making sense of heritage

The Wave

Washingpool Farm and Over Court Farm, Over South Gloucestershire

Archaeological Evaluation and
Geoarchaeological Borehole Survey Report

Planning Reference: PT13/4756/F
Ref: 103510.03
April 2014

archaeology

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Archaeological Evaluation and
Geoarchaeological Borehole Survey Report

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Summary

Wessex Archaeology was commissioned by RPS Planning & Development acting on behalf of The Wave, (the Client), to undertake an archaeological evaluation and geoarchaeological borehole survey ahead of development on land at Washingpool Farm and Over Court Farm, Over, South Gloucestershire, centred on National Grid Reference (NGR) 385130 182920. The fieldwork was undertaken on 17th to 21st March 2014.

The archaeological trial trenching comprised the excavation of nine trenches ranging from 25m to 35m by 1.80m, which were targeted in the anomalies identified during a previous geophysical survey. In addition, 13 borehole sequences were taken across the proposed development area.

The evaluation identified a number of ditches datable to the Romano-British period, suggesting a degree of occupation, settlement and utilisation of the landscape during the 2nd-4th centuries AD. Although no direct settlement evidence was recovered, a small number of coins may indicate a degree of activity within the vicinity of the Site. Archaeological features were found within eight of the trenches.

A survey of 13 boreholes was also undertaken on the Site. The results indicate that mineralogenic esuarine/ salt marsh deposits of the upper and middle Wentlooge are represented in the lower areas of Site to the west and north. No peat deposits are present, and the deposits observed could fairly be said to be of low palaeoenvironmental potential. The deposits – in particular the middle Wentlooge deposits – may also have the potential to preserve waterlogged artefacts and features associated with salt marsh exploitation and water-use, such as fish traps, trackways, boats etc.

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Acknowledgements

This project was commissioned by RPS Planning & Development, and Wessex Archaeology would like to thank Mick Rawlings in this regard. Wessex Archaeology would also like to thank Paul Driscoll of South Gloucestershire County Council (SGCC) who monitored this project, Ground Technology Servicies for their collaboration on the borehole survey, and the owners of Washingpool Farm and Over Court Farm for their co-operation during the works.

The archaeological evaluation was directed in the field by Matt Kendall with the assistance of Phil Breach, Jamie McCarthy and Tom Blenclowe. The finds were assessed by Rachael Seager-Smith. The environmental samples were processed by Tony Scothern and assessed by Sarah Wyles. The borehole survey was overseen by Angus Foreshaw, the cores described geoarchaeologically seqence by Nicola Mulhall, and the results reported on by David Norcott.

The report was compiled by Matt Kendall and edited by Gareth Chaffey, while the graphics were produced by Elizabeth James. The project was managed on behalf of Wessex Archaeology by Andy King.

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Washingpool Farm and Over Court Farm, Over
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Archaeological Evaluation and Geoarchaeological Borehole Survey Report

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by RPS Planning & Development on behalf of The Wave, (the Client), to carry out an archaeological evaluation and geoarchaeological borehole survey ahead of development on land at Washingpool Farm and Over Court Farm, Over, South Gloucestershire, centred on National Grid Reference (NGR) 385130 182920 (hereafter 'the Site') (**Figure 1**).

1.1.2 Planning permission is being sought for the construction of an artificial lake with landscaped surroundings. Wave generating equipment within the lake will enable recreational surfing at the Site. Around the northern boundary of the lake will be a number of small structures comprising a reception, club house/café and shop, as well as a campsite and cabins. Access will be from Washingpool Farm to the west of the Site where there is existing parking and also a concrete road that will be extended to the facilities adjacent to the lake (Planning Application No. PT13/4756/F).

1.1.3 In accordance with national legislation and local planning policies and following previous non-intrusive heritage assessments of the Site, the South Gloucestershire County Council (SGCC) Archaeological Officer had requested further assessment by means of evaluation trenching and borehole sampling at selected locations so that informed decisions can be made regarding the scope of any further mitigation that may be needed before or during the development.

1.1.4 The fieldwork strategy and methodology was documented in a Project Design (WA 2014) which was prepared in response to a WSI provided by RPS Planning & Development, and was submitted to and approved by the County Archaeological Officer at SGCC prior to fieldwork commencing.

1.1.5 The fieldwork was undertaken on 17th to 21st March 2014.

1.2 The Site

1.2.1 The Site is located on farmland between the B4055 and the village of Easter Compton to the south-west, Over Lane and the hamlet of Over to the south-east and Badger's Lane to the north-east. To the north-west are fields associated with Washingpool Farm and Brynleaze Farm. The area for assessment is used for permanent pasture; field boundaries are mostly thick hedges or fences with adjacent drainage ditches.

1.2.2 The proposed development site is located within and adjacent to the low-lying alluviated flood plain of the River Severn, known as the Avon Levels. This landscape is generally regarded as an area of national archaeological significance. The land within much of the Site is level and low-lying, at approximately 6m above Ordnance Datum (aOD). Towards the southern end of the Site the land starts to rise up to approximately 20m aOD.

1.2.3 Previous ground investigation work and information from other sites in this vicinity has shown that much of the new lake will be outside the Avon levels on higher ground in the south of the Site, underlain by sand which is part of the Mercia Mudstone Group (British Geological Survey). The rest of the lake will be on lower-lying land within the rest of the Site, underlain by silty clays which are almost certainly part of the Wentlooge Formation (Holocene alluviation). Geological survey data suggests that there may also be some glacial head deposits in the south-west part of the Site, but this had not been confirmed by the site investigation work.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 A detailed description of the known archaeological and historical background is presented within the Heritage Assessment already submitted in support of the planning application for the proposed development (RPS Planning & Development 2013). A brief summary of the most relevant aspects is outlined here.

2.2 Designated sites

2.2.1 The high archaeological potential of the North Avon Levels results from the presence here of deep and often waterlogged alluvial deposits of Holocene date, which are known to contain evidence of settlement and other activities from at least the Bronze Age. Whilst material and features of prehistoric through to Romano-British date have been found on the higher ground to the west of the Site (west of Easter Comton), nothing from these periods has been recovered from within the higher ground in the southern part of the Site or indeed from the lower-lying former marches, within which the remainder of the Site is located.

2.2.2 The South Gloucestershire Historic Environment Record includes information regarding potential medieval activity within and adjacent to the Site. Close to the point at which Badger's Lane turns through 90 degrees to run north-east beneath a railway embankment is an area of earthworks. These are clearly visible on aerial photographs and appear to represent former natural (sinuous) drainage channels along with ridge and furrow type earthworks that are typical of medieval or early post-medieval agricultural practices. Other areas of ridge and furrow are present within the Site and indeed across much of the drained landscape of the Avon Levels and the lower slopes adjacent to the Levels.

2.2.3 The proposed development will physically impact on part of the defined area of earthworks adjacent to Badger's Lane and these are one of the targets of the evaluation trenches.

2.2.4 Over Court, to the south of the Site, was demolished *c*. 1980 but was known to have been a country house of mid-17th century date. However, this building is likely to have been erected on the site of a medieval manor house for which some documentary material survives.

2.2.5 The Almondsbury Tithe Map (1839) shows the field layout within the Site much as it is today, albeit with a few internal boundaries which have subsequently been removed. The accompanying Apportionment indicates that all of the fields within the Site were used as pasture, just as they are today.

2.2.6 The nearest building to the evaluation trench locations is shown on the 1903 published edition Ordnance Survey map adjacent to Over Brook – the small enclosure around this building is shown on the 1st edition of this map (*c*. 1880-82) but not the building itself -

which appears to have been for agricultural use in that there is no defined access across the fields. This building is indicated on later mapping until at least 1974

2.3 Previous studies

2.3.1 The Heritage Assessment submitted in support of the planning application highlighted the fact that the North Avon Levels are considered to have significant archaeological potential and are the subject of a particular Supplementary Planning Guidance document (SPG) *Planning and Archaeology in South Gloucestershire Paper 1: Archaeology and Development in the North Avon Levels*.

2.3.2 The SPG stipulates the requirement for archaeological assessment prior to determination of planning applications. Preliminary discussions with the Archaeology Officer at South Gloucestershire Council resulted in an agreed initial approach to the archaeological assessment of the Site which comprised a geophysical survey (caesium vapour magnetometry and conductivity). The results of this survey have been used to inform the subsequent further assessment of the Site.

2.3.3 The geophysical survey identified a number of features of potential archaeological interest within the Site. These include features within the proposed location of the surf lake which suggest a possible settlement enclosure.

3 GEOARCHAEOLOGICAL BACKGROUND

3.1.1 In order to put the Site in its geoarchaeological context, the sub-surface sediments of the area are summarised below (after Brown 2005).

3.1.2 Underlying the area of the Severn Estuary Levels (encompassing these Avon Levels, as well as the North Somerset Levels and the Gwent and Wentlooge Levels of southeast Wales) is a deep sedimentary sequence, consisting of a series of alternating estuarine alluvial silt and peat deposits up to 15m in depth, and extending over some 840km^2 of intertidal zone and now reclaimed and drained former wetland.

3.1.3 These deposits have accumulated over the last 8000 years as a result of an upward, but fluctuating trend in sea-level rise following the end of the last glaciation. Estuarine silts are laid down on saltmarshes and mudflats during periods of sea-level-rise, whilst peats represent stable or falling sea-levels, within which a succession of plant communities can become established.

The Wentlooge Formation

3.1.4 Named after the intertidal sediment exposures on the Wentlooge Levels, southeast Wales, the Wentlooge Formation - sub-divided into lower, middle and upper Wentlooge - represents the principal sedimentary deposit within the Severn Estuary, covering all but the last 2000 years of deposition.

3.1.5 Classification of the Wentlooge sequence is based largely on research into the sedimentary sequence in the Severn Estuary by John Allen (e.g., Allen 1987, 1990, 1997), upon which these descriptions are partially based.

3.1.6 The lower Wentlooge Formation, usually only exposed at lowest tides, consists of several metres of estuarine clayey-silts, grading from pale greenish grey to blue-grey in colour. Networks of tidal creeks, latterly infilled and present as palaeochannels, are widely distributed across the exposed Levels. Lower Wentlooge sediments are not typically deposited to the same extent within the interior of the levels.

3.1.7 The middle Wentlooge is characterised by a series of intercalating estuarine alluvial silt and peat deposits of varying date. The earliest basal peats have been radiocarbon dated to the Mesolithic, in the first half of the 6th Millenium BC (at Porlock on the north Somerset coast, Jennings *et al* 1998), whilst the latest peat formation (on the Welsh side of the Severn Levels) has been dated to the Late Bronze and Iron Ages (e.g. Barland's Farm and Vurlong Reen, Walker *et al* 1998; and Greenmoor Arch, Locock 1999)

3.1.8 The exact sequence of silts and peats varies between individual sites, reflecting complex patterns of relative sea-level rise, involving multiple phases of marine transgression and regression. The overall thickness of peat units also varies, from thin peats of only a few centimetres thick, to reed, wood and succeeding raised mire peats between 2 to 4m deep.

