Burnham Overy Habitat Creation Scheme, Norfolk

Geoarchaeological Investigation



Oxford Archaeology North October 2008

Environment Agency

Issue No: 811 OAN Job No: L9948 NGR: TF 837 432

Document Title:	Burnham Overy, Habitat Creation scheme,		
Document Type:	Geoarchaeological Investigation		
Client Name:	Environment Agency		
Issue Number: OA Job Number: Site Code:	811 L9981 BO07		
National Grid Reference:	TF 837 432		
Prepared by Position: Date:	Lucy Verrill Enviromental Project Office April 2008	Denise Druce ers	
Checked by: Position: Date:	Elizabeth Huckerby Environmental Manager OA October 2008		
Approved by: Position: Date:	Alan Lupton Operations Manager October 2008	SignedA.	

. 3 -

يتحر المتعددة

Oxford Archaeology North Mill 3 Moor Lane Lancaster LA1 1GF t: (0044) 01524 848666 f: (0044) 01524 848666 w: www.oxfordarch.co.uk © Oxford Archaeological Unit Ltd (2008) Janus House Osney Mead Oxford OX2 0EA t: (0044) 01865 263800 f: (0044) 01865 793496

Oxford Archaeological Unit Limited is a Registered Charity No: 285627

e: info@oxfordarch.co.uk

Disclaimer:

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.

CONTENTS

CON	NTENTS1	
SUMMARY		
ACK	KNOWLEDGEMENTS5	
1.	INTRODUCTION	
1.1	Circumstances of the Project	
2.	METHODOLOGY7	
2.1	Project Design	
2.2	Auger Survey7	
2.3	Archaeological Background8	
2.4	Archive9	
3.	BACKGROUND10	
3.1	Location Geology and Lithology10	
3.2	Archaeological Background10	
4.	CORING RESULTS	
4.1	Results14	
5.	DISCUSSION, IMPACT AND RECOMMENDATIONS16	
5.1	The Core Survey16	
5.2	Impact16	
5.3	Recommendations18	
6	BIBLIOGRAPHY	
7.	ILLUSTRATIONS	

Burnham Overy Habitat Creation Scheme, Norfolk: Geoarchaeological Investigation		2
7.1	List of Figures	21
Appi	endix 1: Project Design	22
Appi	ENDIX 2: SITE: GAZETTEER	
Appi	ENDIX 3: CORING LOGS	41

SUMMARY

Oxford Archaeology North (OA North) was commissioned by the Environment Agency to undertake a geoarchaeological investigation on land adjacent to the River Burn near Burnham Overy, Norfolk (centred NGR TF 837 432). The land is proposed for a habitat creation scheme, with five reedbeds, comprising open water areas, excavated, and any clay removed used to construct water-retaining banks.

The site covers an area of approximately 1.2km by between 0.2 and 0.6km, and is situated on the floodplain of the River Burn. Due to the site being within an area of high archaeological potential, an assessment of the impact of the proposed development on any archaeological remains was required, prior to the commencement of any construction works.

The main objective of the geoarchaeological investigation was to characterise the sediment sequences and patterns of deposit accumulation across the site in relation to potential land surfaces/buried soils and localised features, such as topographic highs or palaeochannels. In addition, the investigations sought to identify the location and extent of any waterlogged organic deposits, and to clarify the relationship between sediment sequences and other deposit types.

The survey was carried out over a period of fourteen days between 20th November and 7th December 2007, comprising sampling on transects spaced at roughly 25m intervals along the main axes of the proposed reedbeds. The cores were taken with a hand-held Eiijkelkamp screw auger and a 30mm bore hand-held Eiijkelkamp gouge auger to a depth of 2m or to the point where the underlying solid geology or glacial tills/boulder clay was reached. Sediment descriptions were carried out in the field. In total, 95 cores were taken.

The core survey revealed a complex sequence of Flandrian sedimentary deposits, which overlaid a gently undulating pre-Flandrian surface of fissured chalk bedrock. In broad terms the earliest deposits were peats forming in topographic depressions around an early Holocene palaeochannel, with lateral channel migration resulting in these areas developing into fen/mires and backwater marshes. Alluvial and outwash sands partially overlaid these peats and formed the basal deposits in many areas further away from the channel. These sands were sometimes interbedded with clays, and in an area of higher elevation, palaeosols, indicating that there may have been lateral channel migration or tidal influences at points in the site history. The core survey also revealed the presence of buried stone in two cores.

It is suggested that the proposed development area contains a palaeochannel with adjacent transitional environments, as well as a dryland ridge or river levee, both of which are location types represented in the corpus of existing archaeological evidence, and the impact of the development could potentially be considerable. In particular, the buried palaeosols in Area 6 have the potential to contain *in-situ* archaeological sites.

It is recommended that a programme of further stratigraphic work and modelling of the sediments, coupled with radiocarbon dating and palaeoenvironmental information, will provide a highly detailed picture of environmental change in this area of Burnham Overy in relation to human occupation. In particular, palaeoenvironmental investigation of the palaeosols is recommended. The resulting model should inform where archaeological sites, within a dry land or wetland context, are likely to be situated.

OA North would like to thank the Environment Agency for commissioning the report, their assistance during fieldwork, for providing survey data previously carried out at the site, and for providing the digital OS base map. In particular OA North would like to thank Peter Doktor and Philip Catherall of the Environment Agency and, in particular, Roger Beecroft of Wildlife and Countryside Services, who provided valuable information and guidance.

The auger survey was undertaken by Lucy Verrill and Christina Robinson. Lucy Verrill described the sediments and recorded the lithological data. Christina Robinson recorded the co-ordinates and height of each location with a GIS software package. Heather Wallis compiled the archaeological background. Lucy Verrill wrote the report with contributions from Denise Druce and Heather Wallis. Denice Druce, Carl Champness, Neil Wearing and Mark Tidmarsh, assisted by Joanne Cook, produced the lithological diagrams and created the maps. Pip Haworth compiled *Appendix 2* and Joanne Levey entered the data into OASIS, the online database of archaeological events. Elizabeth Huckerby managed the project and edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Following proposals for the redevelopment of land adjacent to the River Burn near Burnham Overy, Norfolk (centred NGR TF 837 432) for a habitat creation scheme, the Environment Agency requested that Oxford Archaeology North (OA North) submit a project design for a programme of geoarchaeological investigations.
- 1.1.2 The area of redevelopment covers an area measuring approximately 1.2km by between 0.2 and 0.6km, and is situated on the floodplain of the River Burn (Fig 1). The solid geology is fissured chalk, and there are pockets of overlying drift geology mainly glacial till and morainic drift, with beds/stringers of outwash sands and gravels. The deposits beside the water courses are of river terrace sands and gravels and alluvium, often underlain by peats and windblown sands. Due to the site being within an area of high archaeological potential, on the examination of the impact of the proposed development on any archaeological remains and organic deposits was required prior to any construction works commencing on site.
- 1.1.3 The main objective of the geoarchaological investigation was to characterise the sequence and patterns of accumulation in relation to potential land surfaces/buried soils and localised features such as topographic highs or palaeochannels. The areas targeted for this characterisation are to be the proposed location of the reed beds in areas 1, 3, 5 and 6 (Fig 2). A fifth area (2) of proposed reed bed was also selected but is not illustrated on Figure 2 as access to it was denied. In addition, the investigations sought to identify the location and extent of any waterlogged organic deposits, and to clarify the relationship between sediment sequences and other deposit types, including periods of 'soil' development, peat growth, and areas with the potential to contain archaeological remains.
- 1.1.4 The investigations comprised an auger survey carried out between 20th November and 7th December 2007, where cores were taken with hand-held screw and gouge augers to a depth of 2m, or until the underlying solid geology or glacial tills/boulder clay was reached. The resulting data was entered into an Excel spreadsheet and incorporated into the Rockworks software, which produced the lithological and stratigraphical diagrams included in the report.
- 1.1.5 A rapid desk-based assessment of the archaeological resource of the study area, which was extended by a radius of 0.5km, was undertaken. This was to place the geoarchaeological investigation within an archaeological and historical context.

2. METHODOLOGY

2.1 **PROJECT DESIGN**

2.1.1 The methodology outlined in the Project Design (*Appendix 1*) was adhered to, although access to Area 2 and a small part of Area 5 was not allowed. The approximate positions of the offset coring transects were supplied electronically as a sketch map to the Environment Agency as an addendum to the Project Design. In addition, the client requested that OA North extend the transects by 25m outside the area of the proposed reedbeds. The presence of standing water in part of Area 3 prevented investigation of one of the planned offset transects in this area. In much of Area 1, the clay was deep and extremely stiff, and impossible to sample below the topsoil with hand-held augers, even when a screw head was utilised.

2.2 AUGER SURVEY

- 2.2.1 The programme of coring was carried out using a hand-held Eiijkelkamp screw auger and a 30mm bore hand-held Eiijkelkamp gouge auger, and each location was probed to a depth of either 2m, or until the underlying solid or drift geology was proved. In total, 95 cores were sampled in transects spaced at roughly 25m intervals along the main axes of the proposed reedbeds in Areas 1, 3, 5 and 6. The cores in each transect were labelled from south-east/north-west and south-west/north-east and each one was labelled by its area, transect letter, and by the distance in metres from the start of the transect eg 3B 120. Those cores that were located outside the area of the reedbeds, are designated by + or 25m (from the last or first coring postion) eg 1B 0-25m.
- 2.2.2 Each core location, including OD height, was recorded with a Leica 1200 GPS.
- 2.2.3 The lithology of each core was described in a field notebook and the resulting data, along with the co-ordinates and heights, was entered into an Excel spreadsheet (*see Appendix 3*) and incorporated into Rockworks software (Rockworks/2004 Revision 4.8.19). Rockworks was then used to produce the core locations and 2D structural elevations of the present ground surface and bedrock surface, and structural thickness of the uppermost peat.
- 2.2.4 All plots utilised a grid-based method, using an inverse-distance weighting algorithm, and a weighting exponent of 2.0. This algorithm was chosen due to the regular distribution of the data points (Hageman and Bennet 2000, 115). The plots were utilised as an aid to interpretation, their accuracy being dependent on the number of usable datapoints (see below).
- 2.2.5 The boundary of each plot was defined by the location of the cores within that plot, which in each case covered an area c 300 x 400 m in size. Area 1 was not included in the modelling due to the lack of recovered data (see *Appendix 3* and *Section 4.1.2*).

- 8
- 2.2.6 The ground surface elevation model (Fig 5) was produced using a grid-based mapping tool based on the Z data from Areas 3, 5, and 6, which provided 76 data points. The extrapolated elevation of the bedrock (Fig 4) was also produced using the grid-based mapping tool in Rockworks, based on the data from each core location in Areas 3, 5, and 6 where bedrock was proven ('Hit Base' in the core logs). In total, 34 cores (out of a total of 76 from Areas 3, 5, and 6) proved the bedrock surface, therefore an assumption can be made that this plot has a confidence limit of 48%.
- 2.2.7 The plot of peat-thickness (Fig 6) was produced using Rockworks' 2dimensional (Isopach) mapping tool, which creates the model of a selected stratigraphic unit by gridding and extrapolating its thickness using the upper and lower surfaces. The resultant plot in this instance is based on the uppermost peat encountered in the study area and incorporated the data from those cores where its surface and base were proven (29 cores). An additional further 24 cores also confirmed the presence of this peat; however, in these cases the base of the peat was not proven, therefore they were not included in the model.
- 2.2.8 The maps showing the location of cores with fluvial sand (Fig 7) and cores with palaeosol (Fig 8) were plotted using the X and Y data of each of the relevant logs. The bedrock surface plot was used as a background plot in each of the diagrams in order to assess their distribution in relation to the extrapolated underlying topography.
- 2.2.9 The final Rockworks images were exported as raster files and geoferenced in ArcMap (ArcMapTM 9.2 1999-2006) in order combine them, to overlay them onto an OS map, and to create a plot of the study area. The final elevation maps were clipped to fit inside the study area using Photoshop and the final edits were carried out in ArcMap.

2.3 ARCHAEOLOGICAL BACKGROUND

- 2.3.1 A search was made of the Norfolk Historical Environment Record (NHER) to identify both known sites within the development area and those within a band *c*.0.5km in width around this area. In total, 79 records were returned. These covered all archaeological periods from the Mesolithic through to the 20th century. These are listed in Tables 1 and 2 (*Appendix 2*) while a descriptive summary of the archaeology of the sites and immediate area is presented in *Section 3.2* below.
- 2.3.2 In addition to this, Faden's 1797 map of Norfolk (Barringer 1989), Bryant's 1826 map of Norfolk (Barringer 1998) and the Tithe (1840), enclosure and 1st edition Ordnance Survey map (N/A available through Norfolk E-Map Explorer) were consulted. Pevsner and Wilson (1999) was used to inform on several of the important buildings in the area. Other books and articles were consulted as necessary.

2.4 ARCHIVE

- 2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Norfolk County Record Office in Norwich, and a copy of the report will be deposited with Norfolk County Sites and Monuments Records.
- 2.4.2 The data has been inputted into OASIS, the online database of archaeological events

3. BACKGROUND

3.1 LOCATION GEOLOGY AND LITHOLOGY

- 3.1.1 The survey is located on the northern coast of Norfolk. The geology of the area is chalk, which dips from west to east and is buried by glacial deposits in many places. The topography of the area is dominated by the chalk geology, creating a lowlying, flat landscape (Environment Agency 2005).
- 3.1.2 The north Norfolk coastline sediments have been shown to overly a Quaternary trough, probably a palaeo-river valley. The lithofacies associations are separated by erosion surfaces, which record movement of the tidal channels and of shoreface processes in response to sea-level rise in the early Holocene (Andrews *et al* 2000). The earliest Holocene sediments are peats formed on undulating till, which formed from 11,000-10,000 cal. BP to 7000 cal. BP in many places. In response to rising sea-levels, marine mudflat and saltmarsh environments began to form at 6000 cal. BP or younger west of Holkham (*ibid*).
- 3.1.3 Holocene transgressive and regressive events causing saltmash migration appear to be small-scale and localised in nature, suggesting the cause is autocyclic rather than allocyclic in the north Norfolk area, related to the disposition of coastal defences (Andrews *et al* 2000).
- 3.1.4 The Burnhams are a group of four modern parishes (originally seven) which lay on the north Norfolk coast. The parish of Burnham Overy is the northeasterly of these with the parish of Holkham to its east. The area under study, which lies close to the point where these four parishes meet, is on the western edge of Burnham Overy Town and the inlet of Overy Creak, which joins the River Burn to the North Sea. The town of Burnham Market lies less than 1km to the south. The area between Burnham Overy and the coast is largely made up of salt marsh.

3.2 ARCHAEOLOGICAL BACKGROUND

- 3.2.1 **The development area**: Eight entries are listed on the NHER which lie within the study area (*Appendix2*, *Table 1*). These include Roman, medieval and post-medieval monuments.
- 3.2.2 *Roman:* Site 27010 is located on both sides of the southern boundary of the study area and consists of a number of negative cropmarks and parchmarks, including linear features, pits and possible enclosures and is described as a settlement. The date is somewhat uncertain, but the NHER record suggests that these possibly represent Roman enclosures and field systems. Considering the quantity of Saxon and medieval activity in the area however, a later date is also possible
- 3.2.3 *Medieval*: One major site of this period lies within the southern part of the study area. This site (NHER 1738) is a Scheduled Ancient Monument (SAM

No. 202) and consists of the remains of St Mary's Friary. This was the earliest Carmelite Friary established in Norfolk. Although originally founded on a different site (NHER 32740) in 1241, it was moved to this location in 1253 and enlarged in 1353. The gatehouse and some parts of the other buildings remain standing. The remainder of the Friary complex is visible either on the ground in the form of foundations and earthworks or from the air, showing on aerial photographs. The upstanding elements and earthworks were planed in 1995 (Cushion and Davidson 2003, 133) illustrating part of the church, as well as the possible precinct boundary. This plan has since been enhanced by the National Mapping Programme (NHER). Small excavations in 1840 and 1995 have produced human remains, medieval pottery and brick. Lying just outside the development area is site NHER 43988, Friary Cottage. This building, though largely dating to the 18th century and later, incorporates the remains of a 14th-century wall. It has been suggested that this was perhaps the infirmary or hostelry belonging to the Friary. The Tithe Map of 1840 shows two standing buildings, the gatehouse and church, which had been subdivided into two (Cushion and Davidson 2003, 133). To the north of the Friary two areas of medieval ridge and furrow has been identified from aerial photographs (NHER 27004 and 27015).

