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Dog Head Stakes Weir Hambridge Lane, Newbury Berkshire

Archaeological Trial Pit Evaluation and Watching Brief Report



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Archaeological Trial Pit Evaluation and Watching Brief Report

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Dog Head Stakes Weir Hambridge Lane, Newbury Berkshire

Archaeological Trial Pit Evaluation and Watching Brief Report

Contents

Sumn	nary	
Ackno	owledgements	iv
1	INTRODUCTION	1
1.1	Project background	1
1.2	The Site	
2	ARCHAEOLOGICAL BACKGROUND	2
2.1	Introduction	2
2.2	Archaeological investigations at the Site	2
3	METHODOLGY	4
3.1	Aims and objectives	4
3.2	Fieldwork methodology	5
	Geotechnical cores	
	Archaeological watching brief	
0.0	Trial pit evaluation	
3.3	Monitoring	
3.4	Recording	6
4	ARCHAEOLOGICAL RESULTS	6
4.1	Geotechnical cores	6
4.2	Archaeological watching brief	6
4.3	Trial pits	
4.4	Trial pit 1	7
4.5	Trial pit 2	7
	Wood	
5	ENVIRONMENTAL EVIDENCE	9
5.1	Introduction	
	Monoliths:	
	Geotechnical cores:	
	Summary	
5.2	Land and aquatic molluscs	10



6	DISCUSSION	11
7	STORAGE AND CURATION	12
7.1	Museum	12
7.2	Archive	12
7.3	Discard policy	12
7.4	Copyright	12
7.5	Security Copy	13
8	REFERENCES	13
9	APPENDIX 1: TRIAL PIT AND WATCHING BRIEF TABLES	16
10	APPENDIX 2: ENVIRONMENTAL DATA	18
11	APPENDIX 3: OASIS FORM	23
Tables		
Table 1:		9
Table 2: Table 3:		
Table 4	·	
Table 5		

Figures

Figure 1: Site location

Figure 2: Sections from Trial pits 1 and 2

Figure 3: Selected plates Figure 4: Selected plates

Plates

Front cover: Trial pit 2 under excavation
Plate 1: Northern watching brief area
Plate 2: Southern watching brief area

Plate 3: Trial pit 1 viewed from the west showing sediments in section

Plate 4: Trial pit 1 general excavation shot

Plate 5: Trial pit 2 viewed from the east showing sediments in section
Plate 6: Trial pit 2 showing timbers ON 1 and ON 2, viewed from the south

Plate 7: Geotechnical core 1 Plate 8: Geotechnical core 2



Dog Head Stakes Weir Hambridge Lane, Newbury Berkshire

Archaeological Trial Pit Evaluation and Watching Brief Report

Summary

Wessex Archaeology was commissioned by the Canal and River Trust to undertake a programme of geotechnical coring, trial pit evaluation and archaeological watching brief in advance of work to construct a fish pass at the Dog Head Stakes Weir, on the Kennet and Avon Canal. The area is one of national importance for the study of the Final Upper Palaeolithic and Mesolithic occupation of Britain. The watching brief was carried out on 1st September and the trial pit evaluation undertaken from 15th to 19th September 2014.

The project was designed to assess the archaeological and palaeoenvironmental potential of the location and to mitigate the impact of the development on any significant deposits.

All phases of work revealed a series of fine grained alluvial deposits that overlay beds of gravel and peaty clay. These deposits apparently accumulated at the edge of an active river channel. The upper parts of the alluvium, which were over 1m thick, sealed a wooden stake, which had been sharpened using metal tools. Analysis of the earlier basal gravels and peaty clay deposits, through which a stake had been driven, were also alluvial sediment (deposited under slow moving fluvial or overbank conditions) and showed no hint of peat development.

The upper sedimentary sequence comprised sizeable alluvial deposits with no discernible boundaries. Given their stratigraphic position, seemingly over the metal cut wood, these are highly unlikely to be of early prehistoric date. Nevertheless the results were more directly relevant to the history of the Kennet and Avon Canal. It is probable that the sedimentary and archaeological results attest to changes in the hydrology of the River Kennet and can be attributed to the construction of the Kennet Navigation in the 18th century.

No further analysis is required to fulfil the project brief.



Dog Head Stakes Weir Hambridge Lane, Newbury, Berkshire

Archaeological Trial Pit Evaluation and Watching Brief

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The fieldwork was directed by Phil Harding who also compiled this report, with assistance in the field from Neil Fitzpatrick, Bill Moffatt and Eleanor Morris. Geoarchaeological sampling was undertaken by Richard Payne. Soils and sediments were assessed by Nicki Mulhall, who also assessed the molluscs with Sarah F. Wyles. The graphics were prepared by Elizabeth James. The project benefitted immeasurably from input from Cathie Barnett (formerly of Wessex Archaeology, now University of Reading). The project was managed for Wessex Archaeology by Gareth Chaffey.



Dog Head Stakes Weir Hambridge Lane, Newbury, Berkshire

Archaeological Trial Pit Evaluation and Watching Brief Report

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology (WA) was commissioned by the Canal and River Trust to undertake an archaeological trial pit evaluation, watching brief and coring for the recovery of environmental samples on land at Dog Head Stakes Weir, Hambridge Lane, Newbury, Berkshire, centered on National Grid Reference (NGR) 450528 166265, hereafter 'the Site' (Figure 1). A Planning Application (14/01339/FUL) was submitted with proposals to reconstruct an existing weir across the River Kennet and install a fish pass and a weir boom.
- 1.1.2 The Site lies within an area rich in archaeological and historical potential. The top of the river gravels and the overlying sediments along the Kennet have been shown repeatedly to contain sites of national and international significance relating to the Upper Palaeolithic and Mesolithic periods. As such, any excavation on undisturbed ground has the potential to uncover further archaeological deposits that relate to this period. A highly significant Mesolithic site was uncovered some 460m to the north-east of the proposed development area, whilst Bronze Age and Saxon artefacts have also been recovered in the immediate vicinity.
- 1.1.3 In view of the importance of the area, a pre-application condition relating to archaeological investigation was placed by the Local Planning Authority (LPA) on any groundworks relating to the development until such works, as set out in a Written Scheme of Investigation (WSI) prepared by WA (WA 2014), had been implemented.
- 1.1.4 The WSI set out the methodologies and standards to be employed by Wessex Archaeology to undertake the archaeological evaluation, watching brief and environmental sampling. It was submitted and approved by the Archaeological Officer at West Berkshire Council (WBC), acting on behalf of the Local Planning Authority, prior to fieldwork commencing. The fieldwork was undertaken in accordance with the Chartered Institute for Archaeologists Standards and Guidance for Archaeological Watching Brief (CIfA 2014a) and Standards and Guidance for Field Evaluation (CIfA 2014b).
- 1.1.5 The watching brief was carried out on 1st September and the trial pit evaluation undertaken from 15th to 19th September 2014.

