Archaeology South-East

ASE

Deposit model and assessment of land at West St Leonard, East Sussex.

NGR: 578318 108990
(TQ 78318 08990)

ASE Project No: 7560

ASE Report No: 2015366
OASIS id: 225730

Kristina Krawiec
Illustrations by Justin RussellN

NOVEMBER 2015

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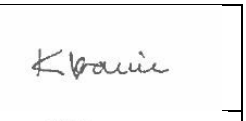
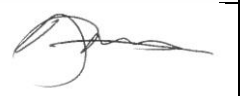
Prepared by:	Kristina Krawiec	Senior Archaeologist	
Reviewed and approved by:	Diccon Hart	Senior Archaeologist	
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Abstract

This report presents the results of a deposit model and geo-archaeological assessment carried out by Archaeology South-East on land at West St Leonards, East Sussex. The deposit model was generated using geotechnical boreholes. The model has demonstrated a good survival of waterlogged deposits, including substantial organic deposits, and broadly predicted where these deposits might interact with the valley sides, where past human activity might be expected to be focussed.

The design of the proposed development requires piling in order to underpin the new building. The effects of piling on waterlogged sediment are poorly understood particularly in relation to de-watering and the halo effect. In order to gain a better understanding of the nature of sediment deposition at the site it is suggested that a core is recovered for multi-proxy analysis and radiocarbon dating. In addition, up to 5 additional boreholes are proposed in order to further refine the model of sediment accumulation.

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East was commissioned by Amicus Horizon to undertake an assessment of geotechnical data and produce a deposit model for land at west St Leonards, East Sussex (NGR 578318 108990, Figure 1).

1.2 Geology and Topography

1.2.1 The site lies to the west of St Leonards and is bounded by Filsham road to the east, Bexhill Road to the south, residential housing the west and the South Saxons Wetlands nature reserve to the north. The site is located within the Filsham Valley, on the western floodplain of the Hollington Stream. The area is prone to tidal and fluvial flooding and currently comprises rough grassland. Previous uses of the site include landfill and anthrax infected cattle burial in the 1940's (TE 2014).

1.2.2 The underlying geology comprises the sandstone of the Ashdown Formation overlain by superficial deposits of Alluvium (BGS 2015). The BGS borehole data for the site dates to 1966 and has no record of landfill deposits, suggesting the site was used for this purpose after this date.

1.3 Planning Background

1.3.1 The proposed development at the site comprises the construction of a 2-3 storey apartment building with associated landscaping. The construction works will involve piling to the bedrock in order to reach suitably firm foundation material. Due to the geoarchaeological, palaeoenvironmental and archaeological potential of the site, The East Sussex County Council (ESCC) Archaeology Section have recommended that an archaeological field evaluation be undertaken before determination of a planning application, in line with paragraph 128 of the National Planning Policy Framework. Following consultation with the East Sussex County Council Archaeology Section a programme of deposit modelling has been agreed in order to inform the nature of any further work required.

1.3.2 The requirement for archaeological work at the site is further informed by Annexe E of the Sussex Archaeological Standards (ESCC 2015a), paragraph 8 of which states that:

> *'Evaluation of a site should aim to sample all sedimentary contexts which have been determined to be present within the development area. They should be sampled to at least the depth of development impact. Impact should be considered in terms of not only physical destruction of sediments and material/features within them but also in terms of the effects of geochemical modification and dewatering. In order to understand geoarchaeological contexts correctly it may be necessary to investigate to the base of the Quaternary sequence or beyond the limits of the development area.'*

1.3.3 In addition reference is made to the Historic England guidance on Piling and Archaeology (2015). The effects of piling (which is proposed for the site) on

waterlogged sediments are poorly understood and the need for comprehensive evaluation is recommended for such sites.

1.4 Scope of Report

1.4.1 This report presents the results of the modelling of data from a geotechnical investigation carried out at the site (Tweedie Evans 2014). The model has been used to determine the likely deposits that are present at the site and make recommendations for the locations of further investigations.

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 A desk-based assessment of the site has been prepared by ASE (2015) a summary of which is provided here.

2.2 Palaeolithic

2.2.1 Evidence for the Palaeolithic in Sussex is well known on the Coastal Plain, with the internationally renowned site at Boxgrove in West Sussex. Locally, evidence has been uncovered in the Hastings area mostly as scattered artefacts, notably hand axes. Evidence from the end of the Pleistocene includes Late Upper Palaeolithic flint scatters recently found during the Bexhill to Hastings Link Road works (*pers. comm.* Casper Johnson; ESCC 2015b).

2.3 Mesolithic

2.3.1 From the beginning of the Holocene and throughout the Mesolithic period, the south-east of England was transformed through rising temperatures, sea level change, and environmental change, leading to the development of mixed woodlands across Sussex and surrounding areas by 6,000 BC (Drewett, Rudling and Gardiner 1988, 11). By this date the majority of Mesolithic activity in Sussex was occurring in isolated zones, including the High Weald, and is represented in the archaeological record mainly by flint scatters. While Hastings lies on the eastern edge of the High Weald, the majority of known Mesolithic sites occur further to the west. A recent survey of Hastings Country Park (ASE 2006) has, however, revealed Mesolithic flint scatters, signifying localised activity. A project of considerable importance for the Mesolithic in the area is recent archaeological work preceding construction of the Bexhill to Hastings Link Road (*pers. comm.* Casper Johnson; ESCC 2015b). Here over 180 separate flint scatters comprising almost 400,000 pieces have been recovered. The complex geoarchaeological situation of many of these scatters, preserving high quality primary context deposits marginal to and below the modern valley floor, demonstrate the importance of understanding depositional sequences in mitigating development impacts on prehistoric archaeology.

