



## Land adjacent to Steart Village, Steart Point, Somerset

Areas D and E Fieldwork  
Post-excavation assessment report and updated project design





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**Post-excavation Assessment Report and Updated Project Design**

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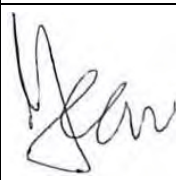
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##### **Summary**

Wessex Archaeology were commissioned by Team van Oord to carry out an archaeological fieldwalking survey of land proposed for a habitat creation scheme at Steart Point peninsula, near Bridgwater, Somerset (centred on OS NGR 327000 145000). The archaeological works were being carried out as part of a package of measures in order to mitigate anticipated off-site impacts associated with construction work at Bristol Port, and specifically loss of floodplain/ wildlife habitat. At Steart Point, the works comprise the construction of an artificial floodplain creek system, extending over a footprint measuring approximately 26ha. The fieldwork was undertaken between 16 January – 4 July 2012, with a few short breaks in fieldwork due to weather conditions or ecological constraints.

The staged and iterative approach to the archaeological investigation of the Steart Point peninsula, culminating in the recent phase of various fieldwork interventions, has been very successful. The results overall fit broad regional patterns of wetland environments in Southern Britain, where phases of land reclamation and climatic amelioration have been key factors in the successful exploitation, occupation and development of these landscapes. These phases of reclamation are strongly linked to the prevailing patterns of associated sea level increases (marine transgressions) which periodically made coastal wetland landscapes less favourable habitats, the most recent examples occurring in the late Roman to early medieval (4th–10th centuries AD) and late medieval to early post-medieval periods (14th–16th centuries).

This previously relatively unexplored wetland landscape has been shown to contain only a small assemblage of finds of earlier prehistoric date (4000 BC – 400 BC) which are probably indicative of small-scale opportunistic exploitation of the landscape. However, a number of significant sites and areas of past human activity and inhabitation from the Middle/Late Iron Ages (400 BC – AD 43), the Romano-British period (1st–4th centuries AD), the medieval (11th–15th centuries) and early post-medieval periods (16th–17th centuries) have been recorded during the current fieldwork. The results follow broad regional patterns seen in the Severn Estuary Levels, with the more regularly planned farming landscapes and permanent settlement evidence from the Romano-British period onwards, developing from seasonal, episodic exploitation of this resources-rich salt-marsh landscape. It has also highlighted extensive continuities within the Steart Point landscape of land divisions and drainage patterns which have their inception at least as far back as the early medieval period (11th–13th centuries) and possibly the Romano-British period.

Proposals are made for a programme of further analysis of the results of the current fieldwork, culminating in their publication in monograph form.

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#### **Acknowledgements**

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The fieldwork was directed by Chris Ellis with supervisory assistance from Jon Powell, Naomi Brennan, Olly Good, and Piotr Orczewski, as well as a number of Wessex Archaeology staff who had to work in extreme site conditions (see *Report Rear Cover*). Finally, all the Wessex Archaeology staff on site would like to thank Tony Bracey, Peter 'Dennis' Bradnock and all the Team van Oord team for their invaluable assistance and their valiant efforts in dealing with the weather conditions and subsequent flooding events, to enable the completion of our fieldwork.

The fieldwork and post-excavation assessment were respectively managed on behalf of Wessex Archaeology by Andy Crockett, Lorraine Mephram and Alistair Barclay.

This report was compiled by Chris Ellis, with contributions from Nicholas Cooke (coins), Kirsten Egging Dinwiddy (human bone), Kevin Hayward (geological identifications), Lorrain Higbee (animal bone), Matt Leivers (prehistoric pottery), Kayt Marter Brown (Roman pottery) and Lorraine Mephram (post-Roman pottery and other finds). The environmental samples were processed by Nicki Mulhall, and the palaeoenvironmental assessment was compiled by Dr Catherine Barnett (waterlogged wood and charcoal), Julie Jones (bulk samples), David Norcott (soils and sediments, including requirement and sampling for micro-fossils), Dr Chris Stevens (archaeobotany) and Sarah F. Wyles (molluscs). The illustrations were prepared by Rob Goller.



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### Areas D and E Fieldwork

#### Post-excavation Assessment Report and Updated Project Design

## 1 INTRODUCTION

### 1.1 Project Background

1.1.1 Wessex Archaeology (the Contractor) were commissioned by Team van Oord ('the Client') to carry out various fieldwork of land proposed for a habitat creation scheme at Steart Point peninsula, near Bridgwater, Somerset (henceforth 'the Site' - centred on OS NGR 327000 145000; **Figure 1**). The current fieldwork was undertaken between 16 January–4 July 2012, and comprised the evaluation of Areas D and E as well as a number of watching brief works. At the time of writing a watching brief is currently being maintained on the channel-cutting groundworks under an approved Written Scheme of Investigation (Wessex Archaeology 2012a).

1.1.2 The archaeological works were carried out as part of a package of measures in order to mitigate anticipated off-site impacts associated with construction work at Bristol Port, and specifically loss of floodplain/wildlife habitat. At Steart Point, the mitigation measures will comprise the construction of an artificial floodplain creek system, extending over a footprint measuring approximately 26ha.

1.1.3 An earlier desk-based assessment (Wessex Archaeology 2008) of the Site and extended heritage assessment of the wider area (Wessex Archaeology 2009) have set out the historical background to the Steart Peninsula, a summary of which is given below. A further evaluation was undertaken of two proposed pond areas (Wessex Archaeology 2010), one of which comprises most of Pond 2.

### 1.2 Scope of Document

1.1.1 This document is an Archaeological Assessment Report which summarises the results of the 2011 and 2012 fieldwork programme and sets them in the context of previous archaeological investigations at Steart Point, and particularly the wider patterns of exploitation and occupation of the Severn Estuary Levels. The report describes the results of the recent fieldwork and sets out an archaeological assessment of their significance, then presents detailed proposals for a programme of further post-excavation analysis leading to a publication of the results.

### 1.3 The Site, Location and Geology

1.3.1 The Site is situated within the Central Somerset Levels, in an area of low-lying (c. 4.50–8m above Ordnance Datum (aOD)), flat, artificially drained land, generally used as pasture, with only a few fields ploughed for arable. Apart from the northern coastal area containing Steart and Wall Common, and an area in the mid-south river margins (lying at 6–8m aOD), most of the peninsula lies at 5.40–5.80m (aOD) (Wessex Archaeology 2009, fig. 2).

- 1.3.2 The solid geology of the area around Steart consists of Mercia Mudstone Group (Triassic mudstones with Rhaetic and Dolomitic conglomerate). To the west, around Stolford, the solid geology is Lower Lias (Geological Survey 1957). For the majority of the Site, the solid geology is overlain by alluvial deposits, with the area around Wall Common overlain by blown sand. The coast of the peninsula consists of shingle storm beaches, dune sands and salt marsh.
- 1.3.3 Pleistocene sediments in the area that overlie bedrock include, 2km to the south-east of the Site, the Burtle Beds (sands and gravels containing marine and freshwater faunas) and, 0.5km to the west of the area, undifferentiated Head deposits.
- 1.3.4 Within the surrounding area the solid geology is typically overlain by alluvial sediment interspersed with peat layers. The alluvium is described by the British Geological Survey as marine and estuarine alluvium of the Somerset Levels including grey clays with some silts and sands. The peat is recorded to lie locally at the base of the sequence and is exposed, from time to time, on the foreshore near Hinkley point. This peat has been dated at 8365±100BP. A more extensive peat lies at around the level of aOD and has yielded as date of 4200±100BP (Brown 1980).
- 1.3.5 The British Geological Survey has recorded the elevation of the upper surface of the Holocene estuarine alluvium in the Somerset Levels at around 6m above aOD, which is also the level of the High Water Spring Tides (HWST). Marine incursions do not, however, affect most of the area due to storm gravel beach deposits, blown sand, man-made works and extensive tidal flats which are widespread along the west-facing coastline (Brown 1980).
- 1.3.6 Pebbles, formed by the abrasive wave action on limestone cliffs, are transported eastwards along the North Somerset Coast to the Steart Peninsula, forming mobile ridges that can be transported shoreward and well as alongshore (Wallingford 2002, 12). The pebble ridge at Catsford Common, for example, migrated almost 190m eastwards between 1957 and 1964. Also during this period, the marsh retreated while the upper foreshore accreted.
- 1.3.7 The intertidal area consists of mobile deposits of shingle, sand and mud. The sand is mobile throughout the tidal range, and significant changes in height and distribution can be noted over a matter of only three or four tides. The sand can completely obscure the remains of a large fish weir over a matter of only a few days. The deposits of mobile mud mask vast areas of the intertidal surface and prevent pedestrian access to other areas (McDonnell 1995, 89–91).
- 1.3.8 In this dynamic landscape, the River Parrett is continuing to alter course. Since 1832, the intertidal loop of the river has gradually moved northwards (McDonnell 1994, 43).
- 1.3.9 Evidence for the development of Steart Point can also be seen in satellite images and the Light Detection and Ranging (LiDAR) data (Wessex Archaeology 2009, figs 4–5, 8–9). The current low-lying marsh land on the east side of Steart Point, adjacent to the River Parrett, is indicated on charts from 1723 as being part of the river channel (McDonnell 1996, 75). In addition, two sub-parallel phases of field boundaries 200m to 800m inland from the current channel of the River Parrett mirror the marsh formation. These may indicate even earlier shorelines of the River Parrett and are indicative of the evolving nature of the landscape.

## 1.4 Historical Background

- 1.4.1 The geomorphological evolution of the Severn Estuary, at the mouth of which Steart Peninsula is located, has over several millennia provided a dynamic environment within which humans have lived.
- 1.4.2 The Severn Levels are a man-made landscape and the result of sustained drainage and sea defence that began in some areas as early as the Romano-British period (AD 43–410). In order to understand the archaeological potential of the Site it is necessary to understand the development of the landscape.
- 1.4.3 During the Pleistocene epoch for the 500,000 years prior to the beginning of the Holocene epoch (12,000 BP), the climate cycled through relatively frequent glacial (cold) and interglacial (warm) periods. The variance in climatic temperature was accompanied by fluctuating sea levels as water was periodically taken up and then released by the ice sheets. Evidence from hydrographic, geophysical and borehole surveys from Gloucester to the central Bristol Channel indicates that within the Severn Levels the Lower and Middle Palaeolithic landscape would have been dominated by a main river valley cut into bedrock geology with a network of subsidiary valleys feeding into it from the English and Welsh sides in the location of the present estuary (Hosfield *et al.* 2008, 43).
- 1.4.4 This very early landscape is now buried beneath deep Holocene marine sediments which make up the Severn Levels. The start of the Holocene is marked by the onset of a warm interglacial period starting at around 12,500BP. This warming phase was accompanied initially by rapidly rising sea-levels. The remains of a submerged Mesolithic forest just off the coast at Hinkley illustrate the huge change in the environment from the wooded landscape which dominated the landscape 10,000 years ago.
- 1.4.5 Within the intertidal zone the importance of the sea as a resource is evident, and the remains of fish weirs and small vessels of medieval and later date give clues as to how the people who lived on this coastline used the sea. On the peninsula itself, surviving field boundaries, banks, ditches, lanes and settlements are the product of hundreds of years of reclamation and land improvement. Combine this with physical ground conditions which favour the survival of organic and environmental remains, and the significance of the heritage resource at a location such as the Steart Peninsula is clear.
- 1.4.6 The wider setting of the Steart Peninsula, particularly Bridgwater Bay and the River Parrett, has been the subject of a number of projects, from which a great deal has been learnt about the nature and extent of the heritage resource both in the intertidal and terrestrial environments. The peninsula itself has also been the focus of some detailed desk-based research projects as part of the Environment Agency's work to assess the suitability of the peninsula for habitat creation use.
- 1.4.7 The results of this recent work (Wessex Archaeology 2008; 2009) have served to define the known heritage resource, but also to highlight the potential that exists for the presence and survival of further buried archaeological and palaeoenvironmental remains. The more salient information is reiterated below.

### *Former field boundaries*

- 1.4.8 Analysis of the digital elevation data model, slope maps and hillshade plots has allowed the digitisation of numerous linear features likely to be the remains of former field boundaries (Wessex Archaeology 2009). Comparison with the historic mapping confirmed that a number of the Site field boundaries do occur on 18th and 19th century maps. It is

clear from this that much of the farmland was originally considerably more subdivided than is the case today.

- 1.4.9 To the east of Steart Drove, there are occasional parcels of smaller fields, but for the most part the fields appear to comprise fairly regular rectangular co-axial fields, aligned roughly north-west to south-east, perpendicular to the road running down the peninsula. This pattern only changes near the point itself, where a number of the fields take their alignment off a second road.
- 1.4.10 In his work on the Severn Estuary Levels, Rippon has suggested that differences in the sub-division of the landscape may well reflect the development of that landscape (Rippon 1996, 50–2). He suggests that areas of small irregular fields with sinuous boundaries may represent early enclosures of the landscape, with more regular fields representing later enclosure. The enclosure of the ‘back fen’ is likely to have taken place at a later phase.

*‘Moated’ sites, earthworks and trackways*

- 1.4.11 In addition to the numerous field boundaries, there are a series of roughly rectangular platforms or ‘moated’ sites set within the enclosed fields. These are generally defined by slightly deeper ditches than the drainage ditches of the surrounding fields. In addition, there is evidence for a number of other earthworks in the landscape, comprising both upstanding earthworks and negative features. There are a number of irregular negative features likely to be ponds created for watering livestock. Many of the ‘moated’ sites and earthworks are linked by trackways or now defunct tracks.
- 1.4.12 In total some 14 ‘moated’ platforms were identified from the LiDAR data (Wessex Archaeology 2009, Appendix I). Most of these sites comprise roughly rectangular platforms either wholly or partially surrounded by ditches or ‘moats’. Most are situated on low-lying ground within the levels, although Somerset Historic Environment Record (SHER) 2028 comprises two possible platforms on the higher ground to the east of Chalcott Farm (Wessex Archaeology 2009, fig. 8). Others appear to be closely linked to areas of existing settlement, whilst the remainder are more likely to represent abandoned cottages, houses or farms. Their distribution (**Figure 1**) suggests that the levels within the area were once divided into a network of smaller farms linked by trackways and droveways, and that many of these later became incorporated into the current farm-holdings.
- 1.4.13 Four ‘moated’ sites were identified on the Site, all located just to the south-east of Steart Drove, to which they are linked by short trackways. The only previously known earthwork is a windmill mound (SHER 1027) within SHER 2035. Excavations on this site revealed medieval pottery, whilst a windmill is recorded on the site as late as 1614. It is not clear how this windmill is likely to relate to the nearby ‘moated’ sites, but it seems to have been one of two mills serving the manor of Stockland Bristol. It was recorded as being flooded by the sea in 1655.

*Modern (1800–Present)*

- 1.4.14 During modern times, the landscape of the Steart Point area continued to be utilised for pasture for sheep and cows and also for arable farming. Fishing remained important, as did other small industries. A large proportion of the built heritage of the villages in the area dates to this period, and there are a number of Grade II Listed buildings recorded.
- 1.4.15 Despite increased prosperity in the 17th century, growing crops appears to have become more difficult in the 19th century. The historic record from 1831 indicates that cropping on coastal lands was only possible in three years out of five, and the poor clay in the area

could only successfully grow vetches. At this time, small farms were disappearing, and their lands were being amalgamated into larger farms. By 1851, the number of large farms (over 150 acres) had doubled.

- 1.4.16 Other farms were disappearing due to changes in the course of the River Parrett. On a map from 1822, a building and an enclosure were recorded on Slab Batch or Fenning Island, whilst Island Farm, originally on Dunball Island, became part of the mainland in the 19th century as a result of the changing course of the river – it was ruinous by 1947. The dynamic environment in Bridgwater Bay has also obscured archaeology on Stert Island. According to the SHER, a variety of buildings were recorded on Stert Island on 19th century cartographic sources. However, as no evidence of the buildings was discovered during a 1994 field survey, it is thought that these buildings may be obscured by shifting sand dunes. A post-medieval building platform with a sub-rectangular enclosure was identified on aerial photographs of 1940 and 1946. The site was no longer visible by 1963, due to the mobility of Stert Flats.
- 1.4.17 A number of sites are associated with World War II. A group of World War II buildings is still visible, probably related to the gunnery range. Two telecommunications buildings recorded by the SHER as visible on aerial photographs taken in 1947 have subsequently been demolished. Other sites in the area are related to the RAF air gunnery range on Stert Flats. The site was in use from 1927 and was active prior to and during World War II. Records in the SHER indicate that two large range marker arrows on Wall Common were partially destroyed by coastal erosion by 1958. The bombing range observation post quadrant tower was still extant in 1966, but appears to have been demolished prior to 1974, whilst the remains of a number of target vessels or rafts have also been recorded.
- 1.4.18 There are four wrecks listed around the peninsula. The *Elmdale*, *Trio*, and an unknown wreck are partially submerged in mud on the banks of the River Parrett. Although the *Elmdale* and the *Trio* are listed by name in the NMR and UKHO records, nothing is documented regarding the age or type of the vessel. The fourth, unknown, wreck was recorded in 1984, but was not visible on aerial photographs from 1990. It may be a bombing range target.

## 1.5 Archaeological Background

### *Heritage Assessments*

- 1.5.1 Two Heritage Assessments have been carried out for the present development scheme as well as an adjacent Port of Bristol scheme to the immediate east of Steart Point peninsula (Wessex Archaeology 2008; 2009).

### *Evaluation*

- 1.5.2 An evaluation of two proposed pond areas was undertaken by Wessex Archaeology in 2010 (Wessex Archaeology 2010), which comprised the areas of proposed Ponds 1 and 2. No archaeological features of significance were identified during the evaluation. Apart from clearly modern finds, the only find of note was from the ploughsoil outside the current area (Area D of the scheme): a single sherd of Roman Central Gaulish samian ware, dating to the second half of the 2nd century AD.
- 1.5.3 A further evaluation by Wessex Archaeology (2011a) comprised the investigation of a complex of earthworks to the immediate west of the Site, recorded on the Somerset Historic Environment Record as a *Deserted Farm, North-East of Woolstone Farm* (SHER No. 34653) and centred on Ordnance Survey National Grid Reference (NGR) 324539 144852. The trenches were positioned to investigate anomalies identified by an earlier

geophysical survey (Wessex Archaeology 2011b) and a number of bank and ditch earthworks visible as extant features on the ground and also in LiDAR imagery of the site. These features were thought likely to represent the remains of a deserted farmstead positioned within a ditched enclosure.

- 1.5.4 The excavated evidence appears to suggest two phases of masonry building within the main interior platform within a roughly square c. 55m ditched enclosure. Evidence for buildings in the form of walling and a section of robbed out wall were recorded from the internal platform. Pottery associated with the earliest investigated phase of the building dates its use to the 13th century, while pottery evidence associated with the later building phase dates to the 17th to 18th centuries.

#### *Geophysical Survey*

- 1.5.5 Following on from the fieldwalking survey results (Wessex Archaeology 2011c), six areas (A-F) were subjected to geophysical survey, in locations where prehistoric worked flint (Area E), Romano-British pottery (Area C) and medieval pottery (Areas A, B, F) had been recovered (Wessex Archaeology 2012b). A relatively dense concentration of medieval pottery in Plots 3 and 11, in the north of the Site, correlated with three ploughed out moated enclosures (Areas A, B) clearly visible on a WWII aerial photograph (supplied by Richard Brunning). Area D included a small sub-square moated site, still visible as an earthwork feature (SHER 2034). This was investigated, as trenching associated with a proposed flood barrier construction would directly impact on the moated site.

## **2 SCOPE OF WORKS**

- 2.1.1 The original scope of works under consideration comprised a field evaluation of the proposed creek system footprint within Area D, to ensure that approximately 2% by surface area was examined in detail. The Written Scheme of Investigation (WSI; Wessex Archaeology 2012c) for this project was approved in advance, and set out the proposed evaluation works. However, during the evaluation fieldwork, a number of changes in the scope of the works were agreed between EA, EH, and SCC representatives to investigate additional sites of archaeological potential and observe ancillary works, both outside the footprint of the proposed channel scheme. A summary of the salient points of these additional works and variations to the original evaluation methodology is provided below.

### **2.2 Unexploded Ordnance (UXO) Survey**

- 2.2.1 Concurrently with the initial Area D evaluation, an archaeological watching brief was maintained (between 16 January and 3 February 2012) of a detailed unexploded ordnance survey undertaken by a BACTEC team. The UXO target locations had been identified in a geophysical survey of the Site by BACTEC prior to the fieldwork. A tabulated summary of all the 612 UXO targets is held in the project archive (no significant archaeological remains or finds were observed).
- 2.2.2 Each UXO target was investigated through hand excavation (if shallow) or with machine excavated test pits (for larger or deeper targets). The spoil was scanned visually and by metal detector by BACTEC for metallic finds, whilst any archaeological or UXO finds, and the test pit's stratigraphic sequence, were recorded archaeologically, with each test pit having a unique number with associated unique context numbers. Each test pit location and ground level was surveyed with GPS surveying equipment.

## 2.3 Evaluation

### *Area D*

2.3.1 The evaluation programme comprised the proposed machine excavation of 163 trenches, 30m long and 2m wide, comprising a 2% sample (by area) of the proposed creek scheme of Area D. During the initial evaluation of Area D a number of individual pieces of fieldwork were added to the initial scope of archaeological works anticipated, some of which were the result of significant results from the evaluation. **Appendix 1** gives a list of all the evaluation trenches, detailing which contained archaeological features/deposits or finds.

2.3.2 A small number (12) of the initially proposed evaluation trenches (**Trs 8–11, 69, 70, 76, 79, 113–115, 127**) were not dug, mostly due to ecological constraints at the time of the fieldwork but also due to fields being flooded. **Trs 8–11** were not dug after all parties (EA, EH, SCC) agreed to expedite the initial methodology by not undertaking an evaluation and instead proceeding directly to stripping the area, with an agreed prior excavation methodology in place. The evaluation confirmed an additional four areas of archaeological potential (500, 501, 502, 503) which were subsequently investigated through detailed excavation (see below).

### *Area E*

2.3.3 A further evaluation was undertaken of Area E (**Figure 1**) to investigate four proposed ponds (Ponds 5-8) and a c. 2 km long, new South Drain (ditch) using the agreed Methodology for the Area D evaluation (Wessex Archaeology 2012c). This evaluation comprised the excavation of 30 trenches (**Trs 300–329**), each 30m long, with 25 trenches within the areas of the proposed ponds and five located on the centreline of the proposed new South Drain.

2.3.4 A significant number of Romano-British ditches and occupation layers were recorded in the proposed Pond 8 area (**Trs 321, 324**) and in the line of the new South Drain (**Tr 327**) (**Figure 3**). Following discussions between EA, EH, SCC and Team van Oord, it was agreed that a scheme design change would not require the excavation of Pond 8. However, it was agreed by all parties that **Tr 327** would be extended westwards and eastwards until a maximum of 30m of trenching was exposed with no archaeological features or deposits present.

### *Old Flood Defences (Area D)*

2.3.5 Based upon the earlier Heritage Assessment results (Wessex Archaeology 2008; 2009), it was agreed to excavate five 30m long evaluation trenches across the line of putative old flood defence lines recognised from map regression analyses (**Trs 600–604**). In fact only **Tr 600** (**Figure 2**) was excavated during the current fieldwork – the others could not be completed because of Team van Oord Health and Safety concerns. It was therefore agreed between all parties that the remaining trenches (**Trs 601–604**) would be undertaken as part of the watching brief works during the channel construction phase (which is still ongoing at the time of writing this report).

### *Moated Sites*

2.3.6 In the light of the number of evaluation trenches in Area D which could not be completed because of ecological constraints or flooding, Richard Brunning (SCC) proposed the investigation of a small number of moated sites or other sites known from aerial photographs (**Trs 164–169**). Two of the trenches (**Trs 164, 167**) were on the centreline of a proposed electrical cable trench running along the east side of Steart Drove (**Figure 2**) which was later part of the watching brief works (see below). The trenches were targeted across earthworks (**Tr 164**) or features from aerial photographic evidence (**Tr 167**).

## 2.4 Excavation Areas

- 2.4.1 The results from the evaluation of Area D, supported in places by corresponding fieldwalking (Wessex Archaeology 2011c), geophysical survey results (Wessex Archaeology 2012b) and aerial photographic evidence, led to the agreed excavation of four areas (**Areas 500–503**), the extent of each area being agreed by EA, EH, SCC and Team van Oord prior to machine stripping (**Figure 2**).

### Area 500

- 2.4.2 This area was excavated within the south-eastern extent of proposed Pond 3 due to the presence of archaeological features/deposits in evaluation trenches **103** and **104**. In **Tr 104** a north-south aligned putative ditch terminal (undated) was recorded (**10403**) which was 0.63m wide and 0.44m deep with a single fill. Once Area 500 was stripped it was clear that this feature was geological in nature and not archaeological.

- 2.4.3 In **Tr 103** a 0.13m thick, mid-greyish-brown silty clay loam deposit (**10303**) was recorded, sealed below the subsoil (**10301**). The deposit, which extended for 12.60m, had some blue/grey gleyed clay mottling and contained charcoal, degraded fired clay and animal bone fragments, abraded Middle/Late Iron Age pottery, as well as a single sherd of Romano-British greyware, all suggesting that it was a possible occupation layer.

### Area 501

- 2.4.4 This area was excavated following the cumulative results of the earlier fieldwalking, geophysical survey and evaluation. The fieldwalking recorded two Romano-British potsherds from the location; the geophysical survey Area C results showed a rectilinear pattern of regular ditches lying perpendicular to a large north-west/south-east aligned ditch, which was visible on a WWII aerial photograph and as an existing cropmark in the pasture field of Plot 21. Finally, the targeted evaluation **Tr 63** recorded two clear Romano-British ditches (**6302**, **6303**) at either end of the trench.

### Area 502

- 2.4.5 As with *Area 501*, this area was excavated following the cumulative results of the earlier fieldwalking, geophysical survey and evaluation, as well as showing clearly as a ditched moated site on a WWII aerial photograph. Earlier medieval pottery (11th to 13th centuries) was recorded during the fieldwalking, while possible archaeology, geological and ferrous anomalies suggesting archaeological and palaeochannel features were recorded in the geophysical survey. During the evaluation, a pit (**2403**) and a ditch (**2406**) were recorded in **Tr 24**, which both contained similarly dated pottery, animal bone, fired clay and slate fragments, all suggesting earlier medieval activity.

### Area 503

- 2.4.6 This machine stripping of this area was undertaken without an earlier trench evaluation but following the cumulative results of the earlier fieldwalking, an extensive geophysical survey and WWII aerial photographic evidence, all clearly showing at least two moated sites in the vicinity. Area 503 was concerned with the investigation of the corresponding earlier medieval pottery concentration, the geophysical results and the larger (northern) of two linked moated sites on the aerial photograph. The southern enclosure, visible on the same aerial photograph, was investigated through evaluation **Tr 169** (see *Evaluation – Moated Sites*, above).

- 2.4.7 The results of the Area 503 excavations along with additional archaeological information collected during the fieldwork led to an agreed enlargement of the area's north-eastern side (see *Results*, below).



## 2.5 Watching Brief

2.5.1 During the current phase of archaeological fieldwork, a small number of watching brief observations were undertaken during ancillary groundworks associated with the proposed channel scheme. All the works were undertaken using a tracked mechanical excavator with a toothless ditching bucket operating under continual archaeological observation. The watching brief works included in turn:

- *Geotechnical Test Pits*
- *Electrical Cable Trench*
- *Flood Barrier trenches (South & North)*
- *Area D (north) New Drain*
- *(Team van Oord Compound) Septic Tank*

### *Geotechnical Test Pits*

2.5.2 A small number of machine excavated geotechnical trenches (**Trs 170–174**) were excavated in the line of the proposed flood barrier (**Figure 2**) prior to the machine excavation of the flood barrier trench for both the north (**Trs 170–172**) and south (**Trs 173–174**) sections. The trenches were excavated to supply geotechnical engineers with information regarding the fill characteristics of known large palaeochannels crossing the lines of the flood barrier, noted on the LiDAR plots of the earlier Heritage Assessment (Wessex Archaeology 2009). The test pits were generally 3.30m long by 0.80m wide and c. 3.0m deep.

### *Electrical cable trench*

2.5.3 A c. 1.4km long cable trench was excavated for the diversion/transfer of overhead power lines which ran parallel to and 12–15m to the east of Steart Drove (**Figure 2**). The trench was 0.60m wide and c. 1.0m deep and cut across the location of a number of known archaeological or possibly archaeological sites. The trench cut across a possible moated site visible on a WWII aerial photograph and a moated site with earthworks (SHER 2034), so both were investigated with targeted evaluation trenches requested by SCC (**Trs 167** and **164** respectively) prior to the watching brief works.

2.5.4 To the north, the trench avoided directly impacting upon the enclosure earthworks of the moated site known as ‘The Mound’ (SHER 2035), though it crossed associated drainage ditches on the perimeter of this site. A small number of archaeological observations (**Trs 175-182**) were recorded from this watching brief.

### *Flood barrier Trench (South)*

2.5.5 This long, curvilinear trench was a c. 2.38km trench bounding the southern edge of Area D of the proposed channel scheme. The trench was 2.50m wide and 1.50m deep and crossed a number of existing and earlier field boundary and drainage ditches known from earlier mapping and/or LiDAR evidence, as well as palaeochannels. Of these only a small number of archaeologically significant observations (**Trs 183-186**) were made during the watching brief.

### *Flood barrier Trench (North)*

2.5.6 This long, curvilinear trench was a c. 1.6km trench bounding the northern edge of Area D of the proposed channel scheme. The trench was 2.50m wide and 1.50m deep and crossed a number of existing and known (from earlier mapping and/or LiDAR evidence)

earlier field boundary and drainage ditches as well as palaeochannels. Of these only a small number of archaeologically significant observations (**Trs 187–194**) were made during the watching brief.

#### *Area D (north) New Drain*

- 2.5.7 At a later stage of the construction works a watching brief was maintained on a 180m section of a large, curvilinear ‘new drain’ drainage channel (**Tr 196**). This was excavated to the immediate north of the northern flood barrier trench. The drain trench was 7m wide at the top and 2.20m deep, with steeply sloping sides and a flat base. Apart from a sequence of natural alluvial deposits, no archaeological features, deposits or finds were recorded.

#### *Septic Tank*

- 2.5.8 To the immediate south of the Team van Oord compound, situated on the west side of Steart Drove, a small trench excavation for the installation of a septic tank (**Tr 195**) was archaeologically observed. The sub-square trench was 9.6 by 8.5m in extent and 3.0m deep, with steep, sloping sides and a flat base. Apart from a sequence of natural alluvial deposits, no archaeological features, deposits or finds were recorded.

## **2.6 Aims and Objectives**

- 2.6.1 The primary aim of the project was to determine the archaeological potential and significance of the area to be impacted upon by the proposed development.

- 2.6.2 To achieve the project aims as outlined, the following generic objectives were defined:

- *To determine the general nature of the remains present;*
- *To determine the approximate date or date range of the remains, by means of artefactual evidence;*
- *To determine the approximate extent of the remains;*
- *To determine the nature of activity or activities that the remains represent;*
- *To determine the degree of complexity of the material present;*
- *To determine or confirm the likely range, quality and quantity of the artefactual evidence present.*

## **3 METHODOLOGY**

### **3.1 Introduction**

- 3.1.1 The full details of the evaluation and watching brief methodology are contained within the Written Scheme of Investigation (Wessex Archaeology 2012c) and are not reiterated here, except to detail the main points and highlight variations made in the field, which were agreed between EA, EH and SCC.

