Axe Valley Cyclepath/Walkway: Axminster to Kilmington

Archaeological Monitoring and Recording





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Archaeological Monitoring and Recording

for

Parsons Brinckerhoff on behalf of Devon County Council

Ву



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Front cover image: Path route entering the Alder Carr. © Context One Archaeological Services 2012



Contents

Non-Technical Summary	1
Introduction	2
Site Location, Topography and Geology	4
Desk-based research	4
Methodology	6
Results	7
The Finds	7
Discussion and Conclusions	.12
Archive	.12
COAS Acknowledgements	.12
Bibliography	.13
pendices	
Appendix 1. Devon Historic Environment Record report for archaeological events within the environs of the Site. Appendix 2. Documentary sources Appendix 3: Context Table	.14 .14
strations	
Figure 1. Site setting showing relevant historic environment records	5 8
res	
Plate 1. Walled conduit (101) (from NW; 1m scale) Plate 2. Easement in Field 3 (from E; 1m scale) Plate 4. General view of bridge base (from W; 2m scales) Plate 5. Bridge base, timber G centre left (from W; 1m scale) Plate 6. Timbers in situ (protected by plastic bags) Plate 7. Timber B (1m scale) Plate 8. Timber E (1m scale)	.10 .10 .10 .11
	Site Location, Topography and Geology. Desk-based research. Methodology. Results



Non-technical Summary

Context One Archaeological Services Ltd (COAS) carried out a programme of archaeological works comprising desk-based research and both comprehensive and intermittent monitoring and recording during groundworks for the construction of the new NCN2 Axe Valley Cyclepath/Walkway between Axminster and Kilmington in Devon (centred on NGR SY 27714 97662). The project was commissioned and funded by Devon County Council (DCC). The fieldwork was carried out as required on seven days between the 5th to 26th July.

The archaeological work was requested by the Devon County Council (planning reference: DCC/3160/2010) on the advice of Ms Faye Glover (Archaeologist, Devon County Historic Environment Service (HES)) as a condition of granting planning permission for the Cyclepath/Walkway.

Archaeological research in the 1980s had discovered a length of the Dorchester to Exeter Roman road and a Medieval route at the north end of the path and the locations of later bridges across the River Yarty were broadly identified. During and since those times there has been significant flooding, leading to deep soils accumulating over areas with potential for preserving archaeological deposits.

The only substantial finds were a stone wall at the north end of the path which probably formed the base of a bridge known to have existed in 1798 and a group of timber stakes close by, which seem to be older and may have been used to stabilise a ford.

There is no evidence that the construction of the path has adversely affected archaeological deposits.



1. Introduction

- 1.1 Context One Archaeological Services Ltd (COAS) carried out a programme of archaeological works comprising desk-based research and monitoring and recording (watching brief) during groundworks associated with the construction of the new NCN2 Axe Valley Cyclepath/Walkway (path) over three days from 5th to 26th July 2011. The path will run between Axminster and Kilmington in Devon (centred on NGR SY 27714 97662) (hereafter referred to as the Site). The project was commissioned and funded by Devon County Council (DCC).
- 1.2 The archaeological works are required by the Local Planning Authority (DCC planning reference: DCC/3160/2010) as a condition of granting planning permission for the construction of a new cyclepath/walkway. The planning condition requires that:

"No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Local Authority. The development shall be carried out at all times in strict accordance with the approved scheme, or such other details as may be subsequently agreed in writing by the Planning Authority."