1.2 The Site

1.2.1 The Dog Head Stakes Weir is located within the Kennet Valley floodplain immediately to the south of the town of Thatcham, Berkshire. It is positioned at a confluence of the River Kennet, Chamber House Draught and the Kennet and Avon Canal (**Figure 1**). The proposed fish pass was located on the western bank of the River Kennet, with the proposed weir crossing the river in an east-west alignment towards Chamber House



- Draught. The proposed new safety boom was designed to separate the Kennet and Avon Canal from the other two watercourses.
- 1.2.2 The Site also lies within a Site of Special Scientific Interest (SSSI), with both the terrestrial area and The River Kennet itself separately designated. The floodplain appears relatively flat with surface elevations typically ranging between 69m and 70m above Ordnance Datum (aOD).
- 1.2.3 The Site is currently covered by mature woodland on either side of the River Kennet and Chamber House Draught. Some of the trees were coppiced to provide access for the archaeological evaluation and to complete the proposed redevelopment.
- 1.2.4 The geology of the area is dominated by Quaternary deposits, which have been examined in some detail in previous archaeological investigations. In general, a sequence of floodplain gravels is identified resting within an eroded bedrock valley at an elevation of between c. 60 and 66m aOD. The gravels occur as discontinuous layers with thicknesses up to c. 4m. They are overlain by a variable distribution and thickness of peats, alluvium and occasional tufa. A topsoil of up to 1m in thickness is common and final surface elevations typically range between 65.5 and 69.5m aOD. On the fringes of the floodplain, and at a higher elevation, are a variety of older terrace gravels. Underneath are patches of London Clay.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

- 2.1.1 The Lower and Middle Kennet Valley contains one of the greatest concentrations of Final Upper Palaeolithic and Mesolithic hunter-gatherer sites in Britain (e.g. Ellis et al 2003, Ford 1992, Froom 1963a-c, 1965, 1970, 1972a-b, 1976, Froom et al 1993, Healy et al 1992, Wymer 1958, 1959, 1960, 1962, 1963). Closely associated sediments include thick Late Glacial transitional and early Holocene floodplain deposits containing a high quality palaeoenvironmental record for the period of 11,500-9,500 cal BP (e.g. Barnett 2009) which provide evidence for activity such as landscape burning (Chisham 2004, Barnett 2009).
- 2.1.2 In addition to excavation of these artefact rich sites in the area, a number of sleeved cores have recently been recovered from sites along the River Kennet SSSI within which the Site in question sits, including Victoria Park, Newbury, Wawcott, Thatcham Reedbeds and Ufton Green (Chisham 2004). The cores have been found to contain buried strata and landsurfaces of early Holocene date.
- 2.1.3 Specifically the sites of Thatcham Reedbeds, to the immediate north of the proposed works and Chamberhouse Farm to the immediate southeast, contain important known artefacts and deposits dating to the Upper Palaeolithic and Early Mesolithic periods, as detailed below. These sites and their associated deposits are well stratified and waterlogged, therefore further excavations in the area are of very high potential for finding preserved early prehistoric remains in direct association with the environmental sequences which provide a landscape context, further increasing their importance.

2.2 Archaeological investigations at the Site

2.2.1 The site of Thatcham Reedbeds lies just to the north of the River Kennet and railway line (approximately 250m to the north of the proposed works). It is considered a site of national or international importance for its early Mesolithic remains. Trial trenching and



area excavation revealed (Wymer 1958, 1959, 1960, 1962, 1963) a series of hearths and a vast number of Mesolithic artefacts along the terrace edge. These were in "mint condition" (Wymer 1958, p34) and included flint tools, waste flakes and animal bone. Approximately 16,000 flakes and spalls, 1,200 blade-like flakes, 280 cores, 285 microliths, 17 axe-adzes, 130 scrapers, 15 awls, 6 hammerstones two of sarsen, and a variety of other flint implements, 18,402 in total. 3.5% were finished forms of Early Mesolithic type, the rest probable waste (Wymer 1963, p44), demonstrating intense *in situ* activity, exceptional for this period. One tranchet axe had been repeatedly reworked and was found with two flakes that could be refitted to the axe (Wymer 1963, p17). Ochre and a small number of worked bone and antler pieces included a bone spearhead apparently unique in the British Mesolithic, resembling a Palaeolithic type.

- 2.2.2 Wymer (1963, p46) also proposed that a 60cm wide butt-ended ditch at right-angles to the Moor Brook bluff represented a fish trap. Mainly adult animal and bird bones associated with the site included common red deer, roe deer, wild pig and beaver, also small mammals e.g. hedgehog, shrew, water vole, pine martin, dog, wolf, crane, ducks and a single fish vertebra were also found, an assemblage said to accord well with Danish Mesolithic sites and Star Carr (King 1962, p360, Mellars and Dark 1998). The majority were found on the upper gravel surface of the terrace, as were the lithics, with artefacts from its surface to 7-15cm depth, usually in a shallow mineral soil profile or sandy, humic silt at c. 0.5m depth. However subsequent work at and around the site shows that similar sites can occur in deeper floodplain deposits at up to 2m depth.
- 2.2.3 Further coring, palaeoenvironmental analysis and dating of the site by Chisham (2004; Barnett 2009) showed that phases of direct landscape burning and manipulation of the environment occurred with this occupation and in repeat phases, with activity starting within 500 years of the start of the Holocene (and contemporary with the site of Star Carr. North Yorkshire). This immediate area within the Kennet Valley is also now one of active archaeological research by WA funded by English Heritage (under 6633 MAIN The Kennet Valley Predictive Mapping Project), with Thatcham Reedbeds forming one of the test sites. Recent coring and ongoing dating work has built on the previous excavations and palaeoenvironmental work there. The sedimentary sequence and its association with archaeological remains is therefore relatively well understood and perhaps more predictable than elsewhere. These sequences have made it possible to predict that wellpreserved palaeoenvironmental sequences contained within buried soils, tufaceous marls and peat deposits exist across the floodplain and wetland edge of the Kennet valley, coincidental with the Dog Head Stakes location. Worked flint, butchered bone, charred plant remains and potentially wooden artefacts and structures could potentially occur in the immediate area, both on the Beenham Grange Terrace edge and directly on the floodplain itself, which was in places a stable landsurface in early prehistory.
- 2.2.4 The landscape around the Site has also been the subject of an extensive programme of archaeological investigations during the 1990s at Chamberhouse Farm, Thatcham (WA 1998). Work comprised fieldwalking of 40ha and the excavation of a total of 125 machine trenches and 245 No. 2m x 2m test pits. A palaeotopographic model of the Site suggests that the ancient landscape was bisected by an east-west running palaeochannel of the River Kennet, with a relict "shoreline" consisting of upper "valley" gravels in the north-east and north-west of the site. Archaeological evaluation has demonstrated the presence of *in situ* lithic and faunal scatters of Mesolithic date surviving along the margins of the gravel terrace adjacent to this palaeochannel, including a particularly favoured location next to a former tributary of the main channel. This can be seen as a continuation of the Lateglacial/early Holocene landscape known from sites upstream along the northern banks of the Kennet (including the hearth sites at Thatcham), and can be considered as nationally important. Upper Palaeolithic remains were also found. There is therefore the potential to