3.1.9 For reasons that are not fully understood, the peat deposits of the Gwent Levels attain a greater maximum thickness than those occurring on either the Wentlooge, Avon or North Somerset Levels.

3.1.10 The upper Wentlooge witnessed a return to the deposition of estuarine clayey-silts, dating to the Iron Age and Romano-British periods. It represents a period of rapid sediment accumulation, with between 3-5m of sediment accumulating between the 3rd century BC and the 2nd century AD, ceasing in some areas with the Romano-British drainage of the Levels (Bell 1999).

4 METHODOLOGY

4.1 Aims and objectives

4.1.1 The overall aim of this programme of archaeological evaluation was to provide further information regarding the potential location and nature of archaeological remains within the Site. If remains are present, the assessment will seek to establish sufficient details such that informed decisions can be made regarding the need and scope of any further mitigation that may be required before or during the development of the Site.

4.1.2 The following specific objectives have been identified:

- *To identify the nature, character, date and extent of archaeology within the proposal area;*
- *To assess the survival, quality, condition and significance of any archaeological remains;*
- *To ensure the preservation by record of all archaeological remains revealed during the course of the assessment; and*
- *To prepare an appropriate archaeological archive including the treatment and preservation of any finds.*

3.1.3 With regard to the current archaeological research agenda (Webster 2007), the following Research Aims were the most applicable, although others could also apply:

- ***17** - Improve the quality and quantity of environmental data and our understanding of what it represents;*
- ***18** - Target specific soil and sediment contexts for environmental information;*
- ***23** - Improve our understanding of past climate and sea level changes together with their effects on the peoples' relationships with landscapes and the sea.*

4.2 Fieldwork methodology

4.2.1 All works were undertaken in accordance with the methodology set out within the WSI (WA 2014). All fieldwork was conducted in accordance with the guidance and standards outlined in the Institute for Archaeologists' *Standard and Guidance for Archaeological Field Evaluation* (IfA 2008).

Evaluation Trenches

4.2.2 A total of nine trenches, ranging from 25m to 35m by 1.80m, were excavated across the area intended to be developed as the surfing lake and also to target geophysical survey anomalies indicative of archaeological features.

4.2.3 All the trenches were laid out using a Leica Viva series GNSS unit using the OS National GPS Network through an RTK network with a 3D accuracy of 30mm or below and in general accordance with the pattern given (**Figure 1**). The investigation areas were scanned using a cable avoidance tool by operatives experienced in the use of such equipment prior to machining, and minor adjustments to the layout of trenches was required to take account of buried services.

4.2.4 Trench excavation was carried out using a 15 tonne mechanical excavator fitted with a 1.8m wide toothless ditching bucket and was supervised by a suitably qualified archaeologist at all times. The topsoil and subsoil were removed by machine in a series of level spits to the top of the archaeology or natural geological deposits, whichever was encountered first. The machine excavated arisings were stored at the side of the trench and were scanned for artefacts at regular intervals from both the topsoil and subsoil.

4.2.5 Areas of investigation completed to the satisfaction of the Client and the Archaeological Officer at SGCC were backfilled using the excavated material in the approximate order in which they were excavated by Wessex Archaeology and left level on completion. No other reinstatement or surface treatment was undertaken.

Borehole Samples

4.2.6 All the boreholes were laid out using a Leica Viva series GNSS unit using the OS National GPS Network through an RTK network with a 3D accuracy of 30mm or below and in general accordance with the pattern given (**Figure 1**).

4.2.7 The sampling was carried out using a pneumatic windowless sampler (Terrier rig type), which drove a *c.*100mm diameter 1m long sampling chamber down into the sediments and extracted a sleeved core for labelling and storage. An extension rod was added and the process repeated at an additional 1m depth, with the hole being cased as work proceeded to prevent collapse and thus ensuring the integrity of the samples.

4.2.8 These boreholes advanced to a maximum depth of 5m below current ground level, and were supervised by a suitably qualified archaeologist.

4.2.9 The core samples were returned to the laboratory where they were opened and described by an experienced and qualified geoarchaeologist familiar with the area in question and the Wentlooge Formation in particular. Descriptions follow Hodgson (1997) and noted a wide range of characteristics including (but not limited to) texture, colour, structure, inclusions, nature of boundaries and evidence for depositional and post-depositional soil and sediment processes.

4.3 Recording

4.3.1 All exposed archaeological deposits were recorded using Wessex Archaeology's *pro forma* recording system.

4.3.2 A complete drawn record of archaeological features and deposits was compiled. This included both plans and sections, drawn to appropriate scales (generally 1:20 for plans, 1:10 for sections), and 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 with OD heights.

4.3.3 A photographic record was maintained during the evaluation using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images were subject to managed quality control and curation processes which will embed appropriate metadata within the image and ensure long term accessibility of the image set.

5 ARCHAEOLOGICAL RESULTS

5.1 Introduction

5.1.1 The following section details the results of an archaeological evaluation and geoarchaeological borehole survey on the Site, which was carried out between the 17th to the 21st March 2014.

5.1.2 Works comprised the machine excavation of nine trenches (1 x 35m, 8 x 25m) and monitoring of 13 boreholes, and their subsequent archaeological recording, prior to backfilling.

5.2 Natural deposits and soil sequences

5.2.1 **Trenches 1** to **9** were situated within fields used for permanent pasture, located where the proposed lake will be constructed. The underlying geology across the Site was made up of Mercia Mudstone and was recorded in all nine trenches, although there was some variation in the make-up of the geology. The natural geology was overlain by sequence of topsoil and subsoil across all nine trenches measuring approximately 0.20m and 0.12m respectively (**Plates 4** and **5**). Full details of the stratigraphic sequence can be found in **Appendix 1**.

5.3 Archaeological features

5.3.1 A number of archaeological features were noted in eight of the nine trenches excavated. In general, the features correspond to the results of the geophysical survey (**Figure 2**), although several were not identified during the evaluation. The evaluation only identified linear features such as ditches and gullies. A summary of the features and deposits encountered in each trench is given in **Appendix 1**.

5.3.2 Shallow gully **104**, north-east south-west aligned, was recorded in the south-western end of Trench 1, whilst a shallow ditch **204** was noted within the northern end of Trench 2. Both contained limited amounts of Romano-British pottery.

5.3.3 Excavation of **Trench 3** (**Plate 1**) identified two ditches; one on an east-north-east to west-south-west alignment recorded as **304**, and one on a north-west to south-east alignment recorded as **306**. Ditch **304** corresponded to a geophysical response which runs through **Trenches 2** and **8**. Dating evidence was recovered from all features.

5.3.4 Three north-east to south-west aligned ditches (**404**, **408** and **410**) were identified within Trench 4. All appeared to correspond to the geophysical survey. Ditch **404** represented a relatively deep feature, and was cut on its northern edge by ditch **408** (**Plate 6**). Both features contained Romano-British pottery, suggesting a degree of re-establishment of the boundary. Ditch **410** was recorded at the southern end of the trench and may represent the same ditch as **204** in Trench 2.

5.3.5 Two possible ditch termini (**604** and **608**) were recorded on the western edge of Trench 6. Both contained Romano-British pottery, whilst a single coin was recovered from **608**. A roughly north-south aligned ditch **606** was noted in the southern end of the trench. At the request of the Archaeological Officer for SGCC, a machine slot was excavated through the feature ditch, which upon excavation, appeared to be a former drainage channel.

5.3.6 Excavation of Trench 7 (**Plate 2**) identified a ditch **704** (**Plate 7**), roughly north-west to south-east aligned, and a possible pit or ditch terminus **707**. Pottery of a post-medieval date was recovered from both features.

5.3.7 Trench 8 (**Plate 3**) identified a number of features of which some corresponded to geophysical responses. Ditch **804**, aligned north-east to south-west, appears to relate to a geophysical response which runs into **Trench 3** and corresponds to ditch **304**. Feature **806** was interpreted as a spread of material which is possibly derived from a demolition event or a possible attempt to create a hard standing area which seems to date from the Romano-British period. Linear **807** was not excavated due to it only being partially exposed within the trench but pottery recovered from its surface suggests a Romano-British date. Ditch **809** is on a north to south alignment and which does not correspond to any geophysical response.

5.3.8 During the excavation of Trench 9, four east-west aligned ditches were identified and recorded as **904**, **906**, **908** and **910**. Ditch **904** contained several sherds of Romano-British date. Linear **910** is undated and was interpreted as a possible geological feature. Ditches **906** and **908**, also of Romano-British date, do not correspond to the results of the geophysical survey.

5.3.9 No archaeological features were identified within Trench 5, despite being targeted on two geophysical responses.

6 BOREHOLE SURVEY RESULTS

6.1 Introduction

6.1.1 13 locations were targeted for coring using the window sampling rig, and all of these were completed successfully. Detailed descriptions of each core (following Hodgson 1997) are presented in **Appendix 2**. The results are summarised below.

6.2 Results

6.2.1 The results demonstrate that the Site straddles the edge of the estuarine deposits of the Avon Levels to the west and drier ground to the east. This is as expected given the topography of the Site, which rises from 6.3m OD at BH13 in the northwest of the site (**Figure 2**) to nearly 12m OD at BH4 in the southeast.

6.2.2 At the majority of the borehole locations (BH1, 3, 4, 7, 8, 9, 10 and 11) the deposits present can be described as modern soil profile overlaying weathered Mercia Mudstone geology. The soil profiles are slightly thickened in places and include some probable

alluvial additions from the maximum extent of salt marsh/ estuarine accumulation (e.g. BH8 & BH10).

6.2.3 In BH2, 5, 6, 12 and 13 deposits of the Wentlooge Formation are recorded. For the Wentlooge these are relatively shallow, with depths-to-Mudstone of 2.0, 2.75, 1.0, 1.7 and 3.2m respectively. In all cases the familiar oxidised brown clays of the upper Wentlooge were present, and where the sequences were deep enough overlay the grey to greenish gray clays and silty clays of the middle Wentlooge.

6.2.4 No peat horizons or stasis horizons were recorded in any of the cores, with the possible exception of BH6. Here 0.85m of upper Wentlooge sediments overlay an alluvial/ weathered mudstone interface which contained quite common charcoal flecks (<2mm). This is likely to be a remnant of imperfectly buried soil pre-dating the maximum growth of salt marsh, and of relatively recent date. It has little potential in of itself – and the charcoal is not suitable for dating – but does indicate probable human activity in the vicinity.

7 ARTEFACTUAL EVIDENCE

7.1 Introduction

7.1.1 Just under 4kg of finds were recovered during the evaluation, deriving from contexts in all nine of the excavated trenches. The assemblage, dominated by ceramics, ranges in date from the prehistoric to post-medieval periods, although the bulk of the material is Romano-British. The overall quantities of artefacts, summarised by material type and trench, are given in **Table 1**.