1.3 The nature of the archaeological works required was determined by Ms Faye Glover (Archaeologist, Devon County Historic Environment Service (HES)) in a brief for archaeological monitoring and recording, dated 29th October 2007. In the brief Ms Glover states:

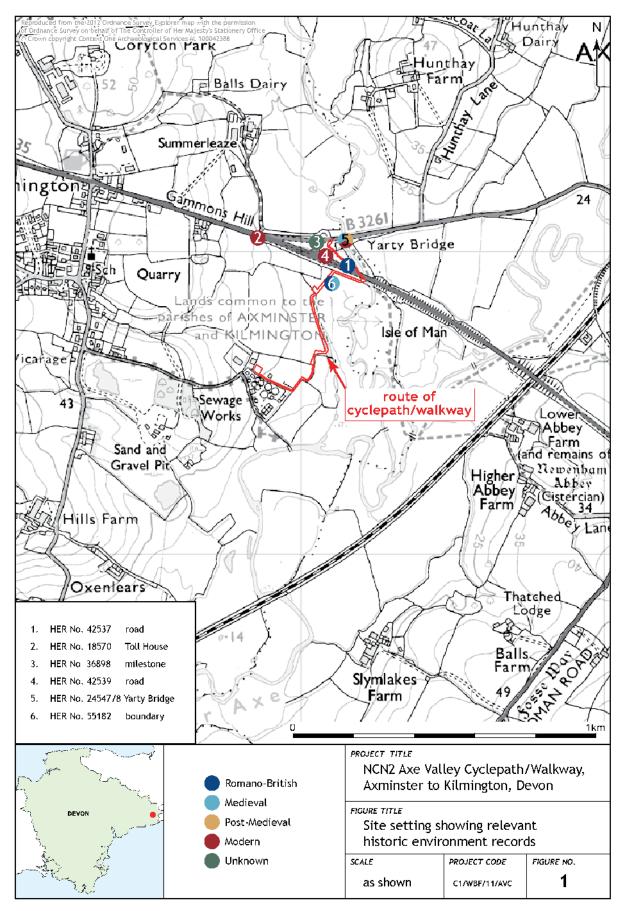
"The proposal is sited in an area of palaeoenvironmental and archaeological potential, on the Axe and Yarty Marshes, which were heavily exploited in the early medieval period. Some of the small strips of subdivided land on the marshes originated in the medieval period, and evidence of these field systems may survive. There is a sequence of Roman to modern river crossings in the vicinity of the modern Yarty Bridge, with abutments of an old bridge and ford remaining to the south. A drain follows an old route of the B3261, through Alder Carr, to the site of the old bridge.

The Exeter to Dorchester Roman Road, and a major boundary, consisting of a substantial hedgebank and ditch, follows the line of the A35.

Palaeochannels are visible to the south of the A35. These are likely to contain palaeoenvironmental evidence, and may contain well-preserved archaeological features."

1.4 The requirement for the archaeological work follows advice given by Central Government as set out in Planning Policy Statement (PPS) 5: Planning for the Historic Environment (2010) and the Local Development Framework Policy on Archaeology.







2. Site Location, Topography and Geology

- 2.1 The Site (between NGR SY 27854 97624 and SY 28122 98022) is situated c. 700m east of the village of Kilmington and 1100m west of the carpet factory complex at the southern end of Axminster, Devon. The path begins at the north-west corner of the sewage works (**Figure 1**), heads east towards the River Yarty and then turns north following a course roughly parallel to the river 100m to the west. At the north end it turns east, towards the river, following it northwards under the A35 road before terminating. The full route is c. 990m long.
- 2.2 The west part of its course lies over head deposits of sand, clay and gravel and much of the central section is close to where the head deposits merge with overlying alluvium of clay, silt, sand and gravel. The underlying solid geology is Branscombe Mudstone Formation (BGS 2012).

3. Desk-based research

- 3.1 The southern area of the Site is largely *terra incognita* as far as the County records are concerned but there is a small cluster of records relating to the north end, several of which have relevance to the Site. The area has also been the object of research work along the route of the Roman road (**Figure 1**, 1) from Dorchester to Exeter. According to projection from this work the path ought to have bisected the Roman road (Weddell et al. 1993, 41, fig. 11). To the east of the Site the road survived well, but it showed increasing signs of dilapidation closer to the Site having endured the rigours of a location on the Yarty floodplain.
- 3.2 It is suggested that the *agger* became a long-term feature in the landscape, in effect becoming a boundary throughout the Medieval and Post-medieval periods. The same source shows the Medieval road from Axminster also crossing the Site, immediately to the north of the projected Roman road. A bridge across the River Yarty is documented in 1334 (**Figure 1**, 5). A map of 1798 shows a four arch bridge crossing the Yarty, apparently within the Site's ambit (Weddell et al. 1993, fig. 7); this is thought to have replaced and amended the crossing point shown on a survey of Axminster manor carried out twenty years earlier (**Figure 1**, 5)
- 3.3 To the west of the river it is estimated that up to 1m of alluvium has been deposited within the last two centuries.

