The Keadby 3 Low Carbon Gas Power Station Project

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The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order

Land at and in the vicinity of the Keadby Power Station site, Trentside, Keadby, North Lincolnshire

Environmental Statement
Volume II - Appendix 15B:
Geoarchaeological Hand Auger Survey Fieldwork Report

The Planning Act 2008

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

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Abstract
This report presents the results of a geoarchaeological hand auger survey carried out by Trent and Peak Archaeology at Keadby 3 Low Carbon Gas Power Station, Keadby, Lincolnshire. The fieldwork was commissioned by AECOM Limited in support of Development Consent Order for further development on the Keadby Power Station site.

The auger survey was carried out across two areas, Area1 in Keadby Common and Area 2 a parcel of arable farmland to the south west of the Common. The hand auger cores were able to record the upper sequence of organic silts/peat and overlying warp deposits. The cores were unable to fully investigate the underlying sands due to the compact nature of the sediment.

The resulting deposit model has demonstrated undulations in the surface of the sands across both areas with isolated pockets of deeper organic accumulation recorded in hollows in the sand surface. The overlying organics are likely to represent encroaching floodplain which may have developed at the site after the Iron Age. These deposits were for the most part highly desiccated and palaeoenvironmental remains are suggested to have a higher potential for survival in areas of deeper accumulation, i.e below 1.00mbgl.

The site also has the potential to preserve possible pre-Iron Age landsurfaces below the organic and warp deposits. In addition the sands are likely to have been substantially reworked and may also mask earlier remains. Further work is required to better understand the potential for the site to preserve archaeological remains both on the surface of and within the sand unit.

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1. INTRODUCTION

1.1. Site Background

1.1.1 Trent and Peak Archaeology were commissioned by AECOM on behalf of SSE Generation Ltd to undertake a geoarchaeological hand auger survey at Keadby 3 Low Carbon Gas Power Station on land in the vicinity of the existing Keadby 1 power station (Figure 1, NGR SE 80761 11011 and SE 81979 12069).

1.1.2 The main power station site has been subject to several phases of archaeological evaluation, archaeological monitoring, auger survey and palaeoenvironmental assessment (Headland 2012-2019; PCA 2015-2016). In addition a desk based assessment was also produced (John Samuels 2003).

1.1.3 The areas of investigation that comprise Keadby 3 include a large open field alongside the main access road to the power station and a smaller field on Keadby Common (Figure 1).

1.2. Geology and Topography

1.2.1. The site is located 5km to the west of Scunthorpe adjacent to the village of Keadby. The Keadby 1 Power Station was built on the site of a former coal fired power station which was operational between 1952 and 1984. The Keadby 1 Power Station is a gas fired power station, commissioned in 1996.

1.2.2. Area 1 is located on Keadby Common, immediately to the west of the Keadby Power Station sub-station. It lies 0.36km south of the substantial Eastoft Moors Drain and 0.56km north of the Stainforth and Keadby Canal and associated North and South drains. It is bounded to the north, west and east by large drains. The land immediately to the south is artificially raised relating to recent works associated with the development of Keadby 2. A large stockpile of material is located immediately to the west and south-west, relating to the demolition works of the former coal power station. To the north, beyond the drains, lies open fields as well as a portion of the Keadby wind turbines.

1.2.3. Area 2 is located across arable fields, separated by open field drains, immediately to the south of the Stainforth and Keadby Canal and associated soak drains. The main access road for Keadby 1 and 2 is located in the north of the area, running east-west. The Area is bounded to the west, south and east by additional arable fields. The Three Rivers system is located 0.70km to the south-east with the canalised River Torne and Hatfield Waste Drain being located 1.00km to the south-west, feeding in to the Three Rivers system.

1.2.4. The present ground surface in Area 1 ranges from ~0.55-0.80m OD and is relatively flat with little in the way of major surface undulations. Area 2 is situated at ~0.80-1.25m OD, with the lower lying land being located in the east of the area.

1.2.5. The underlying geology of both areas of the site is recorded by the British Geological Survey (BGS) as the Mercia Mudstone, a sedimentary bedrock formed in the Triassic (252-201.3 mya). This is overlain by the Sutton Sand

Formation which in turn is overlain by Holocene Alluvium, deriving from the River Trent, and Warp deposits.

1.2.6. The Sutton Sands are concentrated in an area between York and Lincoln and are characterised as aeolian in origin. These sands were originally deposited in the Devensian although no precise chronology exists with regards to the retreat of the Vale of York ice front (Bateman *et al*. 2015). However, organic sediments underlying the Sutton Sand Formation at Sutton on the Forest, some 40km northeast of the site, have been dated to 12,879 +/- 168 cal yr BP indicating that the ice sheet front must have retreated to the north of this location by the late Devensian (Bateman *et al*. 2015). In places the sands are up to 7m thick and are likely to have been extensively reworked in the Holocene.

