October 2012 during the construction of a new invert slab at Puslinch Bridge, Yealmpton, (SX 57078 50990). The bridge is a two-span structure, possibly of 16th- or 17th-century date*

*No conclusive evidence for a bridge pre-dating than the current structure was exposed, although a short length of a possible earlier wall was discovered within the central pier.*

*The central pier had been altered with the addition of a counterfort and refuge on its downstream side. Its construction necessitated the removal of an earlier cutwater. The eastern face of the northern arch had also been rebuilt, perhaps following an historic flood event. A wing wall on the southern bank, upstream of the bridge was also recorded. Two phases of masonry were noted, the earliest of which may have been built soon after the bridge was constructed.*

## 1. INTRODUCTION (Fig. 1)

**1.1** An archaeological watching brief was maintained by AC archaeology in September and October 2012 during the construction of a reinforced concrete invert slab below Puslinch Bridge, Yealmpton, Devon (SX 57078 50990; Fig. 1; Devon County Council planning reference DCC/3372/2012). The work was commissioned by Devon County Council, and requested by their Historic Environment Service who provided guidance on the scope of the monitoring (Tait 2012).

**1.2** Puslinch Bridge is located to the southwest of Yealmpton, between the village and the grounds of Puslinch House. The latter was constructed in the early 18th century, but is documented from the late medieval period (Devon County Historic Environment Record MNV2287). It lies within gardens and parks. The bridge is situated at around 10m aOD and the underlying solid geology comprises Middle Devonian Slates overlain by alluvium of clay, silts, sand and gravel.

## 2. ARCHAEOLOGICAL BACKGROUND

**2.1** Puslinch Bridge is a Grade II listed building of special architectural or historic interest (National Heritage List number 1108566). It is described as being of *c*. 17th-century date and comprises two spans over the river with a separate flood arch at the north end connected by a causeway. It has obtusely-pointed arches with recessed arch rings. Between the western arches on the downstream side is a cutwater with a pedestrian refuge above. The bridge is also recorded on the Devon County Historic Environment Record (DCHER) as being of possibly 16th-century date (MDVs 14421, 14422 and 99663).

## 3. AIMS

**3.1** The HES have suggested that the present bridge may replace an earlier bridge. The groundworks have the potential to expose and destroy any surviving archaeological deposits, structures or artefacts, including those associated with the bridge and any predecessors. The aim of the watching brief was therefore to observe, investigate, excavate and record any surviving below-ground archaeological artefacts and deposits across the area affected by the development.

## 4. METHODOLOGY

**4.1** The watching brief was carried out in accordance with a written scheme of investigation prepared by AC archaeology (Passmore 2012).

**4.2** Groundworks were confined to the river bed, and no new access tracks, as originally proposed, were created

**4.3** All features and deposits revealed were recorded using the standard AC archaeology pro-forma recording system, comprising written, graphic and photographic records, and in accordance with AC archaeology's *General Site Recording Manual, Version 1.* Detailed sections or plans were produced at a scale of 1:10, 1:20 or 1:50 as appropriate.

## 5. RESULTS (Fig. 2; Plates 1-6)

### 5.1 Excavations within the river bed

The river bed in the vicinity of the new invert was excavated under and to either side of the southern arch. No archaeological deposits were exposed. The excavated material comprised river-borne blocks, of varying sizes, of granite, slate and quartz, along with silts and clays.

Similar deposits were visible during the excavations for the northern half of the invert, although the presence of deep standing water within the working area precluded detailed observations.

### 5.2 The southern abutment (Plates 1-2)

The lowest course of the arch is formed by a row of large dressed blocks of masonry, whose outer edge is vertical. Two further courses of similar, but even larger blocks are present below. Either end, this masonry projects out from the bridge and is constructed of rougher slate blocks. On the upstream side of the bridge this masonry also projects slightly into the river forming a half cutwater. Below this, the abutment sits on a slightly projecting thin course of slates laid onto foundations comprising courses of rough large blocks of slate. Two courses were exposed.

The upstream wing wall on the southern bank overlies the projecting masonry of the south abutment. The lowest fabric is constructed from rubble slates laid roughly in 4-5 rows. Above this, the wall has been rebuilt with mortared smaller coarsely-dressed blocks of slate with some granite, laid roughly in 6-7 rows.