Table 1: All finds by material type and trench (number/weight in grammes)

Trench	Animal bone		Fired clay		Pottery		Other finds	Total No.	Total Wt.
	No.	Wt.	No.	Wt.	No.	Wt.			
1					1	1		1	1
2					2	8		2	8
3	3	45			131	1087	1 (9g) iron	135	1141
4	22	489			35	429		57	918
5							1 (1g) cu alloy coin	1	1
6	5	22			14	253	1 (1g) cu alloy coin	20	276
7	5	33			14	146	2 (9g) clay tobacco pipe	21	188
8	10	28	11	604	62	393	1 (46g) iron	84	1071
9	21	62	1	23	23	225	1 (1g) struck flint 1 (1g) glass	47	312
unstrat					1	4		1	4
Total	**66**	**679**	**12**	**627**	**283**	**2546**	**2 (55g) iron objects 2 (2g) cu alloy coins 2 (9g) clay tobacco pipe 1 (1g) struck flint 1 (1g) glass**	**369**	**3920**

7.2 Pottery

7.2.1 The pottery provided the primary evidence for the Site. In general, the sherds survived in good, fresh condition, although some surface abrasion and edge damage were noted, especially amongst the softer, less well fired fabrics. The bulk of the assemblage is of Romano-British date, with the more diagnostic fabrics and vessel forms indicating an emphasis on the latter part of this period (3rd and 4th centuries AD), although two earlier pieces, perhaps of later Iron Age or early Romano-British date, and four post-medieval sherds were also identified.

7.2.2 As part of this assessment, the sherds from each context were sub-divided into broad ware groups (e.g. greywares) or known fabric types (e.g. Oxfordshire red colour-coated wares) and quantified by the number and weight of the pieces present. A breakdown of the assemblage by ware type is shown in **Table 2**. Spot-dates, used to inform the stratigraphic phasing, were then assigned to each fabric group and, in combination with the dating evidence provided by other artefact types, to the context as a whole. Brief details of the vessel forms present in each fabric were also recorded, quantified by the number of examples of each form.

Table 2: Pottery ware totals (number/weight in grammes)

Ware	No.	Wt.
Late Iron Age or Early Romano-British:		
Calcareous ware	1	3
Malvernian type ware	1	4
Romano-British:		
Samian	2	2
Moselkeramik	2	5
Black Burnished ware	115	892
Oxon colour coat	4	49
Oxon colour coated mortaria	1	25
Greywares	114	1072
Oxidised wares	21	185
Oxidised Severn Valley wares	14	250
Grog-tempered ware	3	34
Sandy ware	1	4
Post-medieval:		
Red earthenware	4	31
Total	**283**	**2556**

7.2.3 The two earliest sherds consist of small, abraded body sherds, one in a leeched calcareous fabric (ditch **8095**), the other (unstratified) in a fabric containing small (up to 1mm across) sandstone and other weathered rock fragments, probably Palaeozoic limestone from the Malvern or Woolhope Hills. The use of these fabric types in this area dates back to the Early and Middle Iron Age and continued with little apparent technological change into the late 1st century AD, although the thin-walled, relatively hard-fired nature of both these sherds suggests that they belong within the later part of this range. Both occurred residually here.

7.2.4 Romano-British imports are limited to two small scraps of samian (ditches **204** and **809**), both probably of 2nd century AD date and from Central Gaulish sources, and two Moselkeramik beaker sherds, both from Trench 8 (ditches **804** and **809**). These wares were imported from the end of the 2nd century AD until *c.* AD 276 when the industry was all but destroyed by the barbarian invasion across the Rhine (Symonds 1992, 46). Amphora and imported mortaria are absent but this is probably a reflection of the small size of the assemblage rather than any real lack of desire for, or availability of, these commodities during the Roman period.

7.2.5 Regional imports are dominated by vessels of South-east Dorset Black Burnished ware, which account for 40% of the assemblage by sherd count. These wares are particularly frequent in Trench 3 (78 sherds, 578g), although as many as 74 of these could derive from a single, freshly broken jar (ditch **304** and unstratified), artificially raising the importance of these wares overall. Vessel forms were confined to two of the three the standard Late Roman products of this industry – everted rim jars and shallow, straight-sided, plain rimmed dishes (Seager Smith and Davies 1993, types WA 3 and 20); the absence of flanged bowls (WA 25) is again likely to be the result of the relatively small assemblage size. The only other regional wares are Late Roman red colour-coated ware bowls and mortaria from the Oxfordshire industry. The three recognisable rims, from a hemispherical bowl with a bead rim (Young 1977, 160, type C56; ditch 809), a bead rim bowl with out-swelling walls and white painted decoration (ibid., 164, type C69; ditch 404) and a mortarium with an angular flange (*ibid*., 174, type C100; trench 3, unstratified), are all of 4th century AD date.

7.2.6 The remainder of the assemblage comprises local coarsewares used for a wide range of utilitarian vessels, although the precise identification of form is hampered by the propensity of pieces broken at or above the neck/shoulder junction and representing less than 5% of the rim diameter. Although not assigned to source at this stage, the greywares comprise a wide range of fabrics, mostly containing variable quantities of sand and/or mica, while reduced Severn Valley wares also form part of this group. Vessel forms comprise necked jars/bowls, everted rim jars, shallow, straight-sided, plain rimmed dishes and flanged bowls, predominantly of later 3rd to 4th century AD date. The unsourced oxidised wares also include a range of fine, micaceous fabrics, often so badly abraded that no surfaces survive, as well as coarser, sandier pieces, including seven pieces from a single vessel with a fumed or sooted external surface found in ditches **404** and **408** in Trench 4. No rims occur amongst this fabric group and only two were noted among the oxidised Severn Valley wares made throughout the Roman period; both were from undiagnostic jar/bowl forms.

7.2.7 Overall, the assemblage contains the standard range of fabrics and forms expected on Romano-British sites in the region and broadly dates from the 2nd to 4th centuries AD, with the more diagnostic pieces indicating an emphasis on the latter part of this period (*c.* AD 250/270 - 400). The only later material comprises four post-medieval glazed redwares sherds, all from Trench 7. Three body sherd, including one externally glazed piece, came from ditch **704** and one, with a trail of internal glaze, was found unstratified.

7.3 Metalwork

7.3.1 Metal objects occurred in only very small quantities (**Table 1**). All the items have been examined in their raw state, without cleaning or x-radiography to aid identification. A single copper alloy coin probably of later 3rd or 4th century AD date was found in feature **608** in Trench 6 while a small, flat, oval fragment found unstratified in Trench 5 may represents the remains of a second coin of similar date although it is too badly damaged and corroded to be positively identified at this stage.

7.3.2 The two iron objects consist of a probable nail shank fragment, found unstratified in Trench 3, and a nail with a large square head, also unstratified but from Trench 8. Although these items could date from the Roman period onwards, it is probable that both are of relatively recent origin, perhaps belonging within the post-medieval/modern periods.

7.4 Fired clay

7.4.1 All the pieces of fired clay were made in slightly sandy, predominantly oxidised fabrics that had been fairly hard fired. Where surviving, each had one flattish surface with horizontal withy impressions (8-15mm across) beneath, and others of similar dimensions at right-angles to the first at a slightly lower level. All are of structural origin, their comparatively hard-fired nature suggesting that they derive from the floor of an oven or hearth, rather than wall daub. Ten pieces were found in layer **806** with one other unstratified in Trench 8; the remaining piece came from ditch **904**.

7.5 Animal bone

7.5.1 A total of 66 fragments (679g) of animal bone was recovered from 10 contexts in six of the trenches (Trenches 3, 4, 6, 7, 8 and 9). Most is from contexts of Roman date. Bone preservation is generally fair although some fragments have abraded cortical surfaces and most are extremely fragmented. Although not fully identified to species and skeletal element at this stage, all the pieces appear to belong to common domesticated species, particularly cattle and sheep, with teeth and the larger, more robust bones (e.g. long bones) being the most frequently represented.

7.6 Other finds

7.6.1 All the other material types occur in only very small quantities (**Table 1**). A single, small, broken prehistoric flint fake was found in ditch **908**, but is not sufficiently diagnostic to be more closely datable. The other finds were of all of post medieval date. These comprise a clay tobacco pipe bowl and stem fragment from feature **704** and a scrap of olive green bottle glass from ditch **908**.

7.7 Potential

7.7.1 The assessment results indicate that the preservation of artefacts is generally good across all parts of the site. Chronological evidence, primarily from the pottery, indicates that the activity is predominantly of later Romano-British date, although more precise dating is hampered by the fragmented nature of the sherds and the type of feature they were derived from. Most of the material derived from ditches, which, by their nature, would only be allowed to accumulated material once out of use.

7.7.2 No items of particular intrinsic interest were recovered, but the range of material culture is sufficient to indicate the presence of Romano-British settlement in the vicinity and something of its economy and lifestyle of its inhabitants. The fired clay hints of some form of oven or hearth in the vicinity, while the animal bone indicates that a pastoral economy based upon a mixed strategy of livestock husbandry (i.e. cattle and sheep/goat farming. The pottery provides evidence for the trading links, ceramic influences and the types of vessels used, while the single struck flint highlights the potential for further prehistoric remains, if larger areas were to be examined.

7.7.3 It is recommended that variables such as species, skeletal element, preservation condition, fusion and tooth ageing data, butchery marks, metrical data, gnawing, burning, surface condition, pathology and non-metric traits are recorded for the animal bone, while the coins are submitted for detailed specialist identification. All the metalwork will also

need to be x-radiographed to provide a permanent record of these inherently unstable material types. No further work on any of the other material types is proposed at this stage. However, any future archaeological excavations at the site have a high potential to produce substantial, well-preserved and securely stratified assemblages of Romano-British date and of all material types. There is also a low potential for some prehistoric material. These are likely to provide more significant, detailed information about life in the area, and the material recovered from this evaluation should be reviewed at this stage.

8 ENVIRONMENTAL EVIDENCE

8.1 Introduction

8.1.1 A total of three bulk samples were taken from ditch terminus/pit **608** in **Trench 6**, ditch **404** in **Trench 4** and ditch **804** in **Trench 8** all of Romano-British date to evaluate the presence and preservation of palaeo-environmental remains. This information can assist in determining the significance of the archaeological site.

8.1.2 The samples were processed for the recovery and assessment of charred plant remains and wood charcoal.

8.2 Charred plant remains

8.2.1 The bulk samples were processed by standard flotation methods; the flot retained on a 0.5mm mesh, residues fractionated into 5.6mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6mm) were sorted, weighed and discarded. The flots were scanned under a x10 – x40 stereo-binocular microscope and the preservation and nature of the charred plant and wood charcoal remains recorded in **Appendix 3**. Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals.

8.2.2 The flots were of moderate size with generally relatively high numbers of roots and modern seeds that may be indicative of stratigraphic movement and the possibility of contamination by later intrusive elements. Charred material comprised varying degrees of preservation.