### **3.2 Evaluation**

- 3.2.1 Topsoil and overburden were removed using a mechanical excavator fitted with a toothless ditching bucket, working under the continuous direct supervision of a suitably experienced archaeologist. Topsoil and modern overburden were removed in a series of level spits down to the top of the first significant archaeological horizon. Where practicable, spoil was scanned for artefacts visually, as well as with a metal detector.

3.2.2 Mechanical excavation ceased at the top of the first significant archaeological horizon or natural deposits, whichever was the higher; particular care was taken to ensure that archaeological deposits were not damaged through excessive use of machine excavation. Archaeological investigations generally did not need to exceed a maximum depth of c. 1m.

3.2.3 However, in the event that further excavation was necessary to achieve the aims and objectives of the project, following inspection by the Curator (SCC), machine-excavated test pits were excavated at either or both ends of such trenches, to further understand the alluvial sequence and investigate the possibility of archaeological features/deposits being sealed by a significant thickness of alluvial deposits. These test pits were not for personnel access, and were generally excavated and backfilled within the same working day.

### 3.3 Watching Brief

3.3.1 The archaeological watching brief monitored the investigative BACTEC Unexploded Ordnance (UXO) works as well as other ancillary groundworks associated with the proposed development.

3.3.2 The UXO watching brief focused on two critical roles:

- *Identification, recording, and if feasible, rapid excavation of archaeological remains exposed – it is likely that these will be remains buried at relatively shallow depths (and therefore potentially more recent remains); and*
- *Recording a summary of the stratigraphic sequence encountered – this data will be considered for incorporation into the overall project deposit model.*

3.3.3 Excavation of any archaeological remains endeavoured to achieve the minimum levels of intervention per feature type as set out below, although time and, more importantly, Health & Safety constraints did in some cases affect intervention levels. In all instances, BACTEC H&S instructions took priority over all other considerations.

3.3.4 The ancillary groundworks watching brief focused on exposed archaeological horizons which were cleaned by hand where required for the acceptable definition of archaeological remains. Sufficient of the features located were investigated by hand in order to fulfil the aims of the project.

3.3.5 Although complex stratigraphy, structures and discrete features were investigated to a minimum level in order to fulfil the objectives of the project, in accordance with a sampling strategy developed on site in consultation with the Curator (SCC), care was taken not to compromise the integrity of complex archaeological features or deposits that might be better excavated under the conditions pertaining to more detailed mitigation. The depth and complexity of archaeological deposits across the site were assessed. Wherever feasible, sample sections were positioned to record accurate cross-section profiles of any remains and to identify structural/phasing sequences (for example terminals and intersections).

### 3.4 Excavation

3.4.1 All archaeological remains discovered were hand-cleaned where necessary, and then photographed and planned using both Leica Viva GPS survey equipment and hand-drawn plans. Representative sections of the excavation areas were also photographed and

drawn, demonstrating the typical stratigraphic sequence and depth, and highlighting significant atypical variations to this sequence.

- 3.4.2 A sufficient sample was excavated from archaeological features (e.g. ditches, pits, postholes *etc.*) to fulfil the project aims and objectives. Excavation of cut features included examination of feature intersections to establish relative chronologies, feature terminals to ascertain presence/absence of terminal features and/or deposits, and where feasible at least one 'clean' section away from potential sources of contamination to obtain secure dating evidence and environmental samples. The aim was to achieve a minimum 10% by length excavation of 'linear' features (i.e. ditches, gullies, beam slots *etc.*).
- 3.4.3 Discrete features (pits, postholes *etc.*) were in general 50% excavated. Where considerable numbers of closely-spaced, morphologically similar discrete features were encountered, it was considered appropriate, in consultation with SCC, to excavate a representative sample of such features rather than all present.
- 3.4.4 Metal detectors were used as appropriate to scan trench and excavation area locations and archaeological features prior to and during excavation as appropriate, and to scan spoil heaps where practicable.
- 3.4.5 For full recording, artefact recovery and environmental sampling methodologies refer to the WSI (Wessex Archaeology 2012c).

## 4 RESULTS

### 4.1 Introduction

- 1.1.2 This section includes information on the natural deposits and the archaeological features and deposits recorded. A summary of the archaeological features, deposits or finds from the evaluation trenches is given in **Appendix 1**.
- 1.1.3 To correspond with the provisional pottery spot-dating and other diagnostic finds, the *Results* section and the rest of the report will refer to specific broad periods of evidence for the inhabitation and exploitation of the landscape at Steart Point. The following periods will be utilised:
- Prehistoric (12,000 BC–AD 43)
  - Romano-British (AD 43–410)
  - Medieval (1066–1500 AD)
  - Post-medieval (1500–1800 AD)

### 4.2 Site geology

#### *Introduction*

- 4.2.1 This soil sequence was relatively consistent across the whole of Steart Peninsula in the interventions observed during the fieldwork apart from where the original natural creek (palaeochannel) system, clearly visible on LiDAR plots of the Site, was encountered. In these specific locations, not only were the palaeochannels themselves encountered, but areas adjacent to the channel margins contained extensive overbank flood alluvium deposits which decreased in depth at distance from the associated channel.

#### *Topsoil/ploughsoil*

- 4.2.2 For the majority of the Site, the solid geology is overlain by alluvial deposits, and this is reflected in the characteristics of the ploughsoil which lay directly below the turfline. This

c. 0.25–0.30m thick deposit is composed of light to greyish-brown, ‘blocky’ silty clay, clay or clay loams, all with a slight bluish hue, containing very rare rounded and sub-rounded blue/grey, tabular (?) chert cobbles/pebbles (<0.15m; mostly <60mm) and rare angular/sub-angular fragments of a light bluish-grey Blue Lias. Where more than very rare stone inclusions were encountered, these usually indicated sub-surface stone deposits associated with demolished and/or robbed masonry structures (Areas 501–503).

#### *Alluvium*

- 4.2.3 Below the topsoil/ploughsoil and extending down to the distinctive gleyed alluvium below were a series of characteristically greyish-brown, orange/brown clay or silty clay alluviums with varying degrees of mineralisation. In some places alluvial deposits contained datable archaeological finds suggesting relatively recent deposition.
- 4.2.4 Again, fairly consistently across the whole Site, at a depth ranging from 1.2–1.5m, was a very distinctive blueish-grey clay. This was a light or mid-bluish-grey or blue, homogenous and relatively sterile deposit, though in places containing common black lenses of degraded organic material (Areas 501, 502) or (rarely) waterlogged wood fragments (Area 502). In places the deposit contained common mineralogical flecks/grains of iron and manganese as well as broad mineralogical lenses of a strong, very pale green colouring.

### 4.3 Prehistoric

#### *Introduction*

- 4.3.1 Prior to the current fieldwork, there was very little evidence for prehistoric activity on Steart Point peninsula, except for two possible worked flint flakes recorded at the south end of Area D during the fieldwalking works (Wessex Archaeology 2011c). Apart from extensive Iron Age evidence from the Area 500 excavation, little has been added to the overall picture of pre-Roman exploitation of the landscape, although it may be observed that the relatively ephemeral activities one would expect (fishing, wildfowling, hunting) would leave little evidence unless from prolonged activity within a specific location or producing extensive waste deposits.
- 4.3.2 However, some traces of pre-Iron Age prehistoric activity have been recorded. A knapped flake core of Blue Lias (Neolithic/Bronze Age) was recorded from the surface of possible Romano-British ditch **20007** in Area 500 (see below). Another knapped core, of chert, was recovered from a post-medieval (16th/17th century) cobbled surface from Area 503; this is likely to be of Late Neolithic or Early Bronze Age date.
- 4.3.3 Residual pottery of Middle and Late Iron Age date has been recorded from excavation Area 501 and from evaluation trenches (**324**, **327**) in Area E.

#### *Area 500*

- 4.3.4 By far the most significant evidence of prehistoric activity on Steart Point peninsula was recorded from this excavation area, initially encountered as a c. 12m spread/deposit in evaluation **Tr 103**, 0.13m thick. This well-defined, darker deposit contained Iron Age pottery, a single sherd of Romano-British pottery, fired clay, animal bone fragments and charcoal. Additional evidence of Iron Age activity was recorded in evaluation **Tr 168**, c. 85m to the east of Area 500, which was initially targeted on a ploughed-out medieval(?) moated site.
- 4.3.5 In Area 500, five spreads of Middle/Late Iron Age occupation layers (**10303**, **20003**, **20017/20031**, **20152**, **20060**) were recorded in the eastern part of the excavated area, located to the immediate west and south of a bend in a large palaeochannel (**20153**,

**20108**) which was evident in earlier LiDAR plots of the area (Wessex Archaeology 2009, fig. 5).

- 4.3.6 The spreads were generally irregular in plan, mostly 4–5m in extent, though in places (**20060**) extending up to c. 16m along the edge of palaeochannel **20108**. The deposits were highly distinctive due to the relatively dense charcoal inclusions (common to abundant) and/or colouring from *in situ* baking or patches of distinctive, ‘gritty’, pale green ?mineralogical deposits. The southernmost spreads (**20003**, **20017/20031**) also contained very common angular ‘chips’ of Blue Lias stone (<50mm). The spreads were 20mm to 0.13m in thickness, and varied in the quantities of charcoal, fired clay, pottery, animal bone inclusions throughout. The spreads suggest domestic, rather than industrial activity.
- 4.3.7 Immediately to the east of spread **20152**, three undated, truncated postholes (**20075**, **20077**, **20079**), all filled with similar material.
- 4.3.8 Trial test pits excavated across the palaeochannel/spread interfaces on the east side of **20152** and the north side of **20060** clearly showed that the spreads had eroded into the adjacent palaeochannels, probably due to overbank flooding from the same channels. This is further supported by the laminar nature of sedimentation within spread **20152**, clearly visible in a section of the north-east quadrant. This section clearly showed a layer of a sterile, light greyish-brown silty clay alluvium (**20104**) between a charcoal and fired clay-rich occupation layer below **20102** and a ?mineralogical ‘gritty’, light green/brown, sandy clay layer above (**20106**).
- 4.3.9 In the north-east of the area, a rectilinear pattern of ditches was recorded (**20004**, **20007**) which cut palaeochannel **20153**, the earlier of the two palaeochannels to have infilled. The ditch was generally 1.10–1.40m wide and 0.60–0.90m deep, with steep concave sides. The finds were largely residual and included a Blue Lias worked core of Neolithic or Bronze Age date as a surface find from ditch **20007**. Other finds included animal bone and Middle to Late Iron Age pottery from ditch **20004**, undoubtedly washed in from erosion of occupation spreads **20152** or **20060** nearby. Stratigraphically, ditch **20004** was earlier than medieval/post-medieval ditch **20073** to the west. The available stratigraphic, artefactual and spatial evidence, although not definitive, suggest that ditch **20004** is possibly Romano-British in date.
- 4.3.10 Evaluation **Tr 168**, which was targeted on a medieval moated site to the east of Area 500, contained evidence of Middle to Late Iron Age activity, very similar to that from Area 500. In the east of the trench a north-west/south-east aligned ditch (**16807**) contained charcoal-rich fills. One of these (**16809**) was derived from the slumping of a Middle to Late Iron Age occupation spread (**16816**) into the ditch. The spread had also slumped into a possible medieval ditch, belonging to the moated enclosure at the west end of the trench (**16814**).

#### 4.4 Romano-British (AD 43–410)

##### *Area 501*

- 4.4.1 Except for a sherd of Romano-British greyware (**Tr 103**) and a possible rectilinear ditch system from Area 500 (**20004/20007**), the most significant evidence of Roman exploitation and inhabitation on Steart Point peninsula came from excavation Area 501 (**Figure 5**).
- 4.4.2 The main area of archaeological interest comprised a c. 38m wide area containing a complex of rectilinear ditches and gullies as well as postholes, a cobbled surface, and possible building remains represented by two spreads of large cobbles and building stone rubble (**20204**, **20213**). A smaller spread of cobble rubble (**20263**) was recorded to the

south-west. This area of activity was located between two areas of alluvial deposits which infilled a 'lagoon' area, a possible palaeochannel to the south-west (**20363**) and a large palaeochannel to the north-east (**20721**). Although **20363** palaeochannel deposits were discernible as an homogenous, sterile spread of alluvial fill in this part of Area 501, and Romano-British features and deposits (**20263**, **20387**) were stratigraphically later, yet Romano-British ditch **20262** was apparently truncated by the same palaeochannel feature (**20363**) at its western end. It must be concluded that the fills from palaeochannel **20363** include near-identical deposits from successive flooding events which eventually overlaid the latest Romano-British activity at this location.

- 4.4.3 The palaeochannel in the north-east of the excavation area (**20721**) was a north-west/south-east aligned, meandering channel clearly discernible on an earlier LiDAR plot (Wessex Archaeology 2009). Following widespread patterns seen across Steart Point peninsula, this channel had later been incorporated into the medieval/post-medieval field boundary patterns.
- 4.4.4 The large cobble and stone rubble spreads were exposed directly below the ploughsoil, lying in a dark grey stiff clay matrix. Occasional masonry blocks and cobbles were found lying in the upper fills of some of the surrounding ditches.
- 4.4.5 The stone rubble and cobble spreads (**20204**, **20213**, **20263**) comprised moderate quantities of angular and sub-angular tabular blocks (<0.50m in size, <0.10m thick), as well as rounded cobbles; stone types included relatively local Blue Lias, coarse, Triassic red sandstone, Pennant Sandstone, and Limestone (White Lias?), quartzite and abundant, particularly long and near-cylindrical (<0.40m long and <0.15m diameter) beach cobbles. No stones or cobbles showed evidence of mortar and no degraded mortar was evident in the surrounding feature fills, although the relative density of suitable building stone, and abundant large cobbles, suggest a masonry structure in the immediate vicinity. Although some vertically positioned tabular stones were recorded in some stratigraphically earlier gullies these may represent post-depositional dipping of stones into the earlier features or lining of shallow drainage gullies, rather than deliberate placing. Finds from these rubble/cobble spreads include Romano-British pottery (some partial vessels were recovered as sherd scatters), animal bone, fired clay (including some possible salt-working ceramics, or briquetage), and two copper alloy bow brooches (Object Numbers [ONs] 12, 13).
- 4.4.6 In the south-east of stone spread **20204** an of intact cobbled surface (**20371**) comprising sub-rounded and sub-angular cobbles of Blue Lias, red sandstone, limestone and quartzite was recorded, sealed below the occupation waste deposits. This undoubtedly represents a floor or exterior yard surface.
- 4.4.7 Sealed directly below, and protected by the rubble/cobble spreads were dark, charcoal- and artefact-rich occupation waste deposits. These deposits lay directly on the prevailing 'natural' alluvium (**20207**), and had also infilled stratigraphically earlier features including postholes, gullies and hollows. They were characterised by dark grey/black silty clays containing rare stone fragments and cobbles. Where present, pottery from these stratigraphically earlier features is diagnostically of Romano-British date (2nd–4th centuries AD), confirming the date of the earliest occupation at this location.
- 4.4.8 The occupation deposits contained predominantly late Romano-British pottery (3rd–4th century AD), but also some residual 2nd century AD sherds. The deposits also contained common fired clay fragments (again including possible briquetage), animal bone

(including articulated bone groups), redeposited human bone, iron nails and a saddle quern (ON21).

- 4.4.9 A complex of rectilinear ditches and gullies was recorded mostly to the south and east of the stone rubble spreads (**Figure 5**), with a prevailing orientation of ENE/WSW and NNW/SSE. Within this complex, three (possibly four) very similarly sized (c. 2.9m wide) sub-rectangular areas were defined by drainage ditches, suggesting small plots, possibly garden plots. The larger ditches (**20262, 20362, 20364, 20387, 20722**) were generally 0.90–1.90m wide and 0.70–1.0m deep with moderate to steep concave sides and flat or concave bases. Generally, the ditch sections to the south-east of the stone rubble spreads (**20362, 20722**) contained charcoal- and artefact-rich fills, including Romano-British pottery (2nd–4th centuries AD), fired clay, burnt stone and rare iron slag as well as personal items including a copper alloy pennanular brooch (ON26), a hobnailed shoe (ON27), and a shale armlet fragment (ON31).
- 4.4.10 In summary, Area 501 contains evidence of Romano-British activity from at least the 2nd century AD, and spanning the remainder of the Roman period. The artefact-rich deposits were sealed below stone rubble and cobbles from a masonry (and timber?) structure(s) at this location, as well as filling ditches of a rectilinear ditched drainage complex. The datable material from these contexts would suggest the main focus of activity was in the late Roman (3rd to 4th centuries AD) before abandonment and the robbing of stone building material.

#### *Area E Evaluation*

- 4.4.11 A relatively dense area of archaeological features and deposits of late Roman (3rd–4th centuries AD) was recorded in the southern part of the Area E evaluation, within the area of proposed Pond 8 (**Trs 321, 324**), and in the line of a new South Drain (**Tr 327**) (**Figure 3**). This extensive evidence of late Roman activity is located to the immediate east and south of the bend/fork of a large, natural palaeochannel discernible from LiDAR surveys (Wessex Archaeology 2009, fig. 5) which was subsequently incorporated into the developed landscape boundary/drainage system of the medieval and post-medieval periods as the main South Drain.
- 4.4.12 The northern extent of the late Roman features was recorded in **Trs 318, 321** and **324** (see below), although unstratified late Romano-British pottery was recorded from **Trs 301, 316, 317** and **322**. An undated WNW/ESE aligned ditch from **Tr 322 (32206)** may also be late Roman in date.
- 4.4.13 In **Trs 317** and **319**, small discrete areas of charcoal-rich deposits were recorded which also contained fired clay fragments. Although undated, they are similar to other late Roman deposits and fills recorded from **Trs 321** and **327** (see below).
- 4.4.14 By far the greatest concentration of late Roman activity occurred within **Trs 321, 324** and **327**. In **Tr 321**, archaeological features and deposits were recorded at 0.70m depth, sealed by alluvium below the topsoil. In the west of the trench an undated, north-east/south-west aligned ditch (**32107**) was recorded, 0.52m wide and only 0.10m deep.
- 4.4.15 In the east of the trench, a north-west/south-east aligned ditch (**32108**) was partially exposed close to the northern baulk section. The ditch was at least 6.50m long, 0.60m wide and 0.49m deep, with straight, steep sides. The fills included artefact- and charcoal-rich deposits, containing large unabraded sherds of late Romano-British pottery (3rd–4th centuries AD), animal bone and fired clay, all suggesting dumps of occupation waste material in the immediate vicinity.



- 4.4.16 To the immediate south-west of the ditch, a partially exposed charcoal-rich spread (**32104**) was recorded at 0.65m depth. The deposit filled a hollow in the underlying alluvium and contained late Romano-British pottery (3rd to 4th centuries AD), fired clay and animal bone, again suggesting occupation of this date in the immediate vicinity. **Tr 318**, immediately to the west, also contained late Roman artefacts. A north-west/south-east aligned gully (**31805**), containing late Romano-British pottery, was recorded in the south-west of the trench.
- 4.4.17 In **Tr 324** to the east, a substantial, north-west/south-east aligned ditch (**32403**) was recorded running along the length of the trench. The ditch was at least 1.50m wide and 0.80m deep, with steep, straight sides and a flat base, sealed below alluvium. The fills, of redeposited alluvium, contained large sherds of Romano-British pottery, fired clay and animal bone.
- 4.4.18 In **Tr 327**, a concentration of features was recorded in the centre of the trench as initially laid out, including inter-cutting ditches **32706**, **32709** and **32712**, and gullies **32714**, **32716** and **32718**, all sealed below alluvium. Most features contained Romano-British pottery, fired clay fragments, animal bone and, in places, charcoal-rich deposits.
- 4.4.19 Following and agreed methodology to extend **Tr 327** to the east and west until the archaeological evidence was absent, a further c. 43m to the east, and c. 80m to the west, were machined. Another ditch (**32723**) was recorded to the east and a further five ditches to the west (**32728**, **32740**, **32742**, **32743**, **32753**). The ditches were generally 0.60-1.90m wide and 0.30-0.90m deep with moderate to steep flat or concave sides. In the west of **Tr 327** a particularly large ditch (**32742**) was recorded, 4.80m wide and 0.99m deep and containing late Romano-British pottery (3rd to 4th centuries AD), fired clay, animal bone, burnt stone and charcoal. The scale and morphology of the ditches, along with the finds assemblage recovered, suggest agricultural (field) rather than settlement boundaries, although the smaller gully features may indicate settlement.
- 4.4.20 The ditches were generally aligned north-east/south-west, NNE/SSW or ENE/WSW. Rather than suggesting a coherent, single phase rectilinear pattern of ditches, this may represent different phases of Romano-British activity. The finds included Romano-British pottery (mainly late Romano-British; 3rd–4th centuries AD), as well as fired clay fragments, animal bone, burnt stone and, in places, relatively charcoal-rich deposits. Residual Middle Iron Age pottery (ditch **32709**) and Late Iron Age pottery (ditch **32740** and subsoil of **Tr 327**) were also recorded.

#### *Old Flood Defences (Area D)*

- 4.4.21 **Tr 600** was the only trench of five initially proposed (**Trs 600-604**) to be excavated across the line of putative old flood defence lines (**Figure 2**). The trench contained four undated north-west/south-east aligned ditches (**60007**, **60021**, **60022**, **60023**), one of which (**60022**) was the existing field boundary ditch. No finds were recovered from any of the ditch fills, although residual late Romano-British pottery sherds were recovered from the subsoil, redeposited natural and made ground. These deposits were in the uppermost 0.80m of the stratigraphic sequence and were all indicative of relatively recent soil movement/redeposition (flood bank construction?).

## **4.5 Medieval (1066–1500)**

### *Introduction*

- 4.5.1 The potential for the recovery of medieval archaeology on the Steart Point peninsula was considered to be high, based on historical, cartographic, SHER, LiDAR, aerial

photographic, geophysical and fieldwalking evidence from the Site. When combined, the results of these investigations showed a number of known locations in the landscape with high potential for evidence of medieval activity, particularly the relatively recently ploughed-out moated sites. It is no surprise, therefore, that specific locations on the Site yielded significant evidence of medieval (11th–15th centuries) as well as post-medieval (16th to 17th century) activity.

#### *Area 501*

- 4.5.2 A medieval/post-medieval field boundary ditch (**20361**), parallel to the existing field boundary ditch immediately to the north-east, bisected the earlier archaeological evidence in the centre of the area (**Figure 5**) and contained only residual late Romano-British pottery. However, three sherds of 13th/14th century pottery were recovered from the hand cleaning of stone rubble spread **20213**, indicating the possible date of construction of this field boundary ditch and/or the robbing of suitable building stone from the area.

#### *Area 502*

- 4.5.3 As predicted from aerial photographic, geophysical and fieldwalking evidence, the north-eastern extent of a sub-square moated site enclosure was recorded in the initial evaluation of the area (Wessex Archaeology 2012d), as well as in the later excavation area (**Figure 6**). A spread of sub-angular and angular stone fragments, recorded on the field surface during the evaluation fieldwork, clearly indicated the location of a possible stone structure in the vicinity.
- 4.5.4 Most of the north-eastern side of the moat ditch (**20566**) was exposed, with a parallel ditch (**20567**) c. 7m to the south. To the south of **20567** an area of cobbled surface and possible stone rubble (**20504**) was partially exposed. Adjoining the north-east side of the moat ditch, two smaller ditches (**20564**, **20565**) enclosed a small sub-rectangular area, which possibly represents a garden plot or stockade enclosure.
- 4.5.5 The moat ditch was aligned WNW/ESE, and was at least 38m long, 4.80m wide, 1.02m deep, filled with water-lain, light blue/grey gleyed clay fills; the upper fills contained rare charcoal, shell fragments and later medieval pottery (14th–15th century). A later re-cut (**20581**) was c. 3m wide and 0.64m deep and was clearly of modern date as it contained modern iron and plastic, degraded wood, as well as residual later medieval pottery. Dipping lenses of degraded organic material in underlying gleyed alluvial clay deposits (**20570**, **20571**) suggest the moat ditch overlies an earlier palaeochannel, which is supported by LiDAR data (Wessex Archaeology 2009) and geophysical survey plots (Wessex Archaeology 2012b).
- 4.5.6 To the south, parallel ditch **20567** correlated with an linear ferrous anomaly interpreted as possible archaeological feature during the geophysical survey (Wessex Archaeology 2012b). This ditch was at least 36.5m long, 1.55m wide and 0.33m deep and contained medieval pottery (11th–13th century), animal bone, fired clay, burnt stone and rare charcoal. Towards the south-east end of the ditch, elements of cobble/stone rubble layer **20504** dipped into the upper ditch fills. This, along with late medieval pottery recovered from the hand cleaning of **20504**, confirms the early date of ditch **20567**, a possible earlier precursor to the moat ditch **20566**.
- 4.5.7 Two smaller ditches (**20564**, **20565**) enclosed a 22m by 8m area adjoining the northern side of the moated enclosure. The ditches were generally 0.8–1m wide and 0.3–0.5m deep, becoming shallower to the north-east; they contained medieval pottery (11th to 13th century), animal bone (some burnt), fired clay, and rare to sparse charcoal in some fills. Stratigraphic evidence suggest that this small enclosure was probably associated with

ditch **20569**. A small pit (**2408**) within the small enclosure contained animal bone but no datable finds.

- 4.5.8 The cobbles and stone rubble deposit **20504** formed an extensive spread in the southern corner of the excavated area, located directly below the ploughsoil. The cobble surface was composed of Blue Lias, red sandstone, limestone and rare quartzite cobbles; to the south-east the surface became more discontinuous (through slumping). To the south-east, a few tabular or roughly dressed stone blocks (mostly tabular Blue Lias and red sandstone) were recorded lying within, or overlying the cobbled surface. These large blocks probably represent the remains of a completely robbed-out masonry structure within the moated enclosure. Stratigraphic and artefactual evidence suggest that **20504** represents the remains of a cobbled surface and demolished and robbed structure of the later occupation (14th–15th century) of the moated enclosure.

#### *Moated sites*

- 4.5.9 The small number of targeted trenches (**Trs 160, 164–169**) of the known moated sites all identified archaeological features or deposits of medieval date, although a putative moated site within the electrical cable trench (**Tr 167**) contained only post-medieval pottery from a basal ditch fill (**16705**), and **Tr 168** produced Iron Age deposits.
- 4.5.10 **Tr 160** was located across the south-western side of the earthwork enclosure (SHER 2034). A ditch was recorded (**16005**) which was coincident with the earthwork and was 3.05m wide and 1.19m deep. A small area of tabular stone rubble (**16004**) lay at the north-east end of the trench, probably deriving from a stone structure within the moated site. Although the ditch itself was undated, 12th/13th century pottery was recovered from the topsoil close to the stone rubble. In **Tr 164**, a 2.50m wide and 0.60m deep, undated ditch (**16403**) again coincided with a well-preserved linear earthwork feature leading directly to the earthwork enclosure SHER 2034.
- 4.5.11 **Tr 165** was targeted across the southern side of another well-preserved earthwork moated site (SHER 2036). In the centre of the trench, three east-west aligned, inter-cutting ditches were revealed (**16519, 16523, 16531**), containing medieval pottery (11th–13th century), animal bone and fired clay. All the ditches were broadly coincident with the still extant enclosure ditch earthwork, although the stratigraphic evidence suggests at least two phases of enclosure construction and use in the earlier medieval period. This is further confirmed as an internal, north-south aligned ditch (**16512**), possibly contemporary with ditch (**16519**), pre-dated a cobbled surface (**16502**).
- 4.5.12 The cobbled surface was exposed in the northern extent of the trench. It lay directly below the turfline. The surface extended across the width of the trench in the northernmost 6.7m and consisted of predominantly north-east/south-west aligned stones of Blue Lias, red sandstone and beach cobbles, as well as small areas of small rounded pebbles. Some large stone pieces may represent larger elements or re-used blocks from a masonry structure in the vicinity. Medieval pottery (12th/13th century) and fired clay was recovered from the hand cleaning of the surface.

#### *Area 503*

- 4.5.13 As predicted from aerial photographic, geophysical and fieldwalking evidence, a large sub-square moated site enclosure was recorded during the stripping of Area 503 and its further extension. A complex of ditched features as well as pits, postholes, cobbled surfaces (**21422**) and a pond (**21437**) were recorded, dating between the 11th and 17th centuries and including at least three major phases of activity (**Figure 7**). The occupation was conveniently located at a fork in the natural creek system at this point, which is clearly

discernible from the earlier LiDAR survey (Wessex Archaeology 2009). The channels were undoubtedly deliberately ditched and incorporated into the planned and developing medieval landscape divisions.

Phase 1 (11th–13th centuries)

- 4.5.14 The first broad phase of activity is represented by a series of predominantly ditched features in the centre and west of Area 503 (**21046**, **21166**, **21411**, **21412**, **21413**, **21438**, **21439**, **21482**) but also includes short sections of gullies (**21322**, **21486**), a posthole (**21316**) and a small pit (**21298**). These features contained, as well as medieval pottery, animal bone, fired clay and iron objects, all indicative of domestic activities.
- 4.5.15 Ditches and gullies **21166**, **21322**, **21438**, **21439**, **21482**, as well as posthole **21316**, contained charcoal-rich deposits in the upper parts of their fill sequences, implying possible contemporaneity and suggesting that this was core area of the first phase occupation. Unfortunately, due to excessive flooding, proposed sections through the later moat ditch (**21481**) could not be undertaken during the excavation fieldwork. Undoubtedly, the larger ditches (**21046**, **21487**) would have drained either into the natural creek channels or into an initial phase of ditched drainage channels enclosing a sub-rectangular area of c. 1500 m<sup>2</sup>.

Phase 2 (13th–14th centuries)

- 4.5.16 The second phase of activity saw a reorganisation of the landscape with the construction of a regular, sub-square ditched enclosure (**21047**), enclosing an area of c. 2400 m<sup>2</sup>, with few features inside it (Groups **21174**, **21483**). The ditch was c. 1.50–2.0m wide and c. 0.60m deep with fills characterised by redeposited natural alluvium from the ditch sides and particularly gleyed, blue-grey clay deposits towards the base. It contained a small assemblage of medieval pottery (11th–14th centuries), animal bone and fired clay. There is little evidence from the feature fills to suggest the moated enclosure was the focus of occupation at this time. Adjoining the north-east side of this enclosure a series of drainage ditches were constructed (**21483**, **21484**, **21485**), the alignment of which was maintained in the Phase 3 occupation of Area 503 (see below, post-medieval).

**4.6 Post-Medieval (1500–1800)**

- 4.6.1 Excluding patently modern features, deposits or artefacts of this period are represented almost exclusively by the assemblage from Phase 3 of occupation of Area 503, although a small artefactual assemblage was recorded from evaluation trenches (see below).

*Area 503*

Phase 3

- 4.6.2 The final phase of activity on Area 503 occurred in the 16th–early 17th century, which saw another shift in focus within the moated site to the north-east, in which the Phase 2 north-eastern section of the moated ditch was recut (**21048**) (**Figure 7**). This area of post-medieval activity on Area 503 confirmed evidence initially noted as post-medieval material concentrated in a baulk section of Area 503 of the prevailing ploughsoil (**21296**). This area contained common Blue Lias and cobbles with post-medieval pottery, animal bone, an imported polychrome glass bead (ON234) and iron objects, extending to the section of the pre-existing modern drainage ditch c. 26m to the north-east. Because of this, after agreement between EH, EA, SCC and TVO, Area 503 was extended 17m to the north-east to investigate this area further (**Figure 7**).
- 4.6.3 The focus of this post-medieval activity is located within what appeared to be a sub-square, ditched enclosure (**21048**) of at least 35m by 32m in extent, with a pond feature

(**21437**) at its centre surrounded by a cobbled surface (**21422**) very similar to the medieval example recorded in Area 502 (see above). A well-built masonry latrine pit (**21165**) was constructed on the side of ditch **21048**, and presumably drained into the latter feature. The fills of the latrine included medieval and post-medieval pottery (16th–early 17th century), animal bone and marine shell, as well as a lead pilgrim’s ampulla (ON238), probably late medieval, and an early 15th century Anglo-Gallic copper alloy coin (ON216).