### 5.3 The central pier (Fig. 2; Plates 3-5)

In the central pier the two arches stop abruptly at a point two courses below the normal river flow level. On the upstream side of the bridge the lowest three courses of masonry project out and may form a crude cutwater.

On its downstream side is a counterfort or cutwater with a pedestrian refuge at road level. This was not inspected in detail during the works but it obscures the lower voussoirs of both the northern and southern arch, and may therefore have been added after the bridge was constructed. The foundation of this counterfort comprises a minimum of 7 courses of finely-dressed green thin-laminated slates, whose alignment is set back from the course of the adjacent pier foundations. Some of the stones displayed diagonal tool marks, and overall were characteristically different from other stone used in the bridge. They may have been reused from a high-status structure (cf Evans weir at Tavistock where similar high-quality masonry was used in the retaining wall beside the river; Passmore and Pink 2011, 3). Set around this

masonry is a mid brownish-grey friable silty clay that contains small fragments of brushwood and three small vertical stakes. These features were interpreted on site as a repair to the bridge, but probably actually form the foundations for the later counterfort. The north side of these foundations had been disturbed, and evidence for the addition is less clear, but a break could be determined between the earlier foundations, and the later counterfort and its foundations.

Under the south arch, part of the main foundation of the pier had been previously underpinned and heavily repointed in cement. Removal of this underpinning exposed a stub of north-south aligned masonry, comprising three courses of mud-bonded blue-green slates. This appeared to predate the majority of the pier footings, although its function is not clear.

On the northern side of the pier the masonry below the arch comprises five courses of large blocks of slate. These had been repointed in cement, which had also been used as a render at the east end.

**5.4** **The northern pier** (Plate 6)
Detailed observations were restricted by the standing water within the working area, and the pier was recorded from downstream of the bridge. In addition, emergency holding repairs to the west side of the abutment had taken place without archaeological monitoring. The construction of the lower section of the abutment is similar to the southern abutment. The lowest course of the arch is formed by a row of large dressed blocks of masonry, although they were not vertical, but slightly angled forming the arc of the arch. Below this are three courses of coursed large slate blocks. There is no projecting row of stones below this masonry, and it rests directly onto rows of large undressed stones. Two courses of this lower masonry were exposed.

A clear join is visible where the eastern part (approximately 1m wide) of the arch had been rebuilt. The arch was reconstructed entirely from the base of the voussoirs upwards. In general, small stones have been used (as per the earlier arch) but larger dressed slates were utilised at the base, within the central pier, and for the exterior quoins and keystone. The latter are flush with the face of the bridge and larger than the voussoirs used in the earlier arches.

## 6. DISCUSSION

**6.1** No conclusive evidence for a bridge earlier than the present structure was recorded. A short length of possible wall within the masonry of the central pier could be associated with an earlier bridge, but its north-south alignment, and narrow width, do not readily allow an interpretation.

**6.2** The majority of the fabric of the bridge appears to be of one phase, with consistent masonry in the north and south abutments joined by two arches springing off a central pier.

**6.3** Three later alterations to the bridge were noted. Firstly, the cutwater on the downstream side was truncated and a replaced by a larger counterfort incorporating a refuge at road level. Secondly, the eastern side of the northern arch was replaced, along with at least some of the masonry of the bridge causeway on its northeastern side. Both these alterations are not datable, but the latter may have taken place following an historic flood event since at this location the River Yealm flows down to the causeway before turning and passing under the arches (see the heritage Statement/Design and Access Statement, Plate 3). Thirdly, the upstream wing wall

was added, and subsequently heightened. Again, this is undated, but given the unusual course of the river (which must be constricted by the presence of the bridge), it may have been added soon after the bridge was constructed to protect the adjacent roads and access to Puslinch House beyond.

## 7. ARCHIVE AND OASIS ENTRY

**7.1** The paper and digital archive and finds are currently held at the offices of AC archaeology Ltd, at 4 Halthaies Workshops, near Exeter, Devon, EX5 4LQ. They will be deposited at the Plymouth City Museum and Art Gallery under the accession number 2012.39.

**7.2** The OASIS (Online AccesS to the Index of Archaeological InvestigationS) number for this project is 141476.

## 8. ACKNOWLEDGEMENTS

**8.1** The watching brief was commissioned by Peter Burge of Devon County Council, and managed by Andrew Passmore for AC archaeology. The fieldwork was carried out by Abigail Brown and Chris Caine. The report was written by Andrew Passmore with the illustrations prepared by Sarnia Blackmore.