- 3.2.4 *Post-medieval*: Four sites of post-medieval date lay within the study area all to the north of the medieval sites. These are all visible on aerial photographs and comprise a ditch (NHER 27027), a bank running on the north edge of an extant dyke (27029) and elements of the sea-defences (NHER 1761 and 26670). The latter of these form part of a large sea defence, designed by Thomas Telford, which runs along the coast to the west of Overy Creek for several kilometres. At its eastern end it turns to the south and it is this branch of defences which extends into the study area. This is also noted on Bryant's map of 1826 (Barringer 1998, 7) but not on Faden's map of 1797 (Barringer 1989, 3).
- 3.2.5 **The extended study area:** The search of the HER was extended to 0.5km from the boundary of the development area. This produced a further 69 records of which 19 are buildings, 18 are finds spots and 32 are monuments. These are listed by NHER number in *Appendix 2, Table 2*, where each site is listed with grid reference and each period which is represented. A brief summary of this expansive data set follows.
- 3.2.6 *Prehistoric*: The earliest find listed are flints from the Mesolithic ((NHER 18496 and 34280). Further finds of flint flakes and tools have been made for the Neolithic and Bronze Age, including scrapers (NHER 1756) and an axe-hammer (NHER 1737). Pottery of a Bronze Age date has also been recorded (NHER 1734 and 34280). A significant monument is a Late Neolithic/Bronze Age hengiform enclosure (NHER 1020), which was identified from aerial photographs. This monument was possibly associated with a group of ring ditches of possible Bronze Age date (NHER 12787 and 12789).
- 3.2.7 A large circular enclosure (NHER 27002) has also been identified and it has been suggested that this may date to the late prehistoric period. Iron Age pottery has been found on seven sites within the extended study area. A single prehistoric feature, in the form of a pit, has been excavated during an

- 3.2.8 *Roman*: Aerial photographs have also revealed a field system, including enclosures and buildings, of this date (NHER 27010). A further two sites with buildings are recorded (NHER 18496 and 20343). Evidence for these buildings is in the form of significant quantities of tile recovered from fieldwalking. Metalwork and pottery was also recovered.
- 3.2.9 Eleven other sites have evidence of Roman occupation in the form of finds of metalwork and/or pottery. Particularly unusual finds include part of an inscription on black marble (NHER 20344) and an Egyptian gold coin (NHER 21881), which is thought to have been a Roman import.
- 3.2.10 *Saxon*: By far the majority of the known archaeological evidence from the general area surrounding the site dates to the Saxon period with the Early, Middle and Late Saxon periods all very well represented. Most of the evidence is in the form of finds, many of them retrieved from metal-detecting. Early Saxon finds of metal artefacts and/or pottery have been retrieved from eight sites, Middle Saxon finds from ten sites and Late Saxon material from twelve sites. Finds have been recovered in such quantities that it has been possible to interpret these as representing a market, port and settlement (Major finds sites NHER 18496 and 28127, one examined by the site NHER 34581, excavation by Norfolk Archaeological Unit) which developed around Overy Creek, navigable to this point during the Saxon period. St Margaret's church (NHER 1770), which lies within the extended study area, has a Saxon round tower.
- 3.2.11 *Medieval*: St Margaret's church continued in use and has a rare early Norman stone font (Pevsner and Wilson 1999, 230). The architecture of All Saints' church (NHER 1759) and St Clements church (NHER 1741) indicates that they were also built during the Norman period. The churches were all altered and refurbished during the medieval period, architectural styles relating to the 13th, 14th and 15th centuries being recognised within the buildings. The probable site of St Andrew's church (NHER 1753) has also been identified by finds of human bone and medieval pottery. The Augustinian priory (Peterstone Priory NHER 1774) which was founded nearby sometime prior to 1200. One other building is listed, a medieval stone cross (NHER 1771), which stands in the centre of the village.
- 3.2.12 Again much of the other evidence for this period is in the form of pottery and metal artefacts. These have been found on seventeen other sites, one of which (NHER 34581), located in Burnham Market, has been excavated revealing evidence of cut features of this date. Of the local markets, that at Burnham Market is first documented in 1209, while Burnham Overy market is first recorded at the later date of 1271 (Dymond 2005, 76-77). The latter of these fell out of use by the 17th century, while Burnham Market became the dominate centre.
- 3.2.13 *Post-medieval*: The post-medieval evidence for this period is of a more 'industrial' nature with a lime kiln (NHER 12239), extraction pits (NHER 27013 and 27059), a brick kiln (NHER 18496), and two windmills (NHER

1765 and 15152) and two water mills (NHER 1766 and 1772), the mills being all Grade II-listed buildings. One post-medieval house of 18th century date, which is located just outside the main study area, also incorporates part of a 14th century wall within it. Of the other twelve buildings, all of which are Grade II-listed, five originated in the 17th century, three in the 18th century and four in the 19th century, all have subsequent alterations and additions made.

- 3.2.14 The rural landscape has also been noted with the recording of field boundaries and enclosures (NHER 27005, 27012, 27033), as well as ditches and banks relating to the drainage of the area (NHER 27034, 27035 and 27054). Artefacts of this period have also been recovered from ten different sites.
- 3.2.15 *Modern*: Modern features are also present in the record. These have been mainly identified from aerial photographs and include Second World War defences (NHER 18223, 27028 and 27055), as well as sea defences (NHER 41468) and drainage ditches (NHER 27035).

4. CORING RESULTS

4.1 **RESULTS**

- 4.1.1 In total, 95 core locations were taken and cored to a maximum depth of 2m, however in some instances no retrieval of cores was possible. The core locations discussed are shown in Figure 2 and the borehole logs are presented in Appendix 3. Although depths of 2m, with the base not reached were attained in some locations, in the majority of cores either the proximity of bedrock to the surface or the strength or consolidation of underlying deposits dictated the depth of coring. There were 34 boreholes, in total, where the base was at a depth greater than 2m (1B 0 -25m; 1B 0m; 3A 0m; 3A 25m; 3A 50m; 3A 75m; 3A 100m; 3A 120m; 3A 120 + 25m; 3B 120m; 3B 120 + 25m; 3C 0 -30m; 3C 25m; 3C 50m; 5F 0 -25m; 5F 25m; 5A 100m; 5A 125m; 5A 50m; 5A 162m; 5D 50m; 5D 75m; 5D 100m; 5D 125m; 5B 0m; 5B 25m; 5B 155m; 5H 25m; 5C 50m; 5C 75m; 5C 100m; 5C 125m; 6A 0m; 6A 25m; 6A 50m; 6B 30m). Much of Area 1 was covered by near-surface dense, firm clay, which was difficult to penetrate with the hand-held auger. Similarly, loose, unconsolidated wet sands are difficult to penetrate and retain in an auger, even when a variety of auger heads designed for different sediments are used.
- 4.1.2 Area 1 is not considered in any detail in the report as there was no significant borehole data and the limited results from this area are not-included on the Figures 3-8. The following discussion and interpretation concentrates on Areas 3, 5 and 6, which are considered together (Fig 3). The bedrock plot (Fig 4) must be interpreted with caution as many of the cores did not confirm bedrock depth (Section 2.2.6). However, the available data show an area of high ground separating two low-lying areas. The high ground forms a ridge roughly oriented north-west/south-east, with the highest part aligned along Transect 6A (Cores 6A). The depression to the west of this high ground (which shows two major low-lying foci) appears to represent a palaeochannel running north-west/south-east, which was most likely a former channel of the River Burn. As the channel migrated, the low-lying area comprising Transects 5H (Cores 5H) and the western end of 5C (Cores 5C) developed into a backwater marsh or fen/mire. The smaller depression to the east of the high ground may also represent a topographic hollow, which filled with similar fen/mire and clay deposits, however its extent is not known as it is on the edge of the plot. The ridge of high ground separating the two low-lying areas consists of sandy sediments and may represent a river levee between the two areas.
- 4.1.3 The present ground surface topography is shown in Figure 5. Whilst the area of high bedrock along Transect 6A is also a surface topographic high, the considerable accumulation of peat in the depression seen in Transects 5C and 5B (Cores 5B) and 5H, interpreted as a fen/mire, has made this area relatively elevated also (Fig 6). The bedrock depressions around Area 3 and Transect 5G (Cores 5G) do not contain such a depth of peat and therefore remain relatively low-lying.

- 4.1.4 The lowest depth for the peat surface (see *Appendix 2*) and the thickest peat deposits (Fig 6) are located in the west of the study area, within the northwestern part of Area 5. This peat is interpreted as accumulating in a fen/mire. As would perhaps be expected, some peat accumulation is noted from the edges of the palaeochannel, e.g. the north-western end of Transect 3B and many cores in Transects 5B and 5C.
- 4.1.5 The laminated fluvial sands are largely confined to the edge of the palaeochannel area represented by Transect 5G and Area 3 (Fig 7). As the sands tend to be interbedded with clay and peat deposits they may represent a tidal influence to the channel, or braiding or complex channel migration. In Area 6 the ridge of high ground separating the two low-lying areas consists of sandy sediments and may represent a river levee between the two areas.
- 4.1.6 There are some accumulations of organic alluvium (organic clays and sands), limited to the edge of the channel in Area 6 and low-lying areas (Boreholes 5C 75, 5G 20). These accumulations represent shallow water conditions in transitional environments.
- 4.1.7 Palaeosols are limited to Area 6 (Transects 6A and 6B Cores 6B; Fig 8). In most instances, a layer of palaeosol between 0.3 0.6m thickness was present below the upper topsoil and clay deposits, overlying the laminated sand, clay and organic sediments. One location, 6A 25m (see *Appendix 3*), had a more complex stratigraphic sequence, with at least two distinct palaeosols. The development of a soil in this area is probably linked to the reduced influence of the river channel and the lower water table afforded by the relatively elevated topography, resulting in less frequent or severe waterlogging. The palaeosols may have been truncated by clay inundation and, therefore, their former extent may have been wider over the area of high ground. With this in mind, it is possible that these buried soils hold the potential for containing dry land archaeological sites on the ridge/ possible levee running between the two depressions. Archaeologically, the identification of these palaeosols is highly significant.
- 4.1.8 A layer of stone was recorded immediately under the surface at two core locations in Area 5 (5F 0m NGR 583807 343059 and 5D 25m NGR 583702 343154). At both these coring postions multiple cores were attempted in an area of one metre square. These two locations, which are not shown on the figures, lie in the southern part of Area 5. Archaeologically, the presence of stone may be significant but could equally be of recent origin having been laid as hardcore in an area of wet ground.
- 4.1.9 Paragraph 3.2.9 of the Project Design (OA North 2007) stated that the potential of suitable deposits for any AMS and OSL dating may be considered if the potential of the cores for environmental analysis was required by the client. As no assessment was required by the client the potential for scientific dating was not assessed.

5. DISCUSSION, IMPACT AND RECOMMENDATIONS

5.1 **THE CORE SURVEY**

- 5.1.1 The core survey revealed a complex sequence of Flandrian sedimentary deposits, which overlaid a gently undulating pre-Flandrian surface of fissured chalk bedrock. The lowermost Flandrian sediments were not reached in every borehole and varied according to location. In broad terms, the earliest deposits were peats forming in topographic depressions around an early Holocene palaeochannel, with lateral channel migration resulting in these areas developing into fen/mires and backwater marshes. Alluvial and outwash sands partially overlaid these peats and formed the basal deposits in many areas further away from the channel. These sands were sometimes interbedded with clays, and in an area of higher elevation, palaeosols, indicating that there may have been lateral channel migration or tidal influences at points in the site history.
- 5.1.2 The identification of stone in the southern part of Area 5 may indicate the presence of a buried archaeological feature, although the stone may be of recent origin.

5.2 Імраст

- 5.2.1 As has been illustrated by the data collection and summary above, this part of Norfolk contains evidence of all periods of human activity from the Mesolithic through to the present day. Although prehistoric evidence is not from within the development area the identification of enclosures and barrows in the surrounding area, along with finds of flint and pottery, indicates a growing use of the countryside through the Neolithic and into the Bronze Age. Iron Age occupation is also attested in the region by the presence of pottery finds. The work of the National Mapping Programme in the last few years has increased the number of sites, probably dating to this period, highlighting many areas of field boundaries and enclosures
- 5.2.2 The number of sites relating to the Roman period shows a marked increase. These include field systems and enclosures, one of which lies within the proposed development area. Close by, other finds suggest the presence of substantial buildings and a settlement centre. These buildings are just two of several which have been identified within a few kilometres of the fort and extensive *vicus* at Brancaster (see Ashwin and Davison 2005, 29).
- 5.2.3 Early Saxon activity indicates the presence of a small community which developed into thriving market place and town during the Middle Saxon period. Present evidence suggests that this was focused at the confluence of Goose Beck and the River Burn (Rogerson 2003, 114-5) but may not have extended to where the development area lay. This is described as a 'productive' site of the Middle Saxon period, one of only ten identified in the county (Rogerson 2005, 32-33), and possibly may also have had an early ecclesiastical function (Pestell 2005, 66).

- 5.2.4 Considerable occupation of the area continued into the Late Saxon period, again mainly focused on the east side of the River Burn, although St Margaret's church, which has a Saxon tower, is sited on the west of the river indicating that settlement was also present here. At the time of Domesday the Burnhams had a large recoded population divided between several manors (Pestell 2003, 127). It also included a minster church and royal vill at Burnham Overy (Pestell 2005, 66).
- 5.2.5 Burnham Overy and the surrounding villages continued to thrive into the medieval period as is noted by the presence of several churches, some of Norman foundation and all of which were subject to investment in the form of alterations and additions. The one exception to this was St Andrew's church (Burnham Market), which was consolidated with St Clement's (Burnham Overy) in 1421.
- 5.2.6 Other religious institutions include the Carmelite friary of St Mary and, beyond the detailed study area, the Augustinian priory (Peterstone Priory NHER 1774), which was founded nearby sometime prior to 1200. St Mary's Friary, a scheduled ancient monument, lay partly within the development area. It was founded on this site in 1253 having been moved from a previous site.
- 5.2.7 Areas of medieval ridge and furrow have also been identified by aerial photography and two of these would be affected by the proposed development.
- 5.2.8 The Burnhams continued to be significant settlements into the post-medieval period and many of the buildings from this period, including wind and water mills, as well as residential properties, are still standing. Many have grade-II listed status and several have been the subject of recent restoration. Although none of these lie within the area of proposed development, several lie on the periphery (Friar's cottage and Burnham Overy Mill and Watermill) and their settings would be greatly changed by major alterations to the surrounding landscape.
- 5.2.9 Also of this period are the major banks constructed to defend the land from the encroaching sea. Attempts had been made from the medieval period onward to create sea-defences. Parts of one of the major attempts to defend the land exist within the proposed development area. This monument was designed by Thomas Telford and constructed in 1822 (Albone, Massey and Tremlett 2007, 146).
- 5.2.10 It has been shown that this small part of Norfolk contains a wide variety of significant archaeological evidence relating to many periods of history and prehistory. Within the proposed development site itself important Roman, medieval and post-medieval monuments exist, while within 0.5km lay a major Saxon settlement.
- 5.2.11 The proposed development area contains a palaeochannel with adjacent transitional environments, as well as a dryland ridge or river levee, both of which are location types represented in the corpus of existing evidence, and the impact of the proposed development on these could potentially be

considerable. In particular, the buried palaeosols in Area 6, located as they are on a possible levee, have the potential to contain *in-situ* archaeological sites.

5.3 **Recommendations**

- 5.3.1 Although the sediment maps and lithological sections produced here are extremely useful as an aid to locating the palaeochannel, fen/mire and buried land surfaces, and to the interpretation of the deposits in the survey area, further stratigraphic work is recommended. Ideally, it would be extremely useful to completely map the various deposit types down to bedrock within the survey area, which would ultimately provide a comprehensive model of the depth and extent of the broad sediment types. This would provide specific information, for example, on the extent and depth of the intercalated sand and clay, the peat, the alluvial sands and gravels. It is anticipated that further modelling, coupled with radiocarbon dating and palaeoenvironmental information, will provide a highly detailed picture of environmental change in this area of Burnham Overy in relation to human occupation. In particular, palaeoenvironmental investigation of the palaeosols is recommended. The resulting model should inform where archaeological sites, within a dry land or wetland context, are likely to be situated.
- 5.3.2 It is recommended that a series of evaluation trenches are excavated in Area 6 through the buried soils in Transects 6A and 6B to identify any possible archaeological sites.
- 5.3.3 It is also recommended that a series of evaluation trenches be excavated in the southern part of Area 5 to identify the significance of the buried stone recorded in Cores 5F 0m and 5D 25m. Before these trenches are cut, it is recommended that the local farmer be interviewed, in case there is a simple explanation for their presence in this part of Area 5.