2.4 Neolithic

2.3.1 The Neolithic period represented the emergence of the first farming communities in the south-east and saw the widespread deforestation of areas across Sussex, in order to create open space for farming activities (Drewett 2003). Many substantial monuments of this period such as causewayed enclosures, long barrows and flint mines have been discovered on the South Downs. Evidence for Neolithic archaeology in the area surrounding Hastings has been enhanced by recent work on the Bexhill to Hastings Link Road, including flint scatters and hearths associated with Neolithic pottery, and groups of axes. Of particular significance are waterlogged wood platform structures representing possible platforms and trackways in the marshy low-lying valley bottom; although similar to the Bronze Age site at Shinewater in

Eastbourne, this new example appears, on preliminary dating, to be Neolithic in date (*pers. comm.* Casper Johnson, ESCC, ESCC 2015b).

2.5 Bronze Age

2.5.1 The Early Bronze Age has been characterised by three markers: the introduction of Beaker ceramics; the introduction of metalworking including gold and copper, and later bronze; and finally the construction of a new type of funerary/ceremonial site, the round barrow. Recent work has increased the evidence for this period in the Hastings area, with work on the Bexhill to Hastings Link Road producing quantities of barbed and tanged arrowheads, a hengiform ring ditch associated with a cremation, and a series of burnt mounds (*pers. comm.* Casper Johnson, ESCC 2015b). Work at Catsfield, to the north of the study area, has produced four ring ditches suggestive of a barrow cemetery. The Later Bronze Age in Sussex saw the expansion of agricultural activities and more permanent settlement, evidence for which has been identified on the Coastal Plain and west of the River Adur. East of the River Adur, evidence for this period becomes sparser (Hamilton 2003) and this pattern extends to the Hastings area, although recent work on the Bexhill to Hastings Link Road has produced evidence for field systems and a droveway.

2.5.2 A Bronze Age submerged forest is recorded on the foreshore at Bulverhythe.

2.6 Iron Age and Romano-British

2.6.1 Agricultural expansion continued through to the Iron Age and further developed with the construction of a number of hillforts, primarily on the South Downs. The Middle and Late Iron Age saw an increase in population and settlement density in the county, although there is a notable lack of evidence for Middle Iron Age activity in East Sussex generally (Hamilton 2003). In Hastings there are a number of Iron Age sites excavated in the 1970s, suggesting occupation along the coast (ASE 2006). On East Hill, a possible Late Bronze Age/Early Iron Age Hillfort is located, defined by successive phases of defensive earthworks (Fradley and Newsome 2008) and recent work on the Link Road has produced evidence at Adams Farm for a possible Late Iron Age or Early Romano-British settlement site.

2.6.2 Recent work has shown the higher spurs of land overlooking Combe Haven have evidence for significant multi-period settlement. Activity has been shown to extend into the wetland zone suggesting a complex relationship between people and these landscapes.

2.6.3 The Roman invasion of Britain brought with it an expansion of agricultural and industrial activities and the growth of new centres of urban settlement in Sussex, at Chichester, Pulborough and Hassocks. While the western and central parts of the county were becomingly more densely populated, the archaeological evidence in the east previously suggested a different story. In and around the Hastings area, evidence for the Roman period had been somewhat lacking, with most occupation occurring in the High Weald in association with the exploitation of natural resources for iron production (Rudling 1999). Recent work on the Bexhill to Hastings Link Road has produced extensive evidence from bloomery sites on the higher ground

around Combe Haven, with one site containing 17 furnaces and a square enclosure. Other settlement sites are also known, suggesting a wider range of settlement activity beyond ironworking (*pers. comm.* Casper Johnson, ESCC). Considering the changes in coastline, and changing terrestrial hydrological regimes over the last 2000 years, some potential might exist for Roman maritime activity and trade along this stretch of coast. However, as yet only isolated finds of pottery and coins are recorded in the vicinity of the site.

2.7 Anglo-Saxon

2.7.1 The area of densest Early Saxon settlement in Sussex, as identified by cemeteries, is thought to have lain further west between the Ouse and Cuckmere rivers (Bell 1978). The people of the Hastings area, after whom the town was named (the *Haestingas*), appear to have maintained an identity separate from that of Sussex until quite late in the period. Later Saxon settlement is known at Hastings from the Burghal Hidage, a 10th century document listing defensive sites (burghs) set up by Alfred the Great to counter Danish attacks. Recent work at Filsham Valley School has produced evidence for a mid-late Saxon land enclosure (ASE 2012). It is possible that the excavated features represent outlying activity related to the manorial centre at Filsham Farm to the north of the site. In addition, work at the later manorial site of Upper Wilting has revealed evidence for ditches, gullies, beam slots and three corn driers of broadly 7th century date (*pers. comm.* Casper Johnson).