## 9. REFERENCES

Passmore, A., 2012, *Puslinch Bridge, Yeampton, Devon, (SX 57078 50990), Written Scheme of Investigation for an archaeological watching brief*, Planning ref. Devon County Council DCC/3372/2012, AC archaeology document no. **ACD526/1/1**.

Passmore, A.J., and Pink, F., 2011, *Archaeological Recording at Evans Weir, Parkwood Road, Tavistock, Devon*, Exeter Archaeology Report no. **11.14**.

Tait, G., 2012, *Brief for Archaeological Monitoring and Recording: Puslinch Bridge Yealmpton, Devon*, DCHES reference **ARCH/CM/SH/18759**.


N




SX

0 500m

Scale 1:10,000@A4

Site

PROJECT

Puslinch bridge, Devon

TITLE

Fig. 1: Location of site

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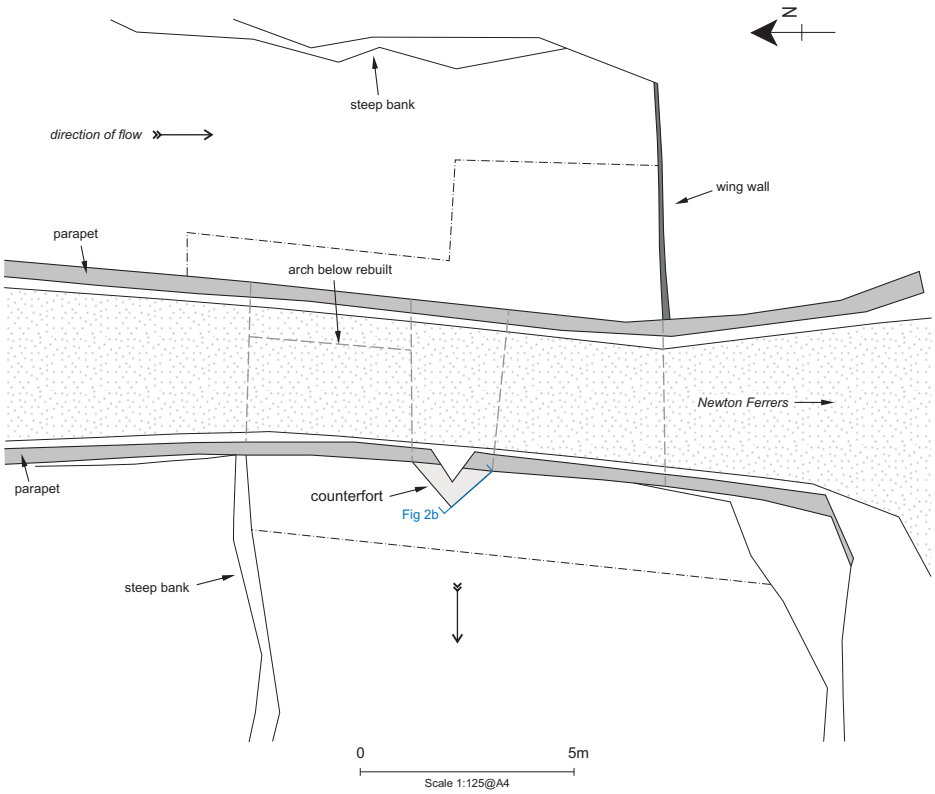
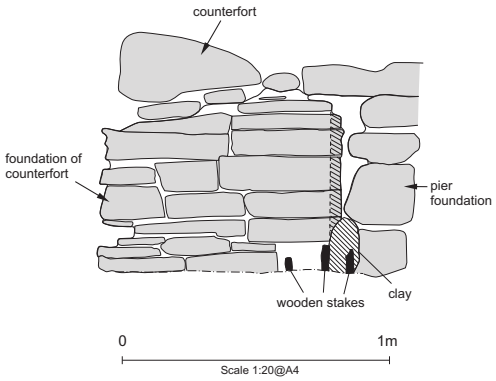
a) Counterfort foundation, plan




b) Counterfort foundation, elevation




PROJECT

Puslinch bridge, Devon

TITLE

Fig. 2: Site plan and elevation of counterfort foundation

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Plate 1: The southern arch showing the south elevation as well as the masonry of the southern abutment, viewed from the northwest