8.2.3 High numbers of cereal remains were recovered in all three samples, in particular the flot from ditch **404**. These remains included barley (*Hordeum vulgare*) grain fragments and hulled wheat, emmer or spelt (*Triticum dicoccum/spelta*), grain, glume base and spikelet fork fragments. Some of the glume bases were identifiable as being those of spelt (*Triticum spelta*).

8.2.4 The samples from ditches **404** and **408** also contained moderately high numbers of weed seeds. These included seeds of oat/brome grass (*Avena/Bromus* spp.), vetch/wild pea (*Vicia/Lathyrus* sp.), docks (*Rumex* sp.), clover/medick (*Trifolium/Medicago* sp.), goosefoot (*Chenopodium* sp.) and celtic bean (*Vicia faba*). These seeds are from species which can be found in grassland, field margins and arable environments.

8.2.5 The assemblages are typical of general settlement activities and crop processing waste and may be indicative of settlement in the vicinity. There are similarities between these assemblages and those observed from other deposits of Romano-British date in the wider area such as at a number of sites at Avonmouth (Masser *et al* 2005; Stevens 2007) and the North Somerset levels, for example Kenn Moor, Banwell Moor and Puxton (Rippon 2000).

8.3 Wood charcoal

8.3.1 Wood charcoal was noted from the flots of the bulk samples and is recorded in **Appendix 3**. Charcoal fragments greater than 4mm were only retrieved in small quantities.

8.4 Further potential

Charred plant remains

8.4.1 The analysis of the charred plant assemblages has the potential to provide some information on the nature of the settlement, the local environment, and local agricultural practices and crop husbandry techniques.

8.4.2 The results of this analysis could provide a comparison with the data from other sites in the wider area, such as at Avonmouth (Masser *et al* 2005; Stevens 2007) and the North Somerset levels (Rippon 2000).

Wood charcoal

8.4.3 There is little potential for the analysis of the wood charcoal to provide information on the species composition, management and exploitation of the local woodland resource on the site due to the paucity of remains recovered.

8.5 Aims and Methods

Charred plant remains

8.5.1 The analysis of the charred plant macrofossils from Romano-British ditch 404 and 804 should be considered once any further work on the site has been undertaken.

8.5.2 At the analysis stage all identifiable charred plant macrofossils would be extracted from the 2 and 1mm residues together with the flot. Identification would be undertaken using stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals and with reference to modern reference collections where appropriate. They would be quantified and the results tabulated.

8.5.3 The samples proposed for consideration for analysis are indicated with a “?P” in the analysis column in **Appendix 3**.

Wood charcoal

8.5.4 No further work is proposed on the wood charcoal in these samples.

Recommendations for Sampling

8.5.5 Samples should be taken for the recovery of charred plant remains and wood charcoal where permitting from phased features, especially any arising and related to settlement activities and/or structures. Features that are specifically related to burning activities, such as cremations, should also be sampled. Generally samples should be taken covering as wider range of feature types, and phases as possible. Where available deposits permit, sample size should be of 30 to 40 litres from individual, secure contexts. However if contexts are encountered that consist predominately of carbonised wood charcoal, in these cases smaller samples of 10 litres would appear suitable.

9 DISCUSSION

9.1 Archaeological features

9.1.1 The archaeological evaluation has been successful in its stated aims and confirmed that archaeological features are present within the areas of the Site evaluated, particularly in the footprint of the proposed lake. The presence of a well-developed topsoil and subsoil across the whole of the Site indicates that this area has been remained undisturbed and preserved due to the use of the land as permanent pasture.

9.1.2 While the results of the evaluation do not match exactly with the geophysical survey results, the fact that archaeology was encountered on or near to the majority of the responses suggests that the surveys were accurate. However, it has been made apparent that the geophysical surveys picked up so called 'ghost features' and some archaeological features may have been missed during the interpretation of the raw data. This suggests that there could be a higher concentration of archaeological features than initially indicated.

9.1.3 The evaluation has confirmed the presence of a relatively high concentration of Romano-British features suggesting a degree of settlement, occupation and utilisation of the landscape, particularly within the 2nd-4th centuries AD. Such features have the potential for increasing the knowledge of Romano-British activity at a local and potentially regional scale. Finds indicative of nearby settlement were discovered during the evaluation, such as coins, and as such may warrant further mitigation.

9.2 Borehole summary

9.2.1 Mineralogenic esuarine/ salt marsh deposits of the upper and middle Wentlooge are represented in the lower areas of Site to the west and north. No peat deposits are present, and the deposits observed could fairly be said to be of low palaeoenvironmental potential.

9.2.2 The deposits do still have the potential to bury archaeology, including land-based (i.e. non-salt marsh) archaeology which predates the expansion of the estuarine deposits. This archaeology, if present, would be at around the level of the weathered Mudstone.

9.2.3 The deposits – in particular the middle Wentlooge deposits – also have the potential to preserve waterlogged artefacts and features associated with salt marsh exploitation and water-use, such as fish traps, trackways, boats etc.

10 STORAGE AND CURATION

10.1 Museum

10.1.1 It is recommended that the project archive resulting from the evaluation be deposited with Bristol Museum and Art Gallery under the accession number **BRSMG 2014/8**. The museum has agreed in principle to accept the project archive on completion of the project. The archive is currently held at Wessex Archaeology's Salisbury office under the site code **103510**.

10.2 Archive

10.2.1 The complete site archive, which will include paper records, photographic records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Bristol Museum and Art Gallery, and in general following nationally recommended guidelines (SMA 1995; IfA 2009; Brown 2011; ADS 2013).

10.2.2 All archive elements will be marked with the site code, and a fill index will be prepared. The physical archive comprises the following.

- *2 cardboard boxes or airtight plastic boxes of artefacts and ecofacts, ordered by material type.*
- *1 file of paper records and A3/A4 graphics.*

10.3 Discard policy

10.3.1 Wessex Archaeology follows the guidelines set out in *Selection, Retention and Dispersal* (Society of Museum Archaeologists 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant further analysis. Any discard of artefacts will be fully documented in the project archive.

10.3.2 The discard of environments remains and samples follows nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002).

10.4 Security copy

10.4.1 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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APPENDIX 1: TRENCH DESCRIPTIONS

TRENCH 1			**Type: Evaluation**	**Machine excavated**
Dimensions: 27.80m x 1.80m		**Max. depth: 0.30m**	**Ground level: 8.62 – 9.07m aOD**	
Co-ordinates: E 358080.38 N 182872.89 and E 358098.37 N 182856.34				
Context	**Description**			**Depth (m)**
101	Layer	Topsoil – Mid greyish brown silty loam containing moderate rooting and rare sub-rounded to sub-angular stone inlcusions (<0.05m).		0 – 0.20m
102	Layer	Subsoil – Mid brownish grey silty loam clay containing rare to very rare sub-rounded to sub-angular stone inclusions (<0.06m).		0.20 – 0.25m
103	Layer	Natural – Mid reddish brown silty clay containing occasional patches of sub-angular to sub-rounded stone inclusions (<0.20m).		0.25m+
104	**Cut**	**Cut of linear gully aligned roughly north-east to south-west and recorded as 1.80m in length by 0.31m wide and 0.07m deep, with moderate straight sides running onto a gently concave base.**		**0.07m deep**
105	Fill	Secondary fill of **104** – Light grey silty clay with small patches of redeposited natural. Derived from the deposition of surrounding materials and erosion of the features sides.		0.07m thick

TRENCH 2			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.30m x 1.80m		**Max. depth: 0.33m**	**Ground level: 8.46 – 8.69m aOD**	
Co-ordinates: E 358091.83 N 182902.07 and E 358090.50 N 182877.88				
Context	**Description**			**Depth (m)**
201	Layer	Topsoil – Light greyish brown silty loam containing moderate rooting and no stone inclusions.		0 – 0.12m
202	Layer	Subsoil – Light greyish brown silty clay loam containing no coarse components. Faint patches of natural make the lower boundary of the deposit very diffuse.		0.12 – 0.20m
203	Layer	Natural – Mid reddish brown silty clay containing sparse angular to sub-angular stone inclusions (<0.25m).		0.20m+
204	**Cut**	**Cut of a linear ditch on a north-east to south-west alignment and recorded as 2.30m in length by 1.40m wide and 0.06m deep, with shallow concave sides running onto a flat base.**		**0.06m deep**
205	Fill	Secondary fill of **204** – Mid greyish brown silty clay containing rare sub-angular to sub-rounded stone inclusions (<0.02m). Derived from the deposition of surrounding materials and erosion of the features sides.		0.06m thick

TRENCH 3			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.80m x 1.80m	**Max. depth: 0.50m**		**Ground level: 9.03 – 9.60m aOD**	
Co-ordinates: E 358129.22 N 182897.51 and E 358139.65 N 182874.94				
Context	**Description**			**Depth (m)**
301	Layer	Topsoil – Mid grey silty clay containing sparse sub-rounded to sub-angular stone inclusions (<0.05m) and occasional rooting.		0 – 0.22m
302	Layer	Subsoil – Mid brownish grey clay silt containing sparse sub-rounded to sub-angular stone inclusions (<0.06m). Only present within the north-western half of the trench.		0.22 – 0.37m
303	Layer	Natural – Mid reddish brown clay silt with light blue grey patches containing rare sub-angular stone inclusions (<0.10m).		0.37m+
304	**Cut**	**Cut of a ditch aligned roughly east-north-east to west-south-west and recorded as 1.70m in length by 1.60m wide and 0.36m deep, with moderate to shallow straight sides which run into a concave base.**		**0.36m deep**
305	Fill	Secondary fill of **304** – Mid greyish brown silty clay containing sparse sub-angular angular stone inclusions (<0.02m). Derived from the deposition of surrounding materials and erosion of the features sides.		0.36m thick
306	**Cut**	**Cut of a ditch aligned south-east to north-west and recorded as 2.64m in length by 1.43m wide and 0.26m deep, with moderate to steep stepped sides which run into a flat base.**		**0.26m deep**
307	Fill	Secondary fill of **306** – Mid greyish brown clay containing moderate sub-angular angular stone inclusions (<0.04m). Derived from the deposition of surrounding materials and erosion of the features sides.		0.26m thick

TRENCH 4			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.70m x 1.80m	**Max. depth: 0.51m**		**Ground level: 8.71 – 9.09m aOD**	
Co-ordinates: E 358123.14 N 182935.81 and E 358130.39 N 182912.15				
Context	**Description**			**Depth (m)**
401	Layer	Topsoil – Mid grey silty clay containing occasional rooting and no coarse components.		0 – 0.22m
402	Layer	Subsoil – Pale grey clay silt containing sparse sub-rounded to sub-angular stone inclusions (<0.04m).		0.22 – 0.37m
403	Layer	Natural – Mid reddish brown clay silt containing occasional sub-rounded to sub-angular stone inclusions (<0.06m).		0.37m+
404	**Cut**	**Cut of a ditch on a north-east to south-west alignment and recorded as 1.80m in length by 1.42m wide and 0.50m deep, with moderate concave sides which run into a flat base.**		**0.50m deep**
405	Fill	Secondary fill of 404 – Dark grey silty clay containing sparse to occasional sub-rounded to sub-angular stone inclusions		0.12m thick