Map regression

- 3.4 On the Tithe Map of 1838 the modern Field 1 (Figure 3) may be identified with parts of apportionments 323 (not found in the apportionment), 322 ('Bramble Hill'), 347 ('Massett Plot') and 348 ('Meadow') (Figure 2). The First Edition Ordnance Survey map shows that by 1889 the plots had been rationalised to form two fields which were reduced to the single 'Mazard Plot Linhay' between 1960 and 1967.
- 3.5 In 1838, Field 2 (**Figure 3**) comprised parts of plots 323, 322, 321 ('Lower Clan field'), 319, 318, 317 316 (all 'Mead' names) and 310 ('Great Clan Field') (**Figure 2**). Most of these units remained until 1905 but over the following half century all were removed so that by 1960 Field 2 was a single entity.
- 3.6 The three plots of 1838 within field 3 and 4 were 311 ('The Hawes'), 309 ('Part of Parson's Close') and 312 ('Little Yarty Close').
- 3.7 The land has generally been used as pasture and meadow. The 'clan' name may refer to the fields being clean of weeds.



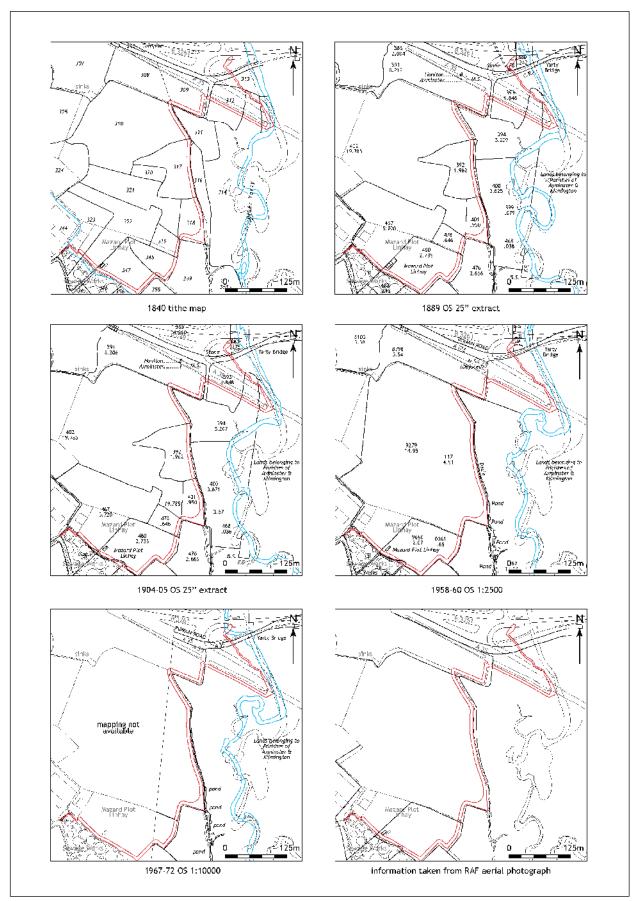


Figure 2. Map regression 1840 - 1972 and air photograph transcription



4. Methodology

4.1 The archaeological work was carried out in accordance with the Standards and Guidance for Archaeological Watching Briefs issued by the Institute for Archaeologists (IfA). COAS adhered to the Code of Conduct of the IFA and the Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology (IFA). The desk-based and fieldwork methodology is summarised below.