- 4.6.4 The spatial organisation of the latrine pit, which was probably internal to a domestic structure, along with the cobbled surface and pond, suggest that a near-totally robbed masonry structure of 16th/17th century date, along with possible ancillary structures, was located in the northern corner of this enclosure.

#### *Area D Evaluation*

- 4.6.5 A small number of datable post-medieval finds were recovered, mostly from topsoil/subsoil deposits, in three Area D evaluation trenches (**Trs 104, 166, 167**) two of which (**Trs 166, 167**) were targeted on moated sites (**Figure 2**).
- 4.6.6 The material from **Tr 104** probably reflects post-medieval activity associated with the ridge and furrow drainage system (ditch **20073**), which superseded the medieval ditched drainage system at this location, as reflected in the Area 500 excavation (**Figure 4**).

#### *Area E Evaluation*

- 4.6.7 A number of trenches contained undated ditches (see **Appendix 1**), many of which correlate with mapping evidence of medieval and post-medieval field boundary drainage ditches (Wessex Archaeology 2009).
- 4.6.8 Only two trenches (**Trs 166, 167**) contained diagnostically post-medieval pottery. **Tr 166** was targeted across an earthwork feature (SHER 2038). Three north-east/south-west aligned ditches were recorded, all visible as well-preserved earthwork features, two of which coincided with the western ditches of the moated site. Although all the ditches were undated, a small assemblage of 17th/18th century pottery, animal bone and fired clay were recovered from alluvial deposits in the trench.
- 4.6.9 **Tr 167** was targeted on a possible moated site visible in an aerial photograph, which was on the line of the later electrical cable watching brief (**Figure 2**). A north-west/south-east aligned ditch (**16703**) was recorded in the south of the trench which contained post-medieval pottery. Animal bone and medieval pottery (11th–13th century) were recovered from the topsoil.

## **5 FINDS**

### **5.1 Introduction**

- 5.1.1 This section considers the finds recovered from the site, from both evaluation and excavation stages of fieldwork. The assemblage is of moderate size, dominated by pottery and animal bone, and includes material of prehistoric, Romano-British, medieval and post-medieval date; the major excavation areas (Areas 501, 502, 503) have produced good, largely discrete groups of, respectively, Romano-British (Area 501) and medieval/early post-medieval date (Areas 502, 503).
- 5.1.2 All finds have been quantified by material type within each context, and totals by material type are presented in **Table 1**. For the purposes of this assessment, all material types have been at least visually scanned, in order to ascertain their nature, condition and

potential date range. Spot dates have been recorded for datable finds (pottery, coins, other metalwork). All data have been entered on to the project database (Access)

- 5.1.3 The following section discusses the finds by material type; on this information is based an assessment of their potential to contribute to an understanding of the Site, and a statement of any proposed further analysis considered necessary to achieve this.

**Table 1: Finds totals by material type**

Material	No	Wt
Pottery	4538	91,011
<i>Prehistoric</i>	521	5189
<i>Romano-British</i>	1817	41,443
<i>Medieval</i>	1305	-
<i>Post-medieval</i>	895	-
Ceramic Building Material	58	2699
Fired Clay	591	7555
Clay Pipe	5	15
Stone	105	39,826
Flint	4	199
Burnt Flint	17	273
Glass	9	167
Slag	31	804
Metalwork	102	-
<i>Coins</i>	7	-
<i>Copper Alloy</i>	5	-
<i>Lead/Lead Alloy</i>	6	-
<i>Iron</i>	84	-
Shale	1	-
Leather	1	-
Worked Bone	2	-
Human Bone	12	55
Animal Bone	2627	34,164
Shell	51	574

## 5.2 Pottery

### *Introduction*

- 5.2.1 Pottery comprises a major component of the overall finds assemblage. It consists mostly of Romano-British, medieval and early post-medieval material, with a small (although still significant) group of earlier ceramics (Middle and Late Iron Age). Later post-medieval pottery makes up a small proportion of the total.
- 5.2.2 The assemblage has been quantified (sherd count and weight for prehistoric and Romano-British; sherd count only for medieval and post-medieval) by broad ware group (e.g. flint-tempered ware) or known ware type (e.g. samian) within each context, and totals are given in **Table A2.1**. The presence of diagnostic forms has been noted. Spot dates have been recorded on a context by context basis.

### *Middle Iron Age*

- 5.2.3 The small Middle/Late Iron Age group is significant in that it points to some settlement prior to the main phase of Late Iron Age/early Romano-British occupation. Material of this

date was recovered from one area (Area 500), indicating small-scale activity, probably a single farm, with sporadic sherds from other locations.

- 5.2.4 Most pieces survive in moderately good condition (mean sherd weight 10.1g) and there are some single-vessel deposits of near complete vessels, although rims are relatively scarce (c. 5% of the total) and many are broken at the neck/shoulder junction, hampering the precise identification of vessel form.
- 5.2.5 The majority of sherds are in sandy fabrics, most with added stone fragments (predominantly sandstone; some calcareous rocks). The prevalence of these tempering agents suggests a relatively local source for the pottery (or at least for the clays and temper) probably in the Quantocks (approximately 10km to the south-west). The range of tempering agents (and their relative frequencies) is repeated in other local assemblages of the same date (for instance Huntworth: Mepham 2008; Meare Village East: Rouillard 1987).
- 5.2.6 Identifiable vessel forms include high-shouldered jars in a range of sizes (many of which appear to be convex or globular), and small fine-walled vessels which are probably bowls. Both can be finely burnished, although on jars, fine surface finishes are generally restricted to the exterior surface above the shoulder. Rims are generally short and either upright, everted or slightly beaded.

#### *Romano-British*

- 5.2.7 The Romano-British assemblage comprises 1817 sherds. With the exception of a small quantity of samian which could be of later 1st century AD date, there is little in this assemblage earlier than the mid-2nd century AD, with a clear emphasis on the later 3rd-4th centuries. The bulk of the Romano-British sherds were recorded from Area 501, with further sherds from evaluation trenches **321**, **324** and **327**.
- 5.2.8 With an average sherd weight of 22g, this material is in good condition; although no complete vessels were recorded, there are some surviving profiles and the sherds are generally large and unabraded.
- 5.2.9 Imported material is scarce, represented by a single sherd of Dressel 20 amphora and 23 sherds of samian (less than 1.5% of assemblage by combined imported sherd count). Samian vessels forms are restricted to cup form Dr33 and bowls within the Dr18/31 series, primarily from both central and east Gaulish sources. A single possible southern Gaulish Dr31 from gully **20297** showed considerable abrasion and numerous other samian sherds were likewise quite battered in comparison to the greywares. One base sherd (ditch **20362**) has rivet holes from a lead repair
- 5.2.10 British finewares appear to be largely, if not exclusively, restricted to Oxfordshire products which again are present in minor quantities (less than 2% by sherd count). Diagnostic sherds occur as Young (1977) types C45 (unstratified, and rubble layer **20204**), C51 (ditch **20276**), both 270–400AD, and a single example of the predominantly 4th century form C81 (ditch **20283**). The Oxfordshire industry also accounts for the majority of the mortaria, with both whiteware and white-slipped examples noted as body sherds and Young types M17 (unstratified) and WC7 (cleaning over rubble layer **20204**), both forms which were produced between 240–400 AD. One oxidised mortarium of uncertain origin may be a local product.
- 5.2.11 South-east Dorset Black Burnished ware was the single most common fabric, representing 43% of the assemblage (sherd count). Vessel forms are restricted to the

characteristic late Roman types (everted rim jars, shallow, straight-sided dishes and drop-flanged bowls; Seager Smith and Davies 1993, 231-5, types 2, 3, 20 and 25). Decoration comprises burnished zones, obtuse lattice on jars and intersecting arcs on dishes and bowls, while late surface treatments such as wiping were also noted. At this stage it is not known if any south-western Black-Burnished ware (Holbrook and Bidwell 1991, 114) also occurs within this material, but this seems unlikely, given the chronological range of the assemblage - south-western Black Burnished ware largely disappears in the early to mid-2nd century AD and, if present on the Site, would only occur in very small quantities.

- 5.2.12 Other coarsewares are of relatively local origin. South-western greywares (including gritty greywares), used for storage jars of varying sizes, are the predominant wares within this group, and have been subdivided into two groups, as previously defined for other assemblages in the south-west (e.g. Seager Smith 1999, 310-14). Type A wares, containing distinctive soft, flaky, silver or pink rock inclusions, appear to correlate with 'Norton Fitzwarren ware', as defined at Exeter (Holbrook and Bidwell 1991, 175, fabric 107; Timby 1989, 54). This type is used particularly for large, thick-walled storage jars. Type B wares, which are micaceous, may also find parallels at Exeter, although fabric descriptions of south-western greywares and gritty wares from the latter site do not include mica (Holbrook and Bidwell 1991, 171, 175).
- 5.2.13 Other, less distinctive greywares also present. These certainly include fully reduced Severn Valley wares (although these have not been separately quantified at this stage). Oxidised wares, representing a range of medium quality wares between finewares and coarse utilitarian wares, comprise a small number of necked jar rims and miscellaneous body sherds.
- 5.2.14 To conclude, the Romano-British assemblage is dominated by utilitarian coarseware vessels, predominantly of later 3rd-4th century AD date. With the exception of a few south Gaulish samian sherds which could be of later 1st century AD date, there is little to indicate a start date, ceramically at least, prior to the 2nd century AD. The large sherd size and good overall condition of the sherds is consistent with domestic debris from rural settlement with access to locally and regionally imported goods. Similar assemblages, in terms of both date and ceramic composition, were identified from sites along the Huntspill cut, on the opposite side of the Parrett estuary to the Site (Seager Smith 2003), although in general there are few comparable Romano-British assemblages in north-west Somerset (Ilchester: Leach 1982; Catsgore: Leech 1982; Sea Mills: Timby 1987). The high proportion of South-east Dorset Black Burnished ware is of interest, and the proximity of the Site to Crandon Bridge (about 7km to the south-east) should be noted; this site appears to have acted as a trans-shipment port for goods brought through Somerset and then exported first to south Wales and then up the western coasts of Britain (Rippon 2008).

#### *Medieval*

- 5.2.15 Medieval wares were recovered largely from Area 503, with smaller quantities from Area 502 and the evaluation trenches, and scattered sherds from other areas. At this stage they have been divided very broadly into coarsewares (containing a range of macroscopically visible inclusions such as patinated flint/chert, limestone and rock; sandy wares of coarse to medium texture; and finer sandy wares, often glazed. While these three broad groups show considerable chronological overlap in the region, there is a general sequence from coarsewares in the 11th and 12th centuries, augmented and later superseded by sandy wares (12th and 13th centuries), to finer wares (13th century onwards). This is confirmed by the diagnostic forms seen in each group: jars and a few bowls in the coarsewares, with undeveloped rims; a similar range, but with more



developed rims, and with a few jugs or pitchers, in sandy wares; and jug forms, some decorated, and dish and bowl forms, mostly with flanged rims, in the finer sandy wares.

- 5.2.16 The first two groups are likely to be of largely local manufacture; there are documentary references, for example, to medieval pottery manufacture at Nether Stowey, about 7km to the south-west of the Site (Allan 1999, 47), and in Bridgwater, a similar distance to the south (Le Patourel 1968, 125). The fine wares, however, show a wider range of potential sources – there are identifiable products here from the Ham Green and other Bristol production centres (not separately quantified at this stage), and also slipwares and sgraffito wares from Donyatt. One notable piece is a large sherd from the rim and neck of a Ham Green jug elaborately decorated with applied strips and possible anthropomorphic motifs (ditch **21166**).
- 5.2.17 The full range of coarsewares, coarse sandy wares and finer sandy wares occurs on both Areas 502 and 503. There are, however, differences in the proportions of these three groups on the two sites, which may have chronological implications, although the relative small size of the assemblage from Area 502 precludes the drawing of any firm conclusions on this basis. Coarse sandy wares are more common than coarsewares in Area 502, while the opposite is true of Area 503, suggesting that for the latter site there may have been an heavier emphasis on the 11th/12th century, while in Area 502 the focus may have been slightly later, in the 12th to 13th century. Area 502 has very little late medieval pottery, and virtually nothing from the post-medieval period, suggesting that this site may have been abandoned by the end of the 13th century. Area 503, on the other hand, has a small but significant late medieval component, and may have continued in use without any hiatus of occupation into the post-medieval period.
- 5.2.18 There are comparable assemblages in the area, although these are generally from urban centres or from 'higher status' sites, for example Cleeve Abbey (Allan 1999), Glastonbury (Kent 1995; 1997) and Taunton (Pearson 1984).

*Post-medieval*

- 5.2.19 Both Areas 502 and 503 produced early post-medieval pottery as well as medieval, and it is probable that in both cases occupation was continuous throughout the period.
- 5.2.20 The predominant wares within the post-medieval assemblage are coarse redwares, both glazed and unglazed, and including slipwares and sgraffito wares. Donyatt products are again represented, but there are other, closer sources across North Devon and south Somerset which were almost certainly supplying the site, including Nether Stowey. The range of forms shows a continuation from the late medieval period, and is dominated by open forms – bowls and dishes, mostly with flanged rims. Jugs and (storage) jars are in the minority, and there appears to be a scarcity of cooking wares (e.g. pipkins and chafing dishes).
- 5.2.21 Other post-med wares are extremely scarce, and are restricted to two sherds of German (probably Frechen) stoneware from Area 503. One sherd of modern stoneware from the same site, and a sherd of modern refined whiteware from an evaluation trench, can be regarded as incidental finds unrelated to the main post-medieval occupation of the peninsula. As this scarcity is unlikely to be because of lack of access to regionally traded wares, given the presence of other non-local items amongst the post-medieval material assemblage, a chronological explanation seems likely. The German stonewares probably date to the 17th century, and the slipwares and sgraffito wares have a potential date range of 17th to 18th century, but the complete absence of common wares from the later 17th and early 18th centuries, such as the Staffordshire-/Bristol-type marbled slipwares

and manganese mottled wares, and English stonewares from the Staffordshire and Nottinghamshire/Derbyshire production centres, and any later wares, suggests that Area 503 was abandoned by the mid-17th century.

### 5.3 Ceramic Building Material (CBM)

- 5.3.1 A large proportion of the CBM recovered came from the evaluation trenches; this was nearly all of post-medieval/modern date (roof tile, brick and drainpipe fragments), and this was discarded after quantification.
- 5.3.2 The only pieces of earlier date comprise three fragments of medieval roof tile (ploughsoil **14200**, rubble layer **20213**, topsoil **32100**).
- 5.3.3 A small group of fragments from Area 503 derive from one or more late medieval or early post-medieval floor tile (subsoil layer **21001**, ditch **21048**, ditch **21264**, topsoil layer **21296**; there are cross-context joins between ditch **21264** and layer **21296**). The tile(s) is undecorated, but has streaks of glaze over upper and lower surfaces; the upper surface has been partially burnt. All the contexts from which these fragments came are post-medieval.

### 5.4 Fired Clay

- 5.4.1 The fired clay comprises small fragments, largely undiagnostic, but with some retaining surfaces. Fabrics are largely fine-grained, and with a soapy texture, although a smaller proportion contain what may be organic material which has resulted in a more open texture; fragments in these coarser fabrics are often grass-marked on surfaces. Two fragments from one context (layer **32104**) contain crushed fossil shell, but this is the only occurrence of these inclusions.
- 5.4.2 Fragments from two contexts in Area 501 have been identified as deriving from flattish 'plates'. The larger of these, from ditch **20472**, has a smooth upper surface, a rougher underside with grass-marks, and preserves part of a straightish edge. Three joining fragments from gully **20398** are thinner and no edge survives, but these are assumed to derive from a similar object. Similar objects have been interpreted as 'oven plates'; they are sometimes circular or ovoid, but a group recently recovered from a Romano-British site at Durrington, Wiltshire, and apparently associated with pottery manufacture, are leaf-shaped, with straightish sides and pointed ends (Wessex Archaeology 2012e).
- 5.4.3 The remainder of the fired clay is less easily ascribed to specific function, but it is likely that most if not all is structural in origin, and could derive from hearth or pit linings, or upstanding structures, although only one piece has a surviving wattle impression. It was observed, however, that a small proportion of fragments (all from Area 501) have the distinctive purplish-pink colouring often associated with salt-working ceramics, or briquetage (Morris 2001, 41). One of these fragments has a possible cut edge, but no other diagnostic pieces were identified. The existence of a salt extraction industry in Somerset during the Romano-British period is well established, although not yet well researched; a number of salt-making sites have been identified, for example, in the Huntspill Cut (Grove and Brunning 1998).

## 5.5 Clay Pipe

- 5.5.1 The clay pipe consists entirely of plain stem fragments, which cannot be dated more closely within the post-medieval period. Two came from evaluation trenches, and three from Area 503. All fragments were discarded following quantification.

## 5.6 Stone

- 5.6.1 This category includes portable objects (a quern, whetstones, and a possible weight) as well as building material.

### *Portable objects*

- 5.6.2 The single quern recovered (ON21, from cleaning over rubble layer **20204**) is a saddle quern in a gritty conglomeratic sandstone of Devonian origin, with a possible source either in the Forest of Dean or possibly in the local Hangman Grits of the West Quantoxhead / Hodder's Combe Beds. From its context, it may have been reused as building material during the Romano-British period.

- 5.6.3 One certain whetstone was identified (ON49, rubble spread **20213** in Area 501); this is a long, thin, cigar-shaped object with a subrectangular cross-section, in a calcareous sandstone, possibly Pennant sandstone from the Bristol area. In addition, a further 26 rounded and elongated pebbles were collected, mainly from Area 501, at it was thought that some at least might have been utilised. Closer examination suggests that only one shows definite signs of utilisation (surface polish on one face). Rounded pebbles or cobbles would have been easily available on the nearby shoreline, and a number were employed in cobbled surfaces. Stone types include quartzite, sandstone, limestone (White Lias)

- 5.6.4 A sub-spherical object (ON29, from rubble spread **20213**) with a partial perforation could have been used as a weight (c. 6kg); this is in a red sandstone of Triassic origin (Mesozoic source) from the Bristol area.

### *Building material*

- 5.6.5 The building material comprises fragments of roofing slabs in limestone and sandstone. Larger blocks of limestone (Blue Lias and White Lias) and paper shale (from the local Middle and Upper Lias) were probably also used as building materials, although showing no obvious signs of working. All this material could have been obtained from local sources.

## 5.7 Struck Flint and Stone

- 5.7.1 Only five pieces were recovered. Two are flakes. Both (from evaluation **Tr 31**) are very fresh and are more probably accidental removals by agricultural machinery than artefactual. Nevertheless, since flint does not occur naturally in the area they may derive from introduced nodules.

- 5.7.2 A piece from medieval ditch **21047** in Area 503 is a patinated and rolled fragment with flake scars on both surfaces. The original form is impossible to reconstruct, since later crude retouch has removed an unknown portion of the object, resulting in a squat piece with a short blunt protrusion. In its present form, the piece may be late prehistoric (Iron Age), but it is far from diagnostic.

- 5.7.3 The remaining two pieces are cores. One (ON233 from medieval ditch **21047** in Area 503) is a multi-platform irregular core on a very cherty nodule, soon abandoned and used as a hammer. It is most likely to be of later Neolithic or Early Bronze Age date, although the unforgiving nature of the raw material means that it could be earlier. The other (ON8 from the surface of Romano-British ditch **20007** in Area 500) is a fragment of Blue Lias, apparently a detached core face. The flaking is somewhat crude, but appears genuine. There are no particular indications of date, although the size of the visible flake and blade removals suggest later (Neolithic or Bronze Age) rather than earlier prehistoric.

## 5.8 Glass

- 5.8.1 This material type includes vessel and window glass, and objects. The vessel and window glass is all post-medieval or modern, the earliest piece being a fragment from a green wine bottle of later 17th or 18th century date (cleaning over cobbled surface **21422**).
- 5.8.2 Of greater interest, however, are three glass beads, all from Area 503 but recovered from separate contexts (ditch **21094**, ditch **21470**, topsoil layer **21296**). All three are of the same type: drawn, cylindrical beads cut from marvered canes of opaque blue, red and white glass. Beads this type are amongst a wide variety of glass beads manufactured in the workshops of Venice in the 16th and 17th centuries. Their occurrence here might be considered unusual, but traded goods would have passed through the local market of Bridgwater.
- 5.8.3 One other bead – a small, globular bead in semi-opaque blue glass of Romano-British type, a surface find from Area 501.

## 5.9 Slag

- 5.9.1 A small quantity of slag was recovered, most probably deriving from iron smithing, but in insufficient quantities to suggest *in situ* metalworking.

## 5.10 Metalwork

### Coins

- 5.10.1 Seven coins were recovered from the excavations – six from Area 501 and one from Area 503. The six coins from Area 501 are all copper alloy coins of Roman date, whilst the single coin from Area 503 is a hammered silver coin of the medieval period. In general the coins are in poor condition, with many displaying signs of post-depositional corrosion; the hammered silver coin is particularly brittle.
- 5.10.2 The six coins from Area 501 span the Romano-British period. The earliest (ON18, unstratified) is a very worn and corroded *sestertius* dating to the 1st or 2nd century AD. The remaining coins all date to the late third and fourth centuries AD. One of these (ON55, ditch **20416**) was too badly worn and corroded to be assigned anything other than a general 3rd to 4th century date. Three date to the late third century: an *antoninianus* (ON17, ditch **20201**) of Victorinus (AD 268–270); a radiate copy of an *antoninianus* (ON19, unstratified) of Tetricus II (AD 270–273) struck between c. AD 270 and AD 296; and an *antoninianus* (ON16, unstratified) of Allectus (AD 293–296). These radiate copies were copies of ‘official’ coinage, possibly struck to compensate for gaps in supply of coinage to Britain and to supply sufficient small change for the provinces needs. It is unclear whether these copies were officially sanctioned, if at all, but they are not uncommon as site finds, and seem to have circulated in the same fashion as officially struck coins.

- 5.10.3 The latest Roman coin from the site is a *centenionalis* (ON23, unstratified) of Magnentius (AD 350–353). There is little that such a small assemblage can tell us about activity on the site other than the fact that the site was clearly in use during the late 3rd and 4th centuries AD. With no official mechanism for withdrawing them from circulation, the large bronzes of the 1st and 2nd centuries AD are relatively common finds in later contexts and assemblages.
- 5.10.4 The single coin from Area 503 is a hammered silver *hardi d'argent* (ON216, construction cut **21087** for latrine **21165**) minted by Henry IV, Henry V or Henry VI (c. AD 1399–1453). This is one of a series of Anglo-Gallic coins issued by the English kings in France for use in their territories in France. These are rare finds in England (R. Kelleher, pers comm.) and it is not clear how the coin ended up on the site, although given that a pilgrim's ampulla was recovered from the same context (see below), it is possible that it was brought back from abroad by someone perhaps returning from one of the major pilgrim sites in France or Spain.

#### *Copper Alloy*

- 5.10.5 Apart from coins, only five other copper alloy objects were recovered. Three are Romano-British brooches, all from Area 501. Two of these were from the same context (rubble spread **20213**), and clearly formed a pair, although not absolutely identical. These are knee brooches, which can be dated to the later 2nd or early 3rd century AD (Bayley and Butcher 2004, 179–81). The third brooch came from ditch **20362**, and is of simple annular form, with a potential date range spanning the Romano-British period.
- 5.10.6 The fourth object was from Area 503 (ditch **21124**), and is a small, double-looped buckle of late medieval or post-medieval type; the type is particularly common in 16th and 17th century contexts, when they were probably mass produced (Whitehead 1996, 52–3). Finally, a small tack came from post-medieval ditch **21157** in Area 503.

#### *Lead/lead alloy*

- 5.10.7 Of interest amongst the lead and lead alloy are two objects – a lead ampulla from construction cut **21087** for latrine **21165**; and a pewter spoon from ditch **21264**.
- 5.10.8 The ampulla, or miniature phial (ON238), is a type of pilgrim souvenir; they were designed to hold the holy water dispensed to pilgrims at many shrines and holy wells. This example is of scallop shell form, with a flattened back; the top is missing, but the bases of two opposed loop handles survive; the ampulla could have been suspended by these handles so that it could be conveniently worn, for example on a cord around the neck. The type can be identified as a Type II scallop, which resembles the true scallop, with bold, radiating ribs and a notched edge (Spencer 1990, 59, fig. 170). Ampullae have a currency from the late 12th century to the early 16th century, and a wide distribution across England; the more robust examples from the 14th and 15th centuries are often found in the sites of medieval hamlets and farmsteads, as appears to be the case at Steart. A number of scallop-shell ampullae have been found at Salisbury, Wiltshire. The type is difficult to date individually, but the Salisbury examples are presumed to be late medieval, c. 1350–c. 1530 (*ibid.*, 58). The Steart ampulla was found in the construction cut for the latrine in Area 503; the same context produced a silver coin dated c. 1399–1453 (see above) although, of course, either object could have been curated for some time before its eventual deposition in this feature.
- 5.10.9 The spoon (ON220) is also incomplete; it comprises a fig-shaped bowl (one side of which is damaged) and the base of the stele (shaft). Without the top of the stele, which could have provided more diagnostic features, the spoon is difficult to date, but the fact that the

bowl is relatively shallow, and there is very little discernible reinforcement of the stele on the underside of the bowl, suggests that this item dates after c. 1570, but probably no later than the mid-17th century (Moore 1999, 128).

- 5.10.10 Other lead objects consist of small pieces of waste; one piece from Romano-British ditch **20201** in Area 501 could have functioned as vessel repair patch.

#### *Iron*

- 5.10.11 The iron objects are all heavily corroded, which has hampered identification in advance of X-radiography. A high proportion consists of probable nails (from all areas), and there are also a few hobnails (evaluation **Trs 321, 327**; Area 501); the latter are likely to be Romano-British.
- 5.10.12 Two ox shoes are also present (one from evaluation **Tr 165**, one from medieval ditch **21050**), as well as two knives (both from medieval ditch **21482** in Area 503), and a tiny annular buckle (cleaning over cobbled surface **21422**). All these objects are of medieval or post-medieval date.

### **5.11 Shale**

- 5.11.1 A single object of shale was recovered (ON31); this is a fragment from a plain, lathe-turned armlet of Romano-British date. It came from ditch **20362** in Area 501.

### **5.12 Leather**

- 5.12.1 A leather hobnailed shoe (ON27) was recovered in a waterlogged condition from Romano-British ditch **20362** in Area 501. It was lifted on site within a soil block, which has not yet been excavated.

### **5.13 Worked Bone**

- 5.13.1 Three objects of worked bone were recovered. These comprise a handle (ON217), a broken point or gouge (ON246) and a needle (ON226), all from Area 503.
- 5.13.2 The broken point is made from the proximal end of a tibia shaft, and was presumably utilised as an awl; both tip and head are missing, but part of a transverse perforation across the head survives, and the object has been polished through use. This object came from a medieval context (ditch **21151**).
- 5.13.3 The needle was found in two joining fragments, and is missing the tip. It is made from a pig fibula; the head is flat and has a single eye 3mm in diameter. This object came from a post-medieval context (cleaning over cobbled surface **21422**).
- 5.13.4 The handle came from the fill of a medieval ditch (**21167**), but is of medieval/early post-medieval type. It has a surface polish, and is decorated with three transverse bands, each of three close-spaced incised lines.

### **5.14 Human Bone**

- 5.14.1 Human bone was recovered from three contexts, comprising redeposited remains from deposits of occupation debris and structural collapse associated with the Romano-British settlement in Area 501. Two contexts were found in close proximity (rubble spread **20213** and occupation layer **20295**), whilst the third (occupation layer **20266**) was c. 35m to the west.

5.14.2 The degree of bone erosion was recorded using McKinley's system of grading (2004, figs. 7.1–7.2). Age was assessed from the stage of skeletal development, length of neonatal long bones (Scheuer and Black 2000), and the patterns and degree of age-related changes (Buikstra and Ubelaker 1994). Where possible the presence or absence of non-metric traits was noted in accordance with Berry and Berry (1967) and Finnegan (1978).

5.14.3 A summary of the results is presented in **Table A2.2**. Full details are held in the archive.

*Disturbance and condition*

5.14.4 The bone was redeposited in two rubble collapse layers, and in a shallow depression together with Animal Bone Group (ABG) 51. The latter was covered by a dark, organic-rich occupation deposit (**20295**; c. 0.11m below machined level). The original deposits from which the remains derive may have been unrecognisable in excavation due to their disturbance, or lie outside the areas excavated.

5.14.5 Bone preservation is fair (grades 2–4, mostly 3), the best preserved being that from under/within the organically rich deposit. Moderate fragmentation occurred in dry bone. A slight sheen was noted on the skull fragments (**20266**).

*Demography*

5.14.6 A minimum of three individuals were identified comprising two neonates and an adult (**Table A2.2**). It is not unusual to find singleton burials or small cemetery groups in the vicinity of Romano-British rural settlements (e.g. Poundbury Farm, Dorset; Egging Dinwiddy and Bradley 2011, 44–9), whilst neonates were commonly excluded from Roman cemeteries, being more frequently found in settlement areas, often in association with structures (Egging Dinwiddy 2011, 116; McKinley 2011, 7; Philpott 1991, 97–102).

*Other observations*

5.14.7 It was not possible to calculate any indices, and no non-metric traits or pathological lesions were observed.

## 5.15 Animal Bone

*Quantity and provenance*

5.15.1 The assemblage comprises 2,627 fragments (or 34.164kg) of animal bone. The bulk of this material was recovered by hand during the normal course of hand excavation. This is a raw fragment count and once conjoins are taken into account this falls to 1,810 fragments. In addition, some small animal bones were noted in the flots from the processing of the bulk soil samples (from Romano-British, medieval and post-medieval contexts), including birds, small mammals, anurans (frogs, toads) and fish (see below, **6.8.2**, and **Table A4.1**); these were not scanned as part of this assessment, and are not included in the quantifications.

5.15.2 The quantity of material from each excavation area is provided in **Table A2.3**. This clearly indicates that the majority of the animal bone assemblage comes from Areas 501 (mid-late Romano-British, c. 38%) and 503 (medieval to post-medieval, c. 39%). Small assemblages of material were recovered from the minor sites, Areas 500 (Middle/Late Iron Age, 6%) and 502 (medieval, 7%), the evaluation and watching brief stages (Middle/Late Iron Age to modern, 10%).

*Methods of assessment*

- 5.15.3 The assemblage was assessed by rapid scanning and the following information recorded where applicable: species, skeletal element, preservation condition, fusion and tooth ageing data, butchery marks, metrical data, gnawing, burning, surface condition, pathology and non-metric traits. This information was directly recorded into a relational database (in MS Access) and cross-referenced with relevant contextual information.