6 BIBLIOGRAPHY

6.1 PRIMARY AND CARTOGRAPHIC SOURCES

OS 1:10,000 Raster Map TF84SW

6.2 SECONDARY SOURCES

Albone, J, Massey, S. and Tremlett, S, 2007, *The Archaeology of Norfolk's Coastal Zone. Results of the National Mapping Programme, The Archaeology of Norfolk's Coastal Zone. Results of the National Mapping Programme*

Andrews, JE; Boomer, I; Bailiff, I; Balson, P; Bristow, CS; Chroston, PN; Funnell, BM; Harwood, GM; Jones, R; Maher, B; & Shimmield, GB 1999. Sedimentary evolution of the north Norfolk barrier coastline in the context of Holocene sea-level change. In I, Shennan, and J, Andrews, (Eds.) *Holocene Land-Ocean Interaction and Environmental Change Around the North Sea.* Geological Society Special Publication **166**, 219-251.

Archaeology Data Service 1997 - 2008 http://ads.ahds.ac.uk/index.html

Ashwin. T and Davison, A, 200, An Historical Atlas of Norfolk, Phillimore, Chichester

Barringer, JC, 1989, Faden's Map of Norfolk, Larks Press, Dereham

Barringer, JC, 1998, Bryant's Map of Norfolk in 1826, Larks Press, Dereham

Cushion, B and Davison, A, 2003, Earthworks of Norfolk, *E.Anglian Archaeol.* **104**, Norfolk Museums and Archaeology Service, Dereham

Dymond, D, 2005, 'Medieval and later markets' in T Ashwin. and A Davison, *An Historical Atlas of Norfolk*, 66-67, Phillimore, Chichester

English Heritage, 1991 Management of Archaeological Projects, second edition, London

Environment Agency, 2005, *The North Norfolk Catchment Abstraction Management Strategy*, March 2005, Ipswich

Funnell, B. M. 1992. A geological heritage coast: north Norfolk (Hunstanton to Happisburgh). *In*: Stevens, C., Gordon, J. E., Green, C. P. & Macklin, M. G. (eds) *Conserving our Landscape: Evolving Landforms and Ice-Age Heritage*, 59–62, Crewe.

Funnell, B M & Pearson, I 1989. Holocene sedimentation on the north Norfolk barrier coast in relation to relative sea-level change. *Journal of Quaternary Science*, **4**, 25–36

Hageman, JB & Bennett, DA, 2000 Construction of Digital Elevation Models for Archaeological Applications. In: Westcott, K. & Brandon, R. (eds) *Practical*

Applications of GIS for Archaeologists: A predictaive modelling Kit (GISDATA S), 113-121, London

Norfolk Museums & Archaeology Service Collections.

http://museums.norfolk.gov.uk/default.asp?document=300

Pestell, T, 2003, The Afterlife of 'Productive' Sites in East Anglia' in T Pestell, and K, Ulmschneider, (eds), *Markets in Early Medieval Europe*, 122-137 Windgather, Macclesfield

Pestell, T, 2005, 'Monasteries' in T, Ashwin. and A, Davison, *An Historical Atlas of Norfolk*, 66-67, Phillimore, Chichester

Pevsner, N and Wilson, B, 1999, The Buildings of England. Norfolk 2: North-West and South, Penguin, London

Rogerson, A, 2003, Six Middle Anglo-Saxon Sites in West Norfolk' in T, Pestell, and K, Ulmschneider, (eds), *Markets in Early Medieval Europe*, 110-121, Windgather, Macclesfield

Rogerson, A, 2005, Middle Saxon Norfolk' in T, Ashwin. T. and A, Davison, An Historical Atlas of Norfolk, 32-33, Phillimore, Chichester

Whitmore, D, 2004, An Archaeological Evaluation at Bellemy's Lane, Burnham Norton, Norfolk Norfolk Archaeological Unit Rep. **989**

7. ILLUSTRATIONS

7.1 LIST OF FIGURES

Figure 1: Location map showing survey area

Figure 2: All Core locations

Figure 3: Core Locations; Areas 3, 5, and 6

Figure 4: Plot of bedrock (with annotated areas 3, 5 and 6)

Figure 5: Plot of present ground surface (with annotated areas)

Figure 6: Plot of peat thickness (with annotated areas)

Figure 7: Map showing areas of fluvial sand

Figure 8: Map showing areas of palaeosol

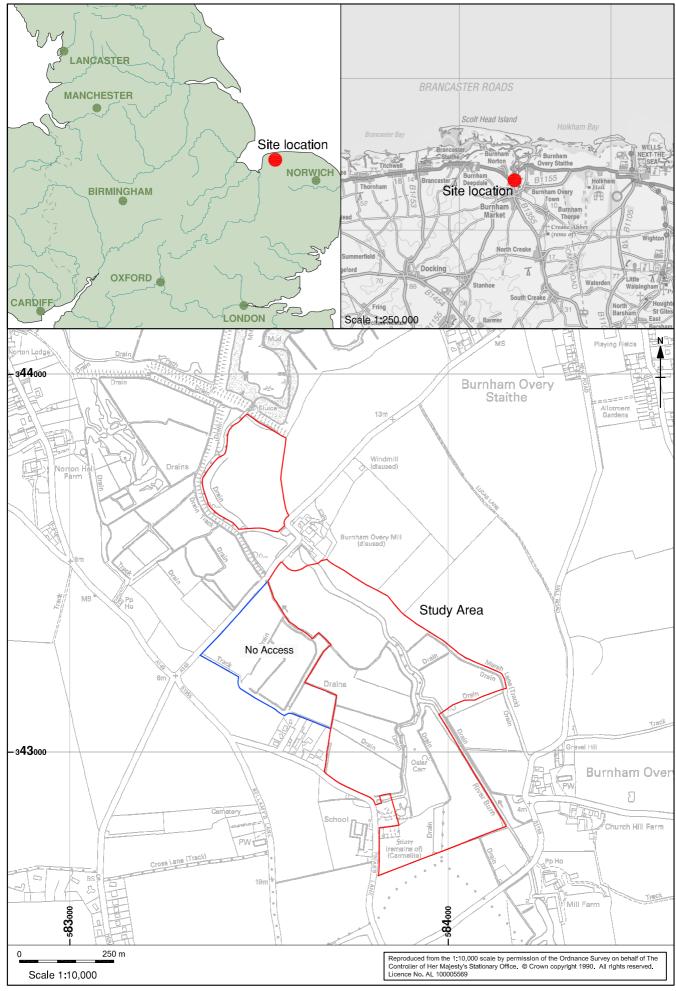


Figure 1: Site Location

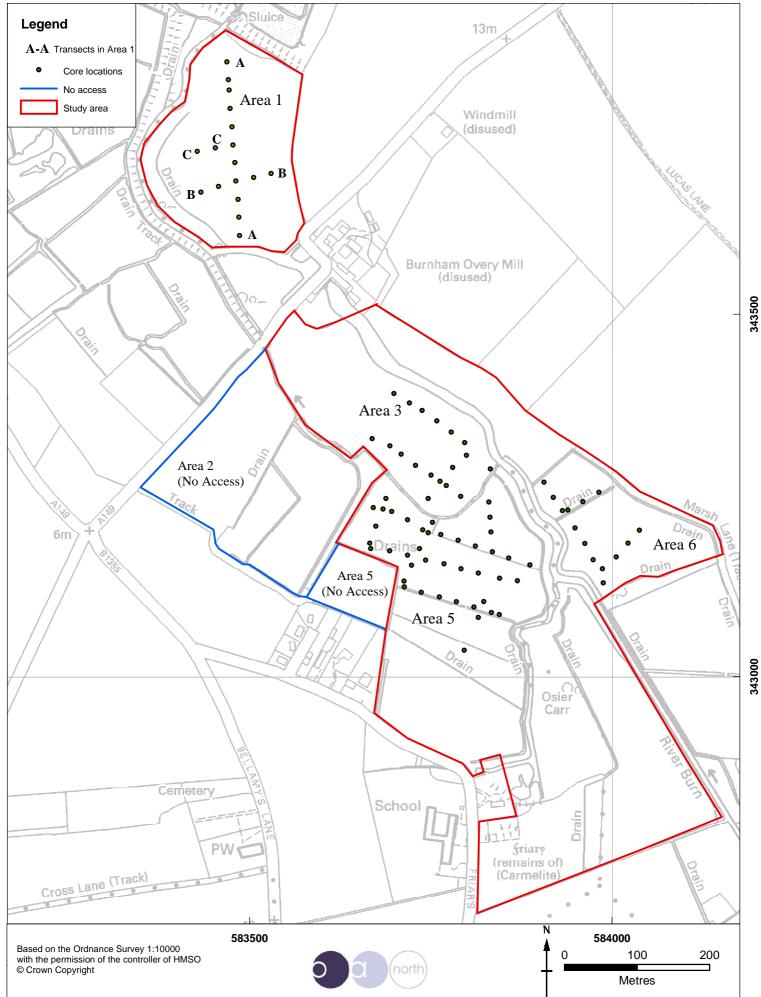


Figure 2: Burnham Overy study areas showing all core locations and the location of transects in Area 1

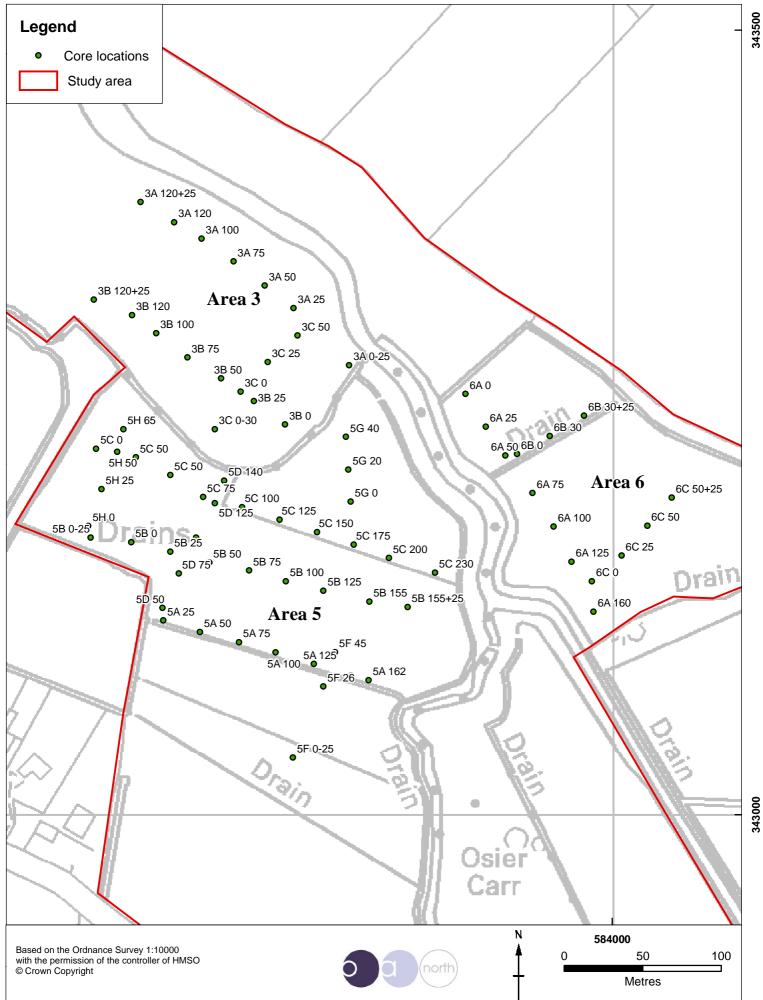


Figure 3: Core locations of Areas 3, 5 and 6. Core numbers prefixed with -/+ 25 lie outside the area of the proposed reedbeds.