Desk-based Appraisal

4.2 The programme of archaeological works included a desk-based appraisal to place the Site into its historic and archaeological context. It comprised map regression based on the Ordnance Survey maps and the Tithe Maps and Apportionments, an examination of aerial photographs held by the Devon County Council Historic Environment Service (HES), as well as any other known relevant cartographic, documentary and photographic sources held by the Devon Record Office, West Country Studies Library and the County Historic Environment Service.

Alder Carr Section and Palaeochannel/oxbow lake area

4.3 Topsoil removal and all groundworks in the Alder Carr section of the proposal, including the excavation of the ditch for compensation storage, and the area of the 'bridge structure' ancillary works over the palaeochannels and oxbow lakes to the south of the A35, was undertaken by a 360° tracked or wheeled JCB-type mechanical excavator fitted with a toothless grading bucket. All mechanical excavation was carried out under the supervision and control of a suitably experienced and qualified archaeologist to the surface of *in situ* subsoil/weathered natural or archaeological deposits, according to which was first exposed.

Intermittent monitoring and recording

- 4.4 Topsoil stripping and groundworks by a 360° tracked or JCB type machine, fitted with a toothless grading bucket, for removal of the topsoil/overburden along the route of the path, was monitored and recorded by the site archaeologist at agreed and appropriate intervals. The intervals were determined by the archaeological consultant in consultation with the applicant, the ground-workers and the HES as set out in the Written Scheme of Investigation.
- 4.5 Archaeological features identified were cleaned manually and part excavated. A written, digital photographic and scaled drawn record was maintained.
- 4.6 A photographic record of the Watching Brief has been prepared and involves the sole use of digital images. This includes images illustrating the principal features in both detail and general context and working shots to illustrate the nature of the archaeological operation mounted.
- 4.7 Provision and agreement has been made for the time-limited retention of all the finds and their full analysis and recording, by appropriate specialists.



5. Results

5.1 The results are presented within a sequence of fields (**Figure 3**) from south to north although in the event only Field 4 produced archaeologically significant information. Structures, fills and deposits are presented in ordinary brackets, i.e. (000) and cuts in square brackets [000].

Soil Sequence and Geology

5.2 In general the soil comprised light sandy topsoil varying in depth from c. 0.20m to 0.30m overlying alluvium, the depth of which was not usually determined as it exceeded that of the excavation for the path. In general the alluvium comprised the finer components of clay, silt sand and gravel, indicating that only the higher part of it had been disturbed.

Archaeological Features

- A photographic record was made of a profile dominated by a concrete conduit (101) close to the sewage works at the south-west end of the Site (Plate 1). Otherwise the easement profiles through Fields 1-3 revealed only the lower topsoil (Plate 2). A further profile was recorded in Field 2, where a ditch was machine and hand cleaned to reveal modern silts (2002) (Plate 3).
- The most significant feature identified was in Field 4 comprising an interrupted length of crudely constructed stone blocks (1002) aligned south-west to north-east, bonded with soft mortar (Plate 4). A section was excavated across the wall (Figure 4, section 1; Plate 5), although this was partly concealed by a modern wall of breeze blocks (Figure 4, section 1). The earlier wall (1002) was constructed on a gravelly river deposit (1007) and was butted by a modern concrete drain on its north-west side and by two distinct layers of gravelly silt (1005) and (1006) to its south-east (Figure 4, section 1). The latter sealed a very distinct dark greyish brown gravelly silt (1004) which had no direct relationship with the wall.
- Excavation of silts (1006) exposed seven *in situ* wooden stakes (**Figure 4**, plan 1, timbers A to G; **Plate 6**), one of which appeared almost to be set into or under wall (1002). Timber D cut silt (1004) and it seems likely that they represent a single event and hence all postdate that context. On removal, some timbers were found to have flat facets (Plate 8) where they had been sharpened, whilst others appeared less regular (**Plates 7** and **9**). The knot in timber E suggests that it was close to its full length and the others do not show signs of having been broken.