*Results*

- 5.15.4 Bone preservation is on the whole good to fair. A small number of poorly preserved fragments were noted from Areas 500 and 503, the condition of these fragments indicates that they have been reworked from surface accumulations (i.e. eroded and abraded due to physical weathering as a result of surface exposure).
- 5.15.5 Gnaw marks were evident of 5% of bone fragments, most of which are from Area 503. This suggests that dogs had more access to accumulations of refuse than at the other sites.

*Middle/Late Iron Age*

- 5.15.6 Only a small proportion (27 fragments) of the animal bone recovered from Middle/Late Iron Age contexts in Area 500 and evaluation trenches 168 and 327, are identifiable to species and element. Sheep/goat bones predominate, and loose teeth are common. Other identified species include cattle, pig and horse.
- 5.15.7 Eighteen bone fragments were recovered from sample 81, ditch **16807**. The fragments include a single sheep/goat premolar tooth.

*Romano-British*

- 5.15.8 A relatively large amount of bone was recovered from late Romano-British contexts in Area 501, of which 35% is identifiable to species and element. Moderate sized groups of material were recovered from contexts associated with two discrete spreads of stone rubble (**20204** and **20213**), while cut features yielded only small numbers of bones.
- 5.15.9 Sheep/goat bones predominate and account for 60% of all identified fragments. This includes three associated bone groups, **ABG 47** from context **20207** (natural alluvium), **ABG 51** from context **20295** (occupation layer associated with rubble spread **20213**) and **ABG 53** from context **20402** (palaeochannel **20401**). **ABG 51** includes the head and foot elements from at least two young sheep, and is of particular interest because it is associated with a human infant burial. The skeletal element representation suggests that the infant might have been wrapped in sheep fleeces, which still had the skull and limb extremities attached.
- 5.15.10 Other identified species include cattle (25%), horse (12% – includes **ABG 58**, a fragmented skull from rubble spread **20213**), pig (2.5%), dog and bird (unidentifiable long bone shaft fragment). Two horse long bone shafts had been modified into uniform cylinders of bone ready for working. The bone blanks were both recovered from rubble spread **20213**. The number of blanks is insufficient to suggest anything other than small-scale craft working to produce objects for domestic use.
- 5.15.11 Apart from the evidence for craft activity and the use of sheep in association with an infant burial, the animal bone assemblage from Area 501 largely consists of domestic refuse. The local pastoral economy appears to have been primarily based on sheep farming as suggested by the predominance of this species in the recovered assemblage. Cattle were



of secondary importance and the presence of a few calf bones indicates that milk production was part of the husbandry strategy. The proportion of horse bones is reasonably high considering the small size of the assemblage and limited area of investigation. However, more detailed analysis of body part information and demographics should clarify whether or not this is significant, for example the bones could be from only one or two animals.

- 5.15.12 A small amount of Romano-British material was also recovered from a few trenches (**316**, **321**, **324** and **327**) in Area E of the evaluation. Most of the 21 identifiable bones belong to cattle and sheep/goat; less common species include horse, pig and dog.
- 5.15.13 Animal bone was retrieved from seven samples (3, 4, 102, 117, 125, 402 and 405). Identified fragments include sheep/goat teeth, phalanges and carpal bones.

#### *Medieval*

- 5.15.14 Most (74%) of the medieval animal bone assemblage is from Area 503, smaller amounts were recovered from Area 502, and evaluation trenches 160, 165 and 167. Approximately 40% of fragments from the medieval assemblage are identifiable to species and element. Sheep/goat predominate (49%), followed by cattle (33%) and then pig (6%). Body part information indicates that these animals were slaughtered on site for local consumption.
- 5.15.15 Of note amongst the sheep/goat bone assemblage is a small group of foot bones (i.e. metapodials and phalanges) from at least eight individuals of different ages and sizes from foundation cut **21087** for latrine **21165**. The deposit also includes the skull and mandibles from a lamb. The general character of this material indicates that it is waste from either primary butchery or light tanning.
- 5.15.16 Less common species include horse, dog, domestic fowl, goose, duck and crow/rook. Butchery marks were noted on a few horse bones indicating that horse carcasses were utilised for meat, the most likely recipients of which were dogs. The presence of at least one juvenile horse bone also indicates that horses were being bred at the site (Area 502) during the medieval period.
- 5.15.17 The bird bone assemblage is dominated by domestic fowl, and the size of the goose and duck bones indicates that these are also from domestic birds. A few of the domestic fowl bones are from birds roughly the size of bantams.
- 5.15.18 Five samples (82, 300, 301, 302 and 332) produced fragments of animal bone. Most of the identified fragments are small bones (i.e. phalanges and carpals) and loose tooth from sheep/goat. Some fish bone was recovered from samples 301 and 302, identified fragments including one dermal denticle from a member of the Rajidae family, most probably thornback ray, *Raja clavata*. Also of note from the samples are three bones from a stoat from sample 332, cut **21410** in Area 503.

#### *Post-medieval*

- 5.15.19 A small quantity of bone was recovered from post-medieval contexts in Area 503 and the flood barrier watching brief area. Approximately half of the recovered fragments can be identified to species and element. Again sheep/goat predominate (56%), followed by cattle (26%) and then pig (12%). Less common species include horse, dog, cat, domestic fowl and goose. No identifiable bone was recovered from sample 334, ditch **21435**.

*Modern*

- 5.15.20 Two cattle bones, a radius and vertebra, were recovered from modern contexts in Area 503 and the flood barrier watching brief area.

**5.16 Marine Shell**

- 5.16.1 The marine shell includes limpet, oyster, scallop and whelk, all occurring in very small quantities across Areas 501, 502 and 503. The exploitation of shellfish is not unexpected given the Site's location. The oyster includes both right and left valves, i.e. both preparation and consumption waste. One of the oyster shells has a small, sub-rectangular perforation, possibly deliberate, near the edge. Perforated oyster shells have been recorded on various sites of Romano-British and medieval date (e.g. Winder 1999; Wyles and Winder 2000), although their significance (deliberate perforation for a specific function, or accidental damage during reworking of refuse deposits) is still a matter of debate. This example came from a Romano-British ditch (**20362**) in Area 501.

**6 PALAEOENVIRONMENTAL EVIDENCE**

**6.1 Introduction**

- 6.1.1 A total of 41 bulk samples were taken from a range of features spread across the Site, covering four main phases of occupation and activity: the Middle/Late Iron Age, Romano-British, medieval and post-medieval periods.

- 6.1.2 The bulk samples break down into the following phase groups, arranged by area and feature type:

**Table 2: Sample provenance summary**

Phase	Area	Feature Type	No. of samples
Middle/Late Iron Age	500	Spread	7
		Posthole/pit	1
		Pit	1
	Trench 168	Spread	1
		Ditch	1
?Late Iron Age/early Romano-British	500	Spread	1
?Late Romano-British/late Romano-British	500	Ditch	1
	501	Ditch	5
	Evaluation	Spread	3
		Gully	1
Medieval	503	Ditch	5
		Gully	1
		Latrine	1
		Posthole	1
		Pit	2
	Trench 165	Ditch	1
		Medieval/post-medieval	500
501	Ditch		2
502	Pit		1
503	Ditch		1

- 6.1.3 Further samples taken from the site include nine monoliths, eight sample series comprising 57 small bulk samples associated with the monoliths, five sub-samples for the recovery of molluscs, three samples for wood species identification and two samples for waterlogged plant remains. These samples cover five sequences going into the Middle to

Late Iron Age date in Area 500, mainly spreads and palaeochannels, along with a possible Romano-British ditch. A further three sequences were sampled within Area 501, two from a Late Romano-British ditch and a further palaeochannel of probable Romano-British date.

6.1.4 The final sampled sequence comes from medieval ditch **21166** in Area 503.

6.1.5 The monoliths and small bulk sample series break down as follows:

**Table 3: Monolith and small bulk sample series**

Area	Monolith	Associated small bulk samples			Details
500	23	45	46-51	6	?RB ditch <b>20004</b>
500	55	64	65-67	3	M-LIA spread <b>20152</b> and underlying alluviums
500	56	59	60-63	4	? to LIA palaeochannel <b>20153</b>
500	57	68	69-72	4	M-LIA spread <b>20062</b> eroding into channel, underlying alluviums and overlying fills of palaeochannel <b>20108</b>
500	58	75	76-79	4	M-LIA spread <b>20062</b> eroding into channel, underlying alluviums and overlying fills of palaeochannel <b>20108</b>
501	103	104	105-116	12	LRB ditch <b>20362</b>
501	132	155	134-154	21	LRB ditch <b>20361</b>
501	156	157	158-162	5	?RB palaeochannel <b>20707</b>
503	304	305	306-309	4	Med ditch <b>21166</b>

## 6.2 Charred plant remains

6.2.1 The bulk samples were processed by standard flotation methods; the flot retained on a 0.5 mm mesh, residues fractionated into 5.6mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6mm) were sorted, weighed and discarded. Flots were scanned under a x10 stereo-binocular microscope and the preservation and nature of the charred plant and wood charcoal remains recorded in **Table A4.1**. The presence of molluscs and other palaeoenvironmental indicators e.g. ostracods, was also recorded in **Table A4.1**. This also provides an indication of sample composition (% of mineral to charred material), flot volume and recommendations for full analysis.

6.2.2 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 and 5), for cereals.

6.2.3 The flots were generally relatively small with on the whole low to moderate numbers of rooty material. Charred material comprised varying degrees of preservation.

*Middle/Late Iron Age to ?Early Romano-British*

6.2.4 Preservation of charred remains from this early phase came largely from Middle to Late Iron Age spreads of charcoal, fired clay and pottery fragments, including possible *in situ* burning in Area 500 associated with potential seasonal activity adjacent to the palaeochannel. Eight of the 12 samples produced a low abundance of hulled wheat (*Triticum*) grains and occasional glume bases, with much of the grain in poor condition with fragmentation and pitting potentially from the charring process, but also, given the nature of the deposits, from water action. As a result some of the grain is probably only identifiable as cf. *Triticum* or Cereal indet. Most samples produced less than 10 grains or chaff items. Other charred remains were also sparse, with numbers again less than 20, but included occasional hazel (*Corylus avellana*) nut fragments and typical arable weeds such as brome (*Bromus*), vetch (*Lathyrus/Vicia*), dock (*Rumex*) and ribwort plantain (*Plantago lanceolata*).

6.2.5 The samples are indicative of low levels of settlement activity dating to the Middle to Late Iron Age. The taphonomic circumstances regarding the accumulation of the material are unclear and the possibility that the material is redeposited, or represents short-lived occupation/industrial events or horizons should be considered.

*Late Romano-British*

6.2.6 Nine of the 13 samples from this phase were from ditch fills and spreads from late Romano-British activity between two areas of alluvial channel deposits in Area 501. The remaining four came from ditches fills, three from Area E Evaluation to the south of Area 501 (Samples 1–3), and the other (Sample 20) from context **20036** in ditch **20004** in Area 500.

6.2.7 In all but one sample there was a greater abundance of grain and chaff recorded than seen within the earlier deposits, with up to 125 hulled wheat grains and 100+ glume bases and occasional spikelet forks. Preservation however was again poor due to fragmentation, especially of the chaff elements, although careful examination of the better preserved fragments may enable some to be confirmed as spelt wheat (*Triticum spelta*). There were also occasional oat grains, awns and two florets noted in sample 116 from ditch **20362**, plus silicified wheat/barley awns in three samples, most notably sample 116 from ditch **20362**, where hundreds were noted. There are also good assemblages of arable weeds, with, for example, over 200 in the aforementioned sample, including many grasses (Poaceae), with silicified grass culms, as well as charred brome, ribwort plantain, dock and clover/medick (*Trifolium/Medicago*). While the three ditch fills from the Area E Evaluation to the south of Area 501 had good assemblages of charred weeds and cereal chaff, grain numbers were generally lower. Only one sample (sample 20) from ditch **20004**, within Area 500, produced no charred remains from a predominantly mineral flot.

6.2.8 The assemblages indicate the dominance of hulled wheat remains, most probably spelt wheat, relating to settlement activity during this period. While barley was poorly represented in the samples, remains of celtic/horse bean (*Vicia faba*) were recorded in a few of the samples.

### Medieval

- 6.2.9 Ten of the 11 samples from the medieval phase are from Area 503, and can be related to a large moated site close to a palaeochannel with samples taken from irregular ditches and short gully sections, with some pit and posthole fills and one latrine fill. Charred assemblages in many of these features include up to 850 grains of free-threshing wheat, but typically no chaff, apart from some silicified awns. Preservation is very variable with some grains well-preserved, others in fair condition, but many very fragmented and while likely to be wheat may have to be identified as cf. *Triticum*/cereal indet. There is also some oat grains, but the cereal remains in all samples are predominantly those of wheat. One 55ml flot from posthole **21318** (sample 321) was estimated to be 95% wheat grains and also included many vetches (75+ whole and 250+ half cotyledons). Arable weed assemblages vary with numbers ranging from two to 200 seeds and include many of the same taxa as recovered from the earlier phases, with the addition of stinking chamomile (*Anthemis cotula*).
- 6.2.10 The final sample from Trench 165, ditch **16507** was also extremely rich in cereal remains, mainly of free-threshing wheat (*Triticum aestivum/turgidum* type), with relatively few weed seeds.
- 6.2.11 The dominance of free-threshing wheat is in keeping with the medieval date of the features from this part of the Site, and it is possible that some of the oats are of the cultivated rather than wild variety. Notably both barley and rye which are the two other common crops of the period appear to be absent, although bean (*Vicia faba*) is present. The addition of stinking mayweed (*Anthemis cotula*) to the weed flora is also in keeping with the period. This species is associated with the cultivation of heavy clay soils, and while present on other sites across England in the Romano-British period becomes and increasingly common component of archaeobotanical assemblages in the Saxon and medieval period, as cultivation shifted onto more marginal and harder to work soils.

### Medieval/Post-Medieval

- 6.2.12 The five samples from this latest phase come from Areas 500, 501, 502 and 503, from four ditch and one pit fill (**Table A4.1**). No grain occurred in three samples, although from one of the ditch fills (sample 138, ditch **20361**, silicified wheat/barley awns were noted. The only sample of interest is from pit **20512** in Area 502 (sample 200), which included over 100 free-threshing grains, 50+ oat grains, plus both carbonised and silicified wheat/barley awns, Celtic bean (*Vicia faba*), plus a small assemblage of arable weeds.

## 6.3 Wood charcoal

- 6.3.1 Wood charcoal was noted from the flots and is recorded in **Table A4.1**. An estimate was made of the number of charcoal fragments >2mm from each sample, and which will allow species identification if required.
- 6.3.2 In several cases contexts from the Middle/Late Iron Age spreads were seen to be charcoal-rich during excavation in the field. However, while in some cases, e.g. context **20003** from Middle to Late Iron Age spread **20017**, produced reasonable quantities of charcoal, others, e.g. context **20099** from spread **20152** and context **20048** from spread **20031**, produced little to no charcoal. It is quite possible, given the poor condition of some of the charred plant remains, that water action and movement through the sediments, combined with frequent periods of wetting and drying, and potentially some later soil development lead to the high fragmentation of charcoal, therefore while appearing charcoal-rich in the field the fragments themselves were small enough to pass through the mesh.

- 6.3.3 Of the richer samples, the wood charcoal in spread **20017** included mixed deciduous taxa of oak (*Quercus* sp), alder (*Alnus glutinosa*), Pomoideae (e.g. whitebeam, apple, hawthorn) and ash (*Fraxinus excelsior*).
- 6.3.4 Charcoal was also noted from the Romano-British spreads from Area 501, but these were generally recorded as less charcoal-rich in the field. Given the poor survival of charcoal within the earlier features, as might be expected, the flots from these also produced little to no charcoal.
- 6.3.5 The ditch deposits were however more productive and high numbers of wood charcoal fragments were retrieved from the late Romano-British ditches **32108**, **32716** and **32743**.
- 6.3.6 The medieval samples also yielded some relatively charcoal rich deposits, including the samples from gully **21282**, ditches **21398**, **21132**, **21157** and **21435** and latrine **21165**.

#### **6.4 Waterlogged plant remains and waterlogged wood**

- 6.4.1 No substantial waterlogged deposits were encountered within the field, and the flots in accordance contained generally few organics. However, a number of seeds of predominantly aquatic species were encountered within the samples which potentially indicate that some limited preservation by waterlogging has occurred. These remains were absent from the earliest samples, occurring predominantly within the late Romano-British, medieval and post-medieval periods. In the Romano-British period such remains were limited mainly to Evaluation Area E, where all three ditches had some remnants of probable waterlogged material, including seeds of bramble (*Rubus* sp.), duck weed (*Lemna* sp.) and water-crowfoot (*Ranunculus* subgenus *Batrachium*). It might be noted in all these cases these seeds have hard seed coats and hence might be more resistant to decomposition. In Area 501 only ditch **20262** had such remains with a few remains of *Lemna* sp. and *Stellaria* sp.
- 6.4.2 The medieval samples contained generally more of this potentially waterlogged background material, mainly from ditches in Area 503. Again preservation and the range of species was limited and the same range of species as seen above were present, with the addition of a few seeds of pondweed (*Potamogeton* sp.) and hemlock (*Conium maculatum*). As might be expected the samples from the posthole, gullies and pits contained no such material, the latrine being the one exception, although even here the range of species was restricted to those of bramble and duckweed.
- 6.4.3 Of the post-medieval samples only two from Area 501, both from ditch **20361**, had waterlogged seeds, mainly of common nettle (*Urtica dioica*), but also a few of sedges (*Carex* sp.) and bramble (*Rubus* sp.). Again the preservation of material by waterlogging was extremely limited and the range of species represented very narrow.
- 6.4.4 While waterlogged preservation of plant macros was poor, 15 pieces of waterlogged wood were recovered and submitted for identification from post-medieval ditches **21140** and **21264** in Area 503, and the medieval moat ditch **20566** in area 502. A fine slice was taken from each fragment along three planes (transverse section (TS), radial longitudinal section (RL) and tangential longitudinal section (TL)) using a razor blade. The pieces were mounted in water on a glass microscope slide, and examined under bi-focal transmitted light microscopy at magnifications of x50, x100 and x400 using a Kyowa ME-LUX2 microscope. Identification was undertaken according to the anatomical characteristics described by Gale and Cutler (2000), Schweingruber (1990) and Butterfield and Meylan

(1980). Identification was to the highest taxonomic level possible, usually that of genus and nomenclature is according to Stace (1997). The results are shown in **Table 4**.

**Table 4: Waterlogged Wood Identifications**

Feature	Context	Sample no.	ID	Comments
<b>AREA 503</b>				
Ditch 21140	21141	303	<i>Quercus</i> sp. x3	Three large twisted mature wood pieces
Ditch 21264	21272	312	<i>Fraxinus excelsior</i> x1	1 large mature piece
<b>AREA 502</b>				
Moat ditch	20579	201	40-60mm d <i>Quercus</i> sp. rwd x5	Rod like pieces, poss. coppice
20574			60mm large rwd <i>Betula</i> sp. x1	Oblique cut end
			Rwd of <i>Alnus/ Corylus</i> sp. x5	Full ID not possible as all pieces twisted and compressed

- 6.4.5 The three large wood pieces recovered from the post-medieval ditch **21140** in Area 503 were of mature oak (*Quercus* sp.).
- 6.4.6 The single large piece of mature wood from post-medieval ditch **21264** in Area 503 proved to be of ash (*Fraxinus excelsior*).
- 6.4.7 Of the 11 pieces of wood recovered from the medieval moat **20566**, five were oak, one was silver or downy birch (*Betula pendula/ pubescens*) and five compared favourably with alder or hazel (*Alnus glutinosa/ Corylus avellana*) but the latter could not be fully identified due to twisting and compression of the pieces. All pieces were 40-60mm diameter roundwood, cut at 20-30 years. The large birch piece displayed an obliquely cut end. It is apparent that these pieces were introduced by anthropogenic activity, either as waste or as part of a structure related to the moat e.g. stakes/ hurdling.
- 6.4.8 A sub-sample of 100ml from the moat fill (context **20579**), associated with the waterlogged wood, was processed for the recovery of waterlogged plant remains. Laboratory flotation was undertaken with flots retained on a 0.25mm mesh and residues on a 0.5mm mesh. The flot was visually inspected under a x10 to x40 stereo-binocular microscope. A single seed of thistle (*Carduus* sp.) was observed, but as with the samples above there was very little other waterlogged material.
- 6.4.9 Similarly a sub-sample from ditch **21264**, containing waterlogged wood, was processed initially for waterlogged material remains, then for molluscs (see below). Despite the preservation of the wood, as with many of the other samples described above, this sub-sample contained few organics and only limited number of seeds from a narrow range of species, predominately of aquatics, and in turn, as seen above, those with harder more siliceous seeds e.g. water-crowfoot (*Ranunculus* subgenus *Batrachium*) and duck weed (*Lemna* sp.).

## 6.5 Land and fresh/brackish water molluscs

- 6.5.1 A selection of samples was processed for the recovery of molluscs. This comprised seven of the small bulk samples from five of the sample series and five small sub-samples from

bulk samples. Samples of generally 1 litre were processed by standard methods (Evans 1972) for land snails. The flots (0.5mm) were rapidly assessed by scanning under a x 10 – x 40 stereo-binocular microscope to provide some information about shell preservation and species representation. In addition two bulk samples of 30 litres were also assessed for molluscs. The numbers of shells and the presence of taxonomic groups were quantified (**Table A4.2**). Nomenclature is according to Kerney (1999).

- 6.5.2 Further estimates were also made of quantities of molluscs present in the bulk samples. These have been recorded in **Table A4.2** as either terrestrial (t) or fresh/brackish water (w).

*?Late Iron Age (Area 500)*

- 6.5.3 The mollusc assemblage from sample 62, part of the sample series 59 from the ?LIA palaeochannel **20153** in Area 500, included the open country species *Pupilla muscorum*, the freshwater species *Bathyomphalus contortus* and the brackish water species *Hydrobia ulvae* and *Hydrobia ventrosa*.

*Late Romano-British (Areas 500, 501 and Area E evaluation)*

- 6.5.4 The two small mollusc assemblages (one from series 45, the other from bulk sample 20) were examined from a possible late Romano-British ditch **20004** in Area 500. These samples are dominated by *Hydrobia*, but also included a few specimens of other species, such as the open country species *Pupilla muscorum* and *Vallonia* sp. and the intermediate species *Cepaea* sp. and *Limacidae*.
- 6.5.5 Large numbers of the brackish water species *Hydrobia*, both *Hydrobia ulvae* and *Hydrobia ventrosa*, were also recorded in sub-sample 53 (this sample was not associated with a monolith or column series). The sample came from palaeochannel **20139** in Area 500, also of probable Romano-British date, but aside from *Hydrobia* no other species were recorded.
- 6.5.6 A small mollusc assemblage of open country and brackish water species was observed in sample 160, part of sample series 157 through ?Romano-British palaeochannel **20707** in Area 501.
- 6.5.7 A single burnt specimen of the open country species *Vertigo pygmaea* was recovered from the two samples from sample series 104, while no shells were observed within the two samples from sample series 155, through the late Romano-British ditches **20362** and **20361** in Area 501.
- 6.5.8 A few shells of *Vallonia* spp. and *Hydrobia* spp. were present in the late Romano-British ditch **32716** within Area E.

*Medieval to Post-medieval (Area 503)*

- 6.5.9 Bulk sample 302 from medieval ditch **21166** covers part of sample series 305 in Area 503. It produced a large mollusc assemblage dominated by the freshwater species *Lymnaea* spp. These included *Lymnaea truncatula*, an amphibious species which 'inhabits marshy grassland, shallow ephemeral ponds, roadside trickles, flushes and dune slacks' and *Lymnaea peregra*, a 'species which occurs in aquatic habitats of all kinds' (Kerney 1999, 51, 56). There were a smaller number of the brackish water species *Hydrobia* sp. The terrestrial element mainly comprised open country species.



- 6.5.10 The bulk sample 332 from medieval ditch **21412**, also in Area 503, produced an assemblage generally dominated by the freshwater and brackish water species, in particular *Lymnaea* spp. and *Hydrobia* sp.
- 6.5.11 Sample 22 from medieval/early post-medieval ditch **20073** in Area 500 contained very few shells, but those present included *Vallonia* sp., *Cepaea* sp. and the fresh water species *Lymnaea* sp.
- 6.5.12 The mollusc assemblage from post-medieval ditch **21264** mainly comprised fresh water species. These included shells of *Lymnaea truncatula*, *Lymnaea peregra* and *Gyraulus crista*. *Gyraulus crista* 'lives in most kinds of lowland aquatic habitats apart from those liable to dry up: quiet rivers, canals, lakes, ponds weedy ditches' (Kerney 1999, 67). There were no brackish water species.
- 6.5.13 The terrestrial species within these assemblages reflect a well established open environment. There is a general absence of shade-loving species, in particular those exploiting woodland habitats. There is evidence for flooding by brackish water by the Middle to Late Iron Age in Area 500, with brackish water-species well-represented in the late Romano-British channel deposits from Area 500. It should be noted though that shell preservation seems to be poorer in Area 501.
- 6.5.14 The samples from the medieval deposits in Area 503 indicate an aquatic environment that appears to be of freshwater and brackish water. By the post-medieval phase of the site all the assemblages appear to indicate freshwater, together with some terrestrial species.

## 6.6 Sediments

- 6.6.1 A total of nine monolith samples were taken from nine locations (see above).
- 6.6.2 In the first instance a geoarchaeological desk-based review was carried out, in order to identify sequences which had the potential to further the aims and objectives of the project. This was done in the light of initial results of the bulk sample assessments, which informed regarding the presence or absence of useful macrofossils and molluscs in the relevant sequences.
- 6.6.3 Samples 11 (undated palaeochannel **17303**, 23 (Area 500: ?Romano-British ditch **20004**), 56 (Area 500: ?LIA palaeochannel **20153**), 103 (Area 501: Romano-British ditch **20362**), 132 (Area 501: Romano-British ditch **20361**), and 304 (Area 503: medieval ditch **21166**) were selected for geoarchaeological description and interpretation.
- 6.6.4 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 5**.
- 6.6.5 Sample 11 is a grab sample of *Phragmites* peat taken from a geotechnical test pit (context **17303**) within the far north of the site close to Area 500. The sample was taken some 2.8 to 3m below the present ground surface and was recorded as being within the bounds of a possible palaeochannel, however, a channel within this location would be more probably a relic tidal creek, which would invariably be filled with mineralogenic sediments.
- 6.6.6 The geotechnical pit has just penetrated deep enough into the underlying alluvial stratigraphy to reach one of the peat layers, which represent a freshwater dominated

phase of a much earlier sequence (below the impact level) known to underlie the Site (estuarine and salt marsh sediments interleaved with freshwater dominated reedswamps).

- 6.6.7 No further work is recommended on the sample, as it is disturbed, without context and lies below the impact level of the development.
- 6.6.8 **Monolith 23** sampled a sequence of fairly unremarkable ditch fills in a probable Romano-British ditch **20004** in Area 500; the lower fill exhibits intact laminations of fine silt, evidence of alluvial origin which has not been subsequently erased by post-depositional soil formation processes. It is important to note that the alluviation may originate externally to the feature (i.e. inundation), or just reflect the presence of standing or slow moving water within the feature.
- 6.6.9 The small bulk samples may be useful in establishing the fresh- or salt-water nature of alluviation within the ditch.
- 6.6.10 **Monolith 56** sampled palaeochannel **20153**. Although in the field this was noted to contain archaeological material, from the sample it appears to be an alluvial layer with indications of post-depositional soil formation in the top (effectively within the base of the modern soil profile).
- 6.6.11 The sediment is fine-grained and mineralogenic, with post-depositional changes due to wetting/ drying and soil formation.
- 6.6.12 If it can be dated stratigraphically or by artefact content, the presence of freshwater or marine molluscs would assist in elucidating the past hydrological regime of the site.
- 6.6.13 **Monolith 103** is from late Romano-British ditch **20362** in Area 501. The fills all contain archaeological material (burnt clay or daub is present throughout), and the artefact-rich stasis horizon **20248** indicates that the feature is located close to ongoing archaeological activity, probably settlement.
- 6.6.14 **Monolith 132** sampled a late Romano-British ditch **20361** in Area 501. Although only marginally lower in elevation than monolith **103** (from a ditch section from the same phase and the same area of site), this sequence is very different in character.
- 6.6.15 The sequence shows a ditch dominated by waterlogged and semi-waterlogged detrital material, and mineralogenic fills formed in standing water.
- 6.6.16 **Monolith 304** sampled medieval ditch **21166**, with fills containing probable burnt clay inclusions. During excavation this was recorded as being a recut; however from section photos/ drawings it resembles more closely episodic side collapse within a single feature.
- 6.7 Ostracods**
- 6.7.1 Ostracods were noted in four of the bulk samples, from Romano-British ditch **32743**; and medieval ditches **21412**, **21166** and **21157**, and also in the sample from latrine **21165**. They were also recorded in seven of the mollusc samples (**Table A4.1**).

## 6.8 Small animal and fish bones and egg shell

- 6.8.1 During the processing of bulk soil samples for the recovery of charred plant remains and charcoals, small animal bones were noted in the flots, and recorded (**Table A4.1**). These included those of birds/small mammals, anurans (frogs, toads), and fish.
- 6.8.2 Much of the bone was highly fragmented and therefore thought to be mostly unidentifiable, with abundances low. However there were occasional small mammal bone and teeth. The fish bone mostly small vertebrae, with occasional scales were more frequent and may be identifiable and could provide additional dietary evidence from this coastal site. Some of the small bone fragments were burnt. There was also occasional egg shell, including some burnt examples.

## 6.9 Scientific dating

- 6.9.1 The majority of the features identified during the excavations at Steart have been suitably phased and therefore do not require radiocarbon dating – this is particularly the case with the Romano-British settlement in Area 501 and later phases of activity on Site as any additional dating would be unlikely to lead to a significant constraining of the already identified timing of occupation nor contribute to the interpretation of the Site.
- 6.9.2 Palaeochannels **20153** and **20707**, provisionally phased to the ?Iron Age and Romano-British periods, should be radiocarbon dated to establish whether these are contemporary with the local archaeology and help establish the local palaeogeography during phases of settlement occupation. Bulk samples associated with these palaeochannel fills (and monoliths 56 and 156 respectively) will be processed to extract, where available, suitable material for dating. Failing this, bulk sediment dating will be necessary and will follow the guidelines of Bayliss *et al.* (2008, Introduction) once considerations of sample taphonomy and origin have been taken into account (see Stevens *et al.* 2012, 345-349).
- 6.9.3 The Middle/Late Iron Age remains found in Area 500 should also be subject to some radiocarbon dating. Direct dating of some of the cereal assemblages from Area 500 (Isee **Section 6.2.4** and **Appendix A4.1**) will establish a more precise chronology for the earlier settlement phase and date cereal processing on-site (as opposed to a broad Middle to Late Iron Age phasing).

## 7 DISCUSSION

- 7.1.1 This previously relatively unexplored wetland landscape has been shown to contain a number of sites and areas of significant past human activity and inhabitation. These sites include significant phases of occupation from the Middle/Late Iron Age (400 BC–AD 43), the Romano-British period (AD 43–410), medieval (11th–15th centuries) and post-medieval periods (16th/17th centuries) as well as highlighting continuities and landscape locations, boundaries and drainage systems right up to the present day.
- 7.1.2 Apart from a few pieces of prehistoric worked flint and stone, the first phase of significant activity on Steart Point occurred in two areas in the Middle/Late Iron Age. Occupation evidence was recorded in Area D (Pond 3) and residual Middle/Late Iron Age material was recorded from the south of Area E (Pond 8 and New South Drain), an area of extensive later, Romano-British activity.