2.7.2 The site lies within the manor of Filsham in the historic parish of Hollington (later the parish of St Leonards). The title of Filsham is of Anglo-Saxon origin (meaning 'Filli's settlement' – Glover 1975, 55) and is first recorded in Domesday records (1086). The site is likely to have formed part of the land associated with the Saxon manorial centre based at Filsham Farm, a royal manor held by Edward the Confessor – Domesday records that it was 'laid waste', perhaps targeted by Norman soldiers as they did with the nearby Crowhurst manor of King Harold (Williams & Martin 2003).

2.8 Medieval

2.8.1 During the 11th century Bulverhythe was a coastal settlement serving as a small port to the west of Hastings, although the extent of any landing infrastructure is undetermined. The port served as a thoroughfare for Hastings, regularly processing the payment of 2000 herrings and other fish received as part of the endowment of the prebend of the college at Hastings castle during the late 11th century. Bulverhythe formed one of three important ports along this coastal stretch within close proximity to Hastings (Gardiner 1999), providing a lower landing area than that offered at ports in Priory Valley and Bourne Valley, both situated to the east.

2.8.2 During this period of flourishing trade William the Conqueror carved Sussex up into a series of north-south aligned territories called rapes, which he put in the safe custody of his most trusted battlefield commanders. The Rape of Hastings was entrusted to Robert, Count of Eu. William kept the bulk of Filsham Manor (the area in which the site is located) in his own possession, with the remainder distributed among 11 tenants, including Hugh the

Crossbowman and Wenenc the priest. The manor comprised arable land with areas of meadow and woodland. The demesne lands, presumably those nearest to the manorial centre, were farmed by 13 villans, 17 cottars and 3 slaves.

2.8.3 Filsham manor subsequently came into the hands of the de Freschville family, until sold in 1243 to Walter de Scotney, lord of Crowhurst. Thereupon it passed down through a succession of minor families (Salzman 1937), although the farm itself appears to have been leased to tenants such as William de Filesham, recorded in the 1296 Subsidy Roll (Baines 1986). The site was at this time an open meadow and formed part of the land associated with the farm.

2.9 Post-medieval and Modern

2.9.1 Filsham farm continued to be held by a succession of people until 1657, when the manor was bought by John Weekes, although it continued to be tenanted – his son rebuilt the farmhouse in 1682. The manor descended with the four daughters of John Weekes and their heirs until 1792, when it was bought by Sir Henry Oxenden. In 1801 it was sold to the Briscos, who held it into the 20th century (Martin & Martin 1981). The site remained as open rural meadows bordered by areas of marsh/wetland at this time.

2.9.2 By 1899 the site had undergone a series of significant changes. The site had developed from a series of open fields associated with Filsham Farm, into use as a cricket ground to the north and playing-fields associated with a newly constructed infant school to the south. This transition of land use is likely to have resulted in a significant degree of landscaping.

2.10 Project Aims and Objectives

2.10.1 The aims and objectives of the deposit modelling and lithological assessment are defined as follows;

- To establish the geoarchaeological and palaeoenvironmental potential and context of the site
- To determine the extent and significance of deposits recorded at the site
- To define the potential of the site in order to mitigate against the impact of the proposed scheme.

2.10.2 In light of the geotechnical survey (Fig. 2, TE 2014) the following objectives are suggested;

- To record and understand the Holocene sequences at the site via modelling borehole survey data
- To suggest a strategy for the collection of samples for off-site analysis/assessment
- To relate geomorphological processes to the archaeological potential of the site

3.0 GEOARCHAEOLOGICAL METHODOLOGY

3.1 Methodology

3.1.1 The borehole survey carried out at the site by Tweedie Evans (2014) recorded a total of 5 boreholes that reached the underlying bedrock, as shown in Figure 2. In addition, 13 window sample locations were also recorded, although these were shallow investigations and therefore were not considered suitable for the model. The lack of survey data for the borehole locations meant recovery of borehole locations was undertaken using rectified mapping and the use of the Ordnance Survey DTM in order to calculate approximate datum heights. As such the model has limited use in terms of obtaining depths of deposits to Ordnance Datum and therefore the depths are discussed as below ground level.

3.1.2 The model was carried out using Rockworks 16 which stores location, stratigraphic and lithological information about each borehole within an Access database. This is then used as the basis for a variety of modelling techniques which have been used to generate 3D solid deposit, 3D fence and 2D section diagrams (Figures 3-6). The models presented here are based on stratigraphic interpretation rather than lithological data, meaning the lithology of the boreholes has been grouped into discrete stratigraphic units.

3.1.3 The data is archived as both Rockworks RW files and an Access database. The images have been generated from navigable 3D models as JPEGS. The contents of the archive are tabulated below (Table 1).