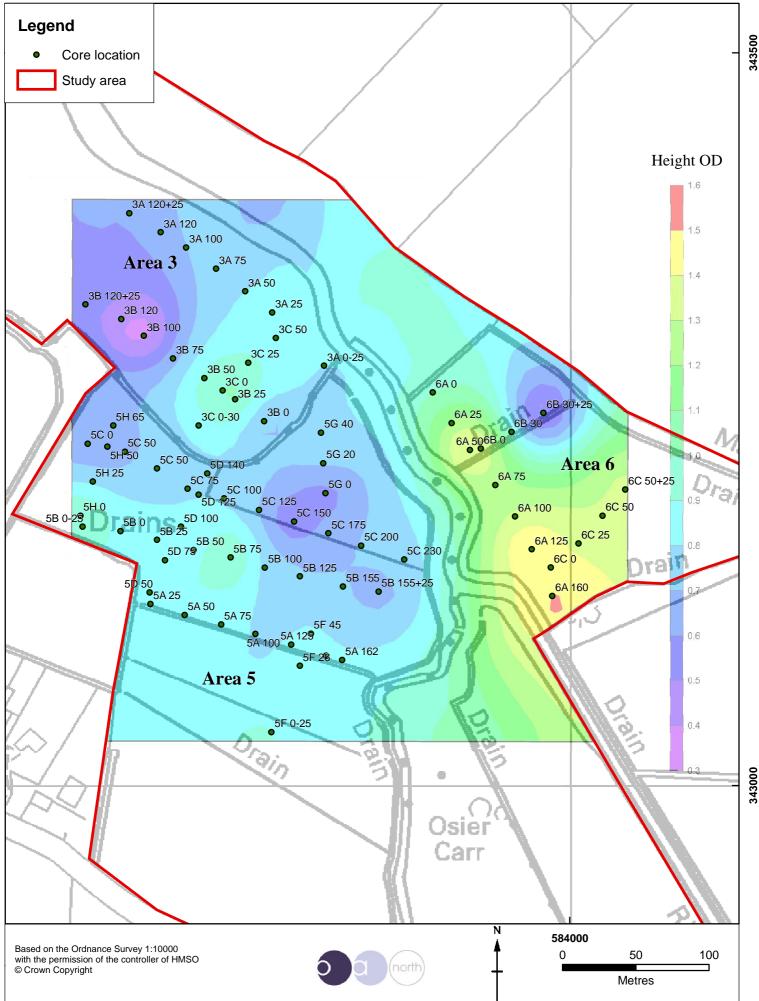


Figure 4: Model of bedrock

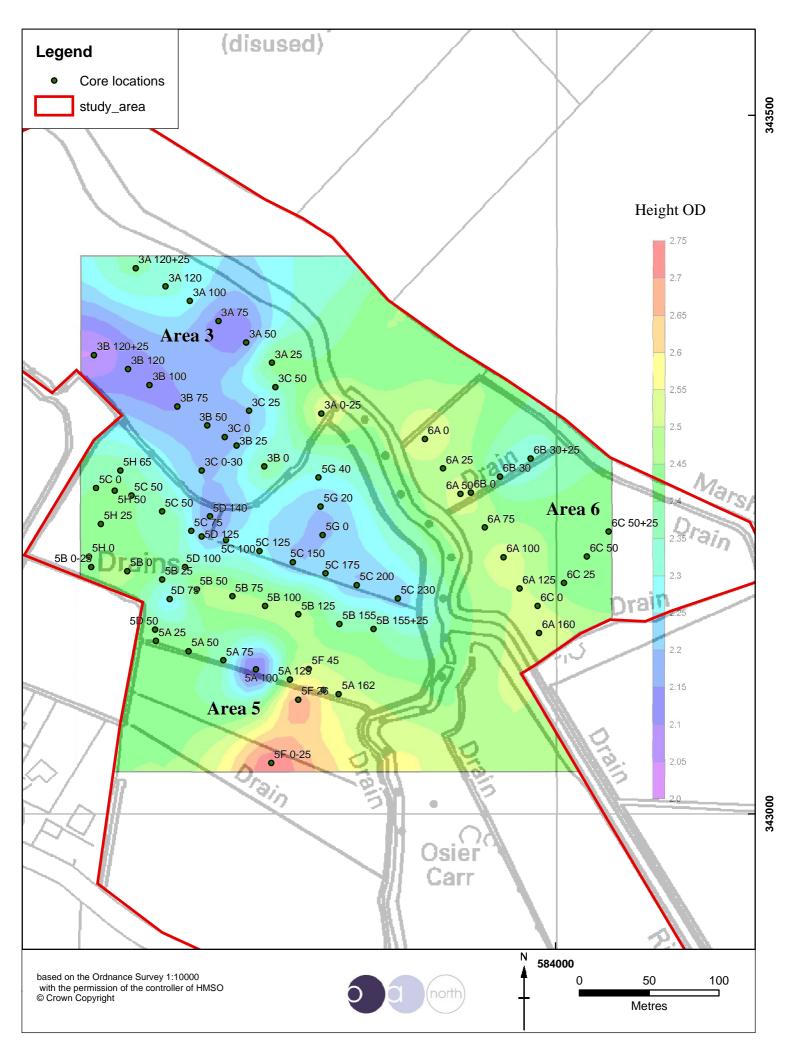


Figure 5: Model of present ground surface

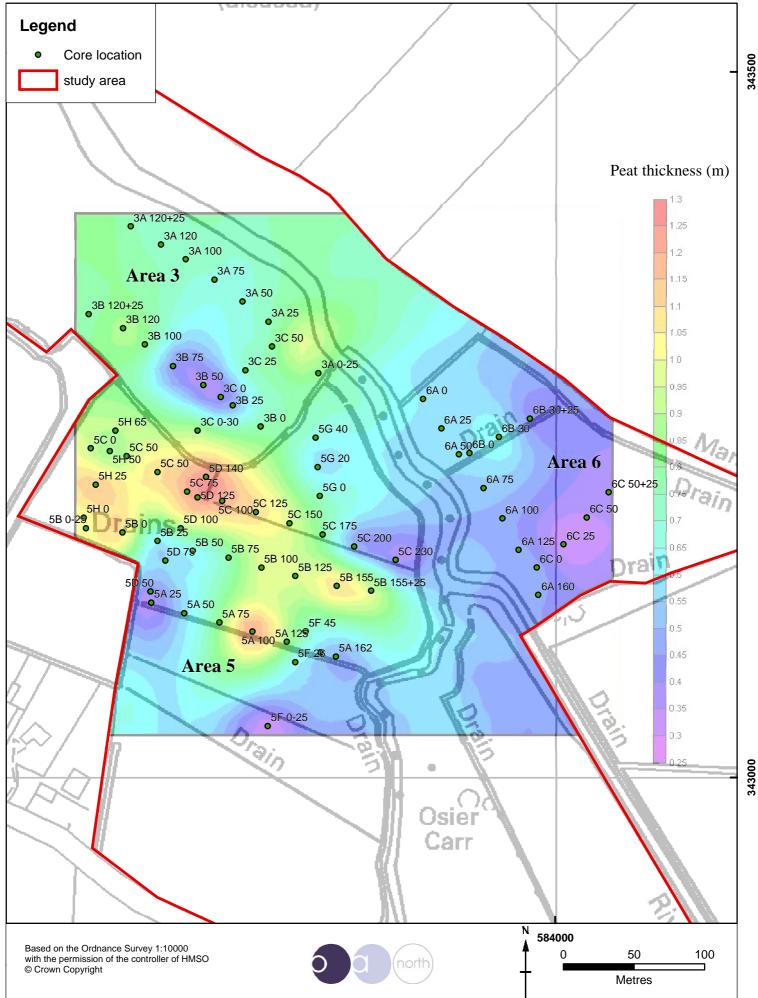


Figure 6: Model of peat thickness

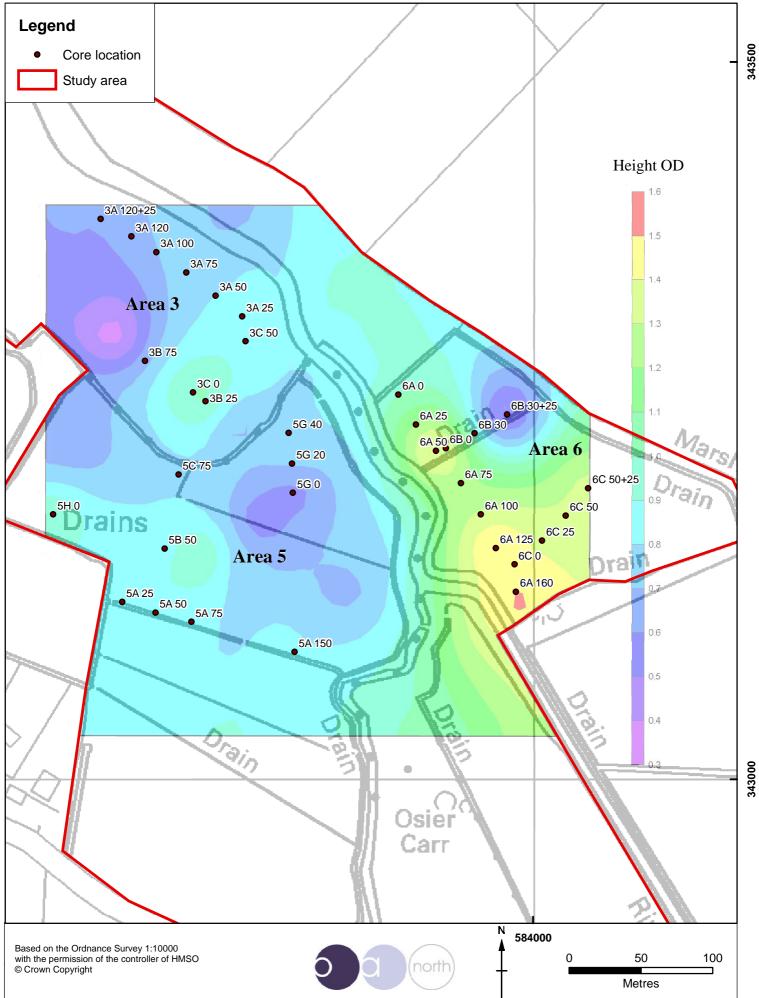
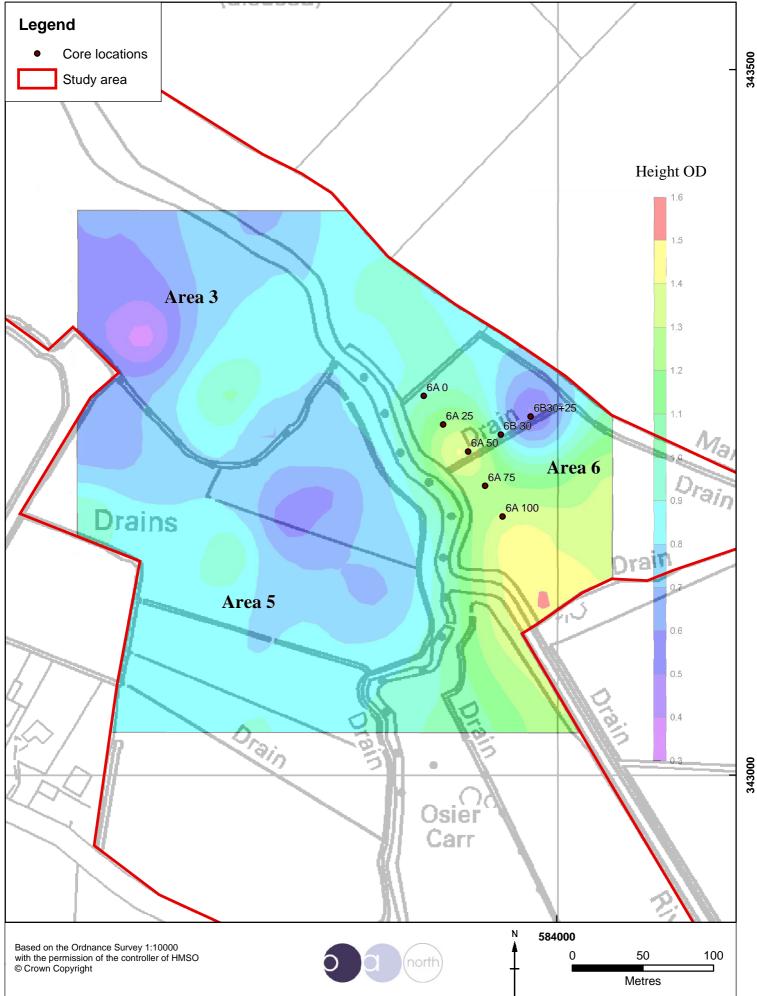
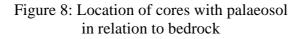


Figure 7: Location of cores with fluvial sand in relation to bedrock





APPENDIX 1: PROJECT DESIGN

1. INTRODUCTION

1.1 **PROJECT BACKGROUND**

- 1.1.1 The Environment Agency (hereafter the 'client'), has requested that Oxford Archaeology North (OA North) submit proposals for a geoarchaeological investigation. The site concerns land adjacent to the River Burn, nr Burnham Overy, Norfolk (centred NGR TF 837 432), which is proposed for a habitat creation scheme. Five reedbeds comprising open water areas will be excavated and any clay removed will be used to make water-retaining banks. The methods for their construction are outlined in Beecroft, and Green (2007). Due to the site being within an area of high archaeological potential, an assessment of the the impact of the proposed development on any archaeological remains is required prior to any construction works commencing on site.
- 1.1.2 Burnham Overy was a trading port until the end of the Middle Ages when the river Burn silted up. The proposed habitat creation scheme also lies close to a former friary. The geoarchaeological survey may locate former dryland surfaces or features associated with both the friary and the trading port.
- 1.1.3 *Location, and Topography*: the site is situated on the floodplain of the River Burn along the west bank, nr Burnham Overy, Norfolk (centred NGR TF 837 432). It covers an area of approximately 1.25 km by 0.70 km.
- 1.2 **QUALITY ASSURANCE**
- 1.2.1 Oxford Archaeology (OA) is a Registered Archaeological Organisation with the **Institute of Field Archaeologists (no 17)**. OA is not at present ISO certified but operates an internal QA system governed by standards and guidelines outlined by English Heritage and the Institute of Field Archaeologists.
- 1.2.2 **Standards:** it is OA's stated policy to adhere to current professional standards set by IFA, English Heritage, Association of Local Government Archaeological Officers, Museums Organisations. OA helps the profession to develop and establish standards by serving on national working parties (eg recently on archives), and conforms with current legislation and national and local policy standards for archaeology health and safety and other relevant matters.
- 1.2.3 OA has established technical manuals, procedures and policies which control its work covering field recording, finds retention and discard, finds storage and handling, environmental sampling and processing, archiving and postexcavation. These have been developed to conform with best professional practice.

- 1.2.4 *Staff:* OA ensures that its staff are fairly recruited, fairly employed, and properly qualified for their work whether by formal qualification or by established and verifiable experience. OA have established terms and conditions of employment and a system of staff representation to ensure regular consultation on employment matters.
- 1.2.5 *Procurement of services and materials:* OA procures subcontracted work on the basis of value for money, considering quality, track record and service, as well as cost. OA regularly reviews quality of subcontracted work and uses tendering procedures for major sub-contracts.
- 1.2.6 Procurement of materials is on the basis of quality and availability, as well as cost, especially in respect of long-term storage of archives (OA adheres to archive quality photographic materials and processes, archive quality boxes etc).
- 1.2.7 *Working Practices:* management procedures ensure that all work conducted within the Company and all end product reports to clients are monitored and evaluated whilst they are in progress, during compilation, and after completion.
- 1.2.8 *Data Acquisition and Security:* for fieldwork projects OA always removes records and finds from site every day, and ensures equipment is secured.

2 OBJECTIVES

- 2.1 The investigation aims to:
- Characterise the sequence and patterns of accumulation in the areas of the reedbed pools, the depth and lateral extent of major stratigraphic units, and the character of any potential land surfaces/buried soils within or pre-dating these sediments;
- Identify significant variations in the deposit sequence indicative of localised features such as topographic highs, or palaeochannels;
- Identify the location and extent of any waterlogged organic deposits and where appropriate and practical retrieve suitable samples in order to assess the potential for the preservation of environmental remains and material for scientific dating;
- Clarify the relationship between sediment sequences and other deposit types, including periods of 'soil', peat growth, and archaeological remains;
- To make available the results of the investigation.

3 METHOD STATEMENT

3.1 **INTRODUCTION**

3.1.1 The following work programme is submitted in line with the objectives summarised above.

3.2 AUGER SURVEY

- 3.2.1 An augur survey will be undertaken which will comprise two offset NW-SE core transects in a grid at 25 metre intervals in each of the five designated pool areas.
- 3.2.2 Each location will be recorded in three dimensions either with a GPS or total station.
- 3.2.3 The equipment will comprise a standard hand operated soil auger. A selection of different auger heads will be employed in order to deal with the variety of sediment types that may be encountered (Bucket, Gouge, and Screw auger)
- 3.2.4 Each location will be augered to a depth of 2.0m or until the underlying glacial tills/boulder clay have been proven, which ever is reached first and providing no obstructions are encountered.
- 3.2.5 The profile will be recorded on a summary *pro-forma* sheet and significant layers identified. relative depths will be noted and a description of the deposits using standard quaternary (Late Devensian and Holocene) terminology (colour texture, compaction and inclusions). This will follow the English Heritage Geoarchaology Guidelines.
- 3.2.6 If any significant deposits are identified 2m cores will be taken with a hand operated Russian-type peat corer or by a terrier rig (windowless samples) for environmental assessment. This assessment would further characterise the deposits and would therefore enhance the interpretation of the results. The costs for this potential auguring will be supplied if required.
- 3.2.7 *Environmental assessment:* if recommended, the deposits may be sampled and assessed for their potential for palaeoenvironmental analysis. It may be necessary for OA North's environmental manager to visit the site to discuss the sampling strategy, depending on the deposits, and request advice from English Heritage's Regional Science Advisor.
- 3.2.8 An assessment of the environmental potential of the site may be undertaken through the examination of suitable deposits by the in-house environmental archaeologists, who will examine the potential for further analysis. This would be undertaken in accordance with English Heritage Guidelines (2002).
- 3.2.9 The cores may be assessed for pollen and plant macrofossils. In addition, the samples may be assessed for diatoms, foraminifera, insect, and molluscs. It may also consider the potential for the dating of suitable deposits and requirements for any AMS and OSL dating and samples may be submitted to

Dr Gordon Cook of the Scottish Universities Environmental Centre for AMS dating.

- 3.2.10 The project will be carried out by a suitably qualified OA North environmental archaeologist, under the overall direction of Alan Lupton, Operations Manager, OA North.
- 3.2.11 The site archive will include both a photographic record and maps showing the locations of the cores.
- 3.2.12 *Contingency plan:* a contingency costing may also be employed for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and which require specialist advice. This has been included in the Costings document and would be charged in agreement with the client.
- 3.2.13 *Access:* liaison for basic site access will be undertaken through the client and it is understood that there will be access for both pedestrian and plant traffic to the site.

3.3 **REPORT AND ARCHIVE**

- 3.3.1 *Report:* three bound copies of a written synthetic report will be submitted to the client together with one on a CD in a single pdf file. The report will include:
 - a site location plan related to the national grid;
 - a front cover to include the NGR;
 - the dates on which the fieldwork was undertaken;
 - a concise, non-technical summary of the results;
 - an explanation to any agreed variations to the brief, including any justification for any analyses not undertaken;
 - a description of the methodology employed, work undertaken and results obtained;
 - an historical and archaeological background;
 - plans and sections at an appropriate scale showing the location and position of deposits and finds located;
 - a list of and dates for any finds recovered and a description and interpretation of the deposits identified. This artefact analysis will include illustration of finds crucial to dating and interpretation;
 - a description of any environmental or other specialist work undertaken and the results obtained;

- a copy of this project design and indications of any agreed departure from the details;
- the report will also include a complete bibliography of sources from which data has been derived.
- 3.3.2 *Confidentiality:* all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.
- 3.3.3 *Archive:* the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork, which will be catalogued by context.
- 3.3.4 The deposition of a properly ordered and indexed project archive in an appropriate repository is essential and archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Norfolk SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the appropriate Record Office.
- 3.3.5 *OASIS*: the data will be entered into OASIS records, the online database of archaeological events.

HEALTH AND SAFETY

- 4.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 4.2 Full regard will, of course, be given to all constraints (services etc) during the evaluation as well as to all Health and Safety considerations. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services, however, this is **only an approximate location tool**. Any drawings or knowledge of live cables or services that may pose a risk to OA North staff during evaluation **must be made known to the project manager** of OA North before site work. This will ensure the risk is dealt with appropriately.
- 4.3 A portable toilet with hand washing facilities will be provided and located on or adjacent to the site.
- 4.4 Any known contamination issues or any specific health and safety requirements on site should be made known to OA North by the client or main contractor on site to ensure all procedures can be met.
- 4.5 Should areas of previously unknown contamination be encountered on site the works will be halted and a revision of the risk assessment carried out. Should it be necessary to supply additional PPE or other contamination avoidance equipment this will be costed as a variation.