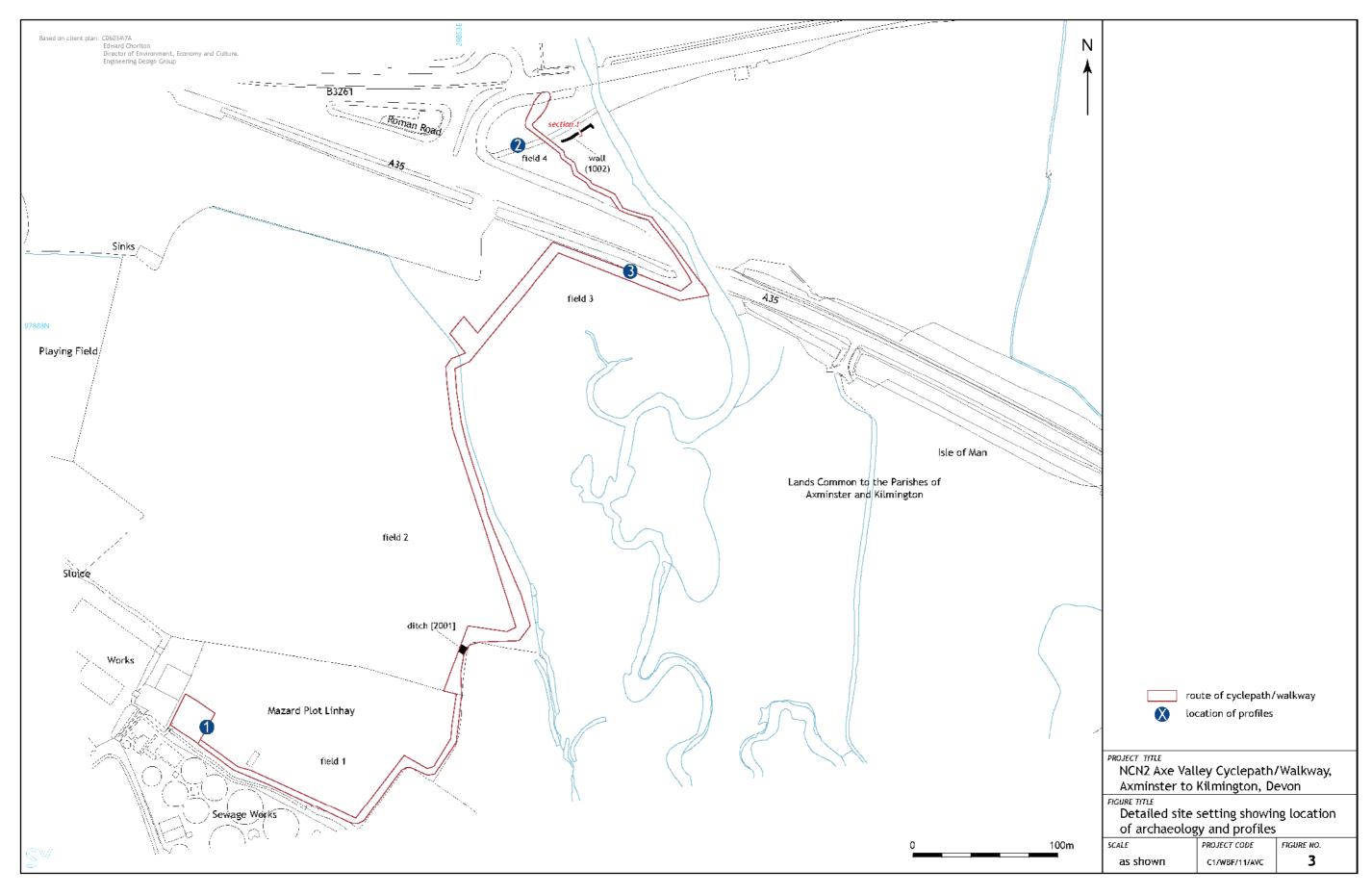
6. The Finds

6.1 The finds recovered from the archaeological programme of works comprised a single flint which was washed and timber stakes which were conserved in waterlogged conditions. They will be given an accession number issued by the Royal Albert Memorial Museum. A request will be made to the Site owner to transfer the title of all finds to the Museum.