Contents	quantity
Digital files	20MB

Table 1: Quantification of site archive

4.0 RESULTS

4.1 Borehole logs

Name	Easting	Northing	Total Depth (mbgl)
BH01	578441.8	109032.1	14.5
BH02	578376.2	108954.9	15.95
BH03	578305.3	108939	17.95
BH04	578320.1	108991.4	15
BH05	578320.6	109032.6	15.95

Table 2: Borehole locations

4.1.1 The geotechnical survey undertaken by Tweedie Evans (2014) recorded both deep cable percussive boreholes and shallow window sample locations across the site. As stated above, only the boreholes have been used to construct the model as the bedrock (Ashdown Formation) was encountered in all but borehole BH04. In order to generate an interpretive model the clay layers, which are recorded as having varying organic and sand components across the site, were grouped together. The 'Made Ground' was also grouped as the description within the borehole logs do not provide enough detail to determine the exact origin of the material.

4.2 Lithology and Stratigraphy

4.2.1 The underlying geology of the Ashdown Formation was recorded in four of the five boreholes as weak light brown to yellow sandstone. This was typically encountered at depths of 15.95m-17.95m below ground level across the site. The exception was in BH04 where the borehole was terminated at 15.00m before the bedrock was encountered.

4.2.2 This was then overlain by an organic silt clay layer which recorded 'pockets of organic material'. This may suggest a degree of reworked organic material in the form of eroded peat bed material becoming incorporated into the silt clay, or *in situ* organic accumulation. Again the lithological descriptions do not make this distinction.

4.2.3 Overlying this silt clay in BH01, 02 and 03 was a sandy clay deposit suggesting a change in depositional environment perhaps via a higher energy event such as overbank flooding from the Hollington Stream. This was not a continuous deposit and this is perhaps related to these boreholes being located proximal to the stream.

4.2.4 Two peat deposits were recorded which were separated by a gravelly clay layer. The descriptions of the peat suggest it was poorly humified (fibrous) indicating that high base-water levels have prevented the wholesale breakdown of organic matter. The lower peat (Peat 2) is overlain with a presumably erosive boundary by the gravelly clay suggesting another change in depositional conditions. This may perhaps represent lateral river movement, high energy flooding or perhaps even storm surge deposits. The environment then returns to one of organic accumulation once more with up

to 5m of peat recorded (BH02). This thickening of deposits may suggest the presence of a palaeochannel, perhaps the former course of the Hollington Stream.

4.2.5 The upper peat (Peat 1) is overlain by a mottled grey-brown silt clay with occasional gravel and disturbed peat clasts, this deposit was up to 4.10m thick. This probably represents an alluvial deposit and the mottling may be an indication of post-depositional weathering. This is overlain by up to 4.60m of Made Ground, which is comprised of a mixed clay, brick and gravel. This is likely to represent the landfill deposits described in the geotechnical report (Tweedie Evans 2014).

4.3 Model

4.3.1 The general trend in deposits is shown in the solid model (Figure 3). This demonstrates a deepening of deposits to the south, towards the Hollington Stream. In addition, the sub-surface topography shows the peat deposits thinning out to the north, towards BH05, which is likely to represent the edge of the floodplain deposition and a possible target for human activity at the wetland edge.

4.3.2 The fence diagram and southwest to north east section also demonstrates the thinning out of the gravelly clay layer separating the two peat deposits to the north (Figures 4 and 5). The north-west to south-east section (Figure 6) show this gravelly clay thickening to the south-east, towards the stream which may suggest a possible palaeochannel.

5.0 DISCUSSION AND CONCLUSIONS

5.1 Overview of stratigraphic sequence

5.1.1 The deposit model has demonstrated the survival of deposits with a high potential to preserve palaeoenvironmental remains. These deposits lie at some depth due to the thick layer of landfill material (c.4.50m) overlying the site. The deposit model also indicates that the site encompasses not only the floodplain of the Hollington Stream but also the edge of the wetland, which may have proved a focus for past human activity.

5.2 Deposit survival and existing impacts

5.2.1 The geotechnical report indicates the site has not only been used for landfill but also for the burial of anthrax-infected cattle (Tweedie Evans 2014). The cattle burials were unable to be located so the risk this poses is unknown but must be borne in mind when considering further work at the site.

5.2.2 The deposits underlying these modern deposits appear to be intact and undisturbed and are therefore considered to be reliable indicators of past depositional regimes.

5.3 Potential impact on archaeological remains

5.3.1 The underlying peat deposits are described as fibrous and as they overlie an impermeable clay layer, may have formed and be preserved due to a perched water table. The proposed scheme involves the use of piling. The effects of certain types of piling have been shown to contaminate more deeply buried deposits by dragging down younger material (HE 2015). In addition the effects of piling on the hydrology within waterlogged sediments, particularly those in perched water tables, are poorly understood. In some cases, a halo effect that extends to an area greater than that of the radius of the pile has been recorded showing a degradation of the burial environment (HE 2015). As no excavation work has been undertaken in the area, the archaeological potential of the site is hard to quantify. In the neighbouring valley of Combe Haven, during the Bexhill to Hastings Link Road works, geoarchaeological assessment demonstrated organic accumulation from the late Mesolithic onwards, with flint scatters underlying some of the peat deposits (Oxford Archaeology 2008). In addition wooden remains that are suggested to form a trackway of potential Neolithic date were also recorded (ESCC 2015b).