5 OTHER MATTERS

5.1 **WORK TIMETABLE**

- 5.1.1 *Auger Survey:* approximately thirteen days will be required to undertake the fieldwork for this element.
- 5.1.2 **Report:** the report and archive will be produced following the completion of all the fieldwork and environmental assessment. it is hoped that an interim report will be available on December 1st 2007 and the final report on December 31st 2007, and the archive deposited within six months.
- 5.1.3 *Scheduling:* OA North would require a formal written agreement and will be able to commence the work on October $22^{nd} 2007$.

5.2 **INSURANCE**

5.2.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

6. STAFFING

- 6.1 The project will be under the direct management of **Dr Alan Lupton** (OA Operations Manager) to whom all correspondence should be addressed.
- 6.2 The fieldwork will be undertaken by an OA North environmental archaeologist experienced in this type of project. Due to scheduling requirements it is not possible to provide these details at the present time. All OA North environmental archaeologists are experienced in auger surveys
- 6.3 Assessment of any palaeoenvironmental samples, if required will be undertaken by or under the auspices of **Elizabeth Huckerby BA MSc** (OA North environmental manager). Elizabeth has extensive knowledge of the palaeoecology of many sites in the British Isles.

REFERENCES

Beecroft, R and Green, A, 2007, *Reedbed creation at Burnham Design, work and bill of quantities*, unpubl client report for AC, RC, and PC Green for Halcrow Group Ltd and the Environment Agency

English Heritage, 1991 Management of Archaeological Projects, second edition, London

English Heritage, 2002 Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation,

English Heritage, 2004 Geoarchaeology: using Earth Sciences to understand the archaeological record, London

SCAUM (Standing Conference of Archaeological Unit Managers), 1997 *Health and Safety Manual*, Poole

UKIC, 1990 Guidelines for the Preparation of Archives for Long-Term Storage, London

UKIC, 1998 First Aid for Finds, London

NB

Following current IFA guidelines it is recommended that a contingency sum equivalent to 15% of the total sum for the fieldwork costs is put aside for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and/or artefacts which require specialist removal, use of shoring to excavate important features close to the excavation sections etc. This sum would only be used following agreement with the client.

Normal OA North working hours are between 9am and 5pm, Monday to Friday, though adjustments to hours maybe made to maximise daylight working time in winter and to meet travel requirements. It is not normal practise for OA North staff to be asked to work weekends or bank holidays and should the client require such time to be worked during the course of a project a contract variation to cover additional costs will be necessary.

Notes:

- 1. COMMERCIAL IN CONFIDENCE
- 2. Salaries and wages inclusive of NI, Superannuation and overheads
- 3. Total costs exclusive of VAT
- 4. All costs at 2007/2008 prices

NHER No	Period	Site name or summary of evidence	Grid Ref	Category	Related NHER
1738	Medieval	St Mary's Friary	TF 8387 4281	Scheduled Monument 202 Building Grade II Listed	43988
	Medieval	Pottery, brick, human remains		Finds	
1761	Post- medieval	Sea defence bank	TF 8323 4339	Monument	
26670	Post- medieval	Sea defences	TF 8020 4433	Monument	
27004	Medieval	Ridge and furrow	TF 8377 4295	Monument	
27010	Roman	Field System, buildings	TF 8398 4258	Monument	
27027	Post- medieval	Ditch	TF 8357 4319	Monument	
27029	Post- medieval or modern	Bank	TF 8390 4314	Monument	
27015	Medieval to Post- medieval	Ridge and furrow	TF 8410 4319	Monument	

APPENDIX 2: SITE: GAZETTEER

Table 1: Sites within development area

NHER No	R Period Site name or summary of evidence		Grid Ref	Category	Related NHER	
1020	Late Neolithic /Bronze Age	Hengiform monument	TF 8420 4227	Monument	12787, 12789	
1734	Late Neolithic /Bronze Age	Flint	TF 835 428	Finds	29185	
	Bronze Age	Pottery		Finds		
1734	Late Saxon	Pottery		Finds		
1736	Early Saxon	Metalwork	TF 8367 4273	Finds	29185	
	Middle Saxon	Pottery		Finds		
	Medieval	Pottery		Finds		
		2				
1737	Iron Age	Pottery	TF 830 420	Finds	29185	
	Roman	Pottery		Finds		
	Early Saxon	Pottery		Finds		
	Middle Saxon	Pottery		Finds		
	Late Saxon	Pottery		Finds		
	Medieval	Metalwork, pottery, tile		Finds		
	Post- medieval	Meatlwork, tile. clay pipe		Finds		
	Undated	Human remains, animal bone		Finds		
1740	Neolithic /Early Bronze Age	Flint axe-hammer	TF 8464 4283	Finds		
1741	Medieval	al St Clements's church TF 84 42930		Building Grade I Listed		
1751	Medieval	Il Pottery TF 837 422		Finds		
1753	Medieval	Site of St Andrew's church, Human remains and pottery	TF 8367 4229	Monument		
1754	Medieval	Pottery	TF 8385 4245	Finds		
101	Post- medieval	Pottery		Finds		
	Undated	MWD, quern		Finds		
1756	Neolithic	Flint scrapers	TF 838 426	Finds		

Bronze Age Roman Early Saxon Middle Saxon Late Saxon Medieval Undated Medieval Unknow n Post- medieval Post- medieval Late Saxon	Flint Pottery Pottery Pottery Pottery Pottery Pottery Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill St Margaret's church	TF 8354 4225 TF 8327 4329 TF 8378 4375 TF 8360 4354 TF 8360 4354	Finds Finds Finds Finds Finds Finds Building Grade J	
Roman Early Saxon Middle Saxon Late Saxon Medieval Undated Medieval Medieval Unknow n Post- medieval Post- medieval Late	Pottery Pottery Pottery Pottery Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Finds Finds Finds Finds Building Grade II* Listed Building Grade II Listed Building Grade II Listed Building Grade II Listed	
Early Saxon Middle Saxon Late Saxon Medieval Undated Medieval Medieval Unknow n Post- medieval Post- medieval Late	Pottery Pottery Pottery Pottery Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Finds Finds Finds Finds Building Grade II* Listed Building Grade II Listed Building Grade II Listed Building Grade II Listed	
Saxon Middle Saxon Late Saxon Medieval Undated Medieval Unknow n Post- medieval Post- medieval Late	Pottery Pottery Pottery All saints church Trackway Burnham Overy windmill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Finds Finds Finds Building Grade II* Listed Building Grade II Listed Building Grade II Listed Building Grade II Listed	
Saxon Late Saxon Medieval Undated Medieval Unknow n Post- medieval Post- medieval Late	Pottery Pottery Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Finds Finds Building Grade II* Listed Monument Building Grade II Listed Building Grade II Listed Building Grade II Listed	
Late Saxon Medieval Undated Medieval Unknow n Post- medieval Post- medieval Late	Pottery Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Finds Building Grade II* Listed Monument Building Grade II Listed Building Grade II Listed J	
Medieval Undated Medieval Unknow n Post- medieval Post- medieval Late	Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Building Grade II* Listed Monument Building Grade II Listed Building Grade II Listed Building Grade II	
Undated Medieval Unknow n Post- medieval Post- medieval Late	Metalworking debris, animal bone All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Finds Building Grade II* Listed Monument Building Grade II Listed Building Grade II Listed Building Grade II	
Medieval Unknow n Post- medieval Post- medieval Late	All saints church Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Building Grade II* Listed Monument Building Grade II Listed Building Grade II Listed Building Grade II	
Unknow n Post- medieval Post- medieval Late	Trackway Burnham Overy windmill Burnham Overy watermill	TF 8327 4329 TF 8378 4375 TF 8360 4354	Grade II* Listed Monument Building Grade II Listed Building Grade II Listed J Building Building Building	
n Post- medieval Post- medieval Late	Burnham Overy windmill Burnham Overy watermill	TF 8378 4375 TF 8360 4354	Building Grade II Listed Building Grade II Listed Building	
Post- medieval Late	Burnham Overy watermill	TF 8360 4354	Grade II Listed Building Grade II Listed Building	
medieval Late			Building Grade II Listed Building	
medieval Late			Grade II Listed Building	
	St Margaret's church	TF 8350 4276		
			Listed	
Medieval	Stone cross	TF 8421 4287	Building Grade II Listed	
Post- medieval	Union Mill (Town mill). Including watermill with tower windmill, mill bridge and mill house	TF 8426 4261	Building Grade II Listed	
Post- medieval	Lime kiln	TF 8437 4326	Monument	
Bronze Age	Ring ditch	TF 8412 4222	Monument	28127
Post- medieval	Church House	TF 8363 4230	Building Grade II Listed	
Post- medieval	Bellamy's Mill (wind mill)	TF 8357 4244	Monument	
Post- medieval	Windmill	TF 843 427	Monument	
Medieval	Pottery	TF 844 429	Finds	
	Post- nedieval Bronze Age Post- nedieval Post- nedieval	nedieval watermill with tower windmill, mill bridge and mill house Post- Age Post- Church House Post- Bellamy's Mill (wind mill) Post- Post- Post- Bellamy's Mill (wind mill)	nedieval watermill with tower windmill, mill bridge and mill house TF 8437 4326 Post- Lime kiln Bronze Ring ditch Age TF 8412 4222 Post- Church House Post- Bellamy's Mill (wind mill) TF 8357 4244 Post- Windmill Post- TF 843 427	nedievalwatermill with tower windmill, mill bridge and mill houseGrade ListedII ListedPost- nedievalLime kilnTF 8437 4326MonumentBronze AgeRing ditchTF 8412 4222MonumentPost- nedievalChurch HouseTF 8363 4230Building Grade I ListedPost- nedievalBellamy's Mill (wind mill)TF 8357 4244MonumentPost- nedievalWindmillTF 843 427Monument

3	6	

NHER Period No		Site name or summary of evidence	Grid Ref	Category	Related NHER
18223	Modern	WWII anti-tank blocks	TF 8352 4346	Monument	
18496	Middle Saxon	Market, settlement	TF 840 420	Monument	28127
	Late Saxon	Settlement		Monument	
	Roman	Building		Monument	
	Post- medieval	Brick Kiln		Monument	
	Mesolithi c	Flint		Finds	
	Neolithic	Flint		Finds	
	Bronze Age	Flint		Finds	
	Iron Age	Pottery		Finds	
	Roman	Metalwork, tile		Finds	
	Early Saxon	Metalwork, pottery		Finds	
	Middle Saxon	Metalwork, pottery		Finds	
	Late Saxon	Metalwork, pottery		Finds	
	Medieval	Metalwork, pottery		Finds	
	Post- medieval	Metalwork, pottery, clay pipe		Finds	
20343	Roman	Building	TF 830 430	Monument	
	Roman	Metalwork, pottery, tile		Finds	
	Late Saxon	Pottery		Finds	
	Early Saxon	Metalwork		Finds	
	Medieval	Metalwork		Finds	
	Post- medieval	Metalwork		Finds	
20344	Roman	Inscription	TF 8314 4357	Finds	
21820	Middle	Pottery	TF 8429 4234	Finds	28127
	Saxon Late Saxon	Pottery			
21881	Iron Age to Roman	Egyptian gold coin	TF 840 420	Finds	1749
25425	Roman	Pottery	TF 83189 43188	Finds	
	Medieval	Pottery			
25918	Prehistor	Flint	TF 830 420	Finds	
	ic Iron Age	Pottery		Finds	
	Roman	Metalwork, pottery		Finds	
	Early	Metalwork, pottery		Finds	

NHER No	Period Site name or summary of evidence		Grid Ref	Category	Related NHER
	Saxon				
	Middle Saxon	Pottery		Finds	
	Late Saxon	Metalwork, pottery		Finds	
	Medieval	Metalwork, pottery		Finds	
	Post- medieval	Metalwork		Finds	
25919	Roman	Metalwork	TF 830 420	Finds	
	Medieval	Metalwork, pottery		Finds	
	Post- medieval	Metalwork		Finds	
	Undated	Metalwork		Finds	
27002	Late prehistori c	Enclosure	TF 8364 4249	Monument	
27005	Post- medieval	Field boundaries	TF 8356 4289	Monument	
27006	Undated	Enclosures	TF 8330 4281	Monument	
27009	Undated	Linear earthworks	TF 8379 4245	Monument	
27010	Roman	Field System, buildings	TF 8398 4258	Monument	18496
27011	Undated	Enclosure	TF 8452 4271	Monument	
27012	Medieval to Post- medieval	Enclosures	TF 8456 4288	Monument	
27013	Post- medieval	Extraction pit	TF 8447 4257	Monument	
27014	Undated	Cropmarks	TF 84127 42283	Monument	
27028	Modern	WWII road blocks	TF 83262 43210	Monument	18223
27030	Undated	Cropmarks	TF 8305 4338	Monument	20343
27033	Post- medieval	Field boundary	TF 8294 4396	Monument	
27034	Post- medieval	Drainage bank	TF 8338 4435	Monument	
27035	Post- medieval or modern	Drainage ditches	TF 8339 4433	Monument	

NHER No	Period	Site name or summary of evidence	Grid Ref	Category	Related NHER
27054	Post- medieval	Channels	TF 8437 4243	Monument	
27055	Modern	WWII anti-tank blocks	TF 8359 4358	Monument	18233, 27028
27059	Post- medieval	Extraction pits	TF 8438 4317	Monument	12239
28127	Middle Saxon	Market, port, settlement	TF 840 420	Monument	18496
	Iron Age	Pottery		Finds	
	Roman	Metalwork, pottery		Finds	
	Early Saxon	Metalwork		Finds	
	Middle Saxon	Metalwork, pottery		Finds	
	Late Saxon	Metalwork, pottery		Finds	
	Medieval	Metalwork, pottery		Finds	
	Post- medieval	Pottery		Finds	
29185	Iron Age	Pottery	TF 830 420	Finds	1734, 1736
	Roman	Metalwork, pottery		Finds	
	Early Saxon	Metalwork, pottery		Finds	
	Middle Saxon	Metalwork, pottery		Finds	
	Late Saxon	Metalwork, pottery		Finds	
	Medieval	Metalwork, pottery		Finds	
29624	Iron Age	Pottery	TF 830 420	Finds	
	Roman	Metalwork		Finds	
	Late Saxon	Metalwork		Finds	
	Medieval	Metalwork, tile		Finds	
	Post- medieval	Pottery		Finds	
34280	Mesolithi c	Flint	TF 830 430	Finds	
	Neolithic	Flint		Finds	
	Bronze Age	Pottery		Finds	
	Iron Age	Pottery		Finds	
	Roman	Metalwork		Finds	
	Middle Saxon	Pottery		Finds	
	Late Saxon	Metalwork, pottery		Finds	
	Medieval	Metalwork, pottery		Finds	
	Post- medieval	Metalwork		Finds	

NHER Period No		Site name or summary of evidence	Grid Ref	Category	Related NHER
34581	Middle Saxon	Occupation	TF 8365 4222	Monument	
	Late Saxon	Occupation		Monument	
	Medieval	Occupation		Monument	
	Mesolithi c	Flint		Finds	
	Neolithic	Flint		Finds	
	Middle Saxon	Pottery		Finds	
	Late Saxon	Pottery		Finds	
	Medieval	Pottery, brick, glass, animal bone		Finds	
	Post- medieval	Metalwork, pottery, tile, animal bone, clay pipe		Finds	
36148	Modern	Turning circle		Monument	
37368	Post- medieval	Ostrich House	TF 84215 42902	Building Grade II Listed	
39285	Medieval or Post- medieval	Iron shackle or hobble	TF 8412 4272	Finds	
39672	Post- medieval	Church House	TF 84277 42893	Building	
40211	Post- medieval	Old Rectory	TF 83726 42308	Building Grade II Listed	
40704	Prehistor ic	Pit	TF 83597 42496	Monument	
	Post- medieval	Ditch		Monument	
41467	Undated	Sluice	TF 83481 43929	Monument	
41468	Modern	Sea defences	TF 83526 43849	Monument	
42015	Post- medieval	St Andrew's and Ulph Drapers	TF 83689 42299	Building Grade II Listed	
43986	Post- medieval to modern	Norton Hall Farmhouse	TF 82908 43750	Building Grade II Listed	
43987	Post- medieval to	Prince of Wales House	TF 82904 43926	Building Grade II Listed	