- examine the relationship and potential overlap of these two technologically distinct periods, a highly significant and so far poorly understood transition.
- 2.2.5 The Chamberhouse Farm evaluation also identified features of Late Iron Age, Romano-British, medieval and post-medieval date in the south of the Site, including field systems and a Romano-British midden deposit suggesting the presence of nearby Romano-British settlement, which would be of local or regional importance. Chamberhouse Farm may be the location of a possible medieval manor complex and any remains that survive within the Site would also be of local or regional importance. Later deposits tend to be absent or truncated, due to fluvial erosion, peat cutting and other activity in the catchment.
- 2.2.6 An auger survey was undertaken by English Heritage in 1996 prior to the excavation of a 400 m long ditch immediately south of the existing Moor Ditch. Nine cores were taken revealing a basic stratigraphy of 1.5–2m of peat overlying gravels, sands and silts. Only one core showed disturbance.
- 2.2.7 Excavations at Lower Farm, Greenham, Berkshire (WA 2011) revealed prehistoric flints as well as prehistoric features including a possible trackway which contained Late Bronze Age pottery. A ditched field system of likely Late Iron Age/Romano-British date was also recorded.
- 2.2.8 In 2005 a watching brief was undertaken during experimental drainage testing at Chamberhouse Farm, including the excavation of five trenches in an area which previous evaluation had shown contained significant archaeological remains. No archaeological features, artefact scatters or deposits were observed.
- 2.2.9 A number of find spots have been recorded in the area including a Bronze Age spearhead found within a gravel pit in 1960, and a Saxon spearhead found at Widmead Lock, Thatcham during the dredging of the lock. Several flint artefacts, including scrapers and microliths were found near gravel pits at The Spinney and The Mud Hole, Muddy Lane, Thatcham.
- 2.2.10 Excavations have also taken place along the canal (Harding 1995; Harding and Newman 1997) to document details of lock construction related to the Kennet Navigation canal, an 18th century river navigation from Reading to Newbury. This waterway was subsequently extended to link with Bath and Bristol as the Kennet and Avon Canal. Study of the industrial archaeology has been somewhat overwhelmed by the wealth of Upper Palaeolithic and Mesolithic remains; nevertheless the construction of this system undoubtedly made a profound impact on the surrounding area. This may have resulted in changes to the natural fluvial regime of the River Kennet, which might be detected in the archaeological record.

3 METHODOLGY

3.1 Aims and objectives

- 3.1.1 The archaeological investigations set out to:
 - Clarify the presence/absence and extent of any buried archaeological remains within the Site that may be impacted by development (either directly or by compression/dewatering in the immediate location);



- Clarify the associated sedimentary sequence and its potential to contain chronologically or directly associated palaeoenvironmental remains such as pollen, plant macrofossils, charcoal, bone and molluscs;
- Identify, within the constraints of the evaluation, the date, character and condition of any surviving remains within the Site;
- Assess the significance and preservation of these remains;
- Assess the degree of existing impacts to sub-surface horizons and to document the extent of survival of buried deposits;
- Produce a report which will present the results of the evaluation in sufficient detail to allow an informed decision to be made concerning the Site's archaeological potential;
- To inform any further or future mitigation strategies required.

3.2 Fieldwork methodology

3.2.1 The WSI (WA 2014) detailed the methodology by which the work, to be completed in three phases (**Figure 1**), would be undertaken concurrently during the groundworks.

Geotechnical cores

3.2.2 Two geotechnical sleeved cores, 1 and 2, each 80mm in diameter, were taken by contractors acting on behalf of the Canal and River Trust. These cores were taken at the west edge of the present river channel and were taken to recover samples of deposits overlying the river terrace gravel deposits. They were transferred to WA's geoarchaeologists for description and analysis.

Archaeological watching brief

3.2.3 An archaeological watching brief was maintained throughout ground-works associated with the construction of a concrete headwall and outlet at the entrance and exit of the fish pass.

Trial pit evaluation

- 3.2.4 Two trial pits, 1 and 2, each measuring up to 2m x 2m were excavated within the line of the proposed fish pass channel.
- 3.2.5 Trial pits were opened using a mechanical excavator fitted with a toothless ditching bucket and under constant supervision by suitably qualified archaeologist. Machine excavation proceeded to the required levels or the top of archaeological levels whichever were higher.
- 3.2.6 These trial pits were opened and excavated to avoid causing unreasonable delay to the groundwork programme.
- 3.2.7 Trial pits, archaeological remains, environmental sample points and drawn sections were plotted using GPS survey and tied in to the Ordnance Survey, with heights above OS datum (Newlyn).
- 3.2.8 Trial pits were excavated to a depth of 1.2m, or into the top of the basal fluvial sands and gravels (whichever was shallowest). Whenever it was necessary to excavate below 1.2m the trial pits were widened and stepped to allow excavation to continue within a safe working environment. In any event it was proposed that a single trial pit, Trial pit 2, would be excavated to a depth of up to 2m to record the full stratigraphic sequence of the Site.



This would mitigate for indirect impacts such as compression or subsequent erosion of the sequence.

- 3.2.9 The WSI also contained detailed provision dealing with finds and palaeoenvironmental sampling. Decisions relating to the location and number of monolith samples, column samples and bulk samples for palaeoenvironmental purposes as well as excavation strategy remained at the discretion of the WA site director, in consultation with the WA geoarchaeologist (Catherine Barnett).
- 3.2.10 Provision was made for trial pits to be pumped in the event that excavation proceeded below the water table to achieve the aims and objectives of the evaluation.
- 3.2.11 At the completion of the work to the satisfaction of the Client and the Archaeological Officer at WBC the trenches were backfilled and leveled. No other reinstatement or surface treatment was undertaken.

3.3 Monitoring

3.3.1 Representatives of WBC were informed of progress, making it possible to visit the work to inspect and monitor the archaeological investigations.

3.4 Recording

- 3.4.1 All trial pits were subjected to written description using WA's *pro forma* recording sheets. These records were subjected to more detailed analysis and description by WA's specialist geoarchaeologist team at the conclusion of the excavation.
- 3.4.2 Trial pits were cleaned by hand, photographed using digital format cameras and sections of deposits from ground surface into the underlying gravels drawn at a scale of 1:10. Detailed plans were prepared at a scale of 1:20 where this was appropriate with reference to a site grid tied to the Ordnance Survey National Grid. The Ordnance Datum (OD) height of all principal features and levels was calculated and plans/sections annotated accordingly.

4 ARCHAEOLOGICAL RESULTS

4.1 Geotechnical cores

4.1.1 Two geotechnical cores were taken and returned to WA for analysis. The results are described below.

4.2 Archaeological watching brief

- 4.2.1 Ground works to install the concrete headwall and outlet at the entrance and exit of the fish pass were monitored to observe and record any archaeological deposits or structures (**Figure 1**).
- 4.2.2 This work noted a sequence of brown/yellow-brown sand, silt and clay deposits that fined upwards from the base of the excavation, which was reached at approximately 1.20m (**Plates 1** and **2**). Natural fluvial river terrace gravel was encountered at a depth of approximately 0.75m below the modern ground surface at the south end of the fish way. No artefacts were recovered.



4.3 Trial pits

- 4.3.1 The WSI made provision for the excavation and recording of up to three trial pits, however following finalisation of the construction programme, archaeological recording during the watching brief and consultation with the Archaeological Officer at WBC, it was decided to reduce the number of trial pits to two.
- 4.3.2 The upper *c.* 0.4m of material was removed by mechanical excavator, which confirmed the absence of artefacts. The trial pits were cleaned rapidly before machine excavation was resumed to a depth of approximately 0.80m, at which point excavation was undertaken by hand. All mechanical excavation was conducted under the instruction of the monitoring archaeologist.

4.4 Trial pit 1

- 4.4.1 This trial pit was dug towards the southern end of the proposed fish way (**Figure 1**). Initial excavation by machine indicated that the upper part of the geological sequence was extensively disturbed by a former tree bole. The trial pit was therefore moved approximately 1m to the north, where it was possible to recover an unbroken stratigraphic sequence of the fluvial deposits that fined upwards from the basal gravel, which was encountered approximately 1.5m from the modern ground surface.
- 4.4.2 Removal of the modern heavily rooted top soil (101) revealed that the upper parts of the sequence comprised sterile, horizontally bedded mid grey-grey brown silty clay (102,103, 104), which extended to a depth of approximately 0.85m (**Figure 2**, **Plate 3**).
- 4.4.3 The excavation strategy was modified at this point. The trial pit was divided into four units and opposing quadrants were dug by hand to the natural gravel (**Plate 4**). This strategy made it possible to reduce the total area of the trench, provide additional sections and retain deposits for sampling that could be removed subsequently should any significant deposits be identified.
- 4.4.4 The lower parts of the fluvial sequence (**Figure 2**) comprised a series of alternating light yellow and grey sand deposits (105, 106, 107, 108, 109, 110), which dipped from south to north towards the River Kennet. Organic material was present in these lower units. Fragments of animal bone were encountered at the interface of the alluvium and gravel.
- 4.4.5 The base of the sequence comprised of dark yellow/grey-brown matrix supported sandy gravel (111).