5.3.2 In the wider vicinity of the site other platform/trackway wetland sites have also been recorded, most notably the Bronze Age platform and trackways at Shinewater, Eastbourne (Greatorex 1998). Prospecting for such sites within wetland contexts is problematic as traditional non-intrusive survey such as geophysics is most frequently ineffective. The presence of such remains at the site, within the floodplain peat deposits, should not be discounted and any works that may alter the hydrological regime are likely to have an effect on any such potential archaeological remains. In addition the palaeoenvironmental remains held within the sediment archive at the site are also at risk of degradation, and baseline data on the nature, state and preservation of environmental remains is required in order to mitigate this risk

effectively.

5.4 Conclusions

5.4.1 The deposit model has demonstrated a good survival of waterlogged deposits and broadly predicted where these deposits might interact with the valley sides. In order to better understand the nature, timing and character of these deposits purposive geo-archaeological boreholes would be required, with associated palaeoenvironmental sampling and radiocarbon dating. In order to refine the deposit model additional cores would also be required. These cores should be examined for archaeological material although it is unlikely the boreholes will be able to locate ephemeral archaeological material. The edge of the floodplain and the valley sides are considered to have a high potential for archaeological remains and are considered the areas at highest risk of encountering archaeological remains. In addition the waterlogged deposits within the floodplain/possible channel also have a high potential to preserve organic archaeological remains.

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HER Summary

HER enquiry no.						
Site code						
Project code	7560					
Planning reference						
Site address	Land at West St Leonards					
District/Borough	St Leonard's					
NGR (12 figures)	578318 108990					
Geology	Alluvium; Ashdown formation					
Fieldwork type	Eval	Excav	WB	HBR	Survey	**Other**
Date of fieldwork	N/A					
Sponsor/client	Amicus Horizon					
Project manager	N.Griffin					
Project supervisor	K.Krawiec					
Period summary	Palaeolithic	Mesolithic	Neolithic	Bronze Age	Iron Age	
	Roman	Anglo-Saxon	Medieval	Post-Medieval	Other	
Project summary **(100 word max)**	*This report presents the results of a deposit model and geo-archaeological assessment carried out by Archaeology South-East on land at West St Leonards, East Sussex. The deposit model was generated using geotechnical boreholes. The model has demonstrated a good survival of waterlogged deposits, including substantial organic deposits, and broadly predicted where these deposits might interact with the valley sides, where past human activity might be expected to be focussed.* *The design of the proposed development requires piling in order to underpin the new building. The effects of piling on waterlogged sediment are poorly understood particularly in relation to de-watering and the halo effect. In order to gain a better understanding of the nature of sediment deposition at the site it is suggested that a core is recovered for multi-proxy analysis and radiocarbon dating. In addition, up to 5 additional boreholes are proposed in order to further refine the model of sediment accumulation*					
Museum/Accession No.						

OASIS Form

OASIS ID: archaeol6-225730

Project details

Project name	Deposit model and assessment of land at West St Leonard, east sussex
Short description of the project	*This report presents the results of a deposit model and geo-archaeological assessment carried out by Archaeology South-East on land at West St Leonards, East Sussex. The deposit model was generated using geotechnical boreholes. The model has demonstrated a good survival of waterlogged deposits, including substantial organic deposits, and broadly predicted where these deposits might interact with the valley sides, where past human activity might be expected to be focussed.* *The design of the proposed development requires piling in order to underpin the new building. The effects of piling on waterlogged sediment are poorly understood particularly in relation to de-watering and the halo effect. In order to gain a better understanding of the nature of sediment deposition at the site it is suggested that a core is recovered for multi-proxy analysis and radiocarbon dating. In addition, up to 5 additional boreholes are proposed in order to further refine the model of sediment accumulation*
Project dates	Start: 01-10-2015 End: 09-10-2015
Previous/future work	Yes / Yes
Any associated project reference codes	2015008 - Contracting Unit No.
Type of project	Environmental assessment
Site status	None
Current Land use	Grassland Heathland 3 - Disturbed
Survey techniques	Soils

Project location

Country	England
Site location	EAST SUSSEX HASTINGS HASTINGS west st leonards
Site coordinates	TQ 578318 108990 50.875421584658 0.243622132502 50 52 31 N 000 14 37 E Point

Project creators

Name of Organisation	Archaeology South-East
Project brief originator	East Sussex County Council

Project design originator	ASE
Project director/manager	Neil Griffin
Project supervisor	Kristina Krawiec
Type of sponsor/funding body	Client
Name of sponsor/funding body	Amicus Horizon

Project archives

Digital Archive recipient	Hastings Museum
Digital Media available	"Database","GIS","Images vector"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Deposit model and assessment of land at West St Leonard, East sussex.
Author(s)/Editor(s)	K.Krawiec
Date	2015
Issuer or publisher	ASE
Place of issue or publication	ASE