		(<0.08m). Derived from the deposition of surrounding materials through natural transportational processes.	
406	Fill	Deliberate backfill/secondary fill of **404** – Mid orange brown clay silt containing sparse sub-angular to sub-rounded stone inclusions (<0.09m). Derived from a possible deliberate backfilling event or from the deposition of materials derived from the erosion of the features sides or bank.	0.27m thick
407	Fill	Secondary fill of 404 – Dark grey silty clay containing sparse sub-rounded to sub-angular stone inclusions (<0.04m). Derived from the deposition of surrounding materials through natural transportational processes. Cut by **408**.	0.19m thick
408	**Cut**	**Cut of a ditch on a north-east to south-west alignment and which physically cuts 404. Recorded as 1.80m in length by 0.81m wide and 0.40m deep, with steep straight sides which run into a flat base.**	**0.40m deep**
409	Fill	Secondary fill of 408 – Dark grey silty clay containing rare sub-rounded to sub-angular stone inclusions (<0.15m). Derived from the deposition of surrounding materials through natural transportational processes.	0.40m thick
410	**Cut**	**Cut of a ditch on a north-east to south-west alignment and recorded as 1.90m in length by 0.95m wide and 0.22m deep, with steep straight sides which run into a flattish base.**	**0.22m deep**
411	Fill	Secondary fill of 410 – Pale to mid grey silty clay with brown patches and containing rare sub-rounded to sub-angular stone inclusions (<0.05m). Derived from the deposition of surrounding materials and the erosion of the features sides.	0.22m thick

TRENCH 5			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.80m x 1.80m	**Max. depth: 0.35m**		**Ground level: 8.40 – 8.93m aOD**	
Co-ordinates: E 358104.39 N 182974.60 and E 358089.65 N 182954.77				
Context	**Description**			**Depth (m)**
501	Layer	Topsoil – Mid greyish brown silty loam containing occasional rooting and rare sub-angular stone inclusions (<0.04m).		0 – 0.15m
502	Layer	Subsoil – Mid brownish grey silty loam containing rare to sparse sub-angular to sub-rounded stone inclusions (<0.06m). Has a diffuse interface with the natural.		0.15 – 0.25m
503	Layer	Natural – Mid reddish brown sandy clay containing sparse to occasional angular to sub-angular stone inclusions (<0.06m).		0.25m+

TRENCH 6			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.80m x 1.80m	**Max. depth: 0.37m**		**Ground level: 8.57 – 9.38m aOD**	
Co-ordinates: E 358129.66 N 182967.79 and E 358114.31 N 182948.49				
Context	**Description**			**Depth (m)**
601	Layer	Topsoil – Dark greyish brown silty loam containing moderate		0 – 0.23m

		rooting and no coarse components.	
602	Layer	Subsoil – Mid reddish brown silty clay containing rare sub-angular to sub-rounded stone inclusions (<0.05m).	0.23 – 0.37m
603	Layer	Natural – Mid brownish red sandy clay containing rare to sparse sub-angular to sub-rounded stone inclusions (<0.06m).	0.37m+
604	**Cut**	**Cut of a possible ditch terminus or pit on a south-east to northwest alignment and recorded as 1.06m in length by 1.04m wide and 0.19m deep, with moderate concave sides which run into a concave base.**	**0.19m deep**
605	Fill	Secondary fill of **604** – Dark greyish brown clay silt containing sparse sub-angular to sub-rounded stone inclusions (<0.04m). Derived from the deposition of surrounding materials and erosion of the features sides.	0.19m thick
606	**Cut**	**Cut of a linear feature on a north-west to south-east alignment and recorded as 1.80m in length by 3.70m wide and 0.50m deep, with moderate concave sides which run into an unknown base. Machine excavated to determine if it was an archaeological feature or the boundary between the solid and drift geology.**	**0.50m+ deep**
607	Fill	Secondary fill of **606** - Dark greyish brown clay silt containing sparse sub-angular to sub-rounded stone inclusions (<0.06m). Derived from the deposition of surrounding materials and erosion of the features sides.	0.50m+ thick
608	**Cut**	**Cut of a possible ditch terminus or pit on a south-east to northwest alignment and recorded as 1.12m in length by 1.20m wide and 0.24m deep, with moderate concave sides which run into a concave base.**	**0.24m deep**
609	Fill	Secondary fill of 608 – Dark greyish brown clay silt containing sparse sub-angular to sub-rounded stone inclusions (<0.06m). Derived from the deposition of surrounding materials and erosion of the features sides.	0.24m thick

TRENCH 7			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.70m x 1.80m		**Max. depth: 0.28m**	**Ground level: 9.16 – 9.61m aOD**	
Co-ordinates: E 358119.18 N 183009.65 and E 358102.84 N 182990.95				
Context	**Description**			**Depth (m)**
701	Layer	Topsoil – Mid to dark brown silty clay loam containing moderate rooting and no coarse components.		0 – 0.15m
702	Layer	Subsoil – Mod brown silty clay with a grey hue containing occasional rooting and rare sub-rounded to sub-angular stone inclusions (<0.03m).		0.15 – 0.23m
703	Layer	Natural – Dark reddish brown sandy clay containing occasional sub-angular to sub-rounded stone inclusions (<0.06m).		0.23m+

704	**Cut**	**Cut of a ditch on a north-west to south-east alignment and recorded as 1.80m in length by 1.10m wide and 0.45m deep, with steep straight sides which run into a flat base.**	**0.45m deep**
705	Fill	Secondary fill of **704** – Mid to dark brown silty clay with a grey hue and red orange mottling and containing occasional sub-angular to sub-rounded stone inclusions (<0.08m).	0.20m thick
706	Fill	Secondary fill of **704** – Pale brown silty clay with a grey hue containing occasional sub-angular to sub-rounded stone inclusions (<0.06m).	0.30m thick
707	**Cut**	**Cut of a possible ditch terminus or pit on a north-west to south-east alignment recorded as 1.72m in length by 1.31m wide and 0.28m deep, with moderate concave sides which run into a flattish base.**	**0.28m deep**
708	Fill	Secondary fill of 707 – Mid greyish brown silty clay containing sparse angular to sub-angular stone inclusions (<0.10m). Derived from the deposition of surrounding materials and the erosion of the features sides.	0.28m thick

TRENCH 8			**Type: Evaluation**	**Machine excavated**
Dimensions: 24.40 x 1.80m		**Max. depth: 0.35m**	**Ground level: 9.21 – 9.60m aOD**	
Co-ordinates: E 358148.86 N 182921.49 and E 358172.44 N 182915.30				
Context	**Description**			**Depth (m)**
801	Layer	Topsoil – Dark greyish brown silty clay loam containing moderate rooting and no coarse components.		0 – 0.25m
802	Layer	Subsoil – Mid brownish orange silty clay containing rare sub-angular to sub-rounded stone inclusions (<0.03m).		0.25 – 0.35m
803	Layer	Natural – Dark to mid reddish brown sandy clay containing occasional to common sub-rounded to sub-angular stone inclusions (<0.06m).		0.35m+
804	**Cut**	**Cut of a ditch on a north-east to south-west alignment which was recorded as 1.90m in length by 0.93m wide and 0.30m deep, with moderate to shallow straight sides which run into a concave base.**		**0.30m deep**
805	Fill	Secondary fill of 804 – Mid brown silty clay with a greyish hue containing occasional sub-angular to sub-rounded stone inclusions (<0.06m). Derived from the deposition of surrounding materials and erosion of the features sides.		0.30m thick
806	Layer	A spread of possible demolition material – Mid to dark brown silty clay with a grey hue recorded as 1.80m in length by 7.80m wide and 0.16m deep. Contains frequent angular to sub-angular stone inclusions with could be heat affected (<0.10m).		0.16m thick
807	**Cut**	**Cut of a possible ditch on a north-east to south-west alignment recorded as 2.30m in length and 1.90m wide. Not excavated due to it only being partially exposed**		**-**

		within the trench.	
808	Fill	Secondary fill of 807 – Light brown silty clay with a pale grey hue containing occasional sub-rounded to sub-angular stone inclusions (<0.05m). Derived from the deposition of surrounding material and the erosion of the features sides.	-
809	**Cut**	**Cut of a ditch or gully on a rough north to south alignment and recorded as 1.60m in length by 1.50m wide and 0.25m deep, with shallow to moderate straight sides which run into a flat base.**	**0.25m deep**
810	Fill	Secondary fill of 809 – Mid to dark brown silty clay with a grey hue containing occasional sub-rounded to sub-angular stone inclusions (<0.05m). Derived from the deposition of surrounding materials and the erosion of the features sides.	0.25m thick

TRENCH 9			**Type: Evaluation**	**Machine excavated**
Dimensions: 32.40m x 1.80m		**Max. depth: 0.38m**	**Ground level: 9.37 – 9.75m aOD**	
Co-ordinates: E 358172.19 N 182954.31 and E 358174.36 N 182922.31				
Context	**Description**			**Depth (m)**
901	Layer	Topsoil – Dark greyish brown silty clay loam containing moderate rooting and no coarse components.		0 – 0.23m
902	Layer	Subsoil – Mid brownish orange silty clay containing rare sub-angular to sub-rounded stone inclusions (<0.04m).		0.23 – 0.38m
903	Layer	Natural – Mid orange brown silty clay containing occasional to sparse sub-rounded to sub-angular stone inclusions (<0.07m).		0.38m+
904	**Cut**	**Cut of a possible ditch on an east to west alignment recorded as 1.80m in length by 1.80m wide and 0.11m deep, with shallow straight sides which run into a flat base.**		**0.11m deep**
905	Fill	Secondary fill of **904** – Mid to dark silty clay with patches of redeposited natural and containing occasional sub-angular to angular stone inclusions (<0.03m). Derived from the deposition of surrounding materials and the erosion of the features sides.		0.11m thick
906	**Cut**	**Cut of a ditch on an east to west alignment recorded as 1.80m in length by 0.70m wide and 0.21m deep, with moderate straight sides which run into a concave base.**		**0.21m deep**
907	Fill	Secondary fill of **906** – Mid brown silty clay with an orange red hue containing rare sub-angular to sub-rounded stone inclusions (<0.05m). Derived from the deposition of surrounding materials and the erosion of the features sides.		0.21m thick
908	**Cut**	**Cut of a ditch on an east to west alignment recorded as 1.80m in length by 1.18m wide and 0.22m deep, with moderate concave sides which run into a concave base.**		**0.22m deep**

909	Fill	Secondary fill of **908** – Mid greyish brown silty clay containing rare sub-rounded to sub-angular stone inclusions (<0.04m). Derived from the deposition of surrounding materials and the erosion of the features sides.	0.22m thick
910	**Cut**	**Cut of a possible ditch or geological anomaly on a rough east to west alignment and recorded as 1.80m in length by 1.25m wide and 0.27m deep, with moderate concave sides which run into an irregular base.**	**0.27m deep**
911	Fill	Secondary fill of **910** – Mid to light grey silty gleyed clay containing occasional to moderate angular to sub-angular stone inclusions (<0.10m). Derived from the gradual deposition of surrounding materials through natural transportational processes.	0.27m thick