Plate 2: The wing wall east of the southern abutment, viewed from the northwest

Plate 3: The foundation of the counterfort attached to the central pier, viewed from the south. 1m scale

Plate 4: Close-up shot of the stakes within the clay, viewed from the south

Plate 5: The possible early wall in the south elevation of the central pier, viewed from the south. 1m scale

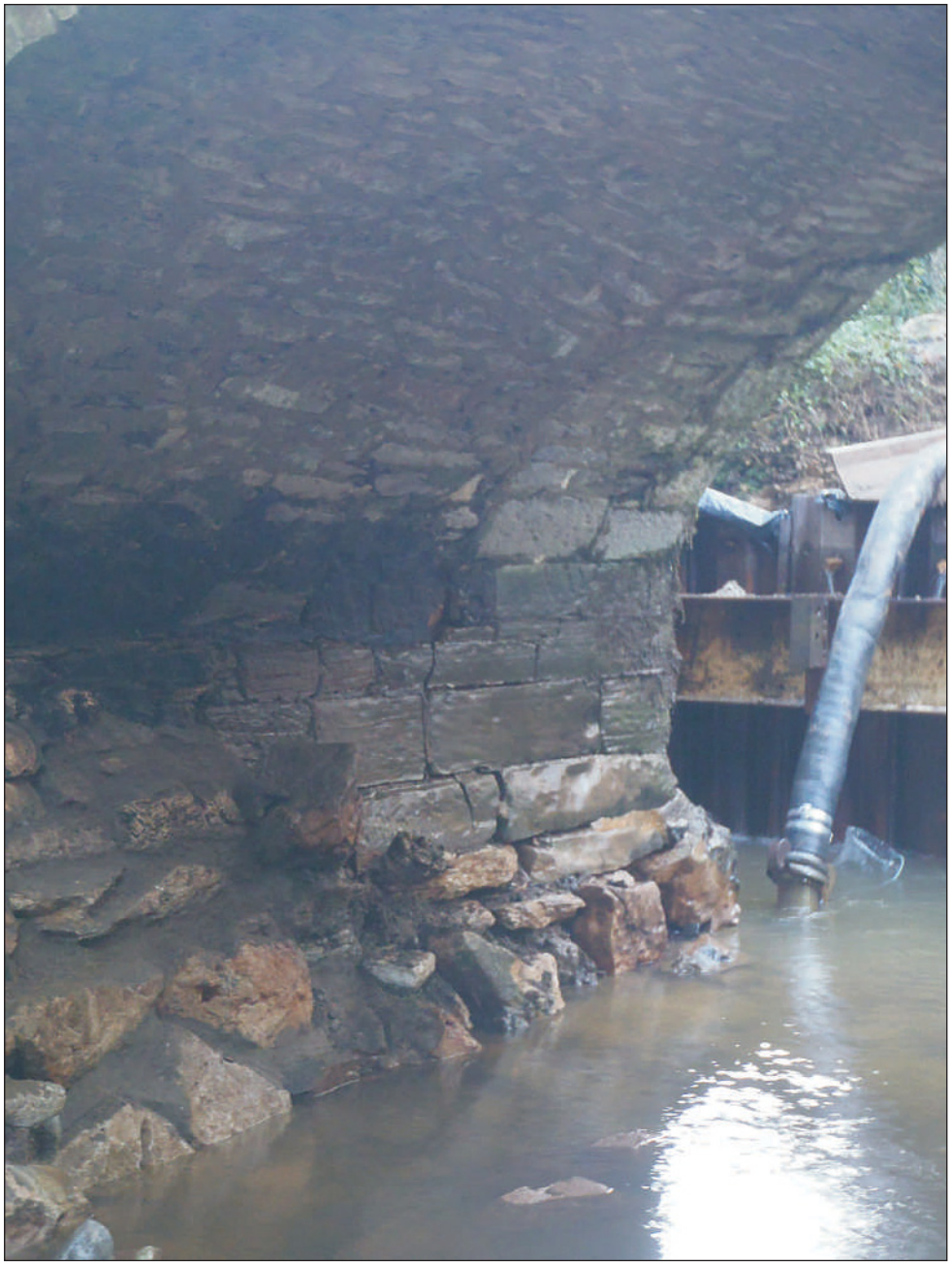

Plate 6: The northern arch, showing the rebuilt east face, viewed from the southeast.

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