1.3. Planning Background

1.3.1. The Proposed Development Site is located approximately 5km to the west of the town of Scunthorpe and adjacent to the village of Keadby. The Proposed Development Site is located adjacent to and within the existing Keadby 1 Power Station site. Keadby 1 was built on the site of a former coal fired power station which was operational between 1952 and 1984. The Keadby 1 Power Station is a gas fired power station, commissioned in 1996.

1.3.2. Adjacent to the west of Keadby 1 Power Station is Keadby 2 Power Station; a 910MW CCGT power station currently under construction, following the grant of a variation to an existing Section 36 consent in 2016. Construction by the Applicant's Engineering, Procurement and Construction (EPC) contractor Siemens Energy commenced in April 2019 and is ongoing; expected completion is by quarter 1 (Q1), 2022.

1.3.3. The Proposed Development Site is located within the administrative boundary of North Lincolnshire Council (a unitary authority) and is bounded to the south by the A18, to the east by the River Trent, to the west by the former Keadby Ash Tip which includes historical landfill, and to the north by agricultural fields in which the Keadby Windfarm is located (three wind turbines located immediately north of the Proposed Development Site boundary).

1.3.4. The Proposed Development will comprise the following elements:

- Proposed PCC Site: this is approximately rectangular in area and would include the proposed generating station comprising turbines, boilers, exhaust gas treatment, stack(s) and ancillary plant as well as cooling infrastructure, electricity export infrastructure;

- Water Connection Corridors: this includes corridors following the routes of the intake (south – referred to as the 'River Water Abstraction Option') and outfall (north – referred to as the 'Water Discharge Corridor') pipework currently associated with the cooling operations for the Keadby 1 Power Station, and which are proposed to also be utilised for Keadby 2 Power Station;

- Electrical Connection Area to National Grid 400 kilovolt (kV) substation;

- Emergency Vehicle Access Road and Potential Electrical Connection to 132kV Substation;

- Waterborne Transport Offloading Area: that would be available should waterborne transport of components via the River Trent be considered as an option by contractors to deliver abnormal indivisible loads;

- Additional Abnormal Indivisible Load Route;

- Indicative Construction Laydown Areas: a number of indicative construction laydown areas which may be provided in different parts of the Proposed Development Site are proposed; and

- Land within the Keadby Power Station site: which includes land associated with Keadby 2 Power Station and Keadby 1 Power Station is also included for the purposes of facilitating connections to the Proposed Development for gas, electricity, water and other necessary infrastructure.

1.3.5. A Cultural Heritage Desk Based Assessment of the known historic and archaeological resource in and surrounding the site has been undertaken (AECOM 2020a). A WSI was produced by AECOM in consultation with the Historic Environment Officer for North Lincolnshire Council (NLC) (AECOM 2020b).

1.3.6. The archaeological works specified within the WSI (hand auger survey and geophysical survey) will contribute to the understanding of the nature of the archaeological resource within the Proposed Development Site. The work detailed in the WSI together with the desk-based assessment will inform the existing baseline information gathered for an Environmental Statement (ES) to accompany a Development Consent Order (DCO) Application in 2021.

1.4. Scope of Report

1.4.1. This report presents the result of a hand auger survey carried out in Area 1 and 2 in February 2021. The fieldwork and report was undertaken by Tom Keyworth (TPA Geoarchaeology Project Officer) and Kristina Krawiec (TPA Geoarchaeology Project Manager).

2. GEOARCHAEOLOGICAL BACKGROUND

2.1. Introduction

2.1.1. The following background is taken form the WSI (AECOM 2020b) and previous studies carried out by Headland (2012; 2018).

2.2. Previous investigations

2.2.1. Keadby is located on the eastern border of the Isle of Axholme area, part of the Humberhead Levels which form a vast drainage catchment area where major rivers drain one fifth of England and enter the River Humber before flowing eastwards into the North Sea (English Nature National Character Area (NCA) 39 2015) The Keadby drainage catchment area has a long history of water management and drainage and there are numerous drains and ditches.

2.2.2. In the post-glacial period, as Lake Humber gradually silted up, the Isle of Axholme was an area of meandering incised rivers, bounded by comparatively dry land. The development and periodic abandonment of channels and the adoption of others, created localised areas of swamp and peat, which can be recognised in a number of palaeochannels.