APPENDIX 2: BOREHOLE DESCRIPTIONS

Location:	358147 182771	**Mono:**	BH1	**Comments: 103510 The Wave Borehole 1**	
Level (top):	10.50mOD	**Drg:**			

Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**	
Mono	mOD					
0.00-0.15	10.50-10.35			10YR 3/3 dark brown silty clay loam. Very crumbly with abundant roots and grass on top. Moderate quartz sand grains throughout. Clear boundary.	Topsoil	Modern soil profile
0.15-0.28	10.35-10.22			10YR 3/3 (slightly paler than above but not a whole Munsell unit) clay loam. Less crumbly than above, more compact and clayey. Fewer roots present. Rare CBM/brick fragments. Rare Fe mottling towards the bottom. Clear boundary.	B horizon/subsoil	
0.28-0.56	10.22-9.94			7.5YR 3/3 dark brown silty clay, quite sticky with moderate sandy grains throughout. Moderate rootlets, 2% fine pores. Common pieces of ?non local stone towards the bottom <10cm in size. Sharp boundary	Probable made ground.	Probable made ground
0.56-0.60	9.94-9.90			10Yr 4/2 dark greyish brown silty clay with common mottles of 7.5YR 4/2 brown throughout. Sparse manganese flecks throughout. This has a slightly blocky structure and is fairly crumbly. Small <2mm patches of Gley 1 5/1 greenish grey throughout. Moderate rootlets 1% fine pores. Clear boundary.	Interface layer	Interface layer
0.60-3.00	9.90-7.50			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Some vertical gleying at 1.00-1.45m, probably indicating larger roots. Patches of crumbly Gley 1 5/1 greenish grey at 1.48, 2.20 and 2.70. Small calcareous concretions in same areas as gleyed patches. Becomes finer and more friable towards the bottom.	Weathered geology. Mudstone.	Weathered geology. Mercia Mudstone

Location:	358042 182823	**Mono:**	BH2	**Comments: 103510 The Wave Borehole 2**		
Level (top):	8.60mOD	**Drg:**				

Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**	
Mono	mOD					
0.00-0.20	8.60-8.40			10YR 3/3 dark brown silty clay loam. Very crumbly with abundant roots and grass on top. Moderate quartz sand grains throughout. Clear boundary.	Topsoil	Topsoil
0.20-0.28	8.40-8.32			7.5YR 3/3 dark brown stiff silty clay with moderate quartz sand grains throughout. Sparse manganese concretions <1mm. Moderate rootlets, 2% fine pores. Clear boundary.	B horizon/subsoil	Upper Wentlooge
0.28-1.15	8.32-7.45			7.5YR 4/4 brown stiff, plastic clay. Massive. Moderate Fe concretions <2mm slightly increasing down profile with some gleying around roots and root voids. 1% fine pores. Stone free. Gap between 0.95 and 1.00 at the bottom of the borehole) Clear boundary.	Estuarine alluvium	
1.15-1.45	7.45-7.15			Gley 1 4/1 dark greenish grey fairly soft clay with faint diffuse Fe mottling throughout, and occasional Fe concretions <2mm, slightly decreasing down profile. Fine, slightly blocky structure. 1% fine pores, rare rootlets. Clear boundary	Estuarine alluvium	Middle Wentlooge
1.45-1.78	7.15-6.82			Gley 1 3/1 very dark greenish grey crumbly clay, becoming very crumbly down profile. Sparse Fe concretions <3mm and moderate quartz sand grains throughout. 1% fine pores, sparse fine rootlets. From 1.62 to base there are sparse stones <3cm and charcoal flecks, possibly indicating shallow water and human activity. Sharp boundary.	Estuarine alluvium, probably estuarine edge, shallow water with possible human activity.	
1.78-2.04	6.82-6.56			Gley 1 4/1 dark greenish grey clay with small <2mm distinct grainy Fe mottles throughout (7.5YR 4/3 brown). Becoming more friable down profile.	Estuarine alluvium	Middle Wentlooge
2.04-2.25	6.56-6.35			Gap – Intrusive material		

Location:		358042 182823	**Mono:**	BH2	**Comments: 103510 The Wave Borehole 2**	
Level (top):		8.60mOD	**Drg:**			
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**	
Mono	mOD					
2.25-3.00	6.35-5.60			Very similar to above but becoming predominantly 5YR 3/4 dark reddish brown from 2.75. Becomes more friable as colour changes and is almost sandy at the bottom. A couple of patches of Gley 1 5/1 greenish grey material here and there.	Weathered geology Mercia mudstone.	Weathered geology Mercia mudstone.

Location:		358146 182864	**Mono:**	BH3	**Comments: 103510 The Wave Borehole 3**		
Level (top):		9.30mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00-0.25	9.30-9.05			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Abrupt boundary.	Topsoil	Modern soil profile	
0.25-0.70	9.05-8.60			7.5YR 4/4 brown clay with occasional gleying around root voids. Patches of calcareous concretions towards the bottom. Abrupt boundary.	B horizon/interface layer		
0.70-2.00	8.60-7.30			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patches of crumbly Gley 1 5/1 greenish grey at 0.88, 1.00,1.27,1.50 and 1.80-1.85. Becomes finer and more friable towards the bottom.	Weathered geology – Mercia Mudstone	Weathered geology-Mercia Mudstone	

Location:		358223 182882	**Mono:**	BH4	**Comments: !03510 The Wave Borehole 4**		
Level (top):		11.80mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00-0.22	11.80-11.58			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Abrupt boundary.	Topsoil	Modern soil profile/ thin Upper Wentlooge	
0.22-0.43	11.58-11.37			5YR 4/3 reddish brown heavy clay with common quartz sand grains. 0.1% fine pores, moderate rootlets, rare small stones <3mm. Abrupt boundary.	B Horizon/subsoil		
0.43-2.00	11.37-9.80			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patches of crumbly Gley 1 5/1 greenish grey at 0.70-0.75, 0.85, 1.15, 1.28 and 1.38. Becomes finer and more friable towards the bottom.	Weathered geology – Mercia Mudstone	Weathered geology- Mercia Mudstone	

Location:	358010 182903	**Mono:**	BH5	**Comments: 103510 The Wave Borehole 5**		
Level (top):	8.20mOD	**Drg:**				

Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**	
Mono	mOD					
0.00-0.25	8.20-7.95			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Clear boundary.	Topsoil	Topsoil
0.25-0.85	7.95-7.35			5YR 4/4 reddish brown stiff clay. 0.5% fine pores and moderate roots. Stone free but moderate small grains of mudstone throughout. Clear boundary.	B horizon/subsoil	Upper Wentlooge
0.85-1.25	7.35-6.95			10YR 3/2 very dark greyish brown stiff clay, massive. 1% fine pores but no roots observed. Rare small stones <3cm. Clear boundary	Estuarine alluvium	
1.25-2.00	6.95-6.20			2.5Y 4/2 dark greyish brown stiff clay. Irregular and slightly grainy mottles of 5YR 4/4 reddish brown in top 20cm. 0.1% fine pores, stone free. Boundary is end of borehole tube.	Estuarine alluvium	
2.00-2.52	6.20-5.68			Gley 1 4/1 dark greenish grey soft slightly wet clay with small grainy concretions. Quite crumbly when dry, feels like coarse silt. No pores observed. Sparse stones, mostly small <1cm with a couple of larger ones <4cm. Abrupt boundary.	Estuarine alluvium	Middle Wentlooge
2.52-2.65	5.68-5.55			Medium grained <2mm layer, almost like pea grit. Very crumbly and won't roll into a ball but has no sandy element. Colour is a mixture of Gley 1 4/1 as above and the 5YR 4/4 reddish brown colour of the weathered geology. Faint interfingering in the top 5cm. Bottom boundary is sharper than the top. Sharp boundary.	Eroded redeposited mudstone	
2.65-2.75	5.55-5.45			Gley 1 4/1 dark greenish grey clay with small grainy concretions. Quite crumbly when dry, feels like coarse silt. No pores observed. Sparse small stones <2cm. Abrupt boundary	Estuarine alluvium, slower energy event.	Middle Wentlooge

Location:		358010 182903	**Mono:**	BH5	**Comments: 103510 The Wave Borehole 5**		
Level (top):		8.20mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
2.75-4.00	5.45-4.20			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patch of crumbly Gley 1 5/1 greenish grey at 3.70. Gap at 3.00-3.35.	Weathered geology – Mercia Mudstone		Weathered geology – Mercia Mudstone

Location:		358053 182992	**Mono:**	BH6	**Comments: 103510 The Wave Borehole 6**		
Level (top):		8.60mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00-0.27	8.60-8.33			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Clear boundary.	Topsoil		Topsoil
0.27-0.85	8.33-7.75			5YR 4/3 reddish brown clay, fairly stiff and firm with quartz sand grains throughout. Moderate fine rootlets, 2% fine pores. Rare small stones <2cm. Clear boundary	Subsoil in upper Wentlooge		Upper Wentlooge
0.85-1.00	7.75-7.60			5YR 4/2 dark reddish grey clay. Slightly silty with rare small stones <5mm. Quite crumbly with small lumps <2mm of mudstone mixed in at the bottom. Sparse to moderate small <2mm charcoal flecks throughout.	Alluvium/ weathered mudstone interface; possible soil formation? Hard to tell as mudstone crumby anyway. Charcoal present.		
1.00-2.00	7.60-6.60			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patches of crumbly Gley 1 5/1 greenish grey at 1.10-1.15 and 1.65. Becomes finer and more friable towards the bottom.	Weathered geology – Mercia Mudstone		Weathered geology – Mercia Mudstone

Location:		358093 183070	Mono:	BH7	Comments: 103510 The Wave Borehole 7		
Level (top):		8.10mOD	Drg:				
Depth		Context	Samples	Sediment description	Interpretation		
Mono	mOD						
0.00-0.35	8.10-7.75			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Rare small stones <2cm towards the bottom. Clear boundary.	Topsoil	Modern soil profile / thin Upper Wentlooge	
0.35-0.52	7.75-7.58			5YR 4/3 reddish brown heavy clay with common quartz sand grains. 0.1% fine pores, moderate rootlets, rare small stones <3mm. Clear boundary.	B horizon/subsoil		
0.52-2.00	7.58-6.10			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patches of crumbly Gley 1 5/1 greenish grey at 0.88, 0.95, 1.25 and 1.82 with gleying around root voids at 0.65-0.95. Becomes finer and more friable towards the bottom.	Weathered geology-Mercia Mudstone	Weathered geology- - Mercia Mudstone	