- 7.1.3 The evidence for Middle/Late Iron exploitation of the Steart peninsula is relatively sparse but does suggest sporadic occupation and salt-making, a pattern which coincides with evidence from Britain and the Continent of a climatic amelioration in the late 1st millennium BC (Lamb 1981; 1982). Evidence from Steart Point will enhance local knowledge of activity in this period and can be compared with much more extensive sites in the county (see for example, Minnitt 2007).
- 7.1.4 The Pond 3 area activity was conveniently located on the margins of a large palaeochannel that extended far across the peninsula from the River Parrett. Undoubtedly at this early stage of occupation, in this wetland environment, the creek system would have offered an efficient manner of negotiating the resource-rich landscape for wildfowling, fishing, fuel (peat, reeds, rushes), building/fencing material and possibly salt production as seen in the Somerset Levels at this time (Rippon 1997, 6).
- 7.1.5 The occupation evidence comprised a series of spreads of charcoal-rich waste material (pottery, animal bone) suggestive of domestic activities. These had been eroded and interdigitated by fluvial processes associated with overbank flooding of the adjacent river channel. Charred plant remains included cereal grains, but only enough to suggest small-scale settlement activity, possibly short-lived. Overall, the evidence would indicate episodic (seasonal?) visits to the same convenient channel-side location between flooding events, to exploit the resources of the peninsula wetland. The only significant contemporary Iron Age evidence in the vicinity is the hillfort at Cannington, c. 4km to the south, which would have been close enough to exploit the available wild resources of the peninsula as well as salt marsh for grazing.
- 7.1.6 In the late 1st millennium BC the climate in Britain and the Continent showed a marked improvement (Rippon 1997, 44). In the Somerset Levels there was a possible lessening of the Upper Wentlooge alluvial formation, suggesting the possible construction of sea walls in the Romano-British period as for instance on the Caldicot Levels (Rippon 1997, 110). The increased exploitation of the Somerset Levels in the Romano-British period also includes industrial as well as domestic occupation, including salt-making and pottery manufacture.
- 7.1.7 The evidence indicates that the first widespread and systematic reclamation of the Somerset Levels occurred in the Romano-British period, and the evidence from the current Steart Point fieldwork supports this. This pattern is reflected in the local area at the rural settlement of Comwich, a possible ferry crossing point, and possible Roman field systems at Pawlett, as well as upstream at Crandon Bridge, where riverside stone structures may represent Romano-British warehouses for riverborne trade (Rippon 1997, 54; 2008).
- 7.1.8 No definitively dated pre-2nd century AD (early Roman) material was recorded from the two areas of Romano-British activity (Area E, Area 501) in the current fieldwork. The Steart Point evidence follows a wider pattern of increased and more regularised exploitation of a planned landscape through the 2nd to 4th centuries AD. Archaeological evidence from Area 501 and Area E (Pond 8 and new South Drain) suggests permanent settlement, with stone and wooden structures (farmsteads) and associated field systems as well as indirect evidence of inhumations (Area 501). The local pastoral economy was based on sheep, with cattle secondary, and wheat was cultivated.
- 7.1.9 The post-Roman environmental evidence of the early 5th to 9th centuries for the Somerset Levels shows widespread flooding due to increased sea levels. This is reflected in Romano-British period ground levels becoming sealed below c. 0.70m of alluvium and a

general decline in the number of settlement sites during the 4th century, though whether the general abandonment of the Somerset Levels wetlands is due to flooding alone, or in conjunction with other social or economic factors is uncertain (Rippon 1997, 126; 2000a, 88-9).

- 7.1.10 The evidence from the late Roman occupation at Area 501 clearly shows the archaeological deposits and features of the 3rd and 4th centuries AD date becoming truncated by the adjacent channels and subsequently overlain by overbank flood deposits represented by alluvial clays. Whilst a direct causal link cannot be made between the abandonment of this site and its inundation, the circumstantial evidence is compelling, and fits with the local evidence for discontinuity of late Roman occupation (in the south of Area E) as well as the wider Somerset Levels. The small quantity of 2nd to 4th century AD pottery recovered from **Tr 600** may indicate activity associated with the site at Area 501 c. 400m to the south-east, or indicate late Romano-British activity on the ridge of higher ground on which Steart village is situated.
- 7.1.11 The evidence from the fieldwork of recolonisation of the Steart Point landscape is absent until around the 11th century and, again, this fits well with regional patterns of wetland exploitation (Rippon 1997, 12); the concerted attempts at recolonisation reflected in sea walls, river flood barriers and drainage ditches becoming more evident from this period onwards. The early medieval period (11th to 13th centuries) is the first to have widespread aspects of the reclamation (moated sites, drainage ditches, field boundary patterns, infilling or ditching of natural/irregular creek channels) still visible and retained as functional elements of a planned landscape of drainage features.
- 7.1.12 This recolonisation and extensive reorganisation and reclamation of the Steart Point landscape correlated with a climatic amelioration including relatively warm and dry weather with less storms, that lasted from around the 10th century to at least c. 1300 (Lamb 1981, 60). Not only were the Somerset Levels used for grazing sheep and cattle, but farming and fishing became more important. By the 13th century, 'almost all of the higher coastal clay-lands were embanked, drained and settled' (Rippon 2000a, 90).
- 7.1.13 As expected, the known moated sites that were investigated provided nearly all the evidence of both medieval and post-medieval activity on Steart Point, but particularly from excavation Areas 502 and 503. Consistent with earlier patterns of landscape exploitation, settlement evidence was located close to palaeochannels, and in many cases these palaeochannels were regularised and incorporated into the drainage/field system pattern of reclamation (Wessex Archaeology 2008; 2009). The continuing occupation and improvement at Steart Point is reflected in the 13th/14th century pottery recorded mixed within the late Roman rubble layers of Area 501. This evidence may indicate the date for the robbing of the building material and/or the construction of the field boundary ditch that cut through the site.
- 7.1.14 The moated sites were functionally linked to the requirement not only for drainage but the management of fields for mixed arable and pastoral farming regimes; waterlogged seeds of stinking mayweed from Areas 502 and 503 reflect the increasing cultivation of heavier, marginal soils at this period. The evidence from the current fieldwork suggests that most of the moated sites were occupied from the 11th to 14th centuries, although the moated site of Area 502 contained possible evidence of 14th/15th century activity.
- 7.1.15 As with many other wetland landscapes, there seems to have been a relatively dramatic decline in activity in the 14th century, associated with falling temperatures, increased levels of rainfall and storminess (Rippon 1997, 6) as well as the dramatic population

decline of the Black Death from the mid-14th century onwards. This pattern is also evident at Steart Point, the latest occupation being of possible 14th/15th century date at the Area 502 moated site. There is no definite evidence of continuity into the immediate post-medieval periods except for the latest (Phase 3) activity at the Area 503 moated site, which was reorganised during the 16th to 17th centuries.

- 7.1.16 More widely, the 16th century does not seem to have been a period of large-scale investment in land drainage maintenance and development and up until c. 1770 there was near stagnation in the improvement of the Somerset Levels (Williams 1970, 110). The evidence from the latest phase of Area 503 occupation, along with 17th/18th century material from the west of Area 500 and a moated site (SHER 2038) might suggest localised or more widespread landscape reorganisation at Steart Point, with the construction date of ridge-and-vurrow drainage.
- 7.1.17 Evidence from all the occupation sites originally containing structures partially or wholly of masonry, or cobbled surfaces (Areas 501–502) all show evidence of extensive robbing, either as a part of a concerted programme of demolition or of robbing conveniently located building material in the landscape following structural disuse.
- 7.1.18 The staged and iterative approach to the archaeological investigation of the Steart Point peninsula, culminating in the recent phase of various fieldwork interventions, has been very successful. The results overall fit broad regional and national patterns of wetland environments in Southern Britain where phases of land reclamation have been a key factor in the successful exploitation, occupation and development of these landscapes. These phases of reclamation are strongly linked to the prevailing patterns of associated sea level increases (marine transgressions) which made coastal wetland landscapes less favourable habitats.

## **8 STATEMENT OF POTENTIAL**

### **8.1 General**

- 8.1.1 The current excavations together with the earlier programmes of historical and investigations have confirmed the significant and multi-period nature of activity from the Site on Steart Point peninsula. The results of this earlier historical and geoarchaeological assessments, along with the results of the current fieldwork, including the excavations, can significantly contribute to information on landscape exploitation and development at Steart Point from the Middle/Late Iron Age onwards. The sequence of activity at the Site correlate well with more widespread patterns of exploitation and occupation of similar landscapes, coincident with climatic and associated sea-level changes.

### **8.2 Stratigraphic and structural remains**

- 8.2.1 The results of the recent work have added significantly to the knowledge of the exploitation and occupation of Steart Point, as well as highlighting patterns of landscape organisation. Many of these chronological and landscape patterns, correlated with climatic and related sea-level changes, fit broad patterns seen in wetland landscapes of southern Britain in general and the Severn Estuary Levels in particular (e.g. Riipon 1997; 2000b; Williams 1970).
- 8.2.2 Preliminary stratigraphic analyses have illustrated significant phases of activity at the more complex archaeological areas (Areas 501, 503) which require further work, including stratigraphic grouping. Further analysis of the pottery and other finds may enable some

refinement of the dating and phasing of the stratigraphic sequence recorded in these parts of the Site.

### 8.3 Finds

#### *Iron Age*

8.3.1 The prehistoric assemblage is small, and consists largely of Middle/Late Iron Age pottery and associated animal bone from Area 500. Nevertheless, the pottery assemblage is stratigraphically secure and contains a number of single-vessel deposits. Comparable material is not especially common in the immediate area. As such, the assemblage would repay further analysis, allowing comparison with Peacock's (1969) fabric types for Middle Iron Age Glastonbury Wares. This would perhaps elucidate the chronological position of the assemblage, allow the more precise identification of raw material sources, and determine the site's place in the local Middle-Late Iron Age social and economic environment.

8.3.2 The faunal assemblage, on the other hand, yielded only 27 bones identifiable to species, and its potential is therefore severely limited. Other finds from Iron Age contexts are extremely scanty; comprising a handful of fragments of undiagnostic fired clay and unworked stone. A saddle quern from Area 501 is also probably Iron Age in origin, but may have been reused as building material during the Romano-British period. These allow little or no interpretation of the nature of occupation in Area 500, or the surrounding areas of the Site.

#### *Romano-British*

8.3.3 The artefactual assemblage from Area 501 appears to consist almost entirely of domestic refuse (pottery, animal bone, metalwork), with some structural material (stone). The presence of redeposited human remains of interest but not entirely unexpected in the context; there are also 'unusual' deposits of animal bone, including sheep remains associated with one of the deposits of human bone. There is a hint of craft/industrial activity in the form of possible salt-working ceramics (briquetage), but this evidence is by no means definitive. There are also two bone-working blanks, although the final products are unknown. Personal items (metal and shale jewellery, leather shoe) are very scarce, and apart from the bone-working and possible salt-working evidence, there is little that can be ascertained about site function (there are no grain-processing or textile-working items).

8.3.4 In terms of sources of supply, the high proportion of south-east Dorset Black Burnished ware (BB1) amongst the ceramic assemblage is of interest, but the proximity of the Site to Crandon Bridge (identified as a possible trans-shipment port for goods heading to south Wales and the west coast of Britain) and Combwich (another port) should be noted. Other major sources for the pottery include Norton Fitzwarren for the greywares, while the finewares were supplied by the Oxfordshire (including mortaria) and Severn Valley production centres. Building material appears to have been sourced entirely locally, largely from material washed along the coast.

8.3.5 The faunal assemblage from Area 501 is of regional significance and, although limited due to small sample size, does at least provide evidence for a pastoral economy and animal husbandry in a marginal environment.

#### *Medieval/Post-medieval*

8.3.6 Medieval and post-medieval material was concentrated in Areas 502 and 503. The assemblage consists largely of pottery and animal bone; other material types are limited in

quantity and the amount of functional evidence that they provide. Domestic equipment is represented by one definite whetstone (and a second possible whetstone or rubber), two iron knives and a pewter spoon. The pottery suggests that Area 502 was probably abandoned by end of 13th century, while 503 continued, possibly with continuous occupation into the early post-med, but was then abandoned by mid-17th century.

- 8.3.7 Some functional evidence is suggested by the late medieval/post-medieval ceramic assemblage, but as only one component of the whole domestic assemblage, this should be treated with caution. A predominance of open forms could suggest a use in dairying (as cream pans, etc). The scarcity of cooking wares at the same period (e.g. pipkins, skillets) may be explained by the increased use of metal vessels (which could be recycled, and as such do not tend to survive in the archaeological record). Some possible craft activity was detected in the faunal assemblage from in Area 503 (possible light tanning waste).
- 8.3.8 Pottery was supplied from the local area, supplemented during the medieval period by Bristol, Donyatt, and possibly other sources. In the post-medieval period, Donyatt and other West Country coarseware production centres were the main suppliers (e.g. Nether Stowey).
- 8.3.9 An Anglo-French coin and a lead pilgrim's ampulla provide a tantalising hint of long-distance connections in the late medieval period (did one of the inhabitants take part in a pilgrimage to a foreign shrine?), as do the three Venetian glass beads in the 16th/17th. Overseas trade in a variety of goods passed through Bridgwater, and both Steart and Stolford provided landing places.
- 8.3.10 The medieval/early post-medieval faunal assemblages from Areas 502 and 503 are of regional significance and again provide evidence for a pastoral economy in a marginal environment. Marine shell provided very minor supplement to diet.

#### **8.4 Palaeoenvironmental**

- 8.4.1 The environmental samples provide a wide range of potential, from the examination of agricultural and subsistence from charred plant remains for the Middle/Late Iron Age, late Romano-British period and medieval period, along with the selection of wood some woodland and potentially some information on composition/management from these same sources.
- 8.4.2 The environmental sequences comprising monolith from which potentially pollen and diatom work can be conducted, along with column samples for molluscs, ostracods, have some potential to examine local vegetation, and also localised changes within hydrology, in particular marine influence.
- 8.4.3 Such potential for the palaeochannels is limited to the Later Iron Age and Romano-British period. Potentially some of these sequences may cover wider periods and/or extend into earlier periods. However, their potential in part depends on their dating, which is to some extent constrained by the archaeological material within the spreads. The relationship of these spreads to the sampled sequence then needs to be firmly established in order for such potential to be reached, and/or further dating may be required.
- 8.4.4 The sampled sequences from the ditches are more tightly constrained and cover the Romano-British and medieval periods. These sequences can potentially provide information on the local vegetation and hydrology and in turn perhaps elucidate on local landuse during these two periods during which the site was occupied. The sampled



sequences from the ditches are more tightly constrained and cover the Romano-British and medieval periods. These sequences can potentially provide information on the local vegetation and hydrology and in turn perhaps elucidate on local landuse during these two periods during which the site was occupied.

*Charred plant remains*

Middle/Late Iron Age to Early Romano-British

- 8.4.5 Although there were assemblages of charred cereal grain, chaff and weed seeds from this earliest phase of activity on the site, there is only limited potential for ascertaining a little information on the nature of the site, the local environment and crop husbandry and local agricultural practices due to the low abundance of charred plant remains preserved. Therefore of the 12 samples examined, only four samples are thought worthy of further analysis to provide some continuity at the site, albeit limited, from this earliest phase of activity.

Late Romano-British

- 8.4.6 Of the 13 samples from this phase 10 produced assemblages worth further investigation. Although preservation was variable, much of the grain present should be identifiable to hulled wheat and some of the better preserved wheat glume bases and spikelet forks are likely to be determined as spelt. There was also evidence for silicification in three of the ditch fills, which may suggest these remains originated from ovens or hearths. A small but regularly occurring, range of arable weeds included some of the taxa found in the earlier phase with the addition of cleavers, clover/medick and black bindweed.

Medieval

- 8.4.7 Quantities of charred cereal grain were generally higher in the features associated with the medieval phase of activity and nine of the 11 samples assessed are worth full analysis. Grains of wheat are again dominant although they are now from a free-threshing variety, with the only chaff preserved silicified wheat/barley awns in two samples. There are also up to 200 weeds in some samples, again with many of the same taxa as the earlier phases, with the addition of stinking chamomile.

Post-medieval

- 8.4.8 Only one pit fill (context **20505**/sample 200) from the post-medieval phase which included wheat grain with some weed taxa would warrant further examination, but as a single sample will not add significantly to the understanding of the Site.

Summary

- 8.4.9 All samples recommended for full analysis will provide evidence for the range of cultivated crops and information on the local site economy from Middle/Late Iron Age and Romano-British through to the medieval period. It is hoped that the plant assemblages will provide evidence on the nature of the site, the local landscape and local agricultural practices and crop husbandry and may help to determine whether occupation was seasonal.
- 8.4.10 These assemblages can be compared with plant assemblages from other sites in the area, such as those from the Iron Age, Romano-British and medieval deposits at Huntworth (Stevens 2008), the Iron Age and Romano-British deposits at RNAS Yeovilton (Pelling 2005) and the medieval deposits at Shapwick (Straker *et al.* 2007). Further comparisons could be made with the remains from a number of settlements on the North Somerset Levels, such as at Kenn Moor, Banwell Moor and Puxton (Rippon 2000b), as well as on the Avonmouth levels (Masser *et al.* 2005; Ritchie *et al.* 2007; Insole 1997).

#### *Wood charcoal*

- 8.4.11 Detailed analysis of the wood charcoal from suitable samples would provide information on the management and exploitation of local woodland resources around the settlement and whether this changed over time. However, such potential is limited from the earliest phase of the site, but is higher for the Romano-British period and medieval period where suitable charcoal-rich deposits were identified.

#### *Waterlogged wood and plant remains*

- 8.4.12 Several of the Romano-British ditch fills, mainly in Area E, also contain potentially waterlogged remains mainly of aquatic species duckweed (*Lemna*) and water crowfoot (*Ranunculus* subg. *Batrachium*), which may represent the *in situ* flora of these features and may hence provide information on water conditions in these features, to complement evidence provided by snails.
- 8.4.13 As above several of the medieval samples contain potentially waterlogged seeds of a limited range of species, predominately aquatics. Those associated with the medieval latrine 21087 appear to have little potential to examine the diet, beyond the presence of bramble. The others as with the material above have some limited potential to look at vegetation within and along the edges of the ditches, however, given the limited range of species and preservation, such potential is also very limited.
- 8.4.14 As the waterlogged wood material from the recovered assemblages have been identified as fully and as far as possible these have no further potential.

#### *Land and fresh/brackish water molluscs*

- 8.4.15 Detailed analysis of a selection of the molluscan assemblages has the potential to provide information on the nature of the local environment, both terrestrial and aquatic, across the site and how this changed over time. This analysis should assist in determining the likely environment reflected by the brackish water element, such as occasional marine inundations, a more lagoon type environment or possibly salt marsh, and that by the fresh water species, such as permanently flowing well vegetated drainage ditches, seasonal flooding or possibly marshy grassland.
- 8.4.16 These assemblages could be compared with other mollusc assemblages from the North Somerset Levels, such as Kenn Moor, Banwell Moor and Puxton (Rippon 2000b), and from the Avonmouth Levels (Ritchie *et al.* 2007; Gardiner *et al.* 2002).

#### *Sediments*

- 8.4.17 The sediments have little intrinsic potential *per se*, beyond the need that they be retained for subsampling.

#### *Pollen*

- 8.4.18 Assessment and analysis of the pollen has the potential to elucidate local and regional vegetation history, land use and also economy and potentially diet from the latrine samples.

#### *Scientific dating*

- 8.4.19 It is proposed to carry out a maximum of 14 radiocarbon dates, spread between the palaeochannels (20153 and 20707) and Middle/Late Iron Age deposits in Area 500. All dates will be calibrated using the program OxCal 4.1.7 (Bronk Ramsey 1995; 2001) against the IntCal09 Northern Hemisphere radiocarbon curve (Reimer *et al.* 2009), with

the calibrated dates quoted in the form recommended by Mook (1986) with the end point rounded outwards to 10 years.

## 9 UPDATED AIMS AND PROPOSALS FOR FURTHER WORK

### 9.1 Introduction

9.1.1 The aims for the analysis and publication phase are as follows:

- To carry out an agreed programme of post-excavation analysis and reporting following the procedures set out in *Management of Archaeological Projects 2* (English Heritage 1991).
- To produce a report on the findings, presenting the results of fieldwork, with specialist reports on finds and environmental material, and an interpretation and thematic discussion of them, for dissemination as an academic publication commensurate with the significance of the data recovered.
- To ensure the long-term curation of the data recovered and its dissemination in a form appropriate to its significance and academic value.

### 9.2 Research themes

9.2.1 No formal research aims have as yet been set for the project. Following the assessment of the potential of the evidence recovered during the current fieldwork, against the background of the earlier heritage assessments, geoarchaeological work and other archaeological fieldwork at Steart Point, the following research themes have been formulated, with reference to the regional research agenda (Webster 2008).

*Theme 1: Exploitation of a marginal landscape from the later prehistoric to the post-medieval period*

9.2.2 The evidence from Steart Point provides an opportunity to examine the changing nature of the exploitation of this marginal coastal landscape through time, from sporadic use in the Iron Age, through to the permanent settlement, formal land divisions and pastoral economy of later periods. Climate change and sea level changes, and their effects, can be glimpsed through the environmental evidence (Webster 2008, 285, research aim 23).

*Theme 2: The nature of Iron Age activity*

9.2.3 Evidence for prehistoric activity at Steart Point is slight, but the identification of at least one site of perhaps seasonal activity in the Iron Age has added significantly to our knowledge of the area at this period. The precise nature of the Iron Age settlement in Area 500 should be explored further, and its seasonality (or otherwise) confirmed.

*Theme 3: Romano-British rural settlement*

9.2.4 Previously, archaeological fieldwork in the region has tended to concentrate on higher status settlement in the Romano-British period (e.g. villas) and, although advances have been made recently in the study of non-villa settlement, the record is still patchy (Webster 2008, 286, research aim 29). The evidence from Steart Point, particularly the settlement foci at Area 501 and in Area E, can help to address this, and to explore the environment and economy. Comparisons can be made with evidence from elsewhere in the North Somerset Levels, with particular reference to land reclamation and sea defences at this period (e.g. Rippon 1997; 2000a; 2000b).

*Theme 4: The role of the 'moated' sites in the medieval settlement heirarchy*

- 9.2.5 As for the RomanoBritish period, rural settlement outside the known medieval villages is as yet imperfectly understood. The examination of the 'moated' sites at Steart Point allows exploration of one aspect of rural settlement in this landscape, against a background of increasing regularisation of drainage systems and land reclamation. At least one of the moated sites (in Area 502) appears to have been abandoned by the late medieval period, and the reasons for this abandonment can be explored (climate change and/or sea level changes, Black Death, etc). The nature of the pastoral economy can be investigated through the faunal remains and environmental data, while certain artefactual classes (e.g. pottery) provide evidence for aspects of trade and production (Webster 2008, 290-1, research aims 42, 47).

*Theme 5: The medieval to post-medieval transition*

- 9.2.6 Although at least one medieval site was abandoned before the post-medieval period, one other appears to have continued in occupation (Area 503); an attempt will be made to confirm (or otherwise) this apparent continuity, primarily through analysis of the ceramic assemblage (Webster 2008, 279-80, research aim 10). The recovery of two 'exotic' artefacts from the late medieval period from Area 503 (Anglo-Gallic coin and pilgrim's souvenir) gives a 'keyhole' glimpse into social interactions at this period.

*Theme 6: Post-medieval settlement and economy*

- 9.2.7 The occupation of Area 503 continued probably to the mid-17th century, in a period of apparent stagnation in the improvement of the Somerset Levels. Again, the reasons for the abandonment of this settlement can be explored. Continuity of economic regimes from the medieval period are apparent, but long-distance trading connections are represented through the recovery of three Venetian glass beads; this was clearly a settlement with some pretensions to gentility.

### 9.3 Recommendations

*Stratigraphic sequence*

- 9.3.1 The stratigraphic sequence has been broadly established during the assessment phase. Further analysis of selected finds and environmental samples may refine the sequence, although this is unlikely to have a significant effect on the existing chronological framework. More detailed analysis of the stratigraphic sequence in selected areas will help to refine and confirm specific relationships.

- *The ongoing watching brief is not anticipated to produce significant amounts of new data, but allowance will be made for incorporation of any new stratigraphic data.*
- *The revised stratigraphic information will be circulated to the project team.*
- *Phase plans will be refined, selected digitising to enhance the original site plan will be undertaken and the database will be enhanced as necessary.*
- *Once the broad sequence of the site has been established, the site narrative will be written. This will draw on the finds and environmental analysis, incorporating relevant information as necessary.*
- *Selected plans, sections and photographs will be prepared for illustration.*

*Documentary research*

- 9.3.2 Previous desk-based assessment (Wessex Archaeology 2008; 2009) has established the existence of a range of cartographic sources for the area (including tithe and estate

maps), and has summarised the archaeological and historical background to the Site. Discussion of the medieval and post-medieval occupation of the Site will be further enhanced by targeted documentary research (e.g. printed, manuscript, cartographic sources). Cartographic sources will give a visual sense of the area, and its changes through time, while the owners and occupiers of properties can be traced through deeds, leases and census returns, for example.

#### *Finds*

- 9.3.3 As for the stratigraphic sequence, significant quantities of additional artefacts are not anticipated from the ongoing watching brief. Proposals and time allowances given in this report allow for the incorporation of any new data.

#### Pottery

- 9.3.4 Full fabric and form analysis is proposed for the Middle/Late Iron Age assemblage, supported by a well focused programme of petrological analysis (thin section). This will enable discussion of the potential sources or source areas of the various fabrics, with reference to existing work on the sources of Iron Age pottery in the region (e.g. Peacock 1969; Woodward 1989).

- 9.3.5 The Roman pottery assemblage has already been recorded to a basic archive level, but some enhancement of the records will be necessary to ensure that the whole assemblage conforms to the recommended minimum archive level for Roman pottery (Darling 1994), for example, by ensuring that the greywares (and subdivisions of) have been recorded consistently across the assemblage. Beyond this, given that there are a very limited number of context groups (combined within cuts and feature Groups) that exceed 25 sherds (9 cuts and 6 Groups), only a very limited programme of further analysis (fabric and form) of these contexts is proposed. A report will be prepared for publication, based on the completed assessment, but with reference to the enhanced records and analysis, and to other comparative assemblages in the region. The intra-site distribution of the pottery will be considered for Area 501, within the stratigraphic framework for this site, and brief comments will be offered on the spatial groups of pottery from other areas of the Site. A very limited number of vessels will be illustrated, focusing on good feature groups, supplemented by any vessels of intrinsic interest (maximum 25 vessels).

- 9.3.6 Full fabric and form analysis is proposed for the medieval/early post-medieval assemblage. External specialist advice will be sought for the local ceramic sequence and any comparable type series; a limited programme of thin-sectioning, combined with geological identification, will be undertaken for the medieval coarsewares in order to inform a consideration of potential sources/source areas. Bristol products will be correlated as far as possible with the Bristol type series (e.g. Ponsford 1988; 1998). A report will be prepared for publication, describing the range of wares and vessel forms present, and discussing these within the local and regional ceramic framework, highlighting chronological trends, and any possible functional bias, and comparing and contrasting the assemblages from Areas 502 and 503. A representative sample of the more diagnostic vessel forms from Areas 502 and 503 will be illustrated.

#### Glass beads

- 9.3.7 Parallels for the three Venetian polychrome beads will be sought, and the dating refined if possible. One bead will be drawn as a representative example.

#### Metalwork

- 9.3.8 Following X-radiography (see below, **section 10.3**), the catalogue of metal objects will be updated as appropriate. Selected objects will be submitted for specialist cleaning to aid identification (three copper alloy brooches; two iron knives).
- 9.3.9 A short report will be prepared on the three Romano-British copper alloy brooches, commenting on their affinities and chronology. All three will be illustrated.
- 9.3.10 A short report will be prepared on the lead ampulla and the pewter spoon, commenting on their chronology, and the potential significance of the ampulla on this particular site. Both objects will be illustrated.
- 9.3.11 No further analysis is proposed for the medieval/post-medieval copper alloy buckle, or for the iron objects, although details of the objects may be incorporated in the publication text where appropriate. None of these objects warrants illustration.

#### Shale and leather

- 9.3.12 The shale armband warrants no further analysis or illustration, but will require conservation (see below, **section 10.3**).
- 9.3.13 The leather hobnailed shoe will be excavated from its soil block under controlled conditions, and will be cleaned by a specialist conservator. A brief descriptive report will be prepared; if possible, the shoe will be illustrated (or photographed). The shoe will require conservation (see below, **section 10.3**).

#### Worked Bone

- 9.3.14 No further analysis is proposed for the worked bone objects, but a short report will be prepared for publication, based on the information presented in this report. All three objects will be illustrated (point, needle, handle).

#### Human Bone

- 9.3.15 No further analysis is proposed, unless more human bone is recovered from the animal bone assemblage, in which case the material should be analysed and the findings incorporated into the final report along with the information presented in this report.

#### Animal Bone

- 9.3.16 Full analysis of the Romano-British and medieval animal bone to include a detailed record of the information quantified in **Table A3.4**. The results of the analysis will be summarised in a report that characterises the assemblage and considers the above points.
- 9.3.17 No further analysis of the Middle/Late Iron Age, post-medieval and modern animal bone assemblages is necessary. Basic information (i.e. species) recorded for this assessment should be summarised in the report and alluded to where relevant (e.g. where it demonstrates continuity in farming practices with the main periods).

#### Other material types

- 9.3.18 No further analysis is proposed for any of the remaining categories (CBM, fired clay, clay pipes, vessel glass, slag, coins, marine shell), although details of these finds may be incorporated in the publication text where appropriate. None of these finds warrants illustration.

*Palaeoenvironmental*

Charred plant remains

- 9.3.19 Based on the results of the assessment it is recommended that 23 of the 41 samples examined have the potential for full analysis as follows.

Phase	Number of samples for analysis
Middle/Late Iron Age to Early Romano-British	4
?Late Romano-British/Late Romano-British	10
Medieval	9

- 9.3.20 All identifiable charred plant macrofossils will be extracted from the 2 and 1mm residues together with the flot. Identification will be undertaken using stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Stace (1997) and with reference to modern reference collections where appropriate, quantified and the results tabulated.
- 9.3.21 The samples proposed for analysis are indicated with a “P” in the analysis column in **Table A4.1**.

Wood charcoal

- 9.3.22 It is proposed to analyse wood charcoal from five samples. These samples are from the M/LIA spread **20017**, Romano-British ditches **32108** and **32743** both in Area E, the medieval gully **21282** and latrine **21165**.
- 9.3.23 Identifiable charcoal will be extracted from the 2mm residue together and the flot (>2mm). Larger richer samples will be sub-sampled. Fragments will be prepared for identification according to the standard methodology of Leney and Casteel (1975, see also Gale and Cutler 2000). Charcoal pieces will be fractured with a razor blade so that three planes can be seen: transverse section (TS), radial longitudinal section (RL) and tangential longitudinal section (TL). They will then be examined under bi-focal epi-illuminated microscopy at magnifications of x50, x100 and x400 using a Kyowa ME-LUX2 microscope. Identification will be undertaken according to the anatomical characteristics described by Schweingruber (1990) and Butterfield and Meylan (1980). Identification will be to the lowest taxonomic level possible, usually that of genus and nomenclature according to Stace (1997), individual taxon (mature and twig) will be separated, quantified, and the results tabulated.
- 9.3.24 The samples proposed for charcoal analysis are indicated with a ‘C’ in the analysis column in **Table A4.1**.