NHER No	Period	Site name or summary of evidence	Grid Ref	Category	Related NHER
	Modern				
43988	Post- medieval	Friary Cottage	TF 83844 42824	Building Grade II Listed	
44177	Post- medieval to Modern	Church Hill Farm	TF 84330 42854	Building Grade II Listed	
44179	Post- medieval to Modern	Stable block	TF 84 262 42650	Building Grade II Listed	
44181	Post- medieval to modern	Mill House	TF 83628 43590	Building Grade II Listed	
47028	Post- medieval to modern	Cobham House	TF 8355 4230	Building Grade II Listed	

Table 2: Sites within extended study area (within 0.5km of boundary of development area)

APPENDIX 3: CORING LOGS

Burnham Overy Geoarchaeological borehole logs

	Borehole No. 1A 0 -25					
Easting 583486.0900			GL ELEV (mOD) 1.8957			
Northing 343608.7839 To			Total dep	Total depth (m) 1.75		
Depth (m) Sediment		Upper contact	Description			
From	То					
0	0.42	Topsoil				
0.42	1.4	Clay	Diffuse	Mottled brown/grey, firm and compact		
1.4	1.75	Clay	Merging	Black, soft and pliable		
1.75				Impenetrable – base unknown		

	Borehole No. 1A 0				
Easting 583485.4873			GL ELEV	(mOD) 2.3770	
Northing 343633.7484		Total depth (m) 1.0			
		Sediment type	Upper contact	Description	
From	То				
0	0.25	Topsoil			
0.25	0.75	Sandy clay	Diffuse	Mottled brown/grey, firm and compact	
0.75	1.0	Clay	Diffuse	Mottled brown/grey, firm and compact, rare silt	
1.0				Impenetrable – base unknown	

	Borehole No. 1A 25					
Easting 583484.0077			GL ELEV	GL ELEV (mOD) 2.1914		
Northing 343658.1743			Total depth (m) 0.5			
Depth (m)	Depth (m) Sediment		Upper contact	Description		
From	То					
0	0.17	Topsoil				
0.17	0.5	Clay	Merging	Mottled brown/grey, firm and compact		
0.5				Impenetrable – base unknown		

	Borehole No. 1A 50 (1B 25)							
Easting 583481.5482			GL ELEV	GL ELEV (mOD) 2.2823				
Northing 583481.5482		Total dep	Total depth (m) 0.5					
Depth (m)	Depth (m) Sediment		Upper contact	Description				
From	То							
0	0.22	Topsoil						
0.22	0.5	Clay	Merging	Mottled brown/grey, firm and compact				
0.5				Impenetrable – base unknown				

	Site code 1A 75							
Easting 583479.7964			GL ELEV (mOD) 2.2838					
Northing 343708.6083			Total dept	Total depth (m) 0.5				
Depth (m)	Depth (m) Sediment		Upper contact	Description				
From	То							
0	0.29	Topsoil						
0.29	0.5	Clay	Merging Mottled brown/grey, firm and compact					
0.5				Impenetrable – base unknown				

	Borehole No. 1A 100 (1C 25)							
Easting 583477.1597				GL ELEV (mOD) 2.7316				
Northing 343733.4167			Tota	Total depth (m) 0.5				
Depth (m)	Depth (m)		Upper contact		Description			
From	То							
0	0.47	Topsoil						
0.47	0.5	Clay	Merging		Mottled brown/grey, firm and compact			
0.5					Impenetrable – base unknown			

	Borehole No. 1A 125							
Easting 583476.1358				GL ELEV (mOD) 2.5026				
Northing 343758.5085				Total depth (m)0.5				
			Upper					
Depth (m)		Sediment type	conta	ict	Description			
From	То							
0	0.2	Topsoil						
0.2	0.45	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.45	0.5	Sandy clay	Diffuse		Mid-brown, some iron mineralization			
0.5					Impenetrable – base unknown			

Borehole No. 1A 150						
Easting 583473.5099			GL ELEV (mOD) 2.3316			
Northing 343783.4437			Total depth (m) 0.45			
	Upp		Uppe	r		
Depth (m)		Sediment type	conta		Description	
From	То					
0	0.15	Topsoil				
0.15	0.3	Topsoil/clay	Diffuse		Mixed topsoil/clay	
0.3	0.45	Clay	Diffuse		Mottled brown/grey, firm and compact	
0.45					Impenetrable – base unknown	

	Borehole No 1A 175							
Easting 583471.9418				GL ELEV (mOD) 2.2528				
Northing 343808.3247				Total depth (m) 0.45				
	Upr		Uppe	r				
Depth (m)		Sediment type	contact		Description			
From	То							
0	0.12	Topsoil						
0.12	0.28	Topsoil/clay	Diffuse		Mixed topsoil/clay			
0.28	0.45	Clay	Diffuse		Mottled brown/grey, firm and compact			
0.45					Impenetrable – base unknown			

	Borehole No. 1A 190							
Easting 583471.2410					GL ELEV (mOD) 2.4182			
Northing 343823.3452				Total depth (m) 0.4				
Depth (m)	Depth (m) Se		Upper contact		Description			
From	То							
0	0.35	Topsoil						
0.35	0.4	Clay	Mergir	ng	Mottled brown/grey, firm and compact			
0.4					Impenetrable - base unknown			

Borehole No 1A 190 +25						
Easting 583468.4279			GL ELEV (mOD) 2.0650			
Northing 343848.0436			Total depth (m) 0.4			
Depth (m)			Uppe conta		Description	
From	То					
0	0.18	Topsoil				
0.18	0.4	Clay	Mergi	ng	Mottled brown/grey, firm and compact	
0.4					Impenetrable - base unknown	

Borehole No 1B 0 -25						
Easting 583433.2108			GL ELEV (mOD) 2.0502			
Northing 343668.9030			Total depth (m) 2.0			
Donth (m)			Uppe		Description	
Depth (m) From	То	types	conta		Description	
0	0.1	Topsoil				
0.1	0.22	Topsoil/clay	Diffu	se	Mixed topsoil and clay	
0.22	1.2	Clay	Diffu	se	Mottled brown/grey, firm and compact	
1.2	2.0	Clay	Clear		Black, soft and pliable	

	Borehole No 1B 0								
Easting 583457.6043					GL ELEV (mOD) 2.1111				
Northing 343676.1328				Total depth (m) 2.0					
Depth (m)	Depth (m)		Upper contact		Description				
From	То								
0	0.26	Topsoil							
0.26	1.6	Clay	Merging		Mottled brown/grey, firm and compact				
1.6	2.0	Lost							

	Borehole No 1B 50							
Easting 583505.9363					GL ELEV (mOD) 2.4600			
Northing 343688.7549				Total depth (m) 0.5				
Depth (m)		Sediment type	Upper contact		Description			
From	То							
0	0.5	Topsoil						
0.5					Impenetrable – base unknown			

	Borehole No 1B 50 +25							
Easting 583	530.0523			GL	ELEV (mOD) 3.2263			
Northing 34	3694.0456			Total depth (m) 0.3				
			Uppe	er				
Depth (m)		Sediment type	contact		Description			
From	То							
0	0.3	Sand			Mid-brown, compact			
0.3					Impenetrable – base unknown			

	Borehole No 1C 0 -25								
Easting 5834	28.2197			GL	ELEV (mOD) 2.3005				
Northing 343724.6592				Total depth (m) 0.5					
Depth (m)			Uppe		Description				
From	То								
0	0.22	Topsoil							
0.22	0.5	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.5					Impenetrable - base unknown				

	Borehole No 1C 0								
Easting 583452.7073				GL ELEV (mOD) 2.4115					
Northing 343730.2183				Total depth (m) 0.5					
Depth (m)			Uppe conta		Description				
From	То								
0	0.15	Topsoil							
0.15	0.5	Clay	Mergi	ng	Mottled brown/grey, firm and compact				
0.5					Impenetrable - base unknown				

	Borehole No 1C 50								
Easting 583500.1687 GL I					ELEV (mOD) 2.6085				
Northing 343	Northing 343743.1561				al depth (m) 0				
U		Uppe conta		Description					
From	То								
0					Impenetrable – depth unknown				

	Borehole No 1C 50 +25							
Easting 58352	Easting 583522.5484				GL ELEV (mOD) 3.4397			
Northing 3437	52.6781			Total depth 0				
			Uppe	r				
Depth (m)		Sediment type	conta		Description			
From	То							
0					Impenetrable – depth unknown			

	Borehole No 3A 0 -25								
Easting 583	3832.7768			GL	ELVE (mOD) 2.6405				
Northing 34	43286.8679			Total depth 0.5					
			Uppe	r					
Depth (m)		Sediment type	contact		Description				
From	То								
0	0.5	Topsoil			Brick inclusions – dyke construction material				
0.5					Impenetrable – base unknown				

		Во	rehole	No 3.	A 0	
Easting 583815.0188				GL ELEV (mOD) 2.4183		
Northing 343304.6516				Total depth (m) 1.9		
Depth (m)		Sediment type	Uppe conta		Description	
From	То					
0	0.31	Topsoil				
0.31	0.38	Clay	Merg	ing	Mottled brown/grey, firm and compact	
0.38	0.4	Sandy clay	Diffu	se	Mottled brown/grey, firm and compact	
0.4	1.0	Clay	Diffu	se	Mottled brown/grey, firm and compact	
1.0	1.08	Organic clay	Diffu	se	Occasional detrital plant fragments	
1.08	1.9	Clay	Diffu	se	Soft grey clay, rare silt, occasional organic fragments	

	Borehole No 3A 25								
Easting 583796.9657					GL ELEV (mOD) 2.6032				
Northing 343322.5404				Total depth (m) 2.0					
Depth (m)	Depth (m) Sedin		Upper contact		Description				
From	То								
0	0.27	Topsoil							
0.27	1.05	Clay	Mergi	ng	Mottled brown/grey, firm and compact				
1.05	2.0	Sandy clay	Diffus	e	Mottled brown/grey, firm and compact				

	Borehole No 3A 50							
Easting 583778.0425				GL	ELEV (mOD) 2.0186			
Northing 343337.8411			Total depth (m) 2.0					
	Upp		Uppe	r				
Depth (m)		Sediment type	conta	ct	Description			
From	То							
0	0.29	Topsoil						
0.29	1.68	Clay	Mergi	ng	Mottled brown/grey, firm and compact			
1.68	1.89	Silty clay	Diffus	se	Grey compact			
1.89	2.0	Sandy clay	Diffus	se	Dark brown compact			

	Borehole No 3A 75								
Easting 583758.0947				GL ELEV (mOD) 2.0687					
Northing 343353.0377				Total depth (m) 2.0					
Depth (m) Sediment type		Upper conta		Description					
From	То								
0	0.23	Topsoil							
0.23	0.3	Topsoil/clay	Diffus	se	Mixed topsoil / clay				
0.3	1.0	Clay	Diffus	se	Mottled brown/grey, firm and compact				
1.0	1.8	Sandy clay	Mergi	ng	Mottled brown/grey, firm and compact				
1.8	2.0	Clayey sand	Mergi	ng	Grey/brown, firm & compact				

		Bor	ehole N	lo 3A	. 100		
Easting 583	3737.9288			GL	ELEV (mOD) 2.3082		
Northing 34	Northing 343367.7599				al depth (m) 1.9		
			Uppe	r			
Depth (m)		Sediment type	conta	ct	Description		
From	То						
0	0.34	Topsoil					
0.34	1.0	Clay	Merg	ing	Mottled brown/grey, firm and compact		
1.0	1.1	Clay	Diffu	se	Grey, soft & pliable		
1.1	1.63	Silty clay	Diffu	se	Dark grey/brown. Sand band at 135cm		
1.63	1.67	Sand	Clear		Mid-brown, compact		
1.67	1.69	Silty clay	Clear		Dark grey/brown		
1.69	1.71	Sand	Clear		Mid-brown, compact		
1.71	1.9	Sandy clay	Clear		Dark brown, compact		

	Borehole No 3A 120								
Easting 583721.0106									
Easting 3657.	21.0100			GL	ELEV (mOD) 2.3258				
Northing 343	Northing 343377.8867				al depth (m) 1.9				
		Uppe conta		Description					
From	То				•				
0	0.3	Topsoil							
0.3	1.35	Clay	Merg	ing	Mottled brown/grey, firm and compact				
1.35	1.6	Silty clay	Diffu	se	Mottled brown/grey, firm and compact				
1.6	1.65	Clay	Diffu	se	Mottled brown/grey, firm and compact				
1.65	1.85	Sandy clay	Diffu	se	Dark grey/brown, firm and compact				
1.85	1.9	Sand	Diffu	se	Dark grey/brown, firm and compact				

	Borehole No 3A 120 +25								
Easting 583699.4011				GL ELEV (mOD) 2.4044					
Northing 343390.7968				Total depth (m) 1.8					
		Uppe conta		Description					
From	То								
0	0.24	Topsoil							
0.24	0.33	Topsoil/clay	Merg	ing	Mixed topsoil / clay				
0.33	1.5	Clay	Merg	ing	Mottled brown/grey, firm and compact				
1.5	1.62	Silty clay	Diffuse		Grey, firm & compact				
1.62	1.8	Sandy clay	Diffu	se	Dark brown, firm & compact				

	Borehole No 3B 0								
Easting 583791.5901				GL ELEV (mOD) 2.4884					
Northing 343249.1178			Total depth (m) 1.9						
	Uppo			r					
Depth (m)		Sediment type	conta	ct	Description				
From	То								
0	0.21	Topsoil							
0.21	1.15	Clay	Merging		Mottled brown/grey, firm and compact				
1.15	1.9	Clay	Clear		Black, soft & pliable				
1.9					Hit base				

Borehole No 3B 25							
Easting 583771.5351				GL ELEV (mOD) 2.1829			
Northing 343264.0810				Tot	al depth (m) 1.05		
Depth (m)		Sediment type	Uppe conta		Description		
From	То						
0	0.21	Topsoil					
0.21	0.67	Clay	Merg	ing	Mottled brown/grey, firm and compact		
0.67	0.74	Silty clay	Diffu	se	Mottled brown/grey, firm and compact		
0.74	0.93	Clay	Diffu	se	Mottled brown/grey, firm and compact		
0.93	1.05	Sandy clay	Clear		Dark brown, firm and compact		
1.05					Hit base		
		Bor	ehole I	No. 3B 50			
Easting 583	750.4771			GL	ELEV (mOD) 2.1678		
Northing 34	3278.0461		_	Tot	al depth (m) 1.2		
Depth (m)		Sediment type	Uppe conta		Description		
From	То						
0	0.2	Topsoil					
0.2	0.97	Clay	Merg	ing	Mottled brown/grey, firm and compact		
0.97	1.2	Peat	Abrupt		Orange/brown, moderately humified. Increasing silt content to base		
1.2					Hit base		

	Borehole No. 3B 75								
Easting 583729.4135					GL ELEV (mOD) 2.1165				
Northing 343291.9432				Total depth (m) 1.47					
		Uppe conta		Description					
From	То								
0	0.2	Topsoil							
0.2	0.97	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.97	1.2	Clay-silt	Merging		Brown, organic, firm				
1.2	1.47	Peat	Abrupt		Orange/brown, moderately humified.				
1.47					Hit base				

	Borehole No. 3B 100								
Easting 583709.2231			GL ELEV (mOD) 2.1065						
Northing 343307.0176			Total depth (m) 1.85						
	Upp			r					
Depth (m)		Sediment type	conta	ct	Description				
From	То								
0	0.25	Topsoil							
0.25	0.95	Clay	Merging		Mottled brown/grey, firm and compact				
0.95	1.85	Peat	Abrupt		Orange/brown, moderately humified. Rare silt				
1.85					Hit base				

	Borehole No. 3B 120									
Easting 583693.5969				GL ELEV (mOD) 2.1210						
Northing 343318.5046				Total depth (m) 1.9						
Depth (m)			Upper contac		Description					
From	То									
0	0.33	Topsoil								
0.33	0.97	Clay	Mergi	ng	Mottled brown/grey, firm and compact					
0.97	1.9	Peat	Abrup	t	Orange/brown, moderately humified. Rare silt					

	Borehole No. 3B 120 +25									
Easting 583671.1282				GL ELEV (mOD) 1.9991						
Northing 343328.2155			Total depth (m) 2.0							
	Uppe									
Depth (m)		Sediment type	conta	ct	Description					
From	То									
0	0.35	Topsoil								
0.35	1.1	Clay	Mergi	ing	Mottled brown/grey, firm and compact					
1.1	1.85	Peat	Abrup	ot	Orange/brown, moderately humified.					
1.85					Lost					

	Borehole No 3C 0 -30								
Easting 583746.1728					GL ELEV (mOD) 2.1720				
Northing 343245.7881					Total depth (m) 1.9				
		Uppe conta		Description					
From	То								
0	0.3	Topsoil							
0.3	0.92	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.92	1.4	Peat	Abrupt		Orange/brown, moderately humified. Rare silt				
1.4	1.42	Clay	Abrupt		Dark grey, firm and compact				
1.42	1.9	Peat	Abru	pt	Orange/brown, moderately humified.				