Location:		358192 183114	**Mono:**	BH8	**Comments: 103510 The Wave Borehole 8**		
Level (top):		7.50mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00-0.48	7.50-7.02			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Bottom 10cm contains moderate stones <3cm, patches of fine sand, rare brick fragments and moderate small charcoal flecks <2mm. Noticeably sandier at interface. Abrupt boundary.	Topsoil with made ground at boundary.		Topsoil and made ground
0.48-0.80	7.02-6.70			5YR 4/4 reddish brown stiff clay. Moderate roots, 1-2% fine pores. Rare small charcoal flecks <2mm in to 4cm. Gradual boundary.	B horizon/subsoil		Subsoil Upper Wentlooge
0.80-2.00	6.70-5.50			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Significant gleying along root voids at 0.80-1.00. Patches of crumbly Gley 1 5/1 greenish grey at 1.12-1.20, 1.86 and 2.00 Becomes finer and more friable towards the bottom.	Weathered geology – Mercia Mudstone		Weathered geology – Mercia Mudstone

Location:		358163 182987	**Mono:**	BH9	**Comments: 103510 The Wave Borehole 9**		
Level (top):		9.10mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00- 0.30	9.10- 8.80			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Moderate stones <3cm at boundary. Clear boundary.	Topsoil	Modern soil profile	
0.30- 0.40	8.80- 8.70			5YR 4/4 reddish brown stiff clay. Moderate roots, 1-2% fine pores. Stone free. Clear boundary.	Subsoil/B horizon		
0.40- 2.00	8.70- 7.10			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patches of crumbly Gley 1 5/1 greenish grey at 0.60, 1.31, 1.66 and 1.75	Weathered geology – Mercia Mudstone	Weathered geology – Mercia Mudstone	

Location:		358262 183042	**Mono:**	BH10	**Comments: 103510 The Wave Borehole 10**		
Level (top):		9.80mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00-0.30	9.80-9.50			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Noticeably sandier at boundary. Clear boundary.	Topsoil		Topsoil
0.30-0.80	9.50-9.00			5YR 4/4 reddish brown stiff clay. Moderate roots, 1-2% fine pores. Top 30cm seems a bit mixed up with sparse stones, some quite large <6cm and charcoal flecks between 0.50-0.62. Mottles of Gley 1 6/1 greenish grey decreasing down profile. Clear boundary.	Subsoil with ?made ground ?human activity.		Subsoil with ?made ground. Upper Wentlooge
0.80-2.00	9.00-7.80			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Patches of crumbly Gley 1 5/1 greenish grey at 1.27 and 1.60.	Weathered geology – Mercia Mudstone		Weathered geology – Mercia Mudstone

Location:		358069 183121	**Mono:**	BH11	**Comments: 103510 The Wave Borehole 11**		
Level (top):		7.50mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
0.00-0.35	7.50-7.15			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Moderate Fe staining, especially towards the bottom, mottles small and grainy <3mm. Couple of large stones at boundary <10cm. Clear boundary.	Topsoil		Topsoil
0.35-0.55	7.15-6.95			5YR 4/4 reddish brown stiff clay. Moderate roots, 1-2% fine pores. Sparse but fairly regularly distributed small charcoal flecks throughout. Appears stone free. Clear boundary.	Subsoil/B horizon		Subsoil. Upper Wentlooge
0.55-2.00	6.95-5.50			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Gleying around a significant root void from 0.55-1.00. Patches of crumbly Gley 1 5/1 greenish grey at 1.23-1.30 and 1.45. Common small stones at the bottom <1cm, resembles 'pea grit'.	Weathered geology – Mercia Mudstone		Weathered geology – Mercia Mudstone

Location:		358113 183197	Mono:	BH12	Comments: 103510 The Wave Borehole 12		
Level (top):		7.00mOD	Drg:				
Depth		Context	Samples	Sediment description	Interpretation		
Mono	mOD						
0.00-0.30	7.00-6.70			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Moderate Fe staining, especially towards the bottom, mottles small and grainy <3mm. Clear boundary.	Topsoil		Topsoil
0.30-0.46	6.70-6.54			10YR 4/2 dark greyish brown clay with small <3mm grainy Fe patches throughout. 0.2% fine pores, sparse rootlets. Stone free. Clear boundary.	Estuarine alluvium		Subsoil – Upper Wentlooge
0.46-0.65	6.54-6.35			7.5YR 4/3 brown stiff clay with rare small <1mm manganese concretions. 0.2% fine pores, rare rootlets. Stone free. Clear boundary.	Estuarine alluvium		
0.65-1.00	6.35-6.00			2.5Y 4/2 dark greyish brown stiff clay, slightly blocky on breaking. Sparse grainy Fe concretions towards the bottom. 0.1% fine pores, very rare rootlets. Stone free. Bottom of core.	Estuarine alluvium		Middle Wentlooge
1.00-1.38	6.00-5.62			Gley 1 5/1 greenish grey silty clay with common grainy Fe concretions and rare manganese concretions throughout. 0.2% fine pores and occasional small stones <2mm. Noticeably siltier towards the bottom. Gradual boundary.	Estuarine alluvium		
1.38-2.00	5.62-5.00			Top 10 cm is a mix of the above layer and 5YR 4/4 reddish brown weathered Mercia Mudstone. Becomes proper weathered geology at 1.70. Vertical root void gleying at the top with a large area of crumbly Gley 1 5/1 greenish grey at 1.85-1.95 containing small grit <2mm.	Weathered geology mixed with estuarine alluvium		Middle Wentlooge with weathered geology
2.00-2.30	5.00-4.70			GAP	GAP		

Location:		358113 183197	**Mono:**	BH12	**Comments: 103510 The Wave** **Borehole 12**		
Level (top):		7.00mOD	**Drg:**				
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**		
Mono	mOD						
2.30-3.00	4.70-4.00			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Diagonal band of crumbly Gley 1 5/1 greenish grey at 2.52-2.65.	Weathered geology – Mercia Mudstone		Weathered geology – Mercia mudstone.

Location:	357880 183221	Mono:	BH13	Comments: 103510 The Wave Borehole 13		
Level (top):	6.30mOD	Drg:				

Depth		Context	Samples	Sediment description	Interpretation	
Mono	mOD					
0.00-0.27	6.30-6.03			10YR 3/3 dark brown clay loam. Slightly wet and heavy with abundant roots and grass on top. Moderate quartz sand grains throughout. Some grainy Fe staining towards the bottom. A couple of large stones <8cm at base. Abrupt boundary	Topsoil	Topsoil
0.27-1.00	6.03-5.30			5YR 4/3 reddish brown slightly silty clay. Rare small stones <3mm. 0.1% fine pores, moderate fine rootlets with some larger vertical roots.	B horizon/subsoil	Upper Wentlooge
1.00-1.15	5.30-5.15			GAP	GAP	
1.15-1.36	5.15-4.94			5YR 4/3 reddish brown slightly silty clay. Rare small stones <3mm. 0.1% fine pores, moderate fine rootlets with some larger vertical roots. Grainy Fe concretions towards the bottom. Clear boundary.	Estuarine alluvium	
1.36-2.40	4.94-3.90			Gley 1 4/1 dark greenish grey soft silty clay. Grainy Fe concretions between 1.50-1.75 with a distinct concentration around 1.65-1.75, there is some manganese staining here too with rare small concretions. 0.1% pores, very rare rootlets. Stone free. Clear boundary	Estuarine alluvium with gleying.	Middle Wentlooge
2.40-2.87	3.90-3.43			Gley 1 3/1 very dark greenish grey soft silty clay with faint indistinct Fe mottles at the top. Becomes slightly darker and a bit humic down profile. Woody root fragments at 2.74 and 2.85, these are not vertical so unlikely to indicate stasis. 0.2% pores and rare fine rootlets. Rare small manganese concretions, otherwise stone free. Abrupt boundary.	Estuarine alluvium with gleying.	Middle Wentlooge
2.87-3.00	3.43-3.30			Gley 1 5/1 greenish grey sandy silt loam. Not obviously horizontally laminated. Sparse frags of organic material, rare Fe grainy concretions.	Estuarine alluvium, low energy event.	

Location:		357880 183221	**Mono:**	BH13	**Comments: 103510 The Wave** **Borehole 13**	
Level (top):		6.30mOD	**Drg:**			
Depth		**Context**	**Samples**	**Sediment description**	**Interpretation**	
Mono	mOD					
3.00-3.12	3.30-3.18			GAP	GAP	
3.12-3.20	3.18-3.10			Gley 1 3/1 very dark greenish grey soft silty clay with occasional woody root fragments. The bottom is a little mixed up with the mudstone from below. Clear boundary.	Estuarine alluvium.	
3.20-5.00	3.10-1.30			5YR 4/4 reddish brown crumbly blocky clay. Horizontally laminated <2mm apart, especially towards the bottom. Common root void gleying, especially from 3.20-4.00 with some white calcareous gritty veins at 3.80. Woody root frags at 3.65. Very wet from 4.00-4.45.	Weathered geology-Mercia mudstone.	Weathered geology-Mercia mudstone.

APPENDIX 3: ASSESSMENT OF THE CHARRED PLANT REMAINS AND CHARCOAL

Samples				Flot								
Feature	Context	Sample	Vol. Ltrs	Flot (ml)	% roots	Charred Plant Remains				Charcoal >4/2mm	Other	Analysis
						Grain	Chaff	Other	Comments			
Trench 6 Romano-British Ditch Terminus/Pit												
608	609	1	19	60	75	C	A	C	Indet. grain frags, glume base frags inc. those of spelt, spikelet forks, *Avena/Bromus, Chenopodium*	0/1 ml	coal	
Trench 4 Romano-British Ditch												
404	405	2	10	60	45	A	A**	A	Hulled wheat and barley grain frags, glume base frags inc. those of spelt, spikelet forks, *Avena/Bromus, Vicia/Lathyrus, Rumex, Trifolium/Medicago, Chenopodium*	5/3 ml	-	?P
Trench 8 Romano-British Ditch												
804	805	3	16	40	60	A	A*	A	Hulled wheat and barley grain frags, glume base frags spikelet forks, *Avena/Bromus, Vicia/Lathyrus, Rumex, Vicia faba, Chenopodium*	0/4 ml	-	?P

Key: A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5; Analysis: P = plant