2.2.3. A considerable amount of geoarchaeological study has been conducted both within the Proposed Development Site and within its vicinity, including in advance of the Keadby Wind Farm and Keadby 2 Power Station developments. The data from these studies has demonstrated the presence of peat deposits throughout the area, with peat deposition occurring from 11,423–11,196 cal BC through to the Iron Age (350–54 cal BC).

2.2.4. As part of the Keadby 2 Power Station development, the following programme of archaeological investigations occurred between 2018 and 2019:

- excavation of eight trial trenches located within the footprint of the proposed Keadby 2 Power Station site;
- drilling of 23 geoarchaeological boreholes; and
- an archaeological watching brief (Headland Archaeology 2018a; 2018b; 2019).

2.2.5. The generalised stratigraphic sequence recorded in the trial trenches comprised topsoil overlying modern deposits (made ground) (between 0.3m and 1.8m thick) generated through the demolition of the former Keadby coal fired power station. This in turn, overlay alluvium (up to 0.6m thick) and peat deposits (Headland Archaeology 2018a).

2.2.6. The geoarchaeological boreholes recorded 'a tripartite natural sequence beneath the modern made ground. This consisted of stiff greenish-grey silty clay (1), overlying black to reddish-brown peat (2), overlying greenish-grey to pinkish-grey fine sandy silt, grading downwards into brown and grey medium to coarse sands (3)' (Headland Archaeology 2018a, 5). Peat was widespread across Keadby 2 Power Station investigation site, ranging from 0.15m to 0.64m thick (Headland Archaeology 2018a, 12). The peat was also recorded as 'tripartite' in character in many of the cores, with the upper and lower horizon recorded as 'silty peat' or 'peaty silt', and the middle horizon described as 'wood or reed peat' (ibid.).

2.2.7. Of the peat samples recovered from the geoarchaeological boreholes, three sub-samples from a single core were selected for further palaeoenvironmental analysis (Borehole 27: 1.30m – 1.35m, 1.46-1.50m and 1.56m-1.60m below ground level). In addition to this, two pieces of 'woody material' were selected from the sub-samples for radiocarbon dating (Headland Archaeology 2018b, 2). The dating and assessment provided the following results:

- the radiocarbon dates from remains from the basal part of the peat indicated formation during the Late Neolithic to Early Bronze Age. A further 0.3m thickness of peat overlay this, suggesting that waterlogged conditions continued through the Bronze Age (Headland Archaeology 2018b, 6);

- macroscopic plant remains suggest the basal sediments were laid down in a woodland carr environment with occasional fragments of larch/ spruce/ pine charcoal (ibid.);
- the macroscopic plant remains in the middle and upper sediments were dominated by fibrous stem fragments ‘suggesting the woodland carr developed into an open rush/ sedge/ reed marshland environment with little indication of woodland in situ or in the near vicinity’ (ibid.); and
- the pollen data supported the macroscopic plant evidence, indicating a fen woodland that became more open and reed-dominated (ibid), demonstrating marine transgressions and a change in environmental conditions.

2.2.8. The Keadby Wind Farm works extended north, south and west of the Proposed Development Site, covering an area approximately 4.5km by 3km. The programme of archaeological investigation carried out to inform and support the Keadby Windfarm development comprised an initial auger survey, targeted trial trenching and coring survey, an auger/ trial trenching evaluation of ‘Compound 3’ (located on the south side of the Stainforth and Keadby Canal) and a final phase of watching brief and excavation (Headland 2012a; 2012b; 2013; 2014).

2.2.9. The initial auger survey was organised along twelve transects and generated a 2D contour map of peat thicknesses, as well as demonstrating the presence of two main episodes of peat formation (at 0.8m to 1m AOD and -0.25m to 2.1m AOD) (Headland 2012a, 5).

2.2.10. Core samples were taken from two cores during the second phase of investigations in advance of the Keadby Wind Farm: Core 1, located approximately 1.2km north of the Proposed Development Site; and Core 2, located approximately 1km south of the Proposed Development Site. The samples from these cores indicated four separate periods of peat formation (Headland 2013). These were as follows:

- Peat 1. Only identified within Core 1, the peat was recorded at -3.88m to -4.20m OD. Dating from this phase of peat deposition, from the top and bottom of the deposit, indicated a date range between 11,423–11,196 cal BC and 9,660–9,304BC. The early date indicates that peat began to develop almost immediately after the Younger Dryas period. The presence of juniper and dwarf birch indicates sub-Arctic conditions, these being among the first trees to have colonised Britain following the end of the last glacial period;