4.5 Trial pit 2

- 4.5.1 This trial pit was located approximately 12m from Trial pit 1 (**Figure 1**) towards the northern end of the proposed fish pass. Excavation adopted an identical strategy to that used in Trial pit 1 using machine excavation, hand digging across the entire area and hand excavation of two opposing quadrants below a depth of approximately 0.70m.
- 4.5.2 The water table was encountered approximately 1m below the ground surface, after which time a pump was installed.
- 4.5.3 Two auger holes positioned in the south-west and north-east quadrants indicated that organic beds were present immediately above the natural gravel. It was therefore decided, in accordance with provisions included in the WSI to enlarge the trial pit area to enable excavation to continue to a depth of 2m.



- 4.5.4 The trial pit was therefore increased in area to approximately 4m x 4m to allow the excavation of an area of 2m x 2m in the base of the trench.
- 4.5.5 As the deposits comprised sterile alluvium the initial stages of excavation were undertaken by machine. Excavation by hand resumed when the top of a vertical stake (ON 1) was discovered in the south-east corner of the trench.
- 4.5.6 The results of excavation revealed a series of fluvial deposits (**Figure 2**) that overlay the natural floodplain gravel approximately 2m below the present ground surface. The upper deposits comprised a series of horizontally and cross bedded deposits of grey brown silty clay alluvium (202, 203, 204, 206) that fined upwards from alternate more sandy beds (205, 207) towards the base (**Plate 5**).
- 4.5.7 These deposits, which correlated with those in the upper part of Trial pit 1, dipped down towards the present River Kennet. These alluvial deposits directly overlay and cut through [208] the basal deposits. The absence of any former land or river bed surface suggests that the upper alluvium filled a channel or meander that had been eroded into the former river bank by the river.
- 4.5.8 The basal deposits comprised of superimposed beds of horizontally bedded coarse sand (209), which was interleaved with fine peaty clay, a deposit containing coarse organic debris (213), further fine sands (210), which were also interleaved with fine bands of peaty clay, an intermittent bed of coarse sand (211) and a basal layer of compact peaty clay (212). These deposits frequently varied in thickness and filled a series of shallow channels that were cut into the surface of the underlying gravel.
- 4.5.9 These beds of material overlay the floodplain gravel (215) which fined upwards into a bed of coarse sand (214). Subsequent excavation by machine to remove a wooden stake indicated that additional surfaces were present within the gravel, including some with preserved wood fragments, but that no beds of peat were present.

Wood

- 4.5.10 Fragments of wood were preserved throughout the lower parts of the fluvial sequence. Most of these comprised pieces of drift wood that showed no hint of having been worked (**Plate 6**).
- 4.5.11 However chips from the processing of wood and other possible fragments were found in alluvium (206) approximately 1.2m from the present ground surface.
- 4.5.12 Two thin rectangular wood chips were collected, both with steeply truncated ends. This type of abrupt cut is unlike those produced by stone axes and more like those produced by metal axes.
- 4.5.13 The top of a vertical stake (ON 1) was exposed that protruded from the upper surface of the compact peaty clay (212) into the overlying sand (209). The upper part of the stake was extensively weathered and appears likely to have rotted off at the surface of the water or a former land surface. In addition deformation of the bedding suggested that the stake had been driven through the compact peaty clay.
- 4.5.14 The stake, when recovered, measured 1.2m long and tapered to a long, narrow point with extensive, well formed facets more typical of those produced by metal axes. The tip of the stake had penetrated into the underlying gravel by approximately 0.90m.



- 4.5.15 There was nothing to indicate that the stake had been driven through from the top of the upper alluvium. This seems highly unlikely in any case as the tip of the stake was approximately 3m from the current ground surface.
- 4.5.16 A squared timber (ON 2) was found in (212).

5 ENVIRONMENTAL EVIDENCE

5.1 Introduction

5.1.1 Four monolith columns were taken from two test pits and were subjected to analysis with the two geotechnical cores (**Table 1**).

Table 1: Summary of monolith samples

Monolith/ core	Feature	Description
sample no.		
<11>	TP1	East facing section of TP1
<12>	TP2	Upper east facing section of TP2
<13>	TP2	Middle east facing section of TP2
<14>	TP2	Lower east facing section of TP2
BH1	-	Geotechnical core 1
BH2	-	Geotechnical core 2

5.1.2 The monoliths were cleaned prior to recording and standard descriptions used, (following Hodgson 1997) including Munsell colour, texture, structure and nature of boundaries, as given below in Appendix 1 (**Tables 2** to **4**).

5.2 Stratigraphy

Monoliths

- 5.2.1 Monolith 11, Trial pit 1 showed the base of the modern topsoil overlying a band of fine calcareous alluvium, common to the rest of the site. This overlay a series of banded alluvial sediments with occasional layers of waterlain organic detritus and tufaceous sand with abundant mollusc shells. The mollusc assemblage indicated moving water with no seasonal desiccation. The deposits observed in this monolith along with the mollusc assemblage are typical of shallow, moving water at a channel edge.
- 5.2.2 Monoliths 12, 13 and 14 represent a full sequence of the east facing section of Trial pit 2. They indicate a very similar sequence to that observed in Trial pit 1 with monolith 11; namely an entirely alluvial sequence, corresponding well with a channel edge environment.

Geotechnical cores

5.2.3 Geotechnical core 1 (**Plate 7**) showed layers of fine calcareous alluvium and humified alluvium underneath the modern topsoil, this is common to the site. This deposit overlay silty clay with tufaceous sand, concretions of tufa and some patches of humic detritus, which are all indicative of a shallow channel edge. These deposits all overlay a series of fluvial sandy gravels.



5.2.4 Geotechnical core 2 (**Plate 7**) showed a sequence very similar to those seen in the monoliths. A fine humic alluvium with some pieces of *Phragmites* was capped by the modern topsoil indicating a channel edge environment. These deposits overlay a series of banded alluvial sediments, also similar to those observed in the monoliths. There was a wide band of tufaceous sand with abundant mollusc shells at around 2.30m. The mollusc assemblage is summarised in section 5.2 below.

Summary

- 5.2.5 The sequences observed in the two trial pits were almost identical; banded alluvial sediments lying below a fairly homogenous upper alluvial deposit. Likewise, Geotechnical core 2 showed a very similar series of deposits. Geotechnical core 1 was different in as much as the alluvial deposits overlay a series of fluvial sandy gravels.
- 5.2.6 No peat deposits were observed, despite perfectly reasonable on-site interpretation of some humic bands as 'peaty clay' these humic bands are in fact alluvial sediment with an organic content, not forming *in situ*, but being deposited alongside minerogenic sediment.
- 5.2.7 There was no indication of drying out or stasis horizons within these sequence sediments, which is also supported by the molluscan assemblages; the sediments are therefore best interpreted as representing continuous deposition near the edge of a flowing channel.
- 5.2.8 There is no reason from the geoarchaeological evidence to suggest that any material of a significantly earlier, Mesolithic or Final Upper Palaeolithic date is present in any of the interventions.