Flint

A multipurpose tool (12g) fashioned from a single, darkish grey broad flint flake with a large bulbar scar had been thoroughly worked. Unilateral steep ventral retouch formed a slightly hollow scraper edge, opposed by dorsal denticulation. Above the proximal end of the retouch a piercer had been formed by the removal of a single spall where the edge met the cortical butt. Ventral denticulation occurred along part of what had been a hinge fracture. It is likely to be of Early to Middle Bronze Age date.







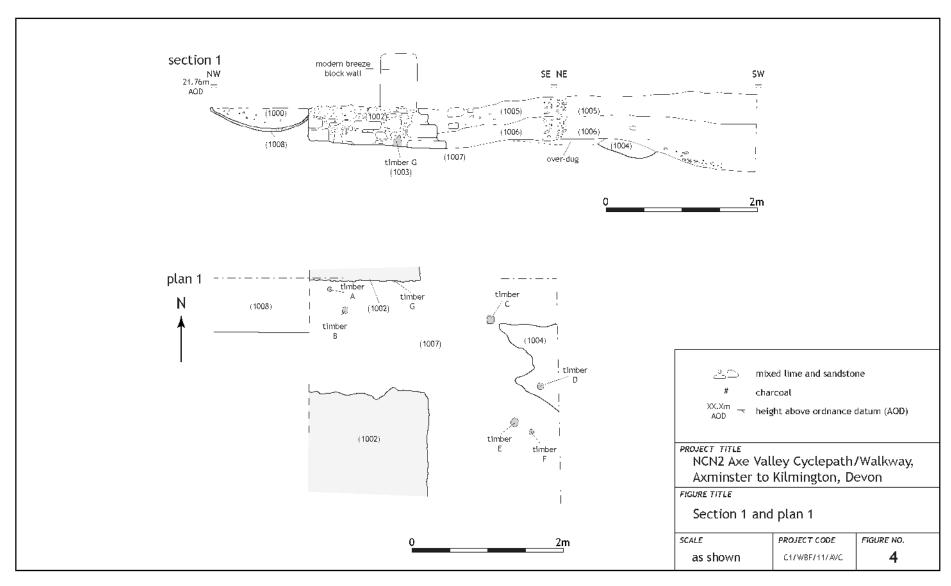






Plate 1. Walled conduit (101) (from NW; 1m scale)



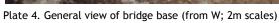
Plate 2. Easement in Field 3 (from E; 1m scale)



Plate 3. Ditch 2001 (from N; 1m scale)



Plate 5. Bridge base, timber G centre left (from W; 1m scale)



The waterlogged wood

- 6.3 Three pieces of waterlogged wood samples were provided for identification and suitability for dendrochronological analysis.
- 6.4 Material and Methods: The three specimens namely (1003) Timber B, (1003) Timber E and (1003) Timber F, all measured ~1 m in length. The sample provided for analysis from each specimen was selected from the mid-section to avoid areas of poor preservation which may hinder identification. Preservation of all samples was good with no evidence of fungal presence or other degradation.
- 6.5 For identification purposes thin sections of all three planes of section of each wood sample was prepared using a razor blade, mounted on a glass slide and studied using transmitted light and on an Olympus BX41 compound microscope with magnifications up to x400.



- 6.6 In order to determine the suitability for dendrochronological dating the transverse section of each sample was cleaned using a razor blade and the number of growth rings counted using a hand lens with the distinction between each ring enhanced by using chalk on the dried surface.
- 6.7 Results: The cross sections provided were incomplete. They lacked bark and pith thus the maximum number of growth rings is not known. The transition from sap wood to heart wood is evident in Timber E. All three samples show evidence of strong ring curvature suggesting that they are derived from small trunk or branch material. The cross sections are however incomplete and the presence of tension wood is not evident, thus the determination of whether the samples originated from trunk and branch wood is not possible.
- 6.8 All samples were identified as Quercus (oak). The species of Quercus (namely Q. robur, Q. petraea and Q. pubescens) native to Central and northern Europe cannot be identified below the level of genus based on wood anatomical characters alone.
- 6.9 The number of growth rings recorded for each sample were: Timber B had ~38 growth rings, Timber E had ~40 growth rings and Timber F ~35 growth rings. The two numbers fall short of the minimum number of 50 growth rings required for dendrochronological analysis of oak wood.