	Borehole No 3C 0								
Easting 583764.0075					GL ELEV (mOD) 2.1261				
Northing 343269.7484				Total depth (m) 1.1					
		Uppe conta		Description					
From	То								
0	0.25	Topsoil							
0.25	0.95	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.95	1.1	Peat with sand	Abrupt		Orange/brown, moderately humif Common sand	ied.			
1.1					Hit base				

	Borehole No. 3C 25								
Easting 583	780.7804			GL	ELEV (mOD) 2.1437				
Northing 34	43288.8714		Tot	al depth (m) 1.9					
		Uppe		Description					
From	То	Seument type	Conta						
0	0.25	Topsoil							
0.25	0.8	Clay	Merging		Mottled brown/grey, firm and compact				
0.8	0.96	Silty clay	Diffu	se	Dark grey/brown				
0.96	1.04	Clay	Diffu	se	Mottled brown/grey, firm and compact				
1.04	1.1	Peat	Abru	pt	Orange/brown, moderately humified.				
1.1	1.16	Clay	Abru	pt	Mottled brown/grey, firm and compact				
1.16	1.7	Peat	Abrupt		Orange/brown, moderately humified.				
1.7	1.9	Peat with clay	Diffu	se	Orange/brown, moderately humified, with grey clay.				

	Borehole No. 3C 50									
Easting 583799.0552					GL ELEV (mOD) 2.2713					
Northing 343305.6368				Total depth (m) 2.0						
Depth (m) Sediment type Conta			Description							
From	То									
0	0.29	Topsoil								
0.29	1.0	Clay	Merg	ing	Mottled brown/grey, firm and compact					
1.0	1.65	Silty peat	Abrupt		Orange/brown, moderately humified. Common silt					
1.65	2.0	Sand	Abru	ot	Brown/grey, compact					

		Bore	hole N	o 5F	0 -25		
Easting 583797.0787				GL ELEV (mOD) 2.7802			
Northing 3430)36.8055			Tot	al depth (m) 2.0		
			Uppe conta		Description		
From	То						
0	0.35	Topsoil					
0.35	0.8	Peat	Clear		Orange/brown, moderately humified.		
0.8	1.3	Clayey peat	Merg	ing	Orange/brown, moderately humified with grey clay patches.		
1.3	1.75	Clay	Clear		Clear		Mottled brown/grey, firm and compact
1.75	2.0	Peat	Abru	pt	Orange/brown, moderately humified.		

	Borehole No 5F 0								
Easting 583807.7513				GL	ELEV (mOD) 3.7207				
Northing 343059.3507				Total depth (m) 0					
		Uppe conta		Description					
From	То								
0		Stone			Stone just under surface				

	Borehole No 5F 25							
Easting 583815.8945				GL ELEV (mOD) 2.9384				
Northing 343083.0713				Total depth (m) 2.0				
Upp		Uppe	r					
Depth (m)		Sediment type	conta	ct	Description			
From	То							
0	0.25	Topsoil						
0.25	1.15	Clay	Merging		Mottled brown/grey, firm and compact			
1.15	1.6	Sandy clay	Merging		Mottled brown/grey, firm and compact			
1.6	2.0	Peat	Abrup	ot	Orange/brown, moderately humified			

	Borehole No. 5F 45							
Easting 583823.5123				GL ELEV (mOD) 2.5302				
Northing 343104.2272				Total depth (m) 1.7				
Depth (m) Sedir		Sediment type	Upper contact		Description			
From	То							
0	0.3	Topsoil						
0.3	1.1	Clay	Merg	ing	Mottled brown/grey, firm and compact, waterlogged			
1.1	1.7	Peat	Abrupt		Orange/brown, moderately humified			
1.7					Hit base			

		Boi	rehole	No 5A	A 25	
Easting 583714.0445				GL ELEV (mOD) 2.4742		
Northing 343124.8136				Total depth (m) 1.8		
Depth (m)		Sediment type	Upper contact		Description	
From	То					
0	0.6	Topsoil				
0.6	0.85	Clay	Merg	ing	Mottled brown/grey, firm and compact	
0.85	1.0	Peat	Abru	pt	Orange/brown, moderately humified	
1.0	1.3	Clay`	Abru	pt	Mottled brown/grey, firm and compact	
1.3	1.8	Peat with sand	Abru	pt	Orange/brown, moderately humified, common sand	

		A 50				
Easting 583737.5207				GL ELEV (mOD) 2.4248		
Northing 343117.0708				Total depth (m) 1.2		
		Upper contact		Description		
From	То					
0	0.4	Topsoil				
0.4	0.6	Clay	Merg	ing	Mottled brown/grey, firm and compact	
0.6	1.0	Silty peat	Abruj	ot	Orange/brown, moderately humified, common silt	
1.0	1.2	Sandy peat	Diffuse		Orange/brown, moderately humified, common sand	
1.2					Lost	

	Borehole No 5A 75							
Easting 583761.7139				GL ELEV (mOD) 2.4161				
Northing 343110.3340				Total depth (m) 1.65				
Depth (m)		Sediment type	Upper contact		Description			
From	То							
0	0.65	Topsoil			Chalk fragments			
0.65	1.2	Clay with chalk	Merg	ing	Mottled brown/grey, firm and compact			
1.2	1.6	Clay	Diffuse		Mottled brown/grey, firm and compact			
1.6	1.65	Chalky sand	Clear		Brown/grey, compact			
1.65					Hit base			

	Borehole No 5A 100							
Easting 583785.9651				GL ELEV (mOD) 1.7029				
Northing 343103.5280				Total depth (m) 2.0				
Depth (m)	Depth (m) Sedime		Upper contact		Description			
From	То							
0	0.25	Topsoil						
0.25	0.51	Clay	Merging		Mottled brown/grey, firm and compact			
0.51	2.0	Peat	Abruj	pt	Orange/brown, moderately humified			

		Bor	5A 125	
Easting 583809.8381				GL ELEV (mOD) 2.4952
Northing 3	343096.2619		'	Fotal depth (m) 2.0
Depth (m)		Sediment type	Upper contac	t Description
From	То			
0	0.4	Topsoil		
0.4	0.6	Silty clay	Mergin	g Mottled brown/grey, firm and compact, common silt
0.6	0.85	Clay	Diffuse	Mottled brown/grey, firm and compact
0.85	0.88	Peat	Abrupt	Orange/brown, moderately humified
0.88	0.9	Clay	Abrupt	Mottled brown/grey, firm and compact
0.9	1.28	Peat	Abrupt	Orange/brown, moderately humified
1.28	1.43	Clay	Abrupt	Mottled brown/grey, firm and compact
1.43	2.0	Peat	Abrupt	Orange/brown, moderately humified

Borehole No 5A 150							
Easting 583	833.9320		GL ELEV (mOD) 2.5052				
Northing 343089.4564					al depth (m) 2.0		
Depth (m)		Sediment type	Upper contact		Description		
From	То						
0	0.6	Topsoil					
0.6	1.2	Clay	Mergi	ng	Mottled brown/grey, firm and compact		
1.2	1.43	Clay with sand	Mergi	ng	Mottled brown/grey, firm and compact, common fine sand		
1.43	1.67	Peat with clay	Clear		Orange/brown, moderately humified, patchy grey clay		
1.67	1.72	Peat	Abrup	t	Orange/brown, moderately humified		
1.72	1.75	Peat with clay	Clear		Orange/brown, moderately humified, patchy grey clay		
1.75	2.0	Peat	Clear		Orange/brown, moderately humified		

	Borehole No 5A 162							
Easting 583845.1896				GL ELEV (mOD) 2.5083				
Northing 343085.9593				Total depth (m) 2.0				
Depth (m)			Uppe conta		Description			
From	То							
0	0.6	Topsoil						
0.6	1.3	Clay	Merg	ing	Mottled brown/grey, firm and compact			
1.3	1.7	Silty clay	Diffuse		Mottled brown/grey, firm and compact, common silt			
1.7	2.0	Peat	Abru	pt	Orange/brown, moderately humified			

	Borehole No 5D 25							
Easting 583702.2611				GL ELEV (mOD) 2.5979				
Northing 343109.3667				Total depth (m) 0				
Depth (m)		Sediment type	Upper contact		Description			
From	То							
0					Stone just under surface			

	0 50					
Easting 583713.4291				GL ELEV (mOD) 2.4849		
Lasting 50571	13.4291			GL	ELEV (IIIOD) 2.4047	
Northing 343	Northing 343132.4979				al depth (m) 2.0	
<u>^</u>		Upper contact		Description		
Depth (m) From	То	Sediment type	conta		Description	
0	0.3	Topsoil				
		I.				
0.3	1.1	Clay	Merg	ing	Mottled brown/grey, firm and compact	
1.1	1.2	Silty peat	Abruj	ot	Orange/brown, moderately humified, common silt	
1.2	1.5	Peat	Diffu	se	Orange/brown, moderately humified	
1.5	1.67	Clay	Abru	ot	Mottled brown/grey, firm and compact	
1.67	2.0	Peat	Abruj	pt	Orange/brown, moderately humified	

		Boi	No 5I	0.75			
Easting 583724.5398				GL ELEV (mOD) n/a			
Northing 343154.9211					Total depth (m) 2		
		Uppe conta		Description			
From	То						
0	0.4	Topsoil			Gravelly		
0.4	0.8	Clay	Merg	ing	Mottled brown/grey, firm and compact, common chalk fragments		
0.8	1.0	Clay	Clear		Grey, soft and pliable		
1.0	1.2	Clay	Clear		Mottled brown/grey, firm and compact, common sand		
1.2	1.85	Peat	Abru	ot	Orange/brown, moderately humified		
1.85	1.0				Lost		

	Borehole No 5D 100								
Easting 583734.9264					GL ELEV (mOD) 2.3545				
Northing 343177.7667				Total depth (m) 2.0					
Depth (m)	Depth (m)		Upper contact		Description				
From	То								
0	0.3	Topsoil							
0.3	0.8	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.8	1.9	Peat	Abruj	pt	Orange/brown, moderately humified				
1.9	1.93	Wood	Abrupt		Unhumified wood fragment				
1.93	2.0	Peat	Abru	pt	Orange/brown, moderately humified				

	Borehole No. 5D 125								
Easting 583746.2373					GL ELEV (mOD) 1.9021				
Lasting 3037-	0.2375			GL	ELEV (IIIOD) 1.9021				
Northing 343	Northing 343199.9121				Total depth (m) 2.0				
			Upper						
Depth (m)		Sediment type	conta	ct	Description				
From	То								
0	0.5	Topsoil							
0.5	0.6	Clay	Merging		Mottled brown/grey, firm and compact				
0.6	2.0	Peat	Abru	ot	Orange/brown, moderately humified				

	Borehole No 5D 140							
Easting 583752.8175				GL ELEV (mOD) 1.9456				
Northing 343212.8477				Total depth (m) >2				
Depth (m)		Sediment type	Uppe conta		Description			
From	То							
0	0.35	Topsoil						
0.35	0.6	Clay	Merging		Mottled brown/grey, firm and compact			
0.6	2.0	Peat	Abrup	ot	Orange/brown, moderately humified			

	Borehole No. 5B 0 -25								
Easting 583669.7310			GL ELEV (mOD) 2.4525						
	Northing 343179.3695			Total depth (m) 1.45					
Depth (m)	Upp		Uppe conta		Description				
From	То								
0	0.12	Topsoil							
0.12	0.35	Clay	Merging		Mottled brown/grey, firm and compact				
0.35	1.45	Peat	Abrupt		Orange/brown, moderately humified				
1.45					Hit base				

	Borehole No. 5B 0								
Easting 583693.6722					GL ELEV (mOD) 2.5209				
Northing 343173.5259				Total depth (m) 2.0					
Depth (m)	Depth (m) Sediment t		Upper contact		Description				
From	То								
0	0.15	Topsoil							
0.15	0.6	Clay	Mergi	ing	Mottled brown/grey, firm and compact				
0.6	2.0	Peat	Abrup	ot	Orange/brown, moderately humified				

	Borehole No 5B 25							
Easting 583718.6514				GL ELEV (mOD) 2.5161				
Northing 343167.2700				Total depth (m) 2.0				
		Uppe conta		Description				
From	То							
0	0.33	Topsoil						
0.33	0.9	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.9	1.2	Clay	Clear		Grey, soft and pliable			
1.2	1.9	Clay	Clear		Mottled brown/grey, firm and compact, common silt			
1.9	2.0	Peat	Abru	ot	Orange/brown, moderately humified			

	Borehole No 5B 50							
Easting 583	743.4446			GL	ELEV (mOD) 2.6368			
Northing 343161.2749					al depth (m) 1.8			
Depth (m)		Sediment type	Upper contact		Description			
From	То							
0	0.45	Topsoil						
0.45	1.15	Clay	Merg	ing	Mottled brown/grey, firm and compact			
1.15	1.16	Sand/wood	Abru	ot	Brown/grey with wood fragments			
1.16	1.3	Clay	Abru	ot	Mottled brown/grey, firm and compact			
1.3	1.4	Clayey sand	Merg	ing	Brown/grey, compact and firm			
1.4	1.45	Sand	Merg	ing	Brown/grey, compact			
1.45	1.8	Peat with silt	Abru	ot	Orange/brown, moderately humified, common			
					silt			
1.8					Hit base			

Borehole No 5B 75								
Easting 583768.3655			GL ELEV (mOD) 2.5384					
Northing 343155.6386				Total depth (m) 1.4				
			Uppe	r				
Depth (m)		Sediment type	conta	ct	Description			
From	То							
0	0.35	Topsoil						
0.35	0.75	Clay	Merging		Mottled brown/grey, firm and compact			
0.75	1.4	Peat	Abrupt		Orange/brown, moderately humified			
1.4					Hit base			

	Borehole no 5B 100							
Easting 583792.3002				GL ELEV (mOD) 2.5353				
Northing 343149.6720			Total depth (m) 1.8					
Depth (m)			Uppe conta		Description			
From	То							
0	0.25	Topsoil						
0.25	0.75	Clay	Merging		Mottled brown/grey, firm and compact			
0.75	1.8	Peat	Abrupt		Orange/brown, moderately humified			
1.8					Hit base			

	Borehole no 5B 125							
Easting 583816.3394			GL ELEV (mOD) 2.5995					
Northing 343143.8324			Total depth (m) 1.9					
	Upp		Uppe					
Depth (m)		Sediment type	conta	ct	Description			
From	То							
0	0.45	Topsoil						
0.45	0.9	Clay	Merging		Mottled brown/grey, firm and compact			
0.9	1.9	Peat	Abrupt		Orange/brown, moderately humified			
1.9					Hit base			

	Borehole no 5B 155								
Easting 583845.3391					GL ELEV (mOD) 2.3773				
Northing 343136.5581				Total depth (m) 2.0					
Depth (m)		Sediment type	Uppe conta		Description				
From	То								
0	0.2	Topsoil							
0.2	0.6	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.6	2.0	Peat	Abru	ot	Orange/brown, moderately humified				

	Borehole no 5B 155 +25							
Easting 583870.0024				GL ELEV (mOD) 2.4271				
Northing 343132.4307			Total depth (m) 1.8					
Donth (m)			Uppe conta		Description			
Depth (m) From	То	Sediment type	Conta	ci	Description			
		Tanaail						
0	0.2	Topsoil						
0.2	0.65	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.65	1.8	Peat	Abrupt		Orange/brown, moderately humified			
1.8					Hit base			

	Borehole no 5H 0							
Easting 583667.6827				GL ELEV (mOD) 2.4257				
Northing 34	3183.7051			Tot	al depth (m) 1.4			
		Uppe conta		Description				
From	То							
0	0.2	Topsoil						
0.2	0.55	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.55	1.3	Peat	Abru	pt	Orange/brown, moderately humified			
1.3	1.4	Sandy peat	Diffuse		Orange/brown, moderately humified, common sand			
1.4					Hit base			