5.3 Land and aquatic molluscs

- 5.3.1 Molluscs were observed in large numbers in monoliths 11 and 14 and in geotechnical core 2. A sub-sample of c. 50ml was taken from geotechnical core 2 at around 2m in order to ascertain whether the mollusc assemblage would assist in characterising the deposit. The sample was washed through a 0.5mm sieve, dried and then rapidly assessed by scanning under a x 10 x 40 stereo-binocular microscope to provide some information about shell preservation and species representation. Nomenclature is according to Anderson (2005) and habitat preferences according to Evans (1972), Kerney (1999) and Davies (2008). The presence of these shells may aid in broadly characterising the nature of the local landscape and the aquatic environment.
- 5.3.2 The large mollusc assemblage recovered included shells of the open country species Vallonia costata, Vallonia pulchella/excentrica, Pupilla muscorum, Helicella itala and Vertigo spp., the intermediate species Trochulus hispidus, Euconulus fulvus and Cochlicopa spp., and the aquatic species Gyraulus crista, Pisidium spp., Bithynia tentaculata, Bithynia operculum, Valvata cristata, Valvata piscinalis, Ancylus fluviatilis, Theodoxus fluviatilis, Radix balthica, Planorbis planorbis, Anisis leucostoma and Galba truncatula.
- 5.3.3 The presence of *Theodoxus fluviatilis* within the assemblage is noteworthy as it is indicative of a faster flowing water element and a fully riverine environment (Boycott 1936, 141), whereas *Anisis leucostoma* and *Galba truncatula* are more indicative of occasional flooding and seasonal desiccation.
- 5.3.4 The aquatic assemblage is typical of a well vegetated moving water (probably channel edge) environment, whilst the terrestrial snails present indicate a local well established open landscape within the upstream or local floodplain, with areas of long damp grass.



These terrestrial snails are not *in situ*, and are likely to have entered the watercourse via seasonal flooding events.

6 DISCUSSION

- 6.1.1 The project was designed to assess the archaeological and palaeoenvironmental potential of the deposits at Dog Head Stakes Weir, an area of high potential for the preservation of Upper Palaeolithic and Mesolithic material. The work was intended to mitigate the impact of the development on any significant deposits.
- 6.1.2 The work exposed and recorded a series of fluvial deposits comprising fine grained alluvium towards the upper part of the sequence, which overlie a series of superimposed beds of gravel and peaty clay. Geoarchaeological description and interpretation of these deposits have indicated that they accumulated within and near the edge of an active river channel.
- 6.1.3 No absolute chronology for the deposits was established; however it is apparent that the upper deposits of alluvium, over 1m thick, post-date the insertion of the wooden stake, which had been sharpened using metal tools. The basal gravels and peaty clay deposits, through which a stake had been driven, were clearly older. Furthermore initial observations suggested that the compact peaty clay (212) represented an earlier land surface that may correlate with the Mesolithic deposits that are known from the area.
- 6.1.4 Sediment analysis has shown that this deposit is also another alluvial layer rather than a peat, with the organic content not accumulating *in situ* but being laid down as sediment. There is no indication of drying out or stasis within these sequences, which is also supported by the molluscan assemblages.
- 6.1.5 In addition the geoarchaeological results suggest that there is no discernable boundary between the upper and lower deposits, suggesting that they are likely to be broadly contemporary, with alluvial deposition continuing without significant interruption. Given the broad contemporaneity of the sequence with the metal-hewn post, it is therefore considered very unlikely that any deposits of prehistoric date are present in the sequences described.
- 6.1.6 The lack of absolute chronology makes it impossible to establish when the stake was driven into the river bed, although it is likely that it had rotted at the probable water level. The stake was also associated with a squared timber, which may represent the line of a former water front at this part of the river.
- 6.1.7 It is by no means certain when this stretch of the river would have benefitted from the construction of a waterfront, although a strong candidate remains the construction of the Kennet Navigation in the 18th century. This major piece of civil engineering was largely constructed of wood. It would have necessitated not only the construction of wharves and locks but also measures to control the flow of water and barges along the waterway. The junction of the Kennet Navigation and the River Kennet at the Dog Head Stakes Weir undoubtedly provided a location at which these issues would arise.
- 6.1.8 The construction of the Kennet Navigation may well also have had a profound influence on the hydrology of the River Kennet, which at this point meanders to the south. The flow of water on the south bank would be naturally slack at this point and may well have been reduced further by the construction of a weir to guarantee water flow along the canal. The



- direct result of the construction of the Kennet Navigation may therefore have increased the accumulation of alluvium on the south bank of the river in the last 250 years.
- 6.1.9 In effect the measures being undertaken by the construction of the fish pass that necessitated the geoarchaeological work would appear to replicate issues which have been faced by successive generations of engineers since the initial construction of the canal.

7 STORAGE AND CURATION

7.1 Museum

7.1.1 It is recommended that the project archive resulting from the excavation be deposited with West Berkshire Museum. The Museum has agreed in principle to accept the project archive on completion of the project **105690**. Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner.

7.2 Archive

- 7.2.1 The complete site archive, which will include paper records, photographic records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions and procedures for the acceptance of excavated archaeological material by **West Berkshire Museum**, and in general following nationally recommended guidelines (SMA 1995; ClfA 2014c; Brown 2011; ADS 2013).
- 7.2.2 All archive elements will be marked with the **105690**, and a full index will be prepared. The physical archive comprises the following:
 - 1 cardboard boxes or airtight plastic boxes of artefacts & ecofacts, ordered by material type
 - 1 files/document cases of paper records & A3/A4 graphics
 - 2 A1 graphics
- 7.2.3 Details of the Site will be submitted online to the OASIS (Online Access to the Index of Archaeological Investigations) database.

7.3 Discard policy

- 7.3.1 Wessex Archaeology follows the guidelines set out in *Selection, Retention and Dispersal* (SMA 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis. Any discard of artefacts will be fully documented in the project archive.
- 7.3.2 The discard of environmental remains and samples follows nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002).

7.4 Copyright

7.4.1 The full copyright of the written/illustrative archive relating to the site will be retained by Wessex Archaeology Ltd under the *Copyright, Designs and Patents Act* 1988 with all rights reserved. The Museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use shall be non-profitmaking, and conforms to the *Copyright and Related Rights* regulations 2003.



7.5 Security Copy

7.5.1 In line with current best practice (e.g. Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

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9 APPENDIX 1: TRIAL PIT AND WATCHING BRIEF TABLES

TRIAL PI	Γ1		Type: Evaluation	Machine excavate	and hand				
Dimensio	ns: 2.6 m x 2.4	4 m Max. depth: 1.5 m	Ground level: 70 m	aOD					
Co-ordina	Co-ordinates: SW 450521.03 166249.92 NE 450520.68 166251.32								
Context	Description				Depth (m)				
101	Layer	Overburden : Dark grey-brown silty of stones, roots and charcoal at base.	clay loam with commo	on	0-0.36				
102	Layer	Subsoil : Mid grey-brown silty clay, p subsoil horizon.	Subsoil: Mid grey-brown silty clay, possible remnant topsoil or						
103	Layer	Alluvium : Mid grey silty clay, with or manganese staining.	Alluvium: Mid grey silty clay, with occasional to common manganese staining.						
104	Layer	Alluvium: Light to mid grey sity clay	Alluvium: Light to mid grey sity clay alluvium.						
105	Layer	Alluvium: Very light yellowish grey s	and.		0.74-0.86				
106	Layer	Alluvium : Mid to dark grey brown, sa material possibly bank deposition.	Alluvium: Mid to dark grey brown, sandy clay, failry 'organic' material possibly bank deposition.						
107	Layer	Alluvium: Light to mid yellowish grey	y sand, same as 109.		0.90-0.96				
108	Layer	Alluvium : Mid to dark grey brown sa material possibly bank deposition.	0.96-1.05						
109	Layer	Alluvium: Light to mid yellowish grey	y sand, same as 107.		1.05-1.11				
110	Layer	Alluvium: Dark grey sand clay, locat	Alluvium: Dark grey sand clay, located above river gravels. 1.1						
111	Layer	River Gravels: Dark yellowish grey b	orown sandy clay grav	vels.	1.32 m+				