Plate 8. Timber E (1m scale)



Plate 7. Timber B (1m scale)



Plate 9. Timber F (1m scale)



7. Discussion and Conclusions

- 7.1 The existing record gave little reason to anticipate significant finds along the south of the path. However, previous work indicated that to the north it might intersect with the Dorchester to Exeter Roman road and with one or more Medieval and later crossings of the River Yarty. Elsewhere, the shallowness of the easement was such that negative evidence from Fields 1 to 3 should not be taken as a reliable indicator of the absence of archaeological deposits.
- 7.2 The stone wall (2001) in Field 4 may confidently be identified with one of the succession of Yarty Bridges, most probably forming the base for the piers of the one recorded in 1798. The timber stakes appear to predate the bridge of this phase but should not be associated with the one which preceded it as they are at least 15m south of its presumed route (Weddell et al. 1993, fig. 7). The flat facets on timber E may be taken as an indication that they are not of a particularly great age but their function is difficult to ascertain. The use of a durable material such as oak implies that whatever their function it was not intended to be short term. They do not appear to have been part of the bridge but may have retained a structure used to stabilise another form of crossing, such as a ford.
- 7.3 Flooding in the 18th century necessitated the relocation of the bridge on at least one occasion and the silts which have formed against the last of those bridges are a clear indication of subsequent flooding which may have erased or submerged other archaeology on the Site.

8. Archive

- 8.1 The site archive is currently held at the offices of Context One Archaeological Services Ltd and consists of 85 digital images in .jpg format and the written paper record including eight context sheets, two drawing sheets and various registers. The archive will be prepared to comply with guidelines set out in Environmental Standards for the Permanent Storage of Excavated Material from Archaeological Sites (UKIC 1984, Conservation Guidelines 3)/ Guidelines for the Preparation of Excavation Archives for Long-term Storage (UKIC 1990)/ Standards in the Museums Care of Archaeological Collections (Museum and Galleries Commission 1992)/ Management of Archaeological Projects 2 (English Heritage 1991). Arrangements will be made to deposit the archive with the Royal Albert Memorial Museum within 12 months following the submission of this report.
- 8.2 Copies of the archaeological report will be deposited with:

Ms A. Kanani
Engineering & Design Group
Devon County Council
Matford Offices
County Hall
Exeter
EX2 4QW

Historic Environment Service
Devon County Council
Environment, Economy and Culture Directorate
Matford Offices
County Hall
Exeter
EX2 4QW

9. COAS Acknowledgements

9.1 Context One Archaeological Services Ltd would like to thank Mr. David Ellis (Site Manager) for his assistance throughout the course of the investigation and Ms Cressida Wickenden, who visited the Site, and Mr Bill Horner (Archaeological Officer, Devon County Council), for curatorial advice.



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Office

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Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology.

Reading: If A

Standard and Guidance for an Archaeological Watching

Brief. Reading: IfA

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Appendix 1. Devon Historic Environment Record report for archaeological events within the environs of the Site.