Appendix 1: Interpreted borehole data

Name	Easting	Northing	Stratigraphic Interpretation	Depth m bgl	
BH01	578441.823	109032.113	Made ground	0-2.80	
			Clay	2.8-6.9	
			Peat 1	6.90-7.80	
			Gravelly Clay	7.80-12.0	
			Peat2	12-12.80	
			Sandy clay	12.80-14.50	
			Sandstone	14.5-15.35	
BH02	578376.206	108954.855	Made ground	0-4.50	
			Clay	4.50-5.80	
			Peat 1	5.80-10.80	
			Gravelly Clay	10.80-14.10	
			Sandy clay	14.00-15.00	
			Sandstone	15.00-15.95	
BH03	578305.29	108938.98	Made ground	0-4.60	
			Clay	4.60-5.70	
			Peat 1	5.70-9.20	
			Gravelly Clay	9.20-16.3	
			Sandy clay	16.30-16.80	
			Sandstone	16.80-17.95	
BH04	578320.11	108991.36	Made ground	0-3.80	
			Clay	3.80-5.60	
			Peat 1	5.60-8.60	
			Gravelly Clay	8.60-10.0	
			Peat 2	10.0-11.50	
			Sandstone	11.50-15.0	
BH05	578320.64	109032.64	Made ground	0-4.60	
			Clay	4.60-8.00	
			Peat 1	8.00-9.00	
			Organic clay	9.00-15.50	
			Sandstone	15.50-15.95	

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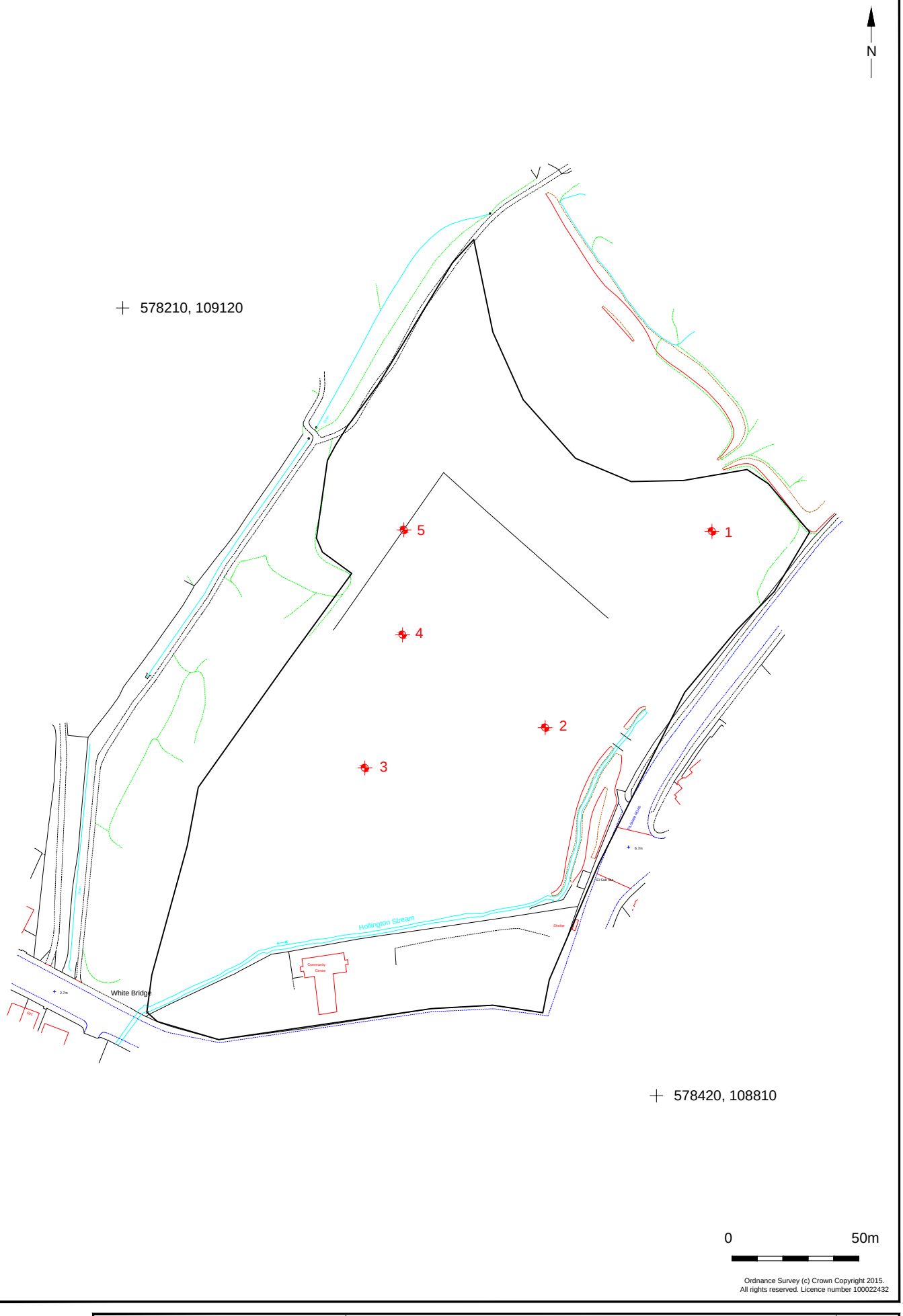
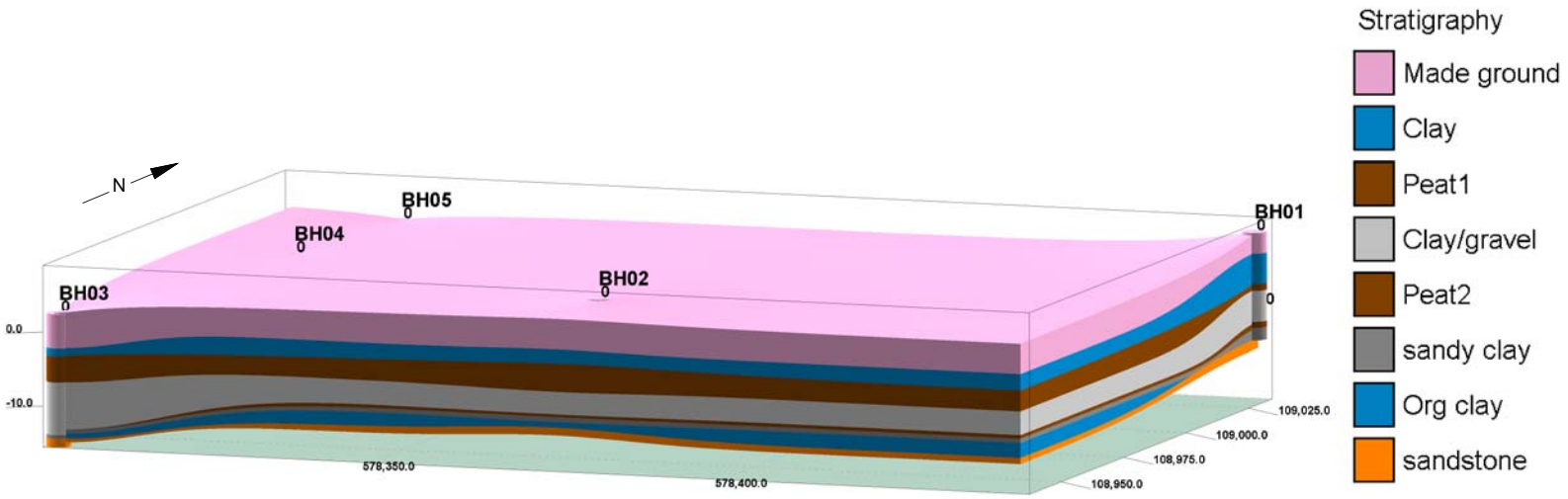
Project Ref: 7560	Oct 2015	Site location	
Report Ref: 2015366	Drawn by: JLR		