	Borehole no 5H 25								
Easting 583676.2778				GL ELEV (mOD) 2.4797					
Northing 343207.4236				Total depth (m) 2.0					
Depth (m)			Uppe conta		Description				
From	То								
0	0.25	Topsoil							
0.25	0.6	Clay	Merging		Mottled brown/grey, firm and compact				
0.6	2.0	Peat	Abrup	ot	Orange/brown, moderately humified				

	Borehole no 5H 50								
Easting 583684.0636				GL ELEV (mOD) 2.4938					
Northing 34	3231.5790		Total depth (m) 1.9						
Depth (m)			Uppe conta		Description				
From	То								
0	0.2	Topsoil							
0.2	0.67	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.67	1.07	Peat	Abru	pt	Orange/brown, moderately humified				
1.07	1.1	Clay	Abru	ot	Mottled brown/grey, firm and compact				
1.1	1.9	Peat	Abrupt		Orange/brown, moderately humified				
1.9					Hit base				

	Borehole no 5H 65							
Easting 583688.5013			GL ELEV (mOD) 2.3836					
Northing 343	Northing 343246.0320			Total depth (m) 1.7				
			Uppe	r				
Depth (m)		Sediment type	conta		Description			
From	То							
0	0.3	Topsoil						
0.3	0.7	Clay	Merging		Mottled brown/grey, firm and compact			
0.7	1.7	Peat	Abrupt		Orange/brown, moderately humified			
1.7					Hit base			

Borehole no 5C 0								
Easting 583671.9565				GL ELEV (mOD) 2.3563				
Northing 3	Northing 343233.7864			Total depth (m) 1.7				
			Upper					
Depth (m)		Sediment type	contac	et 👘	Description			
From	То							
0	0.3	Topsoil						
0.3	0.6	Clay	Merging		Mottled brown/grey, firm and compact			
0.6	1.7	Peat	Abrupt		Orange/brown, moderately humified			
1.7					Hit base			

	Borehole no 5C 25								
Easting 583696.7015			GL ELEV (mOD) 2.4026						
Northing 343228.1854			Total depth (m) 1.7						
	Upi		Uppe	r					
Depth (m)		Sediment type	conta	ict	Description				
From	То								
0	0.2	Topsoil							
0.2	0.7	Clay	Merging		Mottled brown/grey, firm and compact				
0.7	1.7	Peat	Abrupt		Orange/brown, moderately humified				
1.7					Hit base				

	Borehole no 5C 50								
Easting 583718.5150					GL ELEV (mOD) 2.4119				
Northing 343216.8684				Total depth (m) 2.0					
Depth (m)			Uppe conta		Description				
From	То		conta						
0	0.32	Topsoil							
0.32	0.8	Clay	Merging		Mottled brown/grey, firm and compact				
0.8	2.0	Peat	Abrup	ot	Orange/brown, moderately humified				

	Borehole no 5C 75								
Easting 583739.6376					GL ELEV (mOD) 2.5789				
Northing 343	Northing 343203.3200			Total depth (m) 2.0					
Depth (m)		Sediment type	Uppe conta		Description				
From	То								
0	0.45	Topsoil							
0.45	1.2	Clay	Mergi	ing	Mottled brown/grey, firm and compact				
1.2	2.0	Organic clay	Diffus	se	Dark grey organic clay				

	Borehole no 5C 100								
Easting 583763.8062				GL ELEV (mOD) 2.3159					
Northing 343196.3999			Total depth (m) 2.0						
Depth (m)	Depth (m)		Upper contact		Description				
From	То								
0	0.35	Topsoil							
0.35	0.7	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.7	1.9	Peat	Abru	ot	Orange/brown, moderately humified				
1.9	2.0	Silty peat	Diffu	se	Orange/brown, moderately humified, common silt				

	Borehole no 5C 125								
Easting 583787.9125					GL ELEV (mOD) 2.2561				
Northing 343188.6606				Total depth (m) 2.0					
Depth (m)	-		Uppe conta		Description				
From	То								
0	0.43	Topsoil							
0.43	0.83	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.83	2.0	Peat	Abru	pt	Orange/brown, moderately humified				

	Borehole no 5C 150							
Easting 583811.9475			GL ELEV (mOD) 2.1085					
Northing 3431	Northing 343180.8143			Total depth (m) 1.7				
			Uppe	er				
Depth (m)	_	Sediment type	conta	ict	Description			
From	То							
0	0.2	Topsoil						
0.2	0.65	Clay	Merging		Mottled brown/grey, firm and compact			
0.65	1.5	Peat	Abrupt		Orange/brown, moderately humified			
1.5	1.7	Lost			Hit base			

	Borehole no 5C 175							
Easting 583834.8194				GL	ELEV (mOD) 2.2136			
Northing 343172.5406			Total depth (m) 1.55					
			Uppe	r				
Depth (m)	_	Sediment type	conta	ct	Description			
From	То							
0	0.3	Topsoil						
0.3	0.75	Clay	Merging		Mottled brown/grey, firm and compact			
0.75	1.55	Peat	Abrupt		Orange/brown, moderately humified			
1.55					Hit base			

	Borehole no 5C 200								
Easting 583858.2855				GL ELEV (mOD) 2.1125					
Northing 343164.1380				Total depth (m) 1.4					
		Uppe conta		Description					
From	То								
0	0.3	Topsoil							
0.3	0.6	Clay	Merging		Mottled brown/grey, firm and compact				
0.6	0.75	Peat	Abru	pt	Orange/brown, moderately humified				
0.75	0.8	Clay	Abru	ot	Mottled brown/grey, firm and compact				
0.8	1.4	Peat	Abrupt		Orange/brown, moderately humified				
1.4					Hit base				

	Borehole no 5C 230								
Easting 583886.8859				GL ELEV (mOD) 2.1529					
Northing 343154.5234				Total depth (m) 1.4					
~~		Uppe conta		Description					
From	То								
0	0.35	Topsoil							
0.35	0.65	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.65	0.85	Peat	Abru	pt	Orange/brown, moderately humified				
0.85	1.0	Clay	Abrupt		Grey, soft and pliable				
1.0	1.4	Peat	Abrupt		Orange/brown, moderately humified				
1.4					Hit base				

	Borehole no 5G 0							
Easting 583833.1203				GL ELEV (mOD) 2.1556				
Northing 343200.2034				Total depth (m) 1.7				
		Uppe conta		Description				
From	То							
0	0.3	Topsoil						
0.3	0.8	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.8	1.3	Silty peat	Abruj	pt	Orange/brown, moderately humified, common silt			
1.3	1.5	Sandy peat	Diffuse		Orange/brown, moderately humified, common sand			
1.5	1.7	Lost			Hit base			

	Borehole no 5G 20								
Easting 583831.8781				GL ELEV (mOD) 2.1451					
Northing 343	3220.4677			Tot	al depth (m) 1.4				
Depth (m)		Sediment type	Upper contact		Description				
From	То								
0	0.2	Topsoil							
0.2	0.8	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.8	0.95	Sandy clay	Diffu	se	Mottled brown/grey, firm and compact. High organic content				
0.95	1.3	Silty peat	Abruj	pt	Orange/brown, moderately humified, common silt				
1.3	1.4	Sandy peat	Diffu	se	Orange/brown, moderately humified, common sand Hit base				
1.4					sand Hit base				

	Borehole no 5G 40								
Easting 583830.7824				GL	ELEV (mOD) 2.3028				
Northing 343	240.7865			Tot	al depth (m) 1.5				
		Uppe conta		Description					
From	То								
0	0.2	Topsoil							
0.2	0.9	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.9	1.1	Silty clay	Diffuse		Mottled brown/grey, firm and compact. High organic content				
1.1	1.5	Sand / gravel	Abrupt		Grey/brown, loose				
1.5					Hit base				

	Borehole no 6A 0								
Easting 583906.6260				GL ELEV (mOD) 2.5905					
Northing 343268.6674				Total depth (m) 2.0					
		Uppe conta		Description					
From	То								
0		Topsoil							
0.3		Clay	Merg	ing	Mottled brown/grey, firm and compact				
1.08		Soil	Merg	ing	Organic sandy clay, rare flint				
1.4		Clay	Clear		Grey, soft and pliable				
1.85		Sandy clay	Clear		Mid brown, firm and compact				
1.9		Sand	Abru	pt	Grey/brown, compact				

	Borehole no 6A 25								
Easting 58391	9.6735			GL	ELEV (mOD) 2.4577				
Northing 3432	247.9919			Tot	al depth (m) 2.0				
			Uppe	er					
Depth (m)		Sediment type	conta	ict	Description				
From	То								
0	0.23	Topsoil							
0.23	0.27	Topsoil/Clay	Diffu	se	Topsoil and clay mixed				
0.27	0.75	Clay	Diffu	se	Mottled brown/grey, firm and compact				
0.75	0.85	Sand	Abru	pt	Grey/beige, compact				
0.85	0.9	Organic clay	Abru	pt	Dark brown				
0.9	1.1	Clay	Diffu	se	Black, soft and pliable				
1.1	1.65	Soil	Clear		Organic sandy clay, rare flint				
1.65	1.75	Sand	Abru	pt	Grey, loose				
1.75	2.0	Soil	Abru	pt	Organic sandy clay, rare flint				

	Borehole no 6A 50								
Easting 583	Easting 583936.9952				GL ELEV (mOD) 2.6609				
Northing 343229.5923					l depth (m) 2.0				
Depth (m)			Upper conta		Description				
From	То								
0	0.35	Topsoil							
0.35	0.85	Clay	Mergi	ng	Mottled brown/grey, firm and compact				
0.85	0.95	Sandy clay	Mergi	ng	Dark grey/brown, common sand				
0.95	1.22	Soil	Mergi	ng	Organic sandy clay, rare flint				
1.22	1.35	Lost							
1.35	1.8	Clayey peat	Unkno	own	Mid-brown, moderately humified, patches of grey clay				
1.8	1.9	Peat	Clear		Dark brown, moderately humified				
1.9	2.0	Lost							

	Borehole no 6A 75								
Easting 58394	9.3266			GL	ELEV (mOD) 2.4446				
Northing 343205.0511				Total depth (m) 1.6					
		Uppe conta		Description					
From	То								
0	0.3	Topsoil							
0.3	0.67	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.67	1.05	Soil	Clear		Organic sandy clay, rare flint				
1.05	1.2	Organic clay	Merg	ing	Grey, compact				
1.2	1.3	Organic sand	Clear		Dark brown, compact				
1.3	1.35	Sand	Clear		Grey, loose				
1.35	1.6	Lost							

	Borehole no 6A 100							
Easting 583962.0566				GL ELEV (mOD) 2.5783				
Northing 343183.1067				Total depth (m) 1.1				
Depth (m) Sedimen		Sediment type	Upper contact		Description			
From	То							
0	0.26	Topsoil						
0.26	0.6	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.6	1.05	Soil	Merging		Organic sandy clay, rare flint			
1.05	1.1	Clay	Merging		Black, soft and pliable			
1.1					Hit base			

	Borehole no 6A 125								
Easting 583973.9143				GL ELEV (mOD) 2.5001					
Northing 343160.7676				Total depth (m) 0.95					
Depth (m)		Sediment type	Upper contact		Description				
From	То								
0	0.23	Topsoil							
0.23	0.6	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.6	0.75	Sandy clay	Merging		Brown, common sand				
0.75	0.85	Clayey sand	Diffuse		Dark brown, compact				
0.85	0.95	Lost			Hit base				

	Borehole no 6A 160							
Easting 583	3988.9279			GL	ELEV (mOD) 2.5629			
Northing 343129.2983					al depth (m) 1.0			
Depth (m) Sediment type conta			Description					
From	То							
0	0.19	Topsoil						
0.19	0.4	Clay	Merg	ing	Mottled brown/grey, firm and compact			
0.4	0.5	Sandy clay	Merg	ing	Mottled brown/grey, firm and compact, common sand			
0.5	0.6	Sand	Clear		Grey/brown, compact			
0.6	0.65	Clay	Abru	pt	Mottled brown/grey, firm and compact			
0.65	1.0	Sand	Abru	pt	Grey/brown, compact			
1.0					Hit base			

	Borehole no 6B 0								
Easting 583	3932.8241			GL	ELEV (mOD) 2.5107				
Northing 3	43228.9507			Total depth (m) 1.0					
Depth (m)		Sediment type	Upper contact		Description				
From	То								
0	0.21	Topsoil							
0.21	0.4	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.4	0.5	Sandy clay	Diffuse		Mottled brown/grey, firm and compact, common sand				
0.5	0.6	Sand	Diffuse		Grey/brown, compact				
0.6	0.65	Clay	Abrupt		Mottled brown/grey, firm and compact				
0.65	1.0	Sand	Abrupt		Grey/brown, compact				
1.0					Hit base				

	Borehole no 6B 30								
Easting 583960.5736				GL ELEV (mOD) 2.2437					
Northing 343241.7501					Total depth (m) 2.0				
Depth (m)		Sediment type	Upper contact		Description				
From	То								
0	0.17	Topsoil							
0.17	0.65	Clay	Mergi	ng	Mottled brown/grey, firm and compact				
0.65	1.25	Soil	Clear		Organic sandy clay, rare flint				
1.25	1.6	Clayey peat	Merging		Brown, moderately humified, grey clay patches				
1.6	1.9	Peat	Merging		Dark brown, moderately humified				
1.9	2.0	Peat	Clear		Black, crumbly, well humified, common sand				

	Borehole no 6B 30 +25						
Eas	sting 583981.8818	GL ELEV (mOD) 2.2958					

Northing 343	3254.1518		Tot	Total depth (m) 1.9		
Depth (m)		Sediment type	Upper contact	Description		
From	То					
0	0.2	Topsoil				
0.2	0.7	Clay	Merging	Mottled brown/grey, firm and compact		
0.7	1.0	Soil	Clear	Organic sandy clay, rare flint		
1.0	1.35	Peat	Clear	Dark brown, moderately humified		
1,35	1.4	Clay	Abrupt	Mottled brown/grey, firm and compact		
1.4	1.8	Sandy peat	Abrupt	Dark brown, moderately humified, common sand		
1.8	1.9	Peat	Clear	Black, well humified and crumbly		
1.9				Hit base		

Borehole no 6C 0								
Easting 583987.4310				GL ELEV (mOD) 2.5265				
Northing 343149.3810				Total depth (m) 1.15				
Depth (m)		Sediment type	Upper contact		Description			
From	То							
0	0.22	Topsoil						
0.22	0.22 0.6 Clay Merg		Merg	ing	Mottled brown/grey, firm and compact			
0.6	1.1 Sandy peat Clea		Clear		Dark brown, moderately humified, common sand			
1.1	1.15	Clayey sand	Clear		Grey/brown, compact			
1.15					Hit base			

	Borehole no 6C 25								
Easting 584	006 1506		GL	GL ELEV (mOD) 2.3880					
Easting 584006.1506 Northing 343165.3169					Total depth (m) 1.85				
Upp			Uppe conta	r	Description				
From	То								
0	0.3	Topsoil							
0.3	0.8	Clay	Merg	ing	Mottled brown/grey, firm and compact				
0.8	1.05	Sandy peat	Abru	ot	Dark brown, moderately humified, common				
		• •	1		sand				
1.05	1.35	Clay	Abruj	ot	Grey, soft and pliable				
1.35	1.45	Sand	Abruj	ot	Mid-brown, compact				
1.45	1.5	Sand	Diffuse		Dark brown, organic, compact				
1.5	1.8	Sand	Diffuse		Mid-brown, compact				
1.8	1.85	Sand	Diffuse		Dark brown, organic, compact				
1.85					Hit base				

	Borehole no 6C 50								
Easting 584023.1010					GL ELEV (mOD) 2.3841				
Northing 34	43183.7728			Total depth (m) 1.8					
Depth (m)	Depth (m) Sediment type			r ct	Description				
From	То								
0	0.22	Topsoil							
0.22	0.22 0.8 Clay		Merging		Mottled brown/grey, firm and compact				
0.8	0.8 1.35 Sandy clay Merg		ing	Dark brown, inorganic					
1.35	1.8	Sand	Clear		Grey, very compact				
1.8					Solid sand - impenetrable				

Borehole no 6C 50 +25								
Easting 584039.0759				GL ELEV (mOD) 2.4353				
Northing 343202.6170					Total depth (m) 1.1			
Depth (m)		Sediment type	Upper contact		Description			
From	То							
0	0.25	Topsoil						
0.25	0.25 0.75 Clay Merg		ing	Mottled brown/grey, firm and compact				
0.75	1.1	Sandy peat	Clear		Dark brown, moderately humified with common sand			
1.1			1		Hit base			