Waterlogged wood and plant remains

- 9.3.25 No further work is required on the wood or waterlogged plant remains reported here; however, the results from this assessment should be incorporated within the text for the site, especially those associated with sequences which are selected for more detail analysis.

Land and fresh/brackish water molluscs

- 9.3.26 It is proposed to analyse 11 samples for molluscs, sample series 59 from palaeochannel **20153**, sample 53 from palaeochannel **20139**, sample series 305 from ditch **21166**, sample 332 from ditch **21412**, and bulk sample 405 from ditch **32743**.

9.3.27 Analysis of selected samples involves the extraction of apical and diagnostic fragments from both flots and residue. The recovered shells are identified and quantified using stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Kerney (1999) and with reference to modern reference collections where appropriate. The results are tabulated and species diversity indices calculated (Shannon index, Broullion index, Delta 2 index and Delta 4 index). Mollusc histograms are produced where applicable.

#### Sediments

9.3.28 The monolith samples should be subsampled, and are recommended for discard once analysis is completed.

#### Pollen

9.3.29 Two small samples from potential cess deposits, context **20188** in stone-lined latrine **21165** and context **21160** in ditch **21157**, should be assessed and potentially analysed for pollen.

9.3.30 Samples will be processed using standard procedures (Moore *et al.* 1991). Preparation will involve the following treatment: 20mls of 10% KOH at 80°C for 30 minutes; 20mls of 60% HF (80°C for 2 hours); 15 mls of acetolysis mix (80°C for 3 minutes); stained in 0.2% aqueous solution of safranin and mounted on glass microscope slides in silicone oil following dehydration with tert-butyl alcohol.

9.3.31 For assessment, counts of 100–150 Total Land Pollen (TLP – excluding aquatics and pteridophytes) will be made for each level and calculated as a percentage of the pollen sum. Identification was made using a Nikon SE and Nikon Eclipse E400 at x400 magnification. Pollen nomenclature will be based on Bennett (1994; Bennett *et al.*, 1994), except for grasses which follow Küster (1988), with plant nomenclature following Stace (1997). Pollen diagrams will be drawn using Tilia v 2.0.2 (Grimm 1991). At analysis sampling will follow closer intervals than those used in the assessment. Extended counting (aiming for 400 TLP).

## **10 STORAGE AND CURATION**

### **10.1 Museum**

10.1.1 It is recommended that the project archive resulting from the excavation be deposited with Somerset County Museum. The Museum has agreed in principle to accept the project archive on completion of the project, under the accession code **TTNCM 105/2011**. Deposition of the finds with the Museum will only be carried out with the full agreement of the landowner.

### **10.2 Preparation of Archive**

10.2.1 The complete site archive, which will include paper records, photographic records, graphics, artefacts and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Somerset County Museum, and in general following nationally recommended guidelines (Walker 1990; SMA 1995; Richards and Robinson 2000; Brown 2011).

10.2.2 All archive elements will be marked with both site and accession codes, and a full index will be prepared. The archive comprises the following:



- 27 cardboard boxes or airtight plastic boxes of artefacts & ecofacts, ordered by material type
- 8 files/document cases of paper records & A3/A4 graphics
- 30 A1 graphics
- analogue photographs
- digital data: databases, spreadsheets, word-processed files, photographs

### 10.3 Conservation

- 10.3.1 No immediate conservation requirements were noted in the field. Finds which have been identified as of unstable condition and therefore potentially in need of further conservation treatment comprise the metal objects, the shale armlet, and the leather shoe.
- 10.3.2 Metal objects will be X-radiographed, as a basic record, to aid identification, and to inform further conservation treatment. A maximum of five objects (three brooches, two knives) are likely to be selected for further conservation treatment, involving investigative cleaning and stabilisation. This selection is based on a combination of provenance and intrinsic interest.
- 10.3.3 The shale armlet is currently stored wet and refrigerated, but will require freeze-drying for long-term curation.
- 10.3.4 The leather shoe is still in the soil block in which it was lifted on site. It will require careful excavation and cleaning, and then freeze-drying for long-term curation.

### 10.4 Discard Policy

- 10.4.1 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. In this instance, obviously modern material (glass, ceramic building material), and the clay tobacco pipe (all plain stem fragments) have already been discarded. It is anticipated that the unworked stone will also be selectively discarded following identification of stone types, retaining any non-local types only. All discard of artefacts will be fully documented in the project archive.
- 10.4.2 The discard of environmental remains and samples follows the guidelines laid out in Wessex Archaeology's 'Archive and Dispersal Policy for Environmental Remains and Samples'. The archive policy conforms with nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002) and is available upon request.

### 10.5 Copyright

- 10.5.1 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 recipient 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 with the Copyright and Related Rights regulations 2003.

## 10.6 Security Copy

- 10.6.1 In line with current best practice, on completion of the project a security copy of the paper records will be prepared, in the form of microfilm. The master jackets and one diazo copy of the microfilm will be submitted to the National Archaeological Record (English Heritage), a second diazo copy will be deposited with the paper records, and a third diazo copy will be retained by Wessex Archaeology. Alternatively, the security copy may be in the form of a pdf file.

## 11 RESOURCES AND PROGRAMME

### 11.1 Introduction

- 11.1.1 A report on the results of the post-excavation analysis work will be produced, with additional discussion on the wider significance of the results. It is proposed that the report will take the form of a monograph, to be published by Wessex Archaeology.
- 11.1.2 There is a desire to see the results of the current fieldwork published together with the results of fieldwork on adjacent land, carried out under the aegis of the Port of Bristol Authority, if the time frame permits. This fieldwork for the latter scheme is still at a relatively early stage, and it is therefore considered unlikely that this will be possible without considerable delay to the proposed Steart Point publication programme. Proposals given here, therefore, are for a stand-alone publication covering only Areas D and E, although reference will be made to any available results for the adjacent fieldwork.

### 11.2 Proposed publication synopsis

- 11.2.1 It is proposed that the publication monograph will present a fully integrated account of the fieldwork results chronologically, as presented in this assessment report. The results of the current fieldwork along with earlier historical assessments will be discussed in the wider context of landscape developments of the Severn Estuary Levels and other wetland landscape where appropriate.
- 11.2.2 The following outlines the proposed structure of the monograph, with provisional word lengths and figure/table counts.

Section	Estimated word length	Figures & plates	Tables
<b>Preliminaries</b>			
Summary	500		
Acknowledgements	500		
<b>Introduction</b>			
Project background	2000	3	
Geology, topography, land-use	1000	1	
Archaeological background	2000	1	
Methodology	500	1	
<b>Results</b>			
<i>Archaeological results</i>			
Prehistoric	2000	8	
Romano-British	3500	10	
Medieval	3500	12	
Post-medieval	2500	10	

<i>The finds</i>			
Prehistoric pottery	2000	1	1
Romano-British pottery	3000	2	2
Medieval and post-medieval pottery	3000	3	3
Glass beads	250	1	
Metalwork	500	1	
Leather	250	1	
Worked bone	250	1	
Animal bone	2500	1	4
<i>Palaeoenvironmental evidence</i>			
Charred plant remains	2500		2
Wood charcoal	1000		1
Molluscs	2000		1
Sediments	2000	1	1
Pollen	500	2	
<b>Documentary research</b>	3000	6	
<b>Discussion</b>	5000	4	
Bibliography	6000		
<b>Total</b>	<b>51,750</b>	<b>70</b>	<b>17</b>

### 11.3 Management structure

- 11.3.1 Wessex Archaeology operates a project management system. The team will be headed by the Project Manager, in this instance Lorraine Mepham, who will assume ultimate responsibility for the implementation and execution of the project specification as outlined in the Updated Project Design, and the achievement of performance targets, be they academic, budgetary or scheduled.
- 11.3.2 The Manager may delegate specific aspects of the project to other key staff, who both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with external consultants and specialists who are contributing to the publication report, and the museum named as the recipient of the project archive. The Manager will have a major input into how the publication report is written, and will define and control the scope and form of the post-excavation programme.

### 11.4 Performance monitoring and quality standards

- 11.4.1 The Project Manager (Lorraine Mepham) will be assisted by the Quality and Publications Manager (Philippa Bradley), who will help to ensure that the report meets internal quality standards as defined in Wessex Archaeology's guidelines.

### 11.5 Designated project team

- 11.5.1 The team consists primarily of internal Wessex Archaeology staff. The post-excavation team will be managed by Lorraine Mepham (project programme). The following WA staff are scheduled to undertake the work as outlined in the task list and the programme. The lead author will be Chris Ellis. Lorraine Mepham, Chris Ellis and Chris Stevens will be responsible for the compilation of the volume. The report will be peer reviewed by an external referee.

11.5.2 Internal and external finds and environmental analysis, conservation work and scientific analyses will be coordinated by Alistair Barclay, Lorraine Mephram and Chris Stevens.

## **11.6 Personnel**

11.6.1 It is currently proposed that the following Wessex Archaeology core staff will be involved in the Programme of post-excavation analysis:

**Table 5: Post excavation analysis personnel**

<b>Project management &amp; coordination</b>	<b>Project role</b>
Lorraine Mephram	Project Manager (Analysis and reporting)
Andy Crockett	Project Manager (fieldwork - advice and consultation)
Lorrain Higbee	Senior Project Officer – main author
Linda Coleman	Graphics Office management
Jens Neuberger	IT design and support
Paul Baggaley	Environmental management
Alistair Barclay	Finds management
<b>Research and publication</b>	
Lorrain Higbee	Lead author
TBC	Lead illustrator
<b>Specialist Services WA</b>	
Catherine Barnett	Wood charcoal
Philippa Bradley	Publication management
Kirsten Egging Dinwiddy	Human bone
Lorrain Higbee	Animal bone/worked bone
Matt Leivers	Prehistoric pottery
Rachael Seager Smith	Roman pottery
TBC (possibly M Grant, now external)	Pollen
Lorraine Mephram	Medieval & post-medieval pottery
Sue Nelson	Finds archiving
Karen Nichols	Publication design
David Norcott	Soil sediments
Sarah Wyles	Charred plant remains
Lynn Wootten	Conservation
Sarah Wyles	Molluscs
TBC	Records management supervisor

## 11.7 Task List

11.7.1 **Table 6** below presents the list of tasks required within the proposed programme to produce the monograph, together with the necessary resources. Proposed personnel and their qualifications are listed.

**Table 6: Task list**

<b>Task</b>	<b>Steart Point</b>	<b>Days</b>	<b>Staff</b>	<b>Org</b>
	<b>Management/ Support</b>			
1	Project management	10.00	L Mephram	WA
2	Finds management	1.00	A Barclay	WA
3	Environmental management	1.00	P Baggaley	WA
4	Graphics management	1.00	L Coleman	WA
	<b>Pre-analysis</b>			
5	Sample sorting and preparation (incl. molluscs)	10.00	S Wyles	WA
6	Complete digitising	5.00	Illustrator	WA
7	Project meetings	2.00	All	WA

Task	Steart Point	Days	Staff	Org
8	Check phasing/stratigraphic analysis, update site database	15.00	L Higbee	WA
9	X-radiography of metal objects	1.00	L Wootten	Ext
10	Conservation (metal objects)	2.50	WCC/L Wootten	Ext/WA
11	Excavation of leather shoe from soil block	2.00	L Wootten	WA
12	Conservation (freeze-drying) of shale and leather	1.00	WCC	Ext
13	Background research	2.00	L Higbee	WA
14	Documentary research	5.00	J Chandler	Ext
	<b>Finds</b>			
15	Prehistoric pottery	4.00	M Leivers	WA
16	Romano-British pottery	7.00	R Seager Smith	WA
17	Medieval & post-medieval pottery	10.00	L Mephram	WA
18	Medieval & post medieval pottery – advice	1.00	J Allan	Ext
19	Petrological analysis (prehistoric & medieval pot)	8.00	P Quinn	Ext
20	Worked stone	1.00	R Seager Smith	WA
21	Glass beads	0.50	L Mephram	WA
22	Metalwork	1.00	R Seager Smith	WA
23	Leather shoe	0.50	Q Mould	Ext
24	Animal bone	10.00	L Higbee	WA
25	Finds drawing briefs, drawing corrections	2.50	All	WA
26	Illustrations: finds	10.00	Illustrator	WA
	<b>Environmental</b>			
27	Extraction of charred plants and wood charcoal (24 samples)	6.00	S Wyles	WA
28	Processing of 7 mollusc samples and extraction of 15 mollusc samples	7.00	S Wyles	WA
29	Commissioning analysis and contracts	1.00	S Wyles	WA
30	Pollen slide preparation (2 samples)	2.00	Kingston Univ.	Ext
31	Radiocarbon dating (including sample selection and preparation)	14.00	C14	Ext
32	Radiocarbon report	3.00	A Barclay	WA
33	Analysis and reporting of charred plant remains (24 samples)	14.00	S Wyles	WA
34	Analysis and reporting of wood charcoal (5 samples)	5.00	C Barnett	WA
35	Analysis and reporting of molluscs (10 samples)	10.00	S Wyles	WA
36	Pollen assessment (2 samples)	1.00	M Grant	WA
37	Pollen analysis and reporting (2 samples; contingency)	2.00	M Grant	WA
38	Overview and palaeoenvironmental summary	4.00	S Wyles	WA
39	Management, monitoring, editing text	2.00	D Norcott	WA
40	Environmental figures	1.00	Illustrator	WA
	<b>Publication</b>			
41	Project background	1.00	L Higbee	WA
42	Geology, topography, land-use	1.00	L Higbee	WA
43	Archaeological background	1.00	L Higbee	WA
44	Site descriptions	5.00	L Higbee	WA
45	Discussion and synthesis	5.00	L Higbee	WA

Task	Steart Point	Days	Staff	Org
46	Discussion and synthesis	10.00	L Mepham	WA
47	Preparation of publication photographs	2.00	L Higbee	WA
48	Drawing briefs, drawing corrections	2.00	L Higbee	WA
49	Site illustrations	20.00	Illustrator	WA
50	Captions (figs and pls)	1.00	L Higbee	WA
51	Check and compile bibliography	1.00	L Higbee	WA
52	Check and compile bibliography	1.00	L Mepham	WA
53	Compile report	2.00	L Mepham	WA
54	Compile figures	2.00	Illustrator	WA
	<b>Editing</b>			
55	Edit report	5.00	L Mepham	WA
56	Review report	5.00	P Bradley	WA
57	External referee	2.00	Ext specialist	Ext
58	Referee's comments	1.00	All	WA
	<b>Production</b>			
59	Co-ordinate production and printer liaison	0.50	P Bradley	WA
60	Copy edit report	5.00	P Bradley	WA
61	Copy editor's corrections: text	1.00	All	WA
62	Copy editor's corrections: illustrations	5.00	Illustrator	WA
63	Typeset and design	10.00	K Nichols	WA
64	Pursue copyright agreements	1.00	P Bradley	WA
65	Proofs check	1.00	All	WA
66	Corrections	1.00	All	WA
67	Corrections	1.00	Ext specialist	Ext
68	Printing	5.00	Ext specialist	Ext
	<b>Archive</b>			
69	Environmental archiving	1.00	S Wyles	WA
70	Finds archiving	0.50	S Nelson	WA
71	Archive preparation	2.00	L Higbee	WA
72	Microfilm jobsheets and checking	2.00	Archive supervisor	WA
73	Microfilm paper records	1.00	Marathon	Ext
74	Archive deposition	0.50	Archive supervisor	WA

## 11.8 Programme

11.8.1 An outline programme for the analysis and publication proposed in this report is attached (**Appendix 6**); note that this shows 'task windows' rather than actual task allocated days. This outline programme extends for approximately 20 months from the proposed start date of 15<sup>th</sup> October 2012.

11.8.2 The forward programme will be confirmed upon acceptance of the assessment report.

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## 13 APPENDICES

### 13.1 Appendix 1: Evaluation Trench Summary

Trench No.	Archaeology
1	TR during fieldwalking survey. No archaeology.
2	TR during fieldwalking survey. No archaeology.
3	None
4	None
5	None
6	None
7	None
8	In Area A Geophysics Area (includes Area 503). STRAIGHT TO EXCAVATION
9	In Area A Geophysics Area (includes Area 503). STRAIGHT TO EXCAVATION
10	In Area A Geophysics Area (includes Area 503). STRAIGHT TO EXCAVATION
11	In Area A Geophysics Area (includes Area 503). STRAIGHT TO EXCAVATION
12	x3 P/Med land drains.
13	P/Med land drain.
14	x3 P/Med land drains.
15	x2 P/Med land drains.
16	x2 P/Med land drains.
17	None
18	x2 P/Med land drains.
19	x3 P/Med land drains.
20	x2 P/Med land drains.
21	P/Med dew pond (c. 15m in size). Shows on WWII AP of plot.
22	P/Med land drain.
23	None
24	Part of moated site 'X' from WWII AP. NE/SW Medieval ditch and pit (11th - 14th cent.) Area of stone rubble in the topsoil mapped. Later part of Area 502.
25	P/Med land drain.
26	x2 P/Med land drains.
27	x3 P/Med land drains.
28	P/Med land drain.
29	x3 P/Med land drains.
30	x3 P/Med land drains.
31	P/Med land drain.
32	x2 P/Med land drains.
33	P/Med land drain.
34	None
35	None
36	None
37	None
38	None
39	None
40	None
41	P/Med land drain.

Trench No.	Archaeology
42	P/Med land drain.
43	P/Med land drain.
44	None
45	None
46	None
47	None
48	x2 P/Med land drains.
49	x2 P/Med land drains.
50	P/Med land drain.
51	P/Med land drain.
52	P/Med land drain.
53	Med-P/Med field boundary ditch. x2 P/Med land drains.
54	Possible furrow. x2 P/Med land drains.
55	P/Med land drain.
56	None
57	P/Med land drain.
58	P/Med land drain.
59	P/Med land drain.
60	x2 P/Med land drains.
61	None
62	None
63	Geophysics Area C. x2 (NE/SW) LRB ditches & Med-P/Med field boundary ditch (N/S). Later within Area 501.
64	None
65	x2 P/Med land drains.
66	P/Med land drain.
67	x2 P/Med land drains.
68	None
69	NOT DONE -FIELD FLOODED
70	NOT DONE -FIELD FLOODED
71	Med-P/Med field boundary ditch.
72	P/Med land drain.
73	Med-P/Med field boundary ditch. x2 P/Med land drains.
74	x3 P/Med land drains.
75	None
76	NOT DONE -FIELD FLOODED
77	None
78	Undated NE/SW ditch.
79	NOT DONE -FIELD FLOODED
80	P/Med land drain.
81	P/Med land drain.
82	P/Med land drain.
83	Med-P/Med field boundary ditch (NW/SE) at E. end of TR. P/Med land drain.
84	None
85	Med or P/Med field boundary ditch.



Trench No.	Archaeology
86	x2 Med-P/Med field boundary ditches (NE/SW). P/Med land drain.
87	P/Med land drain.
88	x2 P/Med land drains.
89	None
90	Med-P/Med field boundary ditch (NW/SE) at N. end of TR. P/Med land drain.
91	x4 P/Med land drains.
92	None
93	x2 P/Med land drains.
94	None
95	None
96	P/Med land drain.
97	Undated WNW/ESE ditch. P/Med land drain.
98	Undated NW/SE ditch. x2 P/Med land drains.
99	None
100	x2 drainage ditches (NE/SW). x2 P/Med land drains.
101	None
102	Palaeochannel in N. end of TR. Small E/W ditch in middle of TR. Medieval (11th - 13th cent.) pottery from ploughsoil.
103	Grey deposit with RB pottery, animal bone, fired clay and charcoal. Later within Area 500.
104	Brown clay deposit within possible ditch terminal at S. end of TR. Later within Area 500 as geological 'blob'. Post-medieval (1th - 18th cent.) from alluvium probably derived from construction of ridge-and-furrow system with ditch Group 20073 in west of Area 500.
105	None
106	None
107	None
108	None
109	None
110	None
111	None
112	None
113	NOT DONE (Instructed by M. Phillips). Whole of southern boundary of field has a 30m badger exclusion zone.
114	NOT DONE (Instructed by M. Phillips). Whole of southern boundary of field has a 30m badger exclusion zone.
115	NOT DONE (Instructed by M. Phillips). Whole of southern boundary of field has a 30m badger exclusion zone.
116	P/Med land drain.
117	None
118	Med or P/Med field boundary ditch (E/W). P/Med land drain
119	None
120	P/Med land drain
121	Moved c.20m to S. to avoid badger exclusion zone
122	None
123	P/Med land drains (x2). TR moved c.20m to S. to avoid badger exclusion zone.
124	None
125	None

Trench No.	Archaeology
126	P/Med land drain
127	NOT DONE (Instructed by M. Phillips). Very close to previous eval tr's in 'Pond 2' which found nothing.
128	P/Med land drain
129	Med or P/Med field boundary ditch. P/Med land drain.
130	None
131	None
132	None
133	None
134	None
135	None
136	P/Med Land drain.
137	None
138	None
139	None
140	P/Med land drain
141	In Geophysics Area E. P/Med land drain
142	Medieval (11th - 12th cent.) pottery from topsoil.
143	None
144	P/Med land drain
145	None
146	None
147	None
148	None
149	None
150	Small palaeochannel (not on LiDAR survey). x2 P/Med land drains.
151	None
152	P/Med land drain.
153	Med-P/Med field boundary ditch. Seen on WWII AP. x3 P/Med land drains.
154	None
155	x2 P/Med land drains.
156	None
157	P/Med land drain.
158	None
159	None
160	Within moated site. Geophysics Area D (SHER No. 2036). Stone rubble and medieval (12th - 13th cent.) pottery. Moat ditch still visible as earthwork.
161	None
162	None
163	None
164	Across ditched access to moated site (SHER No. 2034). Geophysics Area C. Single access ditch still visible as earthwork. No finds.
165	Within moated site (SHER 2036). Cobbled surface, Moat ditch still as earthwork and with a number of different phase Medieval (11th - 13th cent.) ditches (Medieval?).

<b>Trench No.</b>	<b>Archaeology</b>
166	Within moated site (SHER 2038). Three undated ditches which also show as earthworks, 2 of which correlate with 'moated site'. One sherd 17th/18th century pottery from alluvium overburden (subsoil).
167	TR within Cable Trench corridor. Across a poss. moated site on WWII AP. WNW/ESE ditch in SW of TR with 16th/17th cent. pottery and medieval (11th - 13th cent.) pottery from topsoil. x2 P/Med land drains.
168	Within ploughed out moated site. Moat ditch recorded but also M/L IA ditch and a charcoal/fired clay spread of ?IA date like spreads in Area 500 to the west. (Medieval?).
169	Within ploughed out moated site (Site Z on AP). Two ditches, the moat ditch of Site Z and a ditch for another elongated ditched enclosure to the N/West (seen on geophysics plot). Pottery from both ditches (Medieval?).
170	WB on Geotech pit where proposed flood barrier crosses palaeochannels.
171	WB on Geotech pit where proposed flood barrier crosses palaeochannels.
172	WB on Geotech pit where proposed flood barrier crosses palaeochannels.
173	WB on Geotech pit where proposed flood barrier crosses palaeochannels. Sample <11> from peat at 2.7-3.0m depth.
174	WB on Geotech pit where proposed flood barrier crosses palaeochannels.
175	WB Cable Trench. None.
176	WB Cable Trench. Possible hearth pit [17605] filled with (17606-08) charcoal & ashy fills. No finds. Cut of poss ditch [17609], filled with (17610-11) charcoal dumps. Also no datable finds. Both prehistoric?
177	WB Cable Trench. None.
178	WB Cable Trench. None.
179	WB Cable Trench. Cut of shallow hollow [17904]. Undated.
180	WB Cable Trench. Cut of NE/SW ditch [18004]. Undated. Close to moated site 2035.
181	WB Cable Trench. None. To immediate NE of moated site 2035.
182	WB Cable Trench. None. To immediate NE of moated site 2035.
183	WB Flood barrier trench (S). Med-P/Med field boundary ditch.
184	WB Flood barrier trench (S). Med-P/Med field boundary ditch.
185	WB Flood barrier trench (S). Close to moated site 2034 (TR 160). Area of possible cobbling within a shallow hollow cut. Poss. associated with moated site?
186	WB Flood barrier trench (S). Med-P/Med field boundary ditch.
187	WB Flood barrier trench (N). X2 Med-P/Med field boundary ditches, one existing and an earlier one in east of TR.
188	WB Flood barrier trench (N). Possible palaeochannel in west of trench
189	WB Flood barrier trench (N). Med-P/Med field boundary ditch and a P/Med pit.
190	WB Flood barrier trench (N) NE of Plot 12. None.
191	WB Flood barrier trench (N). None.
192	WB Flood barrier trench (N). None.
193	WB Flood barrier trench (S). None.
194	WB Flood barrier trench (S) - S. of Plot 38. None.
195	WB on septic tank installation to south of Team van Oord compound. No archaeology.
196	WB on new drainage ditch in north of scheme. No archaeology.
300	x2 P/Med land drains.
301	x1 P/Med land drain.
302	None
303	None

Trench No.	Archaeology
304	x2 P/Med land drains.
305	None
306	x2 P/Med land drains.
307	None
308	None
309	x1 P/Med land drain.
310	None
311	None
312	None
313	None
314	Med-P/Med field boundary ditch.
315	None
316	Palaeochannel in NE end of trench.
317	A 0.05m thick charcoal rich deposit with rare fired clay fragments recorded at 0.46m depth in southern trench section (south-east end of trench). Also x3 P/Med land drains.
318	NW/SE aligned gully with Late Romano-British pottery. x2 P/Med land drains.
319	A limited extent lens (0.08m thick) of a charcoal rich deposit with rare fired clay fragments (degraded pottery?) recorded at 0.75m depth in southern trench section (east end of trench).
320	None
321	NW/SE aligned ditch [32108] with artefact and charcoal-rich deposits, including large unabraded Late Romano-British pottery. Also a 0.10m thick charcoal-rich spread recorded at 0.65m depth contained Late Romano-British pottery, fired clay, animal bone and burnt flint.
322	An undated WNW/ESE aligned ditch [32206], 0.90m wide and 0.30m deep (at 1.0m depth) in centre of trench. One sherd of Late Romano-British pottery from the topsoil (32200).
323	x1 P/Med land drain.
324	A substantial NW/SE aligned ditch [32403] runs along the length of the trench. The ditch was sealed below a brown alluvium at 0.95m depth. The fills contained large sherds of Romano-British pottery, fired clay and animal bone.
325	None
326	None
327	A total of 9 ditches and three gullies generally aligned north-east/south-west, north-north-east/south-south-west or east-north-east/west-south-west. The pattern rather than suggesting a coherent single phase rectilinear pattern of ditches, possibly represents different phases of Romano-British activity. The finds included Late Romano-British pottery (3 <sup>rd</sup> – 4 <sup>th</sup> century AD), as well as fired clay fragments and (daub?) lumps, animal bone, burnt stone, and in places relatively charcoal-rich deposits. Residual M/LIA pottery was recorded from some LRB ditches and the subsoil.
328	x1 P/Med land drain.
329	None
600	Two undated NW/SE aligned ditches, one of which was the pre-existing field boundary ditch, and [60007] in north-east end of trench (with its later re-cut [60021]). Residual Late Romano-British pottery (2nd - 4th cent. AD) from subsoil (60008), redeposited natural (60010) and made ground (60003) in uppermost 0.80m of stratigraphic sequence.

## 13.2 Appendix 2: Finds Tables

**Table A2.1: Pottery totals by ware type**

Date	Ware	No	Wt
IRON AGE	Calcareous	23	569
	Flint-tempered	8	43
	Quartz and calcareous	2	19
	Quartzite	16	156
	Sand and calcareous	47	417
	Sand and sandstone	336	3381
	Sandy	89	604
	<i>sub-total prehistoric</i>	<i>521</i>	<i>5189</i>
ROMANO-BRITISH	Amphora	2	423
	Samian	31	663
	Oxfordshire red colour coated	28	346
	Misc. colour coat	2	8
	Mortaria: Oxon red CC	1	11
	Mortaria: Oxon white ware	4	273
	Mortaria: Oxon white-slipped	11	236
	Mortaria: S Wales	3	349
	Greywares	369	7739
	Oxidised ware	24	382
	Whiteware	1	16
	South-east Dorset BB1	784	9585
	SW greyware A	425	17658
	SW greyware B	122	3665
	White-slipped wares	10	89
	<i>sub-total Romano-British</i>	<i>1817</i>	<i>41,443</i>
MEDIEVAL	Ham Green ware	9	
	Medieval coarseware	799	
	Medieval fine sandy ware	80	
	Medieval sandy ware	408	
	medieval whiteware	8	
	<i>sub-total medieval</i>	<i>1305</i>	
POST-MEDIEVAL	Coarse redware	875	
	Sgraffito ware	3	
	Slipware	12	
	Whiteware	2	
	English stoneware	1	
	German stoneware	2	
	Refined whiteware	1	
	<i>sub-total post-medieval</i>	<i>895</i>	
	<b>OVERALL TOTAL</b>	<b>4538</b>	<b>91,011</b>

**Table A2.2: Summary of human bone assessment results**

context	deposit type	quantification	age/sex	comment/condition
20214	R. (collapse rubble )	1 bone l.	neonate c. 40 wk.	3; erosion, esp. trabecular bone; old dry break
20266	R. (collapse rubble )	3 frags s.	adult >c. 25 yr.	3-4; root etching & erosion, old breaks, refit
20295	R. (occupation debris)	c. 18% u.l.	neonate c. 40 wk.	2-3; slight erosion, old dry breaks; some refit; (ABG 51)

Key – s.a.u.l. – skull, axial, upper limb, lower limb (where not all regions present)

**Table A2.3: Quantity and provenance of hand-recovered animal bone by fragment count, weight and number of identified bones present (or NISP)**

Location	Date range	Total N	Total weight (g)	Total ID
Area 500	Middle/Late Iron Age	141	480	21
Area 501	Late Romano-British	843	10,553	289
Area 502	medieval-post-medieval	140	3,851	70
Area 503	medieval-post-medieval	938	15,965	414
Evaluation areas	Romano-British to medieval	279	2,611	59

**Table A2.4: Quantity of detailed information available from further more detailed study**

Period	Age - mandibles 2+ teeth	Age epiphyseal fusion	Biometric	Butchery
Middle/Late Iron Age		2	2	
Late Romano-British	7	83	25	6
Medieval	9	131	46	19
Post-medieval	8	43	21	11
Modern		1		
<b>Total</b>	<b>24</b>	<b>260</b>	<b>94</b>	<b>36</b>

### 13.3 Appendix 3: Coin catalogue

**Context** unstrat  
**Metal** Cu Alloy  
**Diameter** 22  
**Issuer** Allectus  
**Obverse condition** Worn  
**Obverse** Bust r, radiate, cuirassed -PCALLECTVSPFAVG  
  
**Mint** Colchester  
**Notes** Some edge damage  
**Reece Periods:** 14 - AD 275 - 296

**Context** 20200  
**Metal** Cu Alloy  
**Diameter** 17  
**Issuer** Victorinus  
**Obverse condition** Very worn  
**Obverse** Bust r, radiate, bearded. -VICTORI-  
**Mint** Unknown  
**Notes** Antoninianus of Victorinus, reverse uncertain  
**Reece Periods:**

**Context** unstrat  
**Metal** Cu Alloy  
**Diameter** 29  
**Issuer** Unknown Roman Emperor  
**Obverse condition** Corroded  
**Obverse** Bust r  
**Mint** Rome  
**Notes** Almost rectangular in shape, suggesting a C2 issue  
**Reece Periods:**

**Context** unstrat  
**Metal** Cu Alloy  
**Diameter** 17  
**Issuer** Radiate Copy  
**Obverse condition** Very worn  
**Obverse** Bust r, radiate, unshaven  
**Mint** Unknown  
**Notes** Barbarous copy of coin of Tetricus II. The reverse is badly struck off centre.  
**Reece Periods:** 13 - AD 260 - 275

**Context** unstrat  
**Metal** Cu Alloy  
**Diameter** 12  
**Issuer** Magnentius  
**Obverse condition** Worn  
**Obverse** Bust r, bareheaded. DN MAGNEN TIVSPFAVG. V faint A behind bust VICTORIAE (DDNN) AVG  
  
**Mint** Trier  
**Notes**  
**Reece Periods:** 18 - AD 348 - 364

**ON** 16  
**Denomination** Antoninianus  
**Weight** 3.08 **Reverse axis** 6  
**Issue date** AD 293 - 296  
**Reverse condition** Worn  
**Reverse** Laetitia standing left holding wreath & anchor, S-P across fields. Mintmark C  
  
**Officina:**  
**References** RIC V, Part II, Allectus 79  
**Casey Period:** 20 - AD 286 - 296

**ON** 17  
**Denomination** Antoninianus  
**Weight** 1.98 **Reverse axis** 12  
**Issue date** AD 268 - 270  
**Reverse condition** Very worn  
**Reverse** Fig I, w/ cornucopia? S- -G  
**Officina:**  
**References**  
**Casey Period:**

**ON** 18  
**Denomination** Sestertius  
**Weight** 14.55 **Reverse axis** 6  
**Issue date** C1 - C2  
  
**Reverse condition** Corroded  
**Reverse** Female fig sitting l with cornucopia  
**Officina:**  
**References**  
**Casey Period:**

**ON** 19  
**Denomination** Antoninianus  
**Weight** 2.19 **Reverse axis** 5  
**Issue date** AD 270 - 296  
**Reverse condition** Worn  
**Reverse** Priestly implements PIETAS-  
**Officina:**  
**References**  
**Casey Period:** 18 - AD 260 - 273

**ON** 23  
**Denomination** Centenionalis  
**Weight** 4.09 **Reverse axis** 6  
**Issue date** AD 350 - 353  
**Reverse condition** Worn  
**Reverse** 2 facing victories holding a shield inscribed VOT V MVLX X.  
  