SMR No.	Description	NGR	Figure 1
Romano-Briti	sh		
42537	Road. 240m length located, but not fully excavated. Constructed of local water-worn chert and river gravels, set into a fairly loose grey-brown sandy matrix laid directly onto the existing ground surface. Thickness of make-up varied considerably, partly due to the effects of later erosion.	SY2815 9795	1
55182	Boundary. Appears to have followed the line of the Roman road across to the Axe. The agger is presumed to have formed a slightly higher ridge and hence would have been an obvious line to follow	SY281- 979-	6
Medieval (AD	1066 - AD1547)		
24547	Yarty Bridge. Documented in 1334	SY2816 9802	5
55182	Boundary. Documentary evidence suggests a date before <i>c</i> . 1250, hence primary boundaries subdividing the meadowland which was heavily exploited in early medieval period.	SY281- 979-	6
Post Medieva	II (AD1548 - AD1800)		
42539	Two phases of road. <i>C</i> . 1m below ground level, 4m wide, 0.25m deep surface of packed river pebbles set in a sandy matrix. Associated footpath, 1.3m wide, with granite and sandstone kerbs <i>c</i> . 0.3m high had been added on the road's north side, cutting through the metalling.	SY2808 9798	4
24547	Yarty Bridge. Probably that shown on 1776-78 survey of the manor of Axminster. Flooding led to a change of course of the river Yarty in c. 1798 and a new bridge was constructed.	SY2816 9802	5
55182	Boundary. Hedgebank & ditch.	SY281- 979-	6
Modern (AD1	800 - AD1950)		
18570	Toll house. Two buildings marked 'Turnpike' on Tithe map and appearing on Ordnance Survey map of 1904. Roofless ruin by 1982.	SY2787 9804	2
36898	Milestone. Appeared on Ordnance Survey map of 1904	SY2806 9803	3

Appendix 2. Documentary sources

Data type	Repository
Historic maps: 1839 Tithe map & Apportionment	Devon Record Office, Exeter
Historic maps: C19 & C20 Ordnance Survey maps	Devon Record Office, Exeter; West Country Studies Library, Exeter
RAF Air Photographs 1948	CPE/UK/2431.22.JAN.48.F202//16,500/54/SQDN (image no. 3197)



Appendix 3: Context Table

Site code: WBF/11/AVC					Dimension				
Context No.	Provisional Period	Туре	Description	Stratigraphic Relationship	Length	Width/ Diameter	Thickness/ Depth	Drawing Nos.	Sheet No.
100	Modern	Layer	Topsoil: Yellowish brown sandy loam (Field 1)	Over 101					
101	Modern	Layer	Conduit: Grey (10YR 5/1) concrete	Under 100					
300	Modern	Layer	Topsoil: Yellowish brown sandy loam						
1000	Modern	Layer	Topsoil: Yellowish brown sandy loam	Under 1001					
1001	Modern	Structure	Otter run wall: Grey (10YR 5/1) concrete	Over 1000					
1002	Post Medieval	Structure	Bridge base: Pale yellow (2.5YR 8/3) stone blocks (<0.12m x 0.20m x 0.09m) loosely bonded with soft mortar	Under 1001; over 1003	1.00m		0.60m	2-5	2
1003	Post Medieval	Structure	Stakes: Roughly hewn timber stakes (A-F)	Under 1002, 1006; cuts 1004				3-5	2
1004		Fill	Channel fill: Very dark brown (10YR 3/2) silty gravel (angular and rounded <0.10m)	Under 1006; over 1007	0.70m	0.60m	0.20m	1	1
1005	Modern	Fill	Channel fill: Brown (10YR 5/3) silty sandy clay including frequent angular limestones (<0.20m)	Over 1006				2	2
1006	Modern	Fill	Channel fill: Yellowy brown (10YR 5/3) silty sandy clay including frequent angular limestones (<0.20m)	Under 1005; butts 1002				2	2
1007	Geology	Layer	River deposit Grey brown (2.5YR 5/2) rounded gravel (<0.20m)	Under 1004; cut by 1003				2, 3	2
1008	Modern	Structure	Drain: Grey (10YR 5/1) concrete		>50m	1.20m	0.30m		



2000	Modern	Layer	Topsoil: Yellowish brown sandy loam	Cut by [2001]			
2001		Cut	Ditch:	Filled by 2002; cuts 2003			
2002		Fill	Ditch fill of [2001]:	Under 2000; fills [2001]			
2003	Geological	Layer		Cut by [2001]			