TRIAL PI	Г 2		Type: Evaluation	Machin	e and hand			
Dimensio	ns: 4.79 m x 4.	.15 m	Max. depth: 2 m	Ground level: 69.9				
Co-ordina	ates: SW 45051	5.34 1662	262.05 NE 450517.02 1662	66.43				
Context	Description					Depth (m)		
201	Layer		: Very dark brown silty clay l sub-angular flint gravels, at			0-0.2		
202	Layer	and lowe	: Dark greyish brown silty cl er boundaries, with commor GL. Occasional shell.			0.2–0.35		
203	Layer	mangan staining	Very fine light greyish brown silty clay with common very fine manganese and iron staining above 0.5 m BGL. Extensive iron staining in a mottled band approx. 0.1 m thick at 0.5 m BGL, upper limit of water table.					
204	Layer	laminar, upper 0.	Alluvium: Dark to very dark grey very fine silty clay. Finely aminar, with occasional fine shelly sand lenses and banding in upper 0.4 m, increasing thickness of sands towards base. Common small to medium round wood and reed fragments.					
205	Layer	Sand: P eroded r	Sand: Pale grey shelly sand with common medium to large eroded round wood, lumps of peaty soil less than 0.05 m and common fine organic debris.					
206	Layer		n : Dark to very dark grey ve out with appreciably more sa			1.2 m+		
207	Layer		hick deposit of fine to coarse base of layer). Frequent ba					
208	Layer		on horizon (sub-channel).					
209	Layer	Horizont	al band of coarse sand and	fine peaty clay.				
210	Layer		id interleaved with peaty cla e clayey to east.	y. Frequent organic fra	agments			
211	Layer	Coarse	sand and fine gravels.					
212	Layer	Fine har	d peaty debris.					



213	Layer	Coarse organic debris.	
214	Layer	Coarse sand.	
215	Layer	Basal gravel.	

TRIAL PI	Γ North 1		Type: Watching Machi brief	ne excavated			
Dimensio	ns: 5.06 m x 3.	93 m Max. depth: 1.2 m	Ground level: 69.75 m aO)			
Co-ordina	ates: SW 45052	5.25 166267.12 NE 450526.25 166272	2.34				
Context	Description			Depth (m)			
1001	Layer	Topsoil: Dark brown silty clay	0–0.3 m				
1002	Layer	Pale yellow brown silty clay, no visible	Pale yellow brown silty clay, no visible coarse components.				
1003	Layer	Mid grey with rare darker mottling, cla common rooting and small gravels les length/diam.	0.55–12 m				
1004	Layer	Alluvium: Pale yellow grey sand		1.2 m+			

TRIAL PI	Γ South 2		Type: Watching brief	Machine excavated			
Dimensio	ns: 3.46 m x 1.	09 m Max. depth: 1.5 m	Ground level: 70 m aOD				
Co-ordina	Co-ordinates: SW 450530.97 166244.53 NE 450535.36 166243.85						
Context	Description			Depth (m)			
2001	Layer	Topsoil: Dark brown silty clay		0–0.2 m			
2002	Layer	Pale brown silty clay.		0.2–0.35 m			
2003	Lavor	Mid grey silty clay		0.35-0.75			
2003	Layer			m			
2004	Layer	River Gravels: natural gravels		0.75 m+			



10 APPENDIX 2: ENVIRONMENTAL DATA

Table 2: Sediment descriptions for monolith 11

Locatio	on:	TP1	Mono:	11		690 Dog Head Wei est facing section of Trial	
Level (1	op):		Drg:	101			
D	epth	Context	Samples	Sediment de	escription	Interpretation	
Mono	mOD						
0.00- 0.17		(102)		crumbly silty terrestrial moderate ro	dark brown fairly clay with common mollusc shells, potlets and 0.2% radual boundary.		Base of modern soil profile
0.17- 0.42		(103)		clay, slightly fizzes wit Occasional mottles and pale yellow mottles. 0. sparse fine terrestrial m	very pale brown occasional very	alluvium.	Calcareous alluvium.
0.42- 1.00		(106) (107) (108) (109) (110)		dark brown 5YR 4/6 yello 10YR 5/6 tufaceous sa mollusc freshwater) a bands of da humic detritt dark ye calcareous s mollusc shell base. She freshwater, balthica, Valvata pisci. Pisidium ami moving wate desiccation. excentrica/pu	and with abundant shells (mainly and, from 0.85-1.00 ark brown to black us and 10YR 3/4 llowish brown and with abundant is and gravel at the alls are mainly such as: Radix Valvata cristata, inalis, Pisidium sp. nicum all indicating r with no seasonal A single Vallonia ulchella is probably with the humic	sediments. Probable channel edge with shallow moving water. Organic material waterlain and not growing in-situ.	Banded alluvial sediment with waterlain organic detritus. Shallow moving water at a channel edge.



Table 3: Sediment descriptions for monoliths 12,13 and 14

Locatio	on:	TP2	Mono:	12,13 and 14 Comments: 105690 Dog Head Weir, Newbu Monoliths 12, 13 and 14, east facing section of Trial 2.			
Level (1	top):		Drg:	210 A-C	2.		
D	epth	Context	Samples	Sediment de	escription	Interpretation	
Mono	mOD						
0.00-		(203)		clay, quite with 10% terrestrial m top of profil mottles. M 0.1% fine popanning at becomes gi	ollusc shells near e, occasional iron loderate rootlets, ores. Band of iron 0.22-0.23, deposit rittier and slightly elow this to base.	alluvium, base of modern soil profile. With iron panning indicating movement of water.	Fine calcareous alluvium with iron panning.
0.29- 0.60		(206)		humic silty of rootlets, 0.5% fine and no	dark brown soft clay. Common fine % fine pores. Very t at all gritty, no lear boundary.	Fine humified alluvium	Humified alluvium.
0.60- 1.90		(209) (210) (211) (212) (213) (214) (215)		dark brown he sparse fine identical to greyish brown and 10YR 2/dark brown he a rounded lu 1.27. At 0. 1.90 the dedark ye calcareous 10% HCI) mollusc shell humic detriturare mainly frand those id balthica, Valvata piscies sp. all indicativith no sea Retention is of the monotographic fine identical sp. all indicativity is sp. all indicativity in the monotographic fine identical sp. all indicativity is sp. all indicativity in the monotographic fine identical sp. all indicativity is sp. all indicativity in the monotographic fine identical sp. all indicativity in the monotographic fine identical to grey in the identical sp. all indicativity in the identity	rootlets (almost above), 10YR 5/2 on tufaceous sand 1-2/1 black to very numic detritus, with mp of tufa at 1.25-81-1.00 and 1.56-posit is 10YR 3/4 llowish brown sand (fizzes with	sediments with gravel at base. Probable channel edge with shallow moving water. Organic material waterlain and not growing in-situ.	Banded alluvial sediments with waterlain organic detritus. Shallow moving water at a channel edge.