(ETCAES). Mint mark: TRP  
**Officina:** First  
**References** LRBC II, 58  
**Casey Period:** 24 - AD 348 - 364

**Context** 20417  
**Metal** Cu Alloy  
**Diameter** 20  
**Issuer** Unknown Roman Emperor  
**Obverse condition** Corroded  
**Obverse** Bust r  
**Mint** Unknown  
**Notes** Dated by size alone. Heavily corroded and broken into 3 pieces  
**Reece Periods:**

**Context** 21088  
**Metal** Silver  
**Diameter** 18  
**Issuer** Henry IV, Henry V or Henry VI  
**Obverse condition** Corroded  
**Obverse** Half-length facing figure of the king, crowned, holding a sword in his right hand with left hand raised. The king is under a canopy. Annulet above the crown. (HENRIC R AN) GLIE  
**Mint** Unknown  
**Notes** All information supplied by R Kelleher of the British Museum  
**Reece Periods:**

**ON** 55  
**Denomination** AE3  
**Weight** 2.81 **Reverse axis** 0  
**Issue date** C3 - C4  
**Reverse condition** Corroded  
**Reverse** Illegible  
**Officina:**  
**References**  
**Casey Period:**

**ON** 216  
**Denomination** hardi d'argent  
**Weight** 0.34 **Reverse axis** 3  
**Issue date** AD 1399 - 1453  
**Reverse condition** Corroded  
**Reverse** Long cross dividing the inscription, with leopard in the 1st and 4th quarters, and lis in the 2nd and 3rd, with an annulet below each lis. FRA/CIE/DNS-  
**Officina:**  
**References** Mule of ?Elias 233 e/a  
**Casey Period:**



**13.4 Appendix 4: Environmental Tables**
**Table A4.1: Assessment of the charred plant remains and charcoal**

Context	Sample	Feature	Vol (L)	Flot size (ml)	Sample composition	Grain	Chaff	Cereal notes	Charred other	Notes	Non charred	Charcoal >2mm	Snails	Bone	Other	Analysis
<b>MIDDLE/LATE IRON AGE</b>																
<b>AREA 500</b>																
20003	5	Spread 20017	30	60	50% min/ 50% charred	<10	<10	Hulled wheat grain + glume base, cf. <i>Triticum</i> /indet grain	20+	<i>Corylus</i> , <i>Bromus</i>	no	<150	no	no	no	P, C
20046	15	Spread 20031	10	8	80% min/ 20% charred	2	<10	Hulled wheat grain + glume base, <i>Avena</i>	3	<i>Corylus</i> , <i>Rumex</i>	no	10+	2	no	no	P
20048	17	Spread 20031	10	9	99% mineral/ 1% charcoal	no	2	<i>Triticum</i> glume base	7 frags	<i>Corylus</i>	no	<5	1	no	no	
20076	25	Posthole/Pit 20077	5	3	>99% mineral/ <1% charcoal - flecks	1	no	Hulled wheat	no		no	<10	no	no	no	
20082	30	Spread 20060	30	26	90% mineral/ 10 % charcoal	no	no		½	<i>Lathyrus</i> / <i>Vicia</i>	no	30+	<10 - t	40+ ?indet (some burnt)	no	
20085	33	Spread 20060	30	22	60% min/ 40% charcoal	1	1	<i>Avena</i> grain, hulled wheat glume base	1 frag	<i>Corylus</i>	no	<20	10+ - t	no	no	
20099	38	Spread 20152	30	26	95% min/ 5% charcoal	3	<5	Hulled wheat grain + glume base, cf. <i>Triticum</i> /indet grain, <i>Avena</i>	no		no	20+	<10 - t	<10	no	P
20106	44	Spread 20152	5	4	>99% mineral/ <1% charcoal	no	no		no		no	1	no	1 burnt	no	
17610	74	Pit 17609	3	11	50% mineral/ 50% charcoal	no	no		1	<i>Rumex</i>	no	<40	3	no	no	
<b>TRENCH 168</b>																
16815	80	Spread	5	29	98% min/ 2% charcoal	1	no	<i>Triticum</i> sp	1	<i>Plantago</i>	no	<20	15 - t	<5	no	

Context	Sample	Feature	Vol (L)	Flot size (ml)	Sample composition	Grain	Chaff	Cereal notes	Charred other	Notes	Non charred	Charcoal >2mm	Snails	Bone	Other	Analysis
16809	81	Ditch 16807	30	28	98% min/ 2% charcoal	1	10+	Hulled wheat grain, glume base/spikelet fork,	2 frags	<i>Corylus</i>	no	20+	250+ - t	no	no	P, M
<b>LATE IRON AGE TO ?EARLY ROMANO-BRITISH</b>																
<b>AREA 500 - TRENCH 103</b>																
10303	1	Spread	40	22	99% mineral/ 1% charcoal freq roots	no	no		3	<i>Lathyrus/Vicia, Bromus</i>	no	10+	no	no	no	
<b>LATE ROMANO BRITISH</b>																
<b>AREA 501</b>																
6306	3	Ditch 6303	30	40	70% mineral/ 30% charred	65+	75+	Hulled wheat grain + glume base/spikelet fork, cf. <i>Triticum</i> /indet grain, <i>Avena</i>	80+	<i>Galium, Poaceae, Rumex, Bromus, Trifolium/Medicago</i>	no	10+	30+ - t 20+ - w	<10 ? indet fish <10	no	P
6317	4	Ditch 6309	20	110	98% min/ 2% charred	50+	60+	Hulled wheat grain + glume base, cf. <i>Triticum</i> /indet grain, oat awns (c), wheat/barley awns (s)	100+	<i>Rumex, Poaceae, Plantago, Galium, Fallopia</i>		10+	10+ - t	<5 ?indet	no	P
20244	102	Ditch 20245	30	120	98% min/ 2% charred	35+	50+	Hulled wheat grain + glume base, cf. <i>Triticum</i> /indet grain	80+	<i>Vicia faba/Lathyrus/Vicia, Galium, Rumex, Poaceae, Corylus</i>	35+ <i>Stellaria, Lemna</i>	<20	30+ - t	<5 ?indet fish 1	Egg shell 1	P
20252	115	Ditch 20235 gp 20362	1	21	100% min	1	20+	Hulled wheat grain + glume base, wheat/barley awns (s)	5	<i>Rumex, Trifolium/Medicago</i>	no	no	no	no	no	

Context	Sample	Feature	Vol (L)	Flot size (ml)	Sample composition	Grain	Chaff	Cereal notes	Charred other	Notes	Non charred	Charcoal >2mm	Snails	Bone	Other	Analysis
20259	116	Ditch 20235 gp 20362	1	28	98% min/ 2% charred	30+	10+	Hulled wheat grain, glume base, oat floret + awns, wheat/barley awns (s 100's)	200+	Poaceae, <i>Rumex</i> , <i>Trifolium</i> / <i>Medicago</i> , <i>Vicia faba</i> , grass culms (s)	no	no	no	no	no	P
20266	117	Spread 20263	30	25	70% min/ 30% charred	20+	30+	Hulled wheat grain, glume base + spikelet fork, oat awn	10+	<i>Rumex</i> , <i>Lathyrus</i> / <i>Vicia</i> , Poaceae	no	<5	no	no	no	P
20299	125	Gully 20297	30	34	99% min/ 1% charred occ roots	<20	100+	Hulled wheat grain, glume base + spikelet fork	100+	Poaceae, <i>Galium</i> , <i>Rumex</i>	no	<10	no	<5 ? indet	no	P
20295	126	Spread 20213	30	30	80% min/ 20% charred v. freq roots	10+	10+	Hulled wheat grain, glume base + spikelet fork – poor cond, occ <i>Avena</i>	10+	<i>Rumex</i> , <i>Galium</i> , <i>Atriplex</i>	<i>Atriplex</i> (m)	5+	no	no	no	
20379	131	Spread 20377 gp 20204	30	70	60% min/ 40% charred freq roots	125	30	Hulled wheat grain, glume base + spikelet fork	40	<i>Rumex</i> , <i>Galium</i> , <i>Trifolium</i> / <i>Medicago</i> , <i>Avena</i> / Poaceae	no	2	5	4 ?indet	no	P
<b>AREA 500</b>																
20036	20	Ditch 20034 gp 20004	26	8	>99% mineral/ <1% charcoal	no	no		no		no	<10	100+ - t	no	no	
<b>AREA E</b>																
32110	400	Ditch 32108	30	75	50% min/ 50% charred	40+	200+	Hulled wheat grain, glume base + spikelet fork – mostly poor cond, but some ?spelt	150+	Poaceae, <i>Trifolium</i> / <i>Medicago</i> , <i>Bromus</i> , <i>Fallopia</i> , <i>Vicia faba</i>	20+ <i>Rubus</i>	150+	50+ - t	<20	egg shell 1	P, C
32715	402	Ditch 32716	30	44	70% mineral/ 30% charred	10+	170+	Hulled wheat grain, glume base + spikelet fork occ <i>Avena</i>	50+	<i>Rumex</i> , Poaceae, <i>Bromus</i> , <i>Fallopia</i>	10+ <i>Rubus</i> , <i>Lemna</i> , <i>R. Batrach</i>	200+	10+ - t	<5	no	P

Context	Sample	Feature	Vol (L)	Flot size (ml)	Sample composition	Grain	Chaff	Cereal notes	Charred other	Notes	Non charred	Charcoal >2mm	Snails	Bone	Other	Analysis
32751	405	Ditch 32743	30	27	50% min/ 50% charred	<5	20+	Hulled wheat grain + glume base	75+	<i>Rumex</i> , <i>Poaceae</i> , <i>Anthemis</i> , <i>Vicia faba</i>	50+ <i>R. Batrach</i> , <i>Rubus</i>	100+	150+ ? mostly same sp	5+ fish	ostrac 5	P, C, M
<b>MEDIEVAL</b>																
<b>AREA 503</b>																
21088	300	Latrine 21087	30	200	60% min/ 40% charred	65	no	Free-threshing wheat , cf. <i>Triticum</i> + indet grains, <i>Avena</i>	15	<i>Vicia faba</i> , <i>Rumex</i> , <i>Poaceae</i> , <i>Plantago lanceolata</i> , <i>Trifolium/</i> <i>Medicago</i>	100+ <i>Lemna</i> , <i>Rubus</i>	250+	30 - t 20- w	50 ? indet fish 200+	egg shell 30+, ostrac 5	P, C
21130	301	Ditch 21132	30	180	80% min/ 20 charred	150	<5	Free-threshing wheat , cf. <i>Triticum</i> +indet grains, occ <i>Avena</i> grain & awns. Wheat awns (s)	30+	<i>Vicia faba</i> , <i>Rumex</i> , <i>Poaceae</i> , <i>Anthemis cotula</i> , <i>Lathyrus/</i> <i>Vicia</i>	10+ <i>Lemna</i>	<100	50+ - t 100+ - w	20+ ? indet fish 15+	egg shell 2 ostrac 2	P, M
21134	302	Ditch 21127 gp 21166	30	37	60% min/ 40% charred	80+	no	Free-threshing wheat , cf. <i>Triticum</i> +indet grains, <i>Avena</i>	30+	<i>Poaceae</i> , <i>Trifolium/</i> <i>Medicago</i> , <i>Rumex</i> , <i>Anthemis</i> , grass culm nodes (s)	30+ <i>Conium</i> , <i>Lemna</i> , <i>Potamog</i> <i>Rubus</i>	50+	20+ - t <100 - w	<20 ? indet fish <20	no	P
21284	311	Gully 21282	6	70	20% min/ 80% charred	200+	no	Free-threshing wheat, cf. <i>Triticum</i> + indet	<10	<i>Bromus</i> , <i>Poaceae</i>	no	150+	2	no	no	P, C
21160	320	Ditch 21157	8	190	95% min/ 5% charred	20+		Free-threshing wheat , cf. <i>Triticum</i> +indet	2	<i>Lathyrus/</i> <i>Vicia</i>	25+ <i>Lemna</i> , <i>Rubus</i> , <i>R. Batrach</i>	130+	2 - t 20+ w	15 ? indet fish 5	egg shell 2 ostrac30+	P
21316	321	Posthole 21318	10	55	5% min/ 95% charred (mostly cereals)	450+	no	Free-threshing wheat, cf. <i>Triticum</i> + indet, <i>Avena</i> grain	200+	mostly <i>Lathyrus/</i> <i>Vicia</i> , also <i>Anthemis</i> , <i>Rumex</i> , <i>Poaceae</i>	no	20+	5+ - t 10+ -w	10+ fish	no	P

Context	Sample	Feature	Vol (L)	Flot size (ml)	Sample composition	Grain	Chaff	Cereal notes	Charred other	Notes	Non charred	Charcoal >2mm	Snails	Bone	Other	Analysis
21356	326	Pit 21353	10	72	98% mineral/ 2% charred	20+	no	Free-threshing wheat, cf. <i>Triticum</i> + indet, <i>Avena</i> grain	<5 + frags	<i>Lathyrus/Vicia</i> , <i>Vicia faba</i> , Poaceae	no	<30	4	<5 ?indet	no	
21333	328	Pit 21353	30	150	30% min/ 70% charred	850+	20+	Free-threshing wheat, cf. <i>Triticum</i> + indet, <i>Avena</i> grain, wheat/barley awns (s)	150+	<i>Avena/Poaceae</i> , <i>Bromus</i> , <i>Lathyrus/Vicia</i> , <i>Anthemis</i> , grass culm nodes (s)	no	25+	30+ - t	<10	no	P
21399	332	Ditch 21398	30	75	20% min/ 80% charred	275	no	Free-threshing wheat, cf. <i>Triticum</i> + indet, <i>Avena</i>	25	<i>Anthemis</i> , Poaceae, <i>Picris</i> , <i>Lathyrus/Vicia</i>	100+ <i>R. Batrach</i>	150+	100 - t 100+ - w	20 (some ?small mam) 10+ fish/ scale	20+ ostrac	P
21434	334	Ditch 21435	30	95	40% min/ 60% charred	20	no	Free-threshing wheat, cf. <i>Triticum</i> + indet	10	<i>Lathyrus/Vicia</i>	no	200+	50+ - t	30 (small mam teeth) 100+ fish + scales	no	
<b>TRENCH 165</b>																
16508	82	Ditch 16507	30	120	30% min/ 70% charred occ roots	500+	no	Free-threshing wheat, cf. <i>Triticum</i> + indet + abundant grain frags, <i>Avena</i>	20+	<i>Corylus</i> , <i>Rumex</i> , <i>Eleocharis</i> , Poaceae	no	<10	50+ - t	<10 fish	no	P
<b>MEDIEVAL/POST MEDIEVAL</b>																
<b>AREA 500</b>																
20072	22	Ditch 20068 gp 20073	25	58	100% mineral, including lots snail shell frags	no	no		no		no	no	70+ - w abund shell frags	no	no	

Context	Sample	Feature	Vol (L)	Flot size (ml)	Sample composition	Grain	Chaff	Cereal notes	Charred other	Notes	Non charred	Charcoal >2mm	Snails	Bone	Other	Analysis
<b>AREA 501</b>																
20465	138	Ditch 20354 gp 20361	0.75	2	>99% min/<1% charcoal	no	20+	wheat/barley awns (s)	no		100+ mostly <i>Urtica</i> , also <i>Rubus</i> , <i>Carex</i>	no	no	no	no	
20462	140	Ditch 20354 gp 20361	1	12	98% modern plant debris/ 2% mineral	no	no		no		<i>Rubus</i> , <i>Urtica</i> , beetle frags	no	no	no	no	
<b>AREA 502</b>																
20505	200	Pit 20512	20	30	50% min/ 50% charred	150+	occ	Free-threshing + hulled wheat, cf. <i>Triticum</i> /indet, <i>Avena</i> , wheat/barley awns (c+s)	50+	<i>Anthemis</i> , Poaceae, <i>Rumex</i> , <i>Vicia faba</i>	no	20	no	no	no	P
<b>AREA 503</b>																
21272	318	Ditch 21264	1.75	20	80% min/ 20% charred	10 +	1	Free-threshing wheat, cf. <i>Triticum</i> + indet, Free-threshing wheat rachis	no		10+ <i>R. Batrach</i> , 5+ <i>Daphne ephidium</i> , 5+ <i>Lemna</i> , 1x <i>Cirsium</i> / <i>Carduus</i>	10+	2 -t 55+ - w	5 -fish 3 -small mam	Egg shell -2 Ostra 3	

**Key to plant remains**
**Cereals**

*Avena*  
*Triticum*

**Seeds/fruits/nuts**

*Anthemis cotula*  
*Atriplex*  
*Bromus*  
*Carex*  
*Conium maculatum*  
*Corylus avellana*  
*Fallopia convolvulus*  
*Galium aparine*  
*Lathyrus/Vicia*

**Common name**

Oat  
Free-threshing and hulled wheat

Stinking Chamomile  
Orache  
Brome  
Sedge  
Fool's Watercress  
Hazel  
Black bindweed  
Cleavers  
Vetch

**Habitat**

#  
#  
CDh  
CDn  
CDG  
GMPRW  
Bw  
HSW  
CD  
CHSo  
DG

<i>Lemna</i>	Duckweed	A
<i>Plantago lanceolata</i>	Ribwort Plantain	G
Poaceae	Grass	G
<i>Potamogeton</i>	Pondweed	A
<i>Ranunculus</i> subg. <i>Batrachium</i>	Water Crowfoot	A
<i>Rumex</i>	Dock	CDG
<i>Stellaria media</i>	Common chickweed	CD
<i>Trifolium/Medicago</i>	Clover/Medick	CDG
<i>Urtica dioica</i>	Stinging nettle	DGHWp
<i>Vicia faba</i>	Celtic/Horse bean	#

**Habitats**

A: Aquatic. C: Cultivated/Arable. D: Disturbed. G: Grassland. H: Hedgerow. M: Marsh.  
P: Ponds, ditches - stagnant/slow flowing water. R: Rivers, streams . S: Scrub. W: Woodland

h: heavy soils. n: nitrogen rich soils. o: open habitats p: phosphate rich soils. w: wet/damp soils.  
# cultivated plant/of economic importance

**Analysis key:**

P = charred plants; C = charcoal, M = molluscs

**Table A4.2: Mollusc assessment**

Site Phase	?LIA	?RB	?LRB	Med/E Post med	?RB	LRB				Med		Post med	LRB	
<b>Area</b>	500					501				503			T327	
<b>Group</b>	20153	20139	20004		20073	20362		20361		21166				
<b>Feature type</b>	Palaeochannel		Ditch		Ditch	Palaeochannel	Ditch		Ditch		Ditch		Ditch	
<b>Feature no.</b>	20125	20135	20034	20039	20068	20707	20235		20354		21127	21398	21264	32716
<b>Context no.</b>	20127	20136	20036	20042	20072	20705	20252	20259	20465	20462	21134	21399	21272	32715
<b>Sample no.</b>	62	53	20	48	22	160	115	116	138	140	302	332	318	402
<b>Sample series</b>	59			45		157	104		155					
<b>Depth (m)</b>	0.35- 0.40			0.95- 1.00		0.50-0.55			0.89- 0.91	0.78- 0.80				
<b>Volume (l)</b>	1	1	1	1	1	2	1	1	0.75	1	30	30	1.75	1
<b>Open country species</b>														
<i>Pupilla muscorum</i>	A	-	C	-	C	C	-	-	-	-	C	C	-	-
<i>Vertigo</i> spp.	-	-	-	-	-	-	C (Burnt)	-	-	-	C	C	-	-
<i>Vallonia</i> spp.	-	-	C	-	C	C	-	-	-	-	B	A	C	C
<b>Intermediate species</b>														
<i>Cepaea</i> spp	-	-	+	-	+	-	-	-	-	-	-	-	-	-
Limacidae	-	-	C	C	-	-	-	-	-	-	C	C	-	-
<b>Shade-loving species</b>														
<i>Aegopinella nitidula</i>	-	-	-	-	-	-	-	-	-	-	C	-	-	-
<b>Fresh and Brackish water species</b>														
<i>Lymnaea</i> spp.	-	-	-	-	C	-	-	-	-	-	A*	A*	A	-
<i>Anisus leucostoma</i>	-	-	-	-	-	-	-	-	-	-	-	C	-	-
<i>Bathymphalus contortus</i>	C	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gyraulus crista</i>	-	-	-	-	-	-	-	-	-	-	-	-	A*	-
<i>Ovatella myosotis/ Leucophytia bidentata</i>	C	-	-	-	-	C	-	-	-	-	-	B	-	-
<i>Hydrobia</i> spp.	A	A*	A	A	-	C	-	-	-	-	B	A*	-	C
<b>Approx totals</b>	<b>50</b>	<b>100+</b>	<b>15</b>	<b>11</b>	<b>3</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100+</b>	<b>100+</b>	<b>60</b>	<b>6</b>
<b>Ostracods</b>	<b>Yes</b>	<b>Yes</b>			<b>Yes</b>						<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

Key: A\*\*\* = exceptional, A\*\* = 100+, A\* = 30-99, A = &gt;10, B = 9-5, C = &lt;5



### 13.5 Appendix 5: Sediment descriptions

#### Monolith 23

Feature:	n/a	Mono:	23	Comments:	
Level (top):	4.86maOD	Drg:	20010		
Depth (m OD)	Context	Samples	Sediment description	Interpretation	
4.86-4.73	20000		10YR 5/2 greyish brown clay, blocky, 1% fine macropores. Clear boundary.	Base of soil profile	Ditch fills
4.73-4.26	20040 20041	51 50 49	10YR 5/3 brown clay, 0.5% very fine macropores, slight blocky structure. Clear boundary.	Secondary fill	
4.26-4.06	20042	48	10YR 6/3 greyish brown (not perfect match; slightly pinker) clay loam, more friable than above, large blocky structure.	Secondary fill	
4.06-3.58	20043	47 46	10YR 5/3 brown silty clay loam to clay loam, horizontal laminations of fine silt (visible primarily as sediment breaks at these points). Manganese concretions @ 0.85-0.90, also rarely throughout	Alluvial fill (not mixed); may have entered as alluvium or be standing water in ditch	

#### Monolith 56

Feature:	n/a	Mono:	56	Comments:	
Level (top):	4.75m aOD	Drg:	20028		
Depth (m OD)	Context	Samples	Sediment description	Interpretation	
4.75-4.51			10YR 5/3 brown clay loam, Friable and crumbly. 0.5% very fine macropores, rare fine fleshy rootlets, occasional manganese concretion, faint, clear iron mottling. Diffuse boundary.	Alluvium	Alluvium with signs of gleying (wet/dry); upper portion essentially base of modern soil profile
4.51-4.28			10YR 5/2 greyish brown clay, 0.5-1% very fine macropores, 2% manganese concretions	Alluvium	

### Monolith 103

<b>Feature:</b>	n/a	<b>Mono:</b>	103	<b>Comments:</b> ?LRB	
<b>Level (top):</b>	5.23m aOD	<b>Drg:</b>	20207		
Depth (m OD)	Context	Samples	Sediment description	Interpretation	
5.23-5.21			10YR 5/2 greyish brown clay, massive, stonefree, sharp boundary	Alluvium	Ditch fills:, with artefact rich stasis horizon
5.21-5.03	20252 20254		10YR 4/2 dark greyish brown clay to silty clay loam. Fine crumb structure, inclusions or orangey ?burnt clay or daub <5mm, occasional paler ones too (possible ?mortar). 2% fine. Sharp boundary.	Possible dumps followed by pedogenesis, or ploughed-in material	
5.03-4.90	20248		10YR 3/1 very dark grey silt loam, artefacts (big pot sherd), some charcoal lumps (and from colour probable comminuted too), occasional burnt clay inclusions as context above.	Probably stasis horizon with lots of activity nearby (maybe including dumps)	
4.90-4.75	20243		10YR 5/2 greyish brown silty clay loam, crumbly, common macropores, one or two charcoal lumps to centre, rare inclusions of pinkish daub or plaster <5mm. Clear boundary.	Secondary fill	
4.75-4.60	20236		10YR 5/2 greyish brown silty clay loam. Occasional charcoal, less macropores than above and not as friable. V rare pink inclusions, possible plaster/ daub. Sharp boundary.	Primary fill	
4.60-4.38	20208		10YR 5/2 greyish brown clay, stiff	'Natural' alluvial deposits	

### Monolith 132

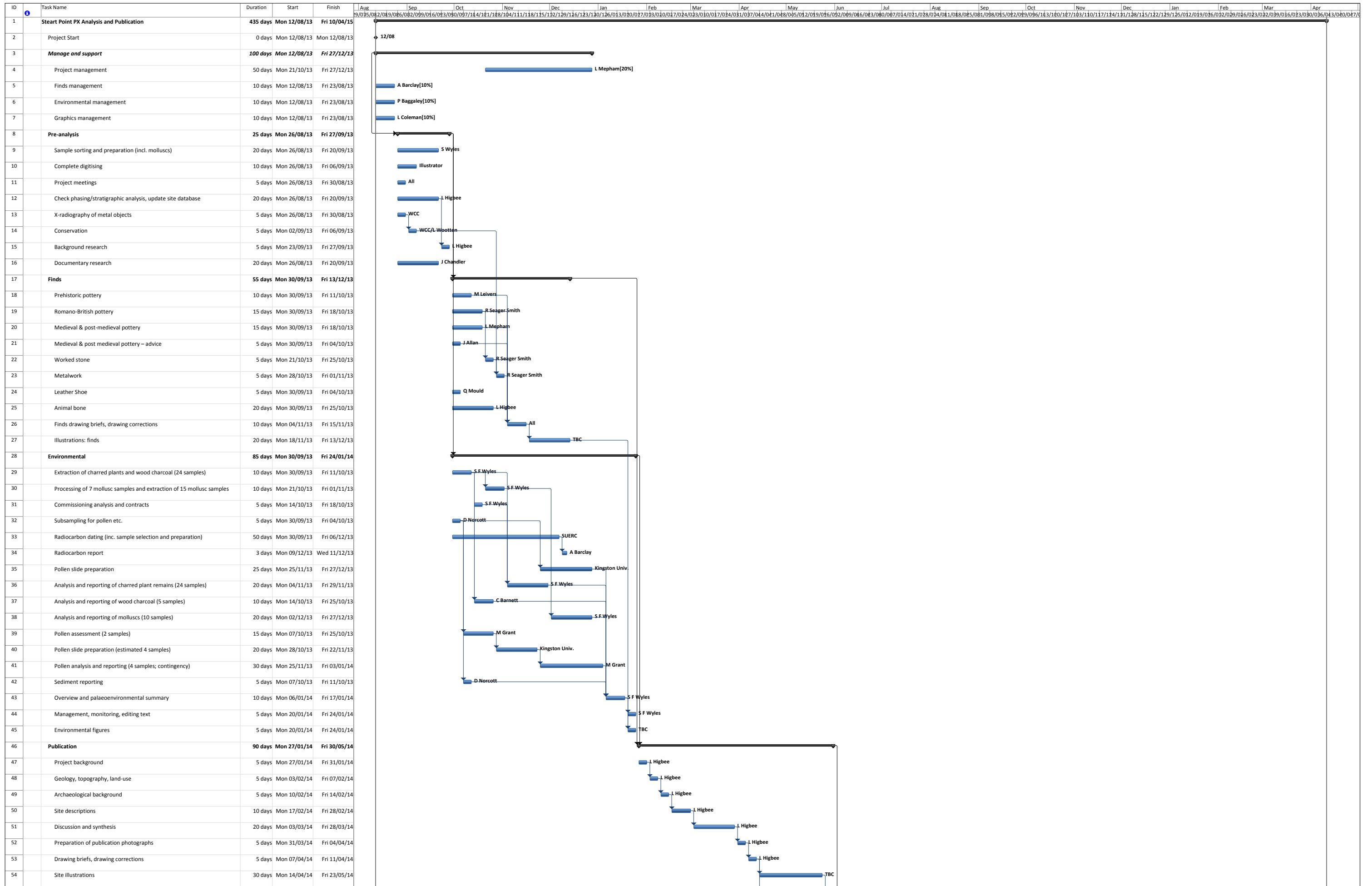
<b>Feature:</b>	n/a	<b>Mono:</b>	132	<b>Comments:</b>	
<b>Level (top):</b>	5.05m aOD	<b>Drg:</b>	20256		
Depth (m OD)	Context	Samples	Sediment description	Interpretation	
5.05-4.65	20355		10YR 4/2 dark greyish brown clay loam, occasional fine fleshy rootlets, massive, rare very fine macropores. Clear boundary.	?Alluvium	Wet ditch fills with lots of organics
4.65-4.36	20458-50		10YR 3/2 very dark greyish brown clay to silty clay loam, highly fibrous with organics/decaying wood frags, waterlogged to some extent, molluscs @0.63 (?trichia). Clear boundary	Woody detrital fill (wet)	