© Archaeology South-East		Land at west St. Leondards	Fig. 2
Project Ref: 7560	Oct 2015	Borehole locations	
Report Ref: 2015366	Drawn by: JLR		



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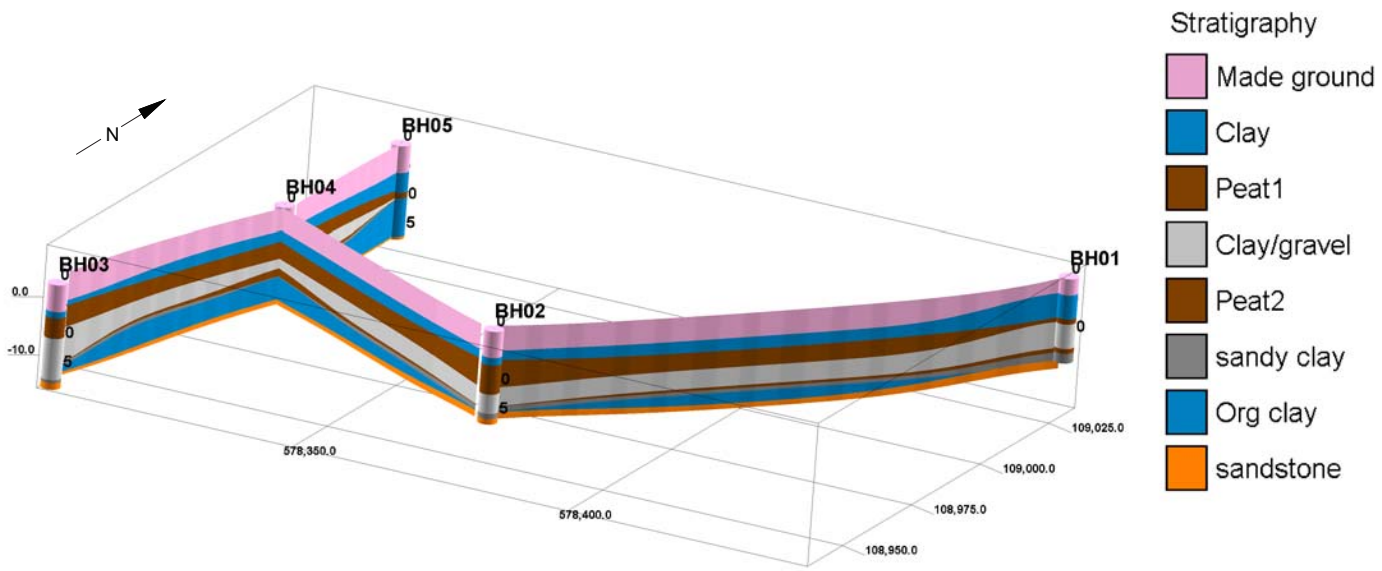
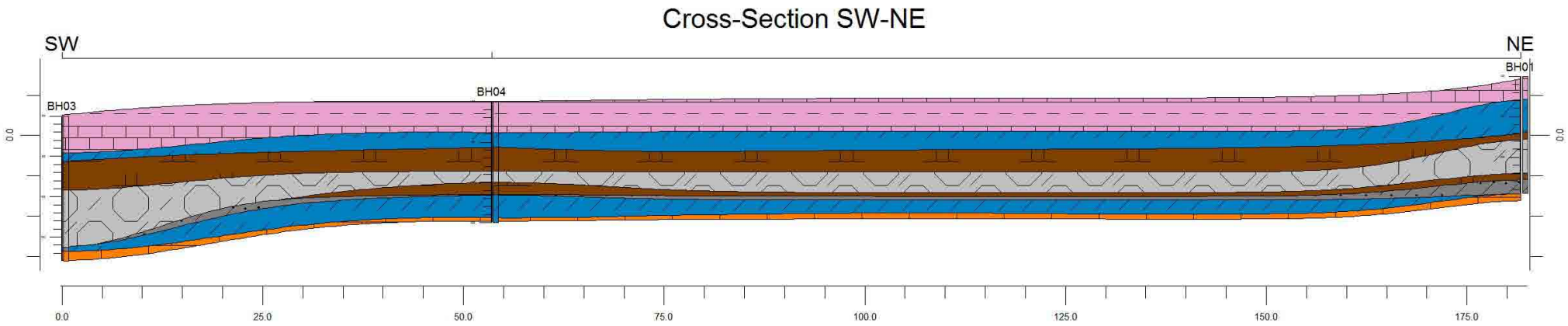
Project Ref: 7560	Oct 2015	3d solid deposit model	
Report Ref: 2015366	Drawn by: JLR		