Table 4: Sediment descriptions for geotechnical core 1

Location:		-	Mono:		Comments: 105690 Dog Head Weir Geotechnical core 1			
Level (top):			Drg:	-				
De	epth	Context	Samples	Sediment of	description	Interpretation		
Mono	mOD							
0.00-0.22				Compression	on gap			
0.22-0.52				silty clay lo	very dark brown cam, crumbly with coots and turf on coundary.		Topsoil	
0.52-0.72				silty clay, s calcareous HCl). Spars fine por	reyish brown very lightly gritty, quite (fizzes with 10% se rootlets, 0.2% res. Moderate on stain mottles. dary.		Fine calcareous alluvium	
0.72-1.00				brown silty and more h Moderate pores and a piece of that runs length of ?intrusive.			Humified alluvium	
1.00-1.27				Compression	on gap			
1.27-1.45				silty clay sand, some organic calcareous small cond Becomes s	ark greyish brown with tufaceous small gravel and detritus. Very with moderate cretions of tufa. slightly gravelly at ual boundary.	calcareous alluvial sediment.	Calcareous alluvial sediment	
1.45-2.00				Poorly supported v size of <80 1.58 and 1. 1.58-1.80 c much sma	d coarse sand. sorted, clast with a large clast cm between 1.45- 80-2.00. Between last size becomes aller <2cm and omes moderately	Gravel.	Fluvial sandy gravels	
2.00-2.31				Compression	on gap			
2.31-2.51				Moderately	d coarse sand. well sorted, clast Clear boundary.		Fluvial sandy gravels	



Location:		-	Mono:		Comments: 105690 Dog Head Weir Geotechnical core 1		
Level (top):			Drg:	-			
Depth		Context	Samples	Sediment description		Interpretation	
Mono	mOD						
2.51-2.69				very coarse gravel <	tht brownish grey sand and small c2cm. Weakly with 10% HCl. dary.		
2.69-3.00				2.5Y 6/4 light yellowish brown gravel and coarse sand. Poorly sorted. Clast size <7cm.			



Table 5: Sediment descriptions for geotechnical core 2

Location:			Mono:	Comments: 105690 Dog Head Weir				
Level (t	op):		Drg:	Geotechnical core		e 2		
D	Depth Context Samples Sediment description		escription	Interpretation				
Mono	mOD	_						
0.00- 0.25				Compression	n gap			
0.25- 0.43				10YR 2/2 very dark brown silty clay loam, crumbly with abundant roots. Sharp diagonal boundary.		-	Modern topsoil	
0.43- 1.74				brown silty with moder 0.1% pores patch of yellowish to (fizzes with with fine sai mottling at the (0.43-0.50). Slightly to greyish browsome phratowards	clay. Fairly humic rate rootlets and s. Wedge shaped 10YR 6/4 light brown calcareous 10% HCl) silty clay nd grains and iron he upper boundary Colour changes 10YR 4/2 dark on down profile with agmites observed the bottom.	?channel edge.	Fine humic alluvium, slow moving channel edge environment	
1.72- 3.00				brown-2/1 bl 10YR 4/3 br 10YR 4/2 d tufaceous sa mollusc she humic silty of dark yellowis silty clay. Ba around 9cn then becon around 1cm containing th potentially th difficult to m the top of th it has flowe made by a	lark greyish brown and with abundant lils, 10YR 4/2 fine clay and 10YR 3/6 in brown fine humic ands are fairly wide; in from 1.72-2.87 me fairly narrow, to base. The band he mollusc shells is ne widest but was neasure as it is at the 2-3m tube where and into the space compression gap.	sediments. With an area of well vegetated channel edge with permanently flowing water as indicated by the mollusc assemblage.	Banded alluvial sediments, alternating slow and fast moving water events with a significant period of permanently flowing water.	



11 APPENDIX 3: OASIS FORM

OASIS ID: wessexar1-201132

Project details

Project name Dog Head Stakes Weir

Short description of

the project

Wessex Archaeology was commissioned by the Canal and River Trust to undertake a programme of geotechnical coring, trial pit evaluation and archaeological watching brief in advance of work to construct a fish pass at the Dog Head Stakes Weir, on the Kennet and Avon Canal. The area is one of national importance for the study of the Final Upper Palaeolithic and Mesolithic occupation of Britain. The project was designed to assess the archaeological and palaeoenvironmental potential of the location and to mitigate the impact of the development on any significant deposits. All phases of work revealed a series of fine grained alluvial deposits that overlay beds of gravel and peaty clay. These deposits apparently accumulated at the edge of an active river channel. The upper parts of the alluvium, which were over 1m thick, sealed a wooden stake, which had been sharpened using metal tools. Analysis of the earlier basal gravels and peaty clay deposits, through which a stake had been driven, were also alluvial sediment (deposited under slow moving fluvial or overbank conditions) and showed no hint of peat development. The upper sedimentary sequence comprised sizeable alluvial deposits with no discernible boundaries. Given their stratigraphic position, seemingly over the metal cut wood, these are highly unlikely to be of early prehistoric date. Nevertheless the results were more directly relevant to the history of the Kennet and Avon Canal. It is probable that the sedimentary and archaeological results attest to changes in the hydrology of the River Kennet and can be attributed to the construction of the Kennet Navigation in the 18th century. No further analysis is required to fulfil the project brief.

Project dates Start: 01-09-2014 End: 19-09-2014

Previous/future work No / No

Any associated project reference

codes

105690 - Sitecode

Any associated project reference

codes

14/01339/FUL - Planning Application No.

Type of project Field evaluation

Site status Site of Special Scientific Importance (SSSI)

Current Land use Coastland 6 - Other

Monument type NONE None

Significant Finds WOOD Post Medieval

Methods & techniques "Test Pits"

Development type Canal works

Prompt Planning condition

Position in the After full determination (eg. As a condition)



planning process

Project location

Country England

Site location BERKSHIRE WEST BERKSHIRE NEWBURY Dog Head Stakes Weir, Hambridge Lane,

Newbury, Berkshire

Postcode RG14 5TH

Study area 0 Square metres

Site coordinates SU 450539 166238 50.9467406489 -1.35859817668 50 56 48 N 001 21 30 W Point

Lat/Long Datum WGS 84 Datum

Project creators

Name of Organisation Wessex Archaeology

Project brief originator Canal and Rivers Trust

Project design

originator

Wessex Archaeology

Project

director/manager

Gareth Chaffey

Developer

Project supervisor PA Harding

Type of

odv

sponsor/funding body

Name of

Canal & Rivers Trust

sponsor/funding body

Project archives

Physical Archive

recipient

West Berkshire Museum, Newbury

Physical Archive ID 105690

Physical Contents "Environmental"

Digital Archive

recipient

West Berkshire Museum, Newbury

Digital Archive ID 105690

Digital Contents "none"

Digital Media available

"Images raster / digital photography", "Spreadsheets", "Survey", "Text"

Paper Archive

recipient

West Berkshire Museum, Newbury



Paper Archive ID 105690

Paper Contents "none"

Paper Media available "Context sheet", "Diary", "Drawing", "Map", "Plan", "Report", "Section"

Project bibliography

1

Grey literature (unpublished document/manuscript)