APPENDIX 4: OASIS FORM

OASIS ID: wessexar1-177693

Project details

Project name	The Wave, Washingpool Farm and Over Court Farm, Over
Short description of the project	Wessex Archaeology was commissioned by RPS Planning and Development acting on behalf of The Wave, (the Client), to undertake an archaeological evaluation and geoarchaeological borehole survey ahead of development on land at Washingpool Farm and Over Court Farm, Over, South Gloucestershire, centred on National Grid Reference (NGR) 385130 182920. The fieldwork was undertaken on 17th to 21st March 2014. The archaeological trial trenching comprised the excavation of nine trenches ranging from 25m to 35m by 1.80m, which were targeted in the anomalies identified during a previous geophysical survey. In addition, 13 borehole sequences were taken across the proposed development area. The evaluation identified a number of ditches datable to the Romano-British period, suggesting a degree of occupation, settlement and utilisation of the landscape during the 2nd-4th centuries AD. Although no direct settlement evidence was recovered, a small number of coins may indicate a degree of activity within the vicinity of the Site. Archaeological features were found within eight of the trenches. A survey of 13 boreholes was also undertaken on the Site. The results indicate that mineralogenic esuarine/ salt marsh deposits of the upper and middle Wentlooge are represented in the lower areas of Site to the west and north. No peat deposits are present, and the deposits observed could fairly be said to be of low palaeoenvironmental potential. The deposits - in particular the middle Wentlooge deposits - may also have the potential to preserve waterlogged artefacts and features associated with salt marsh exploitation and water-use, such as fish traps, trackways, boats etc. The relatively high level of archaeological features encountered during the evaluation suggests that further mitigation may be required prior to the development of the Site.
Project dates	Start: 17-04-2014 End: 21-04-2014
Previous/future work	No / No
Any associated project reference codes	103510 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	DITCH Roman
Significant Finds	COIN Roman
Significant Finds	POTTERY Roman
Methods & techniques	"Targeted Trenches"
Development type	Not recorded

Prompt	Planning condition
Position in the planning process	Pre-application

Project location

Country	England
Site location	GLOUCESTERSHIRE GLOUCESTER GLOUCESTER The Wave, Washingpool Farm and Over Court Farm, Over, South Gloucestershire
Postcode	BS35 5SF
Study area	0 Hectares
Site coordinates	ST 357059 183049 50.9600315018 -2.91557673969 50 57 36 N 002 54 56 W Point
Height OD / Depth	Min: 8.75m Max: 9.12m

Project creators

Name of Organisation	Wessex Archaeology
Project brief originator	RPS Planning and Development
Project design originator	Wessex Archaeology
Project director/manager	Andy King
Project supervisor	Matt Kendall
Type of sponsor/funding body	Developer
Name of sponsor/funding body	The Wave

Project archives

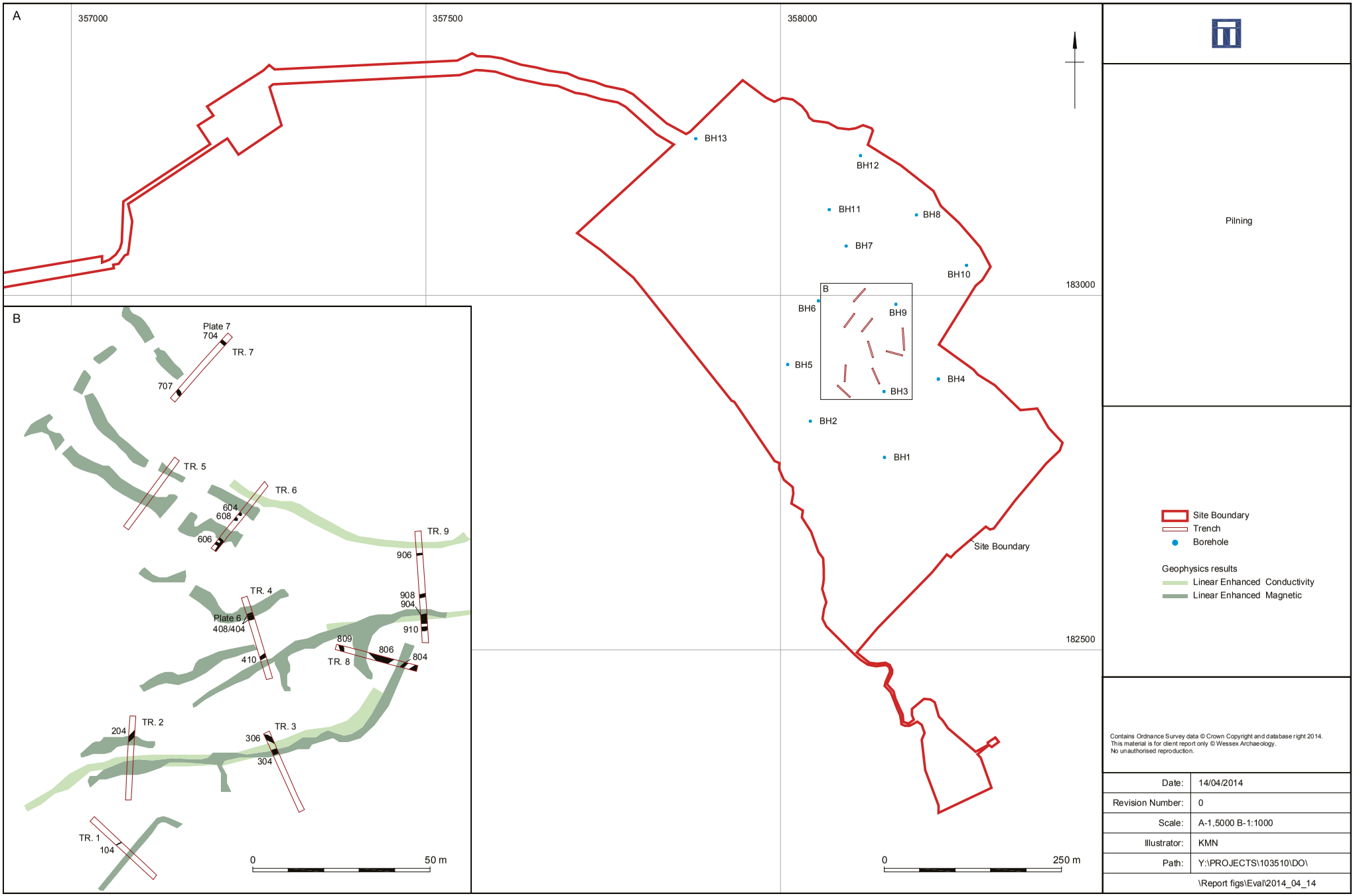
Physical Archive recipient	Bristol City Museum
Physical Archive ID	103510
Physical Contents	"Animal Bones","Ceramics"
Digital Archive recipient	Bristol city Museum and Art Gallery
Digital Archive ID	103510

Digital Contents	"none"
Digital Media available	"Spreadsheets","Survey","Text"
Paper Archive recipient	Bristol City Museum
Paper Archive ID	103510
Paper Contents	"none"
Paper Media available	"Context sheet","Diary","Drawing","Photograph","Plan","Report","Section","Survey"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	The Wave, Washingpool Farm and Over Court Farm, Over, South Gloucestershire
Author(s)/Editor(s)	Kendall, M
Other bibliographic details	103510.03
Date	2014
Issuer or publisher	Wessex Archaeology
Place of issue or publication	Wessex Archaeology, Salisbury
Description	A4 client report with colour illustrations

Entered by	Gareth Chaffey (g.chaffey@wessexarch.co.uk)
Entered on	24 April 2014



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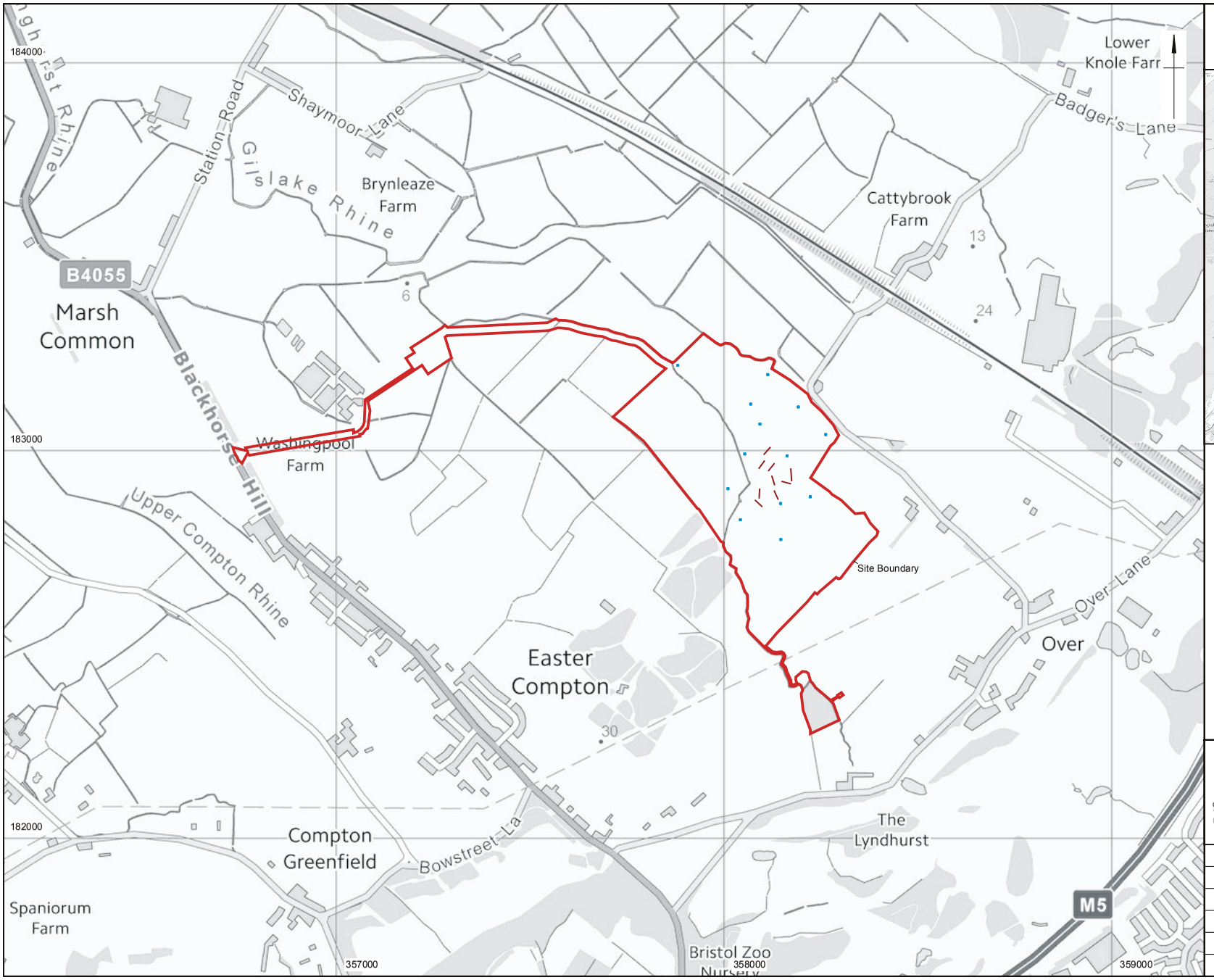
Trench and borehole location plan

Figure 2



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Site location

Figure 1

Plate 1: Trench 3, view from north-west

Plate 2: Trench 7, view from south-west

Plate 3: Trench 8, view from south-east

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Plate 4: Representative section of Trench 2

Plate 5: Representative section of Trench 5

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Plate 6: Trench 4, north-east facing section of ditches 404 and 408

Plate 7: Trench 7, south-east facing section of ditch 704

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Plate 8: Borehole working shot

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Plate 9: Borehole 8

Plate 10: Borehole 13

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