© **Archaeology South-East**		Land at west St. Leonards	Fig. 4
Project Ref: 7560	Oct 2015	3d fence diagram	
Report Ref: 2015366	Drawn by: JLR		



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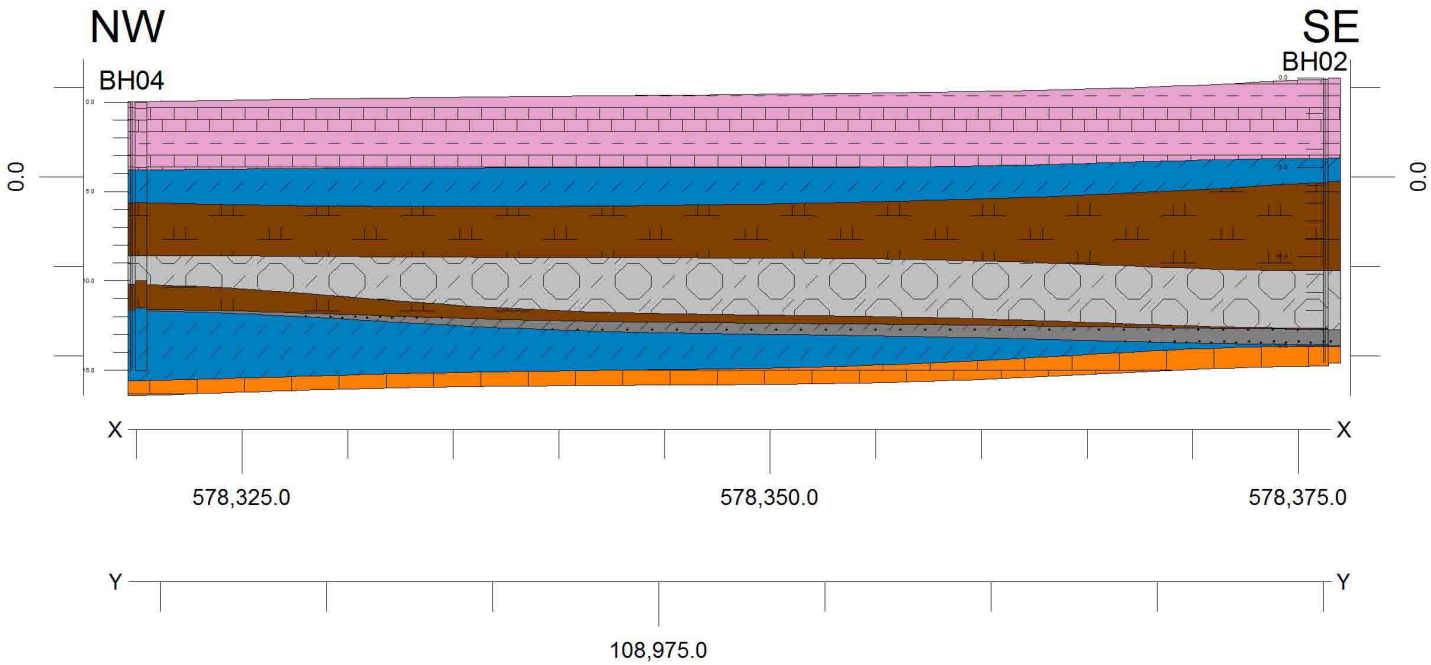
Project Ref: 7560	Oct 2015	SW-NE section	
Report Ref: 2015366	Drawn by: JLR		

NW-SE Section



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Project Ref: 7560	Oct 2015	NW-SE section	
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