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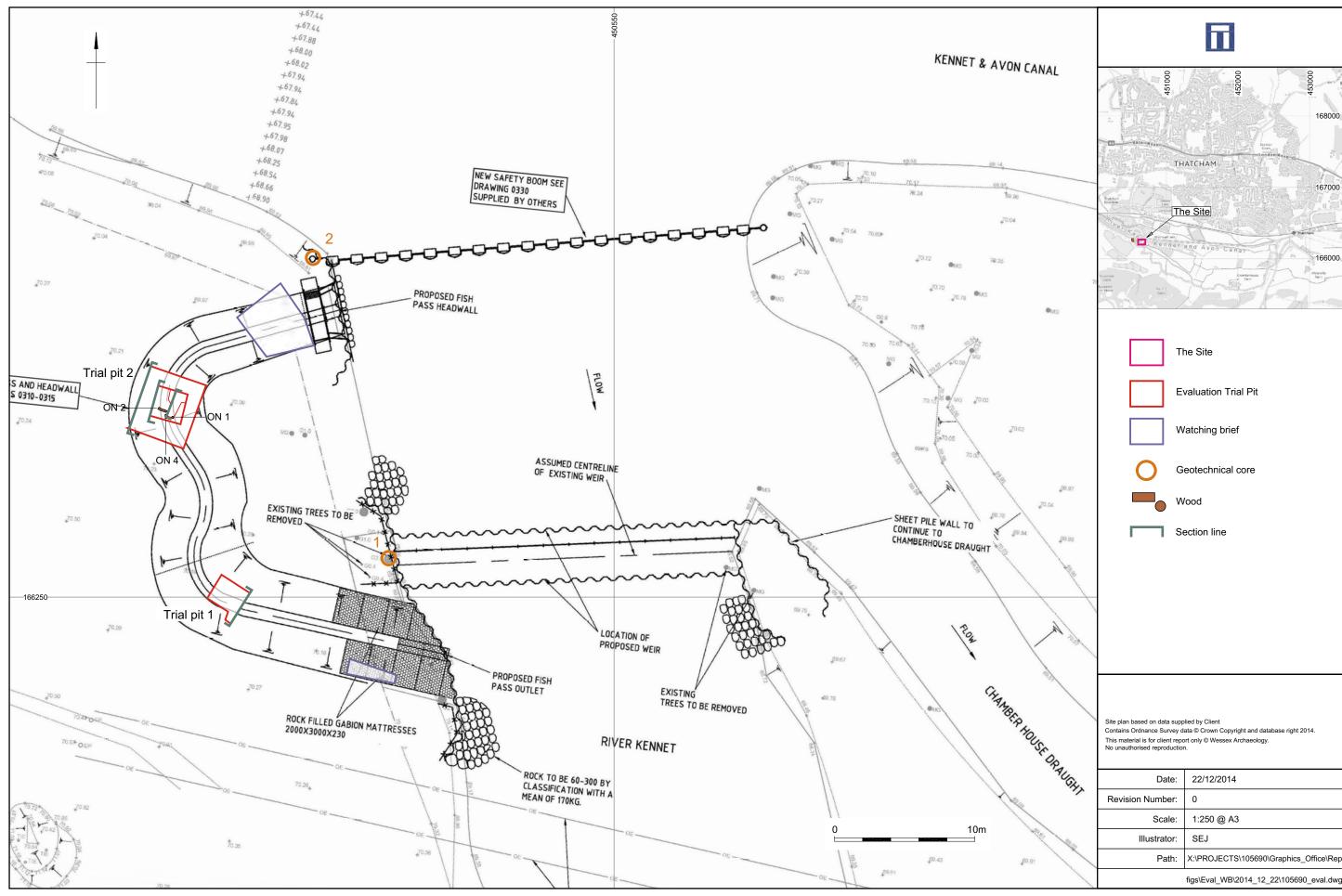
publication

Wessex Archaeology, Salisbury

Description A4 illustrated client report

Entered by Gareth Chaffey (g.chaffey@wessexarch.co.uk)

Entered on 22 January 2015



Site location

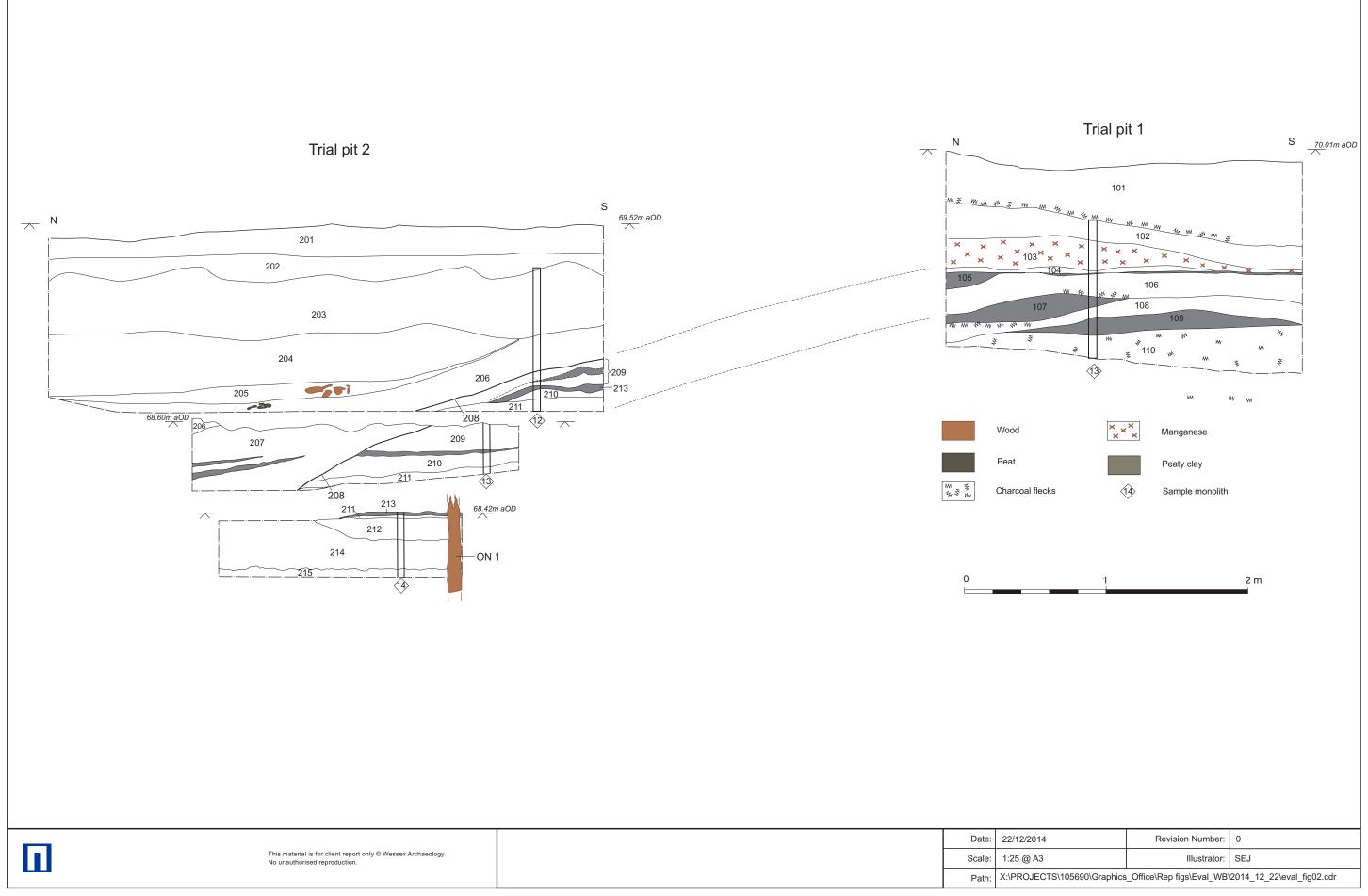




Plate 1: Northern watching brief area



Plate 2: Southern watching brief area

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Plate 3: Trial pit 1 viewed from the west showing sediments in section



Plate 4: Trial pit 1 general excavation shot

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Plate 5: Trial pit 2 viewed from the east showing sediments in section



Plate 6: Trial pit 2 showing timbers ON 1 and ON 2, viewed from the north

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Plate 7: Geotechnical core 1



Plate 8: Geotechnical core 2

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