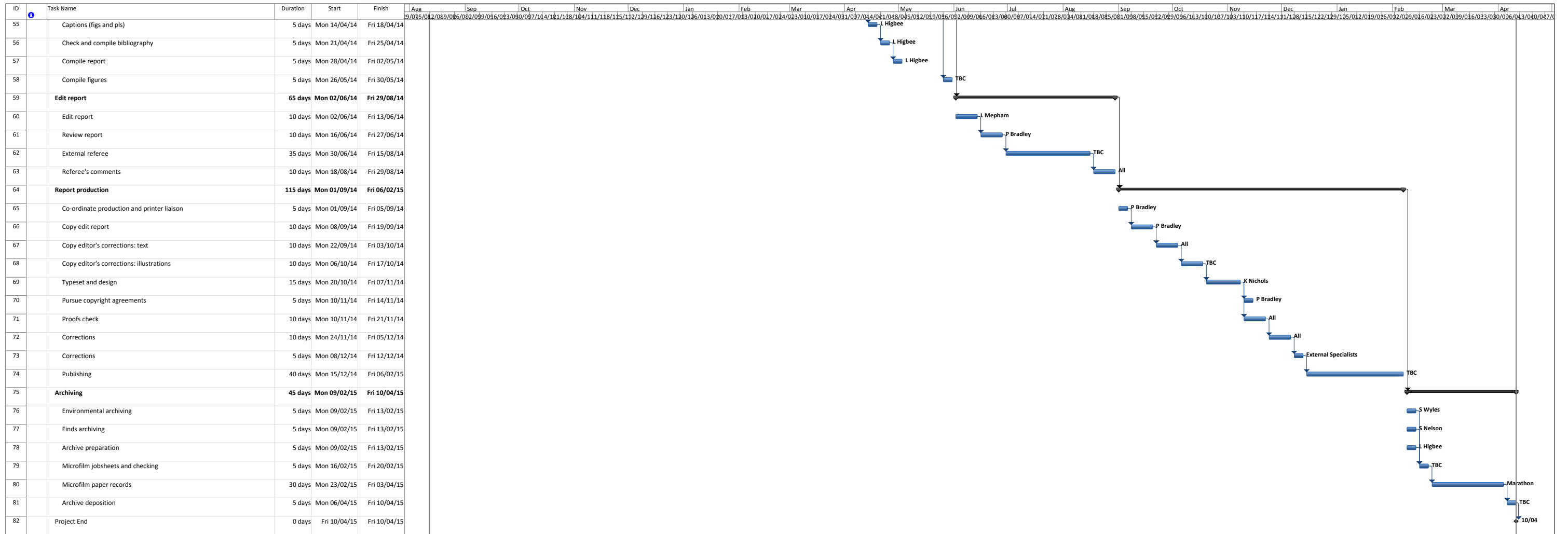
Feature:	n/a	Mono:	132	Comments:	
Level (top):	5.05m aOD	Drg:	20256		
Depth (m OD)	Context	Samples	Sediment description	Interpretation	
4.36-4.21	20461		10YR 4/2 dark greyish brown clay to clay loam, well developed fine blocky structure, friable, 1% macropores. Hallmarks of soil, but odd to have the intact w/ organic smear underneath. Could be redeposited/ collapsed. Sharp boundary.	Soil material, possibly collapsed in rather than <i>in situ</i>	
4.21-4.20	20462		Black layer composed of small partially humified plant remains, some possible charcoal? Sharp boundary.	Detrital plant remains	
4.20-4.16	20464		2.5Y 4/1 dark grey silty clay loam, v slippery, probably reducing environment, sharp-ish boundary	Fine alluvium, formed in standing water	
4.16-4.12	20465		10YR 3/1 very dark grey silty clay loam, occasional small charcoal pieces, waterlogged plant remains (v small), sharp boundary	Detrital waterlogged fill	
4.12-4.08	20466		Gley 1 5/1 greenish grey silty clay loam	Formed in standing water; primary fill	
4.08-3.92			10YR 5/2 greyish brown clay	'Natural' alluvial deposits	

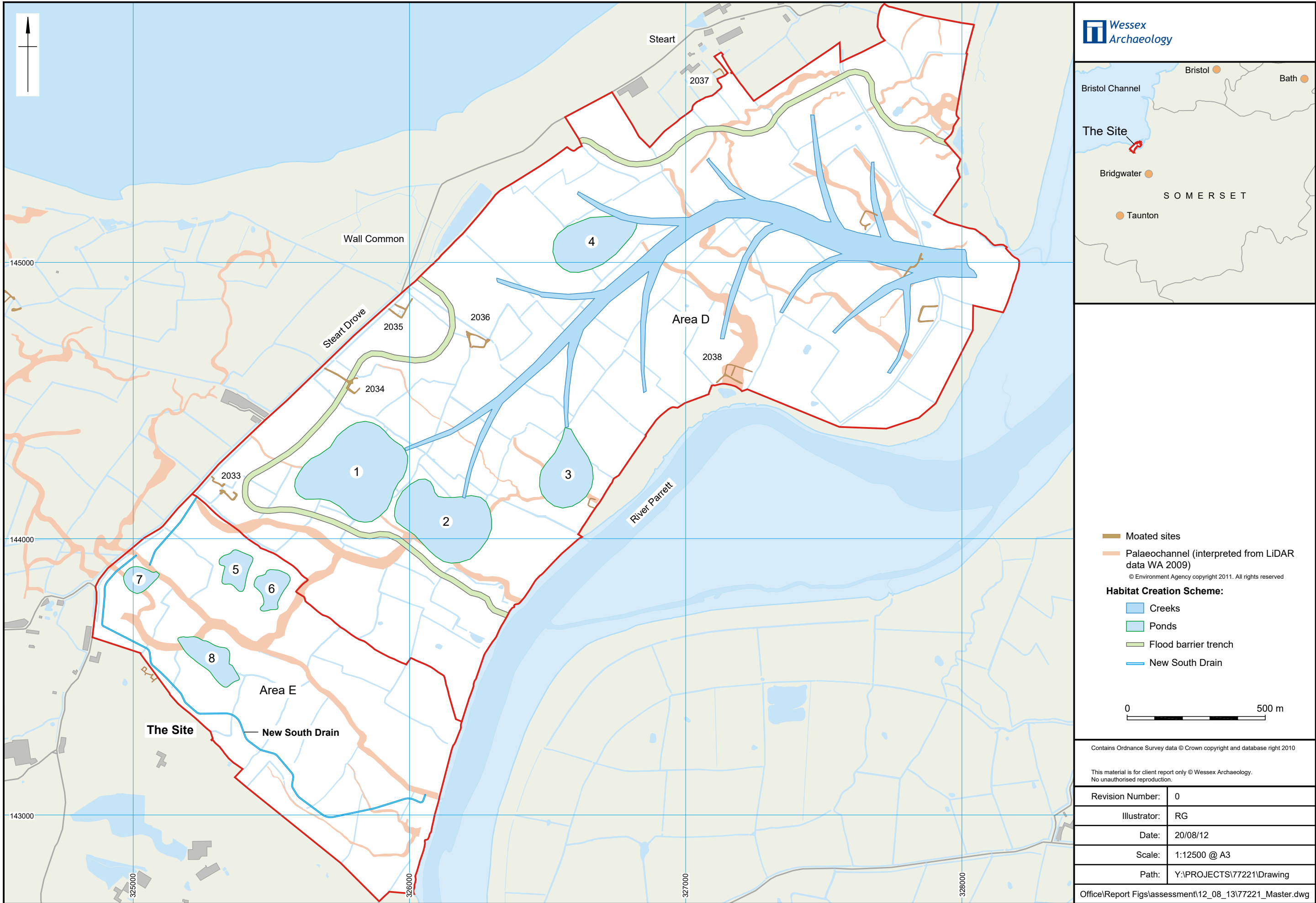
### Monolith 304

Feature:	n/a	Mono:	304	Comments: ?Medieval ditch with possible recut.	
Level (top):	5.01m aOD	Drg:	21018		
Depth (m OD)	Context	Samples	Sediment description	Interpretation	
0-0.63	21129 21131		10YR 5/1 grey to 5/2 greyish brown clay, 2% very fine macropores,, angular blocky structure, occasional v small charcoal lump (1-2mm), ditto ?burnt clay, occ fine fleshy rootlets, molluscs observed in lower part. Clear boundary. NB 2 contexts drawn, but no difference observed in monolith.	Secondary fill	
0.63-0.79	21134		10YR 5/2 greyish brown clay to silty clay loam, occasional v small charcoal and ?burnt clay inclusions (<2mm), at base (0.77-0.79) is considerably more pinkish burnt clay inclusions and greyer matrix. Sharp boundary	Primary fill	
0.79-0.85			10YR 5/3 brown clay	'Natural' / alluvial deposits	

## **13.6 Appendix 6: Outline Programme of Works**







- Moated sites
- Palaeochannel (interpreted from LiDAR data WA 2009)  
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- Habitat Creation Scheme:**
  - Creeks
  - Ponds
  - Flood barrier trench
  - New South Drain



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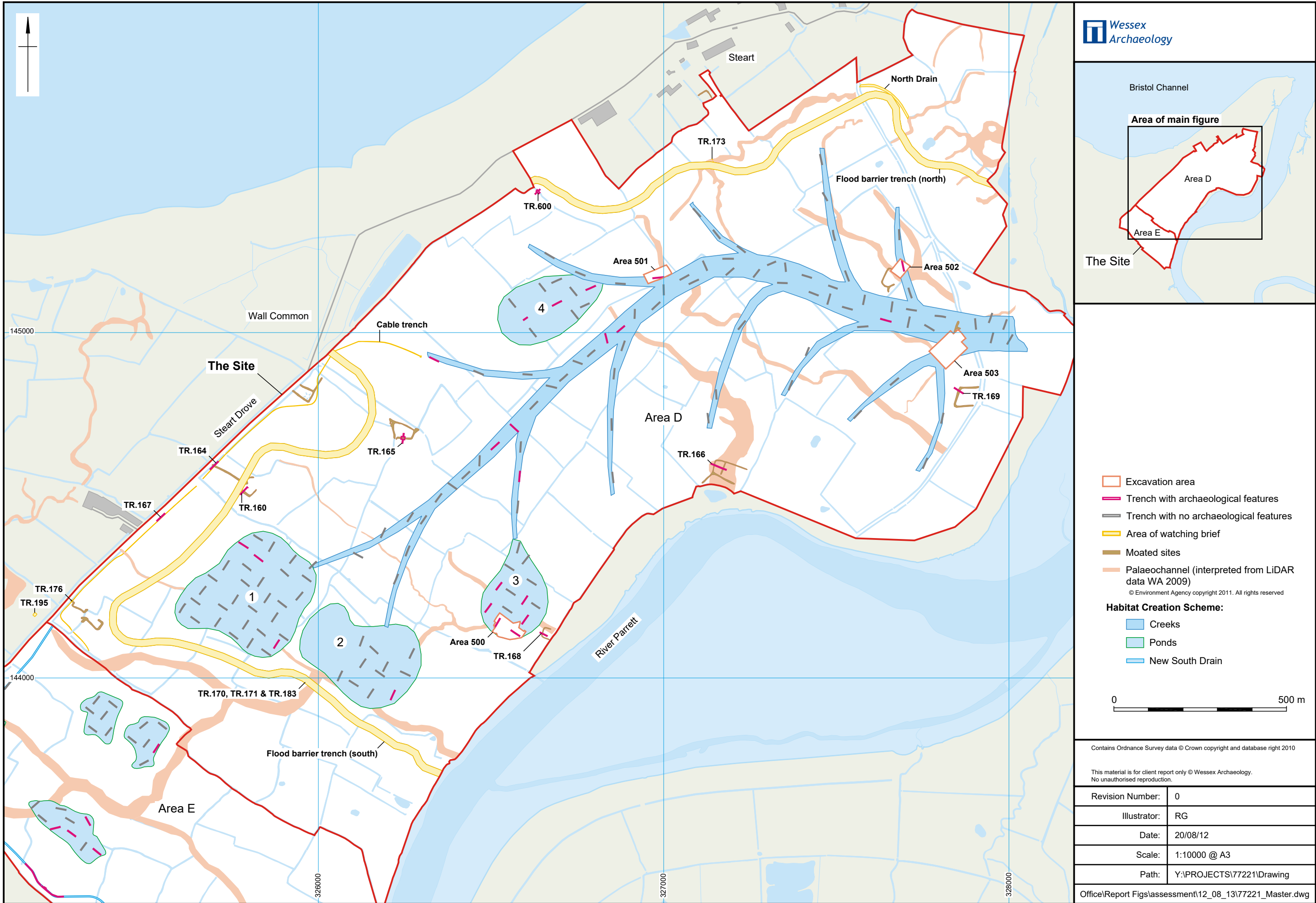
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Site location and Habitat Creation Scheme plan

Figure 1



- Excavation area
  - Trench with archaeological features
  - Trench with no archaeological features
  - Area of watching brief
  - Moated sites
  - Palaeochannel (interpreted from LiDAR data WA 2009)
- © Environment Agency copyright 2011. All rights reserved
- Habitat Creation Scheme:**
- Creeks
  - Ponds
  - New South Drain



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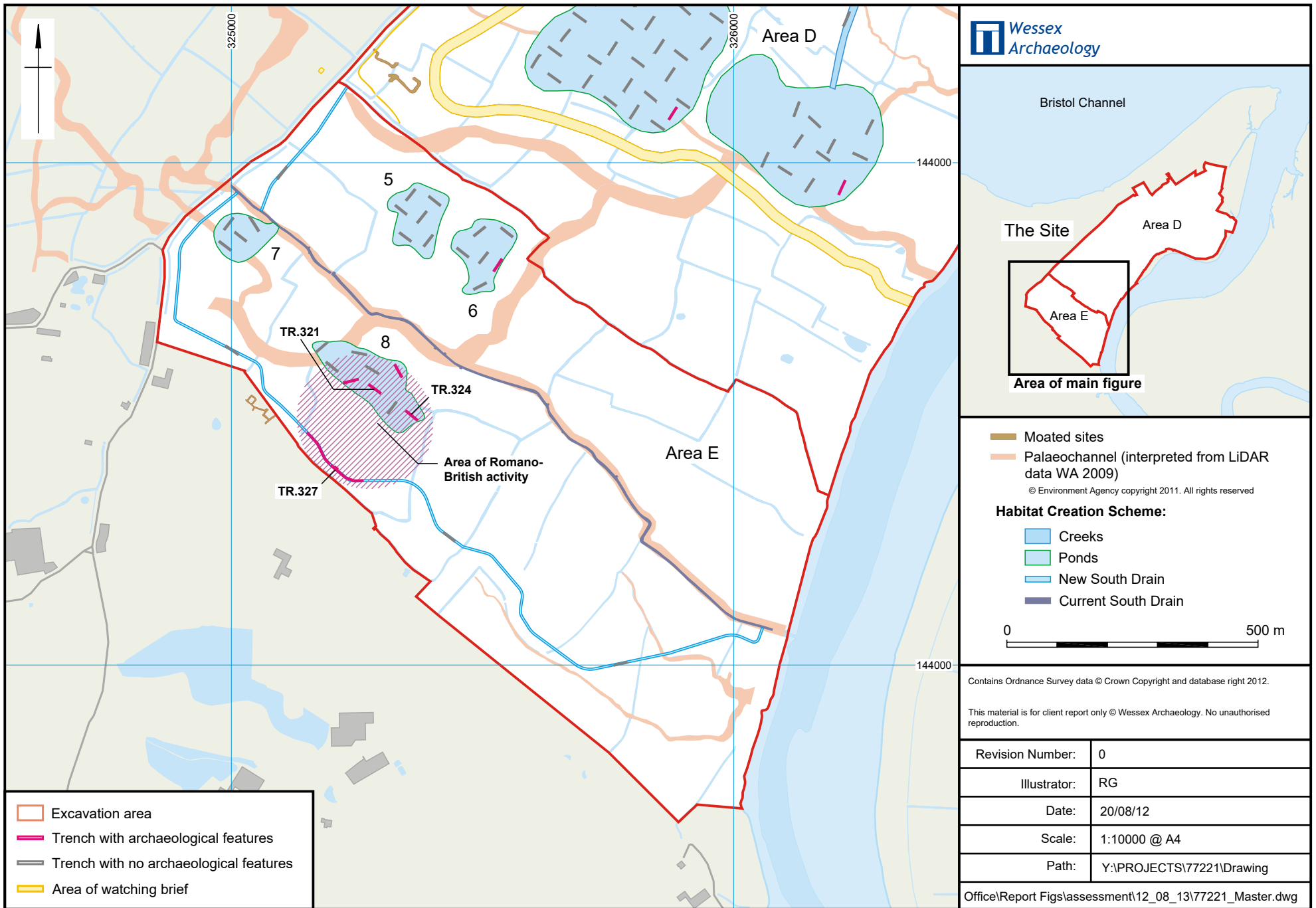
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Area D plan

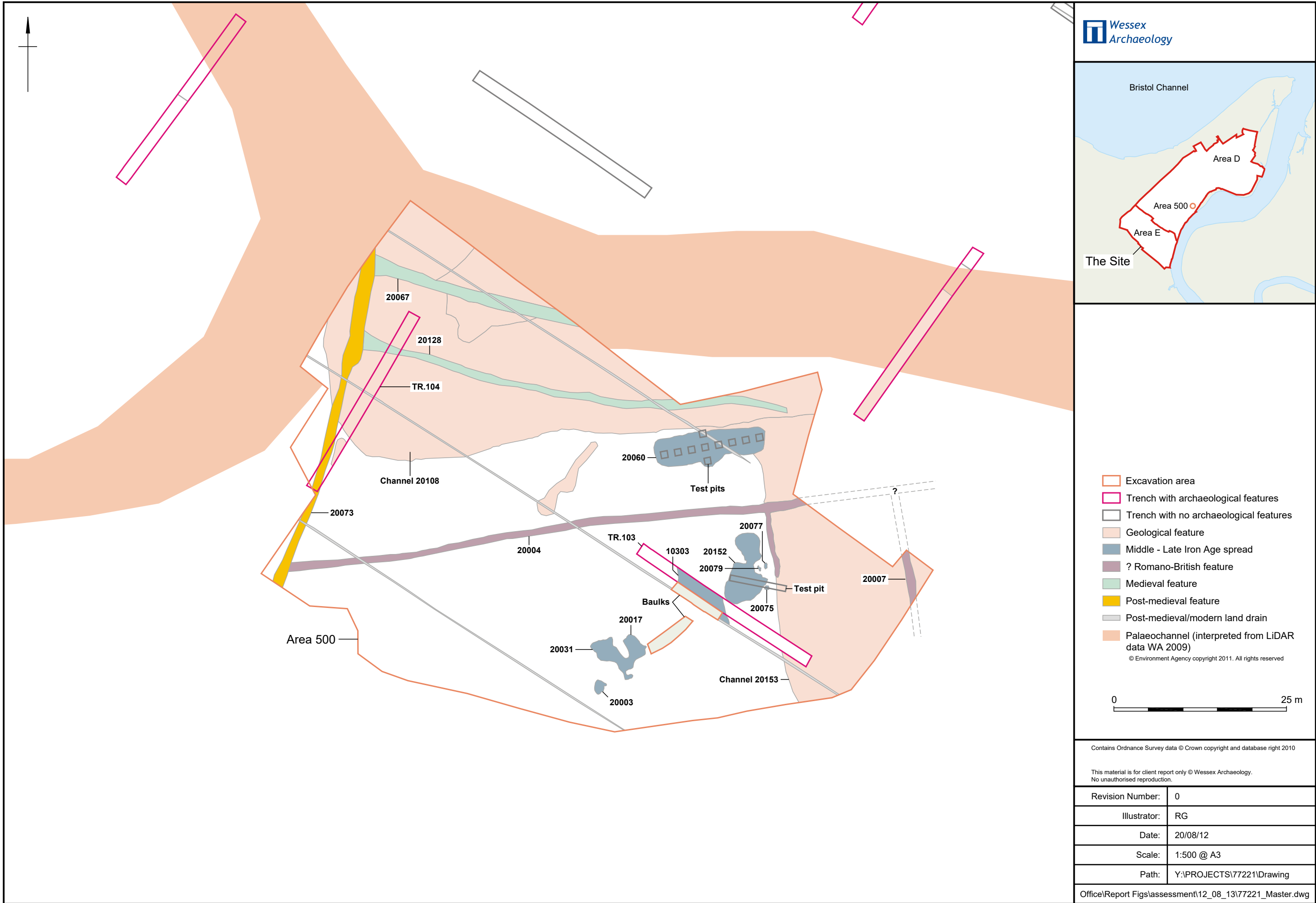
Figure 2





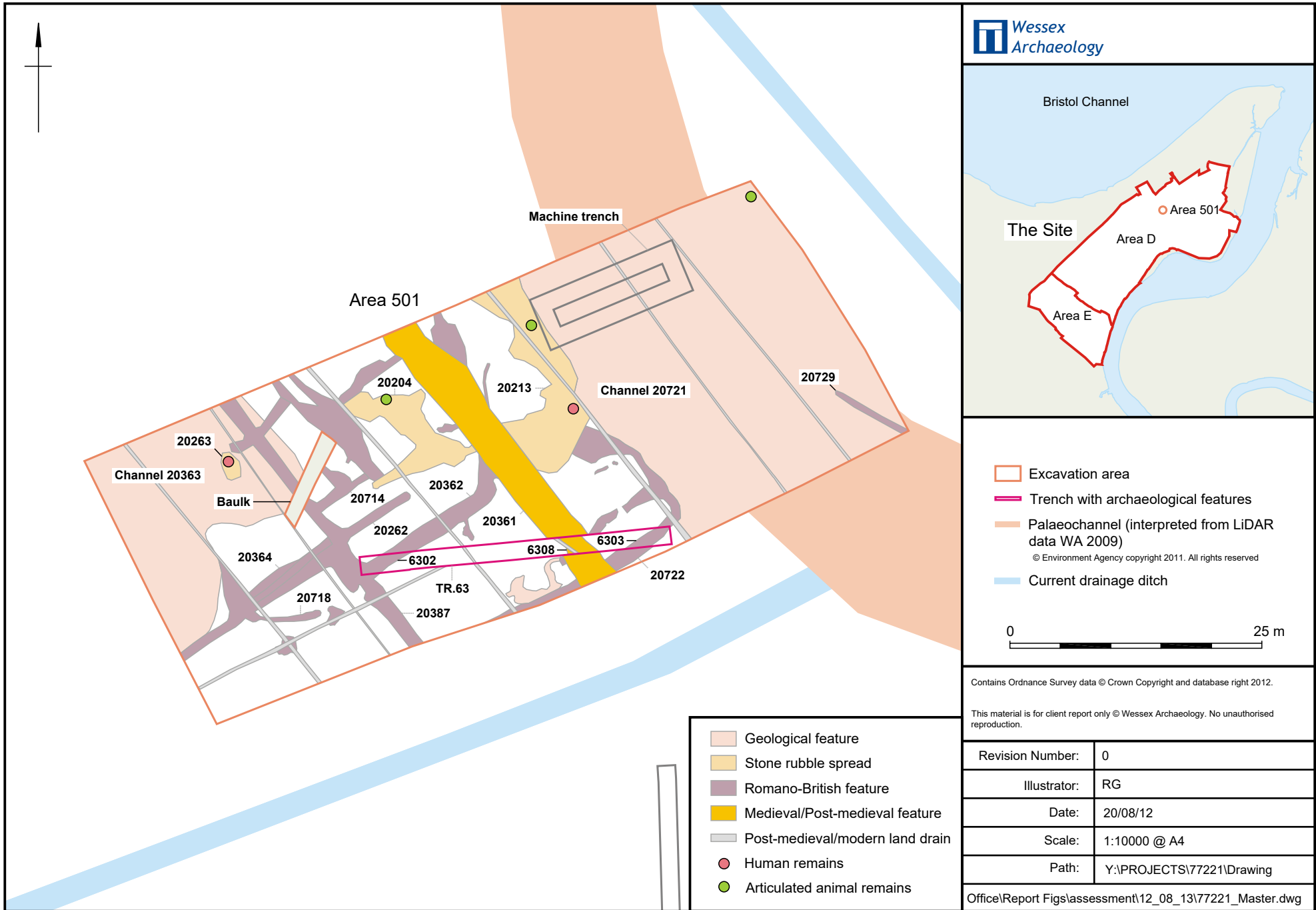
Area E evaluation trench plan

Figure 3



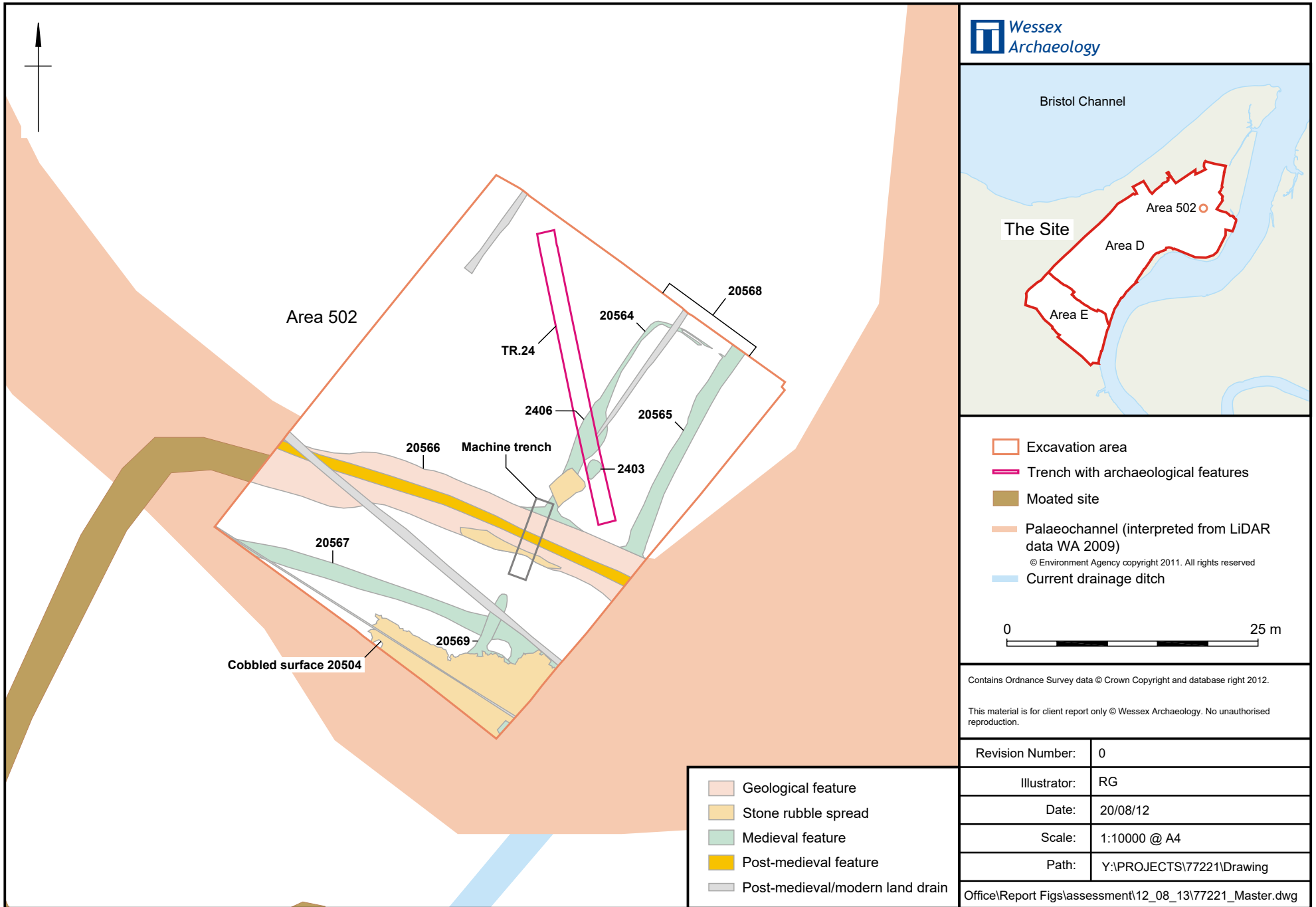
Plan of Area 500

Figure 4



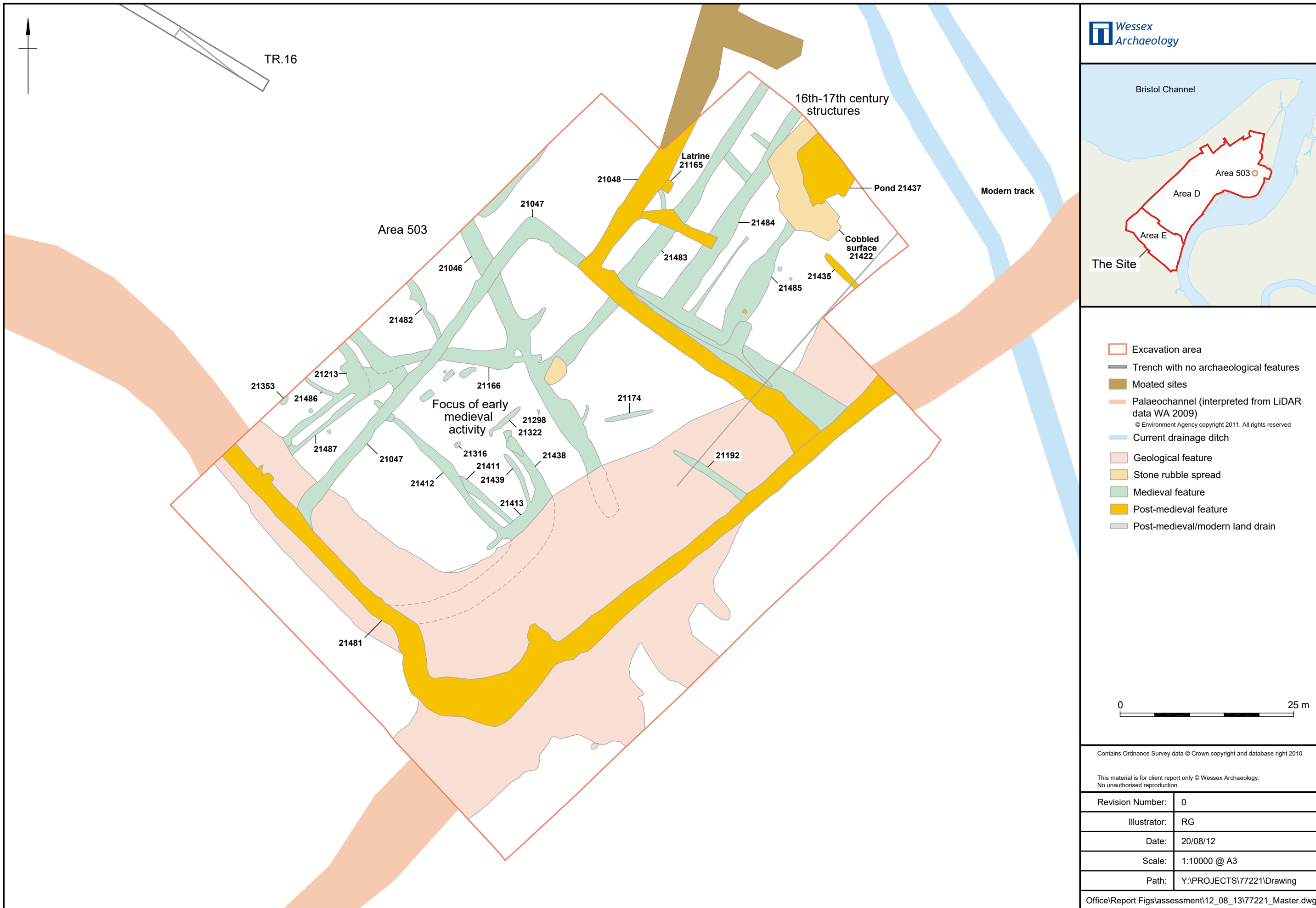
Plan of Area 501

Figure 5



Plan of Area 502

Figure 6



Plan of Area 503

Figure 7



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