- Peat 2. Only identified in Core 1 this peat horizon was recorded at -3.12 to -3.52m OD. The peat was not scientifically dated but its stratigraphic position indicates a Mesolithic date (before 4,000BC);

- Peat 3. This horizon was identified in both cores and based on the previous auger survey this peat accretion was almost ubiquitous across the investigation area. Within Core 1, the peat formation occurred at -

0.82m to -2.47m OD and in Core 2, at 0.25 to -2.03m OD. The dates from the two cores are very similar, forming at 3341-3013 cal BC in Core 1 and at 3339–3029 cal BC in Core 2. The cessation of this peat formation was recorded as occurring in the Iron Age between 537–387 cal BC (Core 1) and 350–54 cal BC (Core 2). This particular horizon has yielded large wood fragments, of types that indicated a landscape of carr woodland throughout much of the Neolithic, Bronze Age, and Iron Age periods; and

- Peat 4. A thin layer of silty peat recorded during the previous auger survey that likely developed after the Iron Age.

2.2.11. The following sequence was recorded within Core 2:

- Peat deposit (lowest level) at 2.58 to 2.59m bgl, developed at 3339-3029 cal BC (Neolithic);
- Peat deposit (upper level) at 2.33 to 2.34m bgl, developed at 2865-2573 cal BC (Neolithic), and containing wood fragments from a carr woodland environment;
- Overlain by a deposit of silty clay with peat inclusions, indicating flooding episodes;
- Overlain by peat deposit (lowest level) at 1.70 to 1.71m bgl developed at 2027–1881 cal BC (Early Bronze Age) and containing large wood fragments indicating the re-establishment of carr woodland;
- Peat deposit (upper level) at 0.84 to 0.85m bgl developed 350–54 cal BC (Iron Age); and
- Overlain by a 0.62m thick deposit of silty clay with peat inclusions, indicating flooding episodes, possibly occurring between Roman to medieval periods.

2.2.12. In addition to this, a further auger survey was conducted in the location of Compound 3 of Keadby Wind Farm. A total of eight augers were drilled, revealing the presence of wood peat, ranging between 0.22m and 2.43m thick, from 0.72m bgl. Wood fragments from the basal peat were identified as alder and birch, indicative of wet woodland. The presence of an oak stump in the middle of the peat layer suggest the peatland was becoming more terrestrial (Headland 2012c, 5). No scientific dating was conducted on the auger samples.

2.3 Archaeological context

Prehistoric

2.3.1. The majority of known evidence for prehistoric activity is located on the higher ground ridges of Crowle and Belton, where remains are buried beneath post-medieval warping sediments and earlier periods of alluviation. Baseline assessment has demonstrated that peat deposition occurred in the late Neolithic period, and there is potential for a buried pre-Neolithic land surface to exist beneath this.

2.3.2. The wetland marsh environment from the Late Neolithic onwards, would be attractive to populations, yielding rich resources (peat, fish, game, plants, wood). The proximity of the area to known sites of prehistoric settlement (such as at Crowle) mean that that this wetland environment would have been easily accessible during these periods. Evidence of Bronze Age activity in the wider area includes a hoard of socketed axes and a Bronze Age shield, and a possible one-tree log boat identified near White House Farm. The latter was found within a peat layer and demonstrates the preservation potential of such deposits.

Roman (43AD – 410)

2.3.3. The recovery of a Romano-British 'bog body', dated to the late 3rd to 4th centuries c. 270m north of the Proposed Development Site demonstrates the level of preservation that peat can provide, as well as demonstrating Roman activity within the area. Roman occupation is known to have occurred at Crowle, which may have functioned as a trading post at this time. A possible small Romano-British settlement is thought to exist within the eastern limits of the Proposed Development Site, adjacent to the Water Connection Corridor, based on a recorded pottery scatter. This settlement may be associated with occupation of an eyot (island) during this period.

Early medieval (450 – 1066)

2.3.4. The place names Keadby and Gunness suggest Viking derivation, with Keadby thought to mean 'Kaeti or keti's farmstead' and Gunness to mean 'Gunni's headland' (Cameron 1998, 54 and 57). If settlements existed here at this time, they may have been connected to retreating positions of the Danes, mentioned in 11th century Anglo-Saxon chronicles as Danes taking shelter in the marshlands of Axholme in order to use its sea and river connections (Le Quesne 2015, p.11).

Medieval (410 – 1540 AD)

2.3.5. Throughout the medieval period, the Proposed Development Site is likely to have remained marshland, used as summer pasture and exploited for the rich fishing and hunting resources that such an environment provides. To date however, no medieval remains have been identified within the Proposed Development Site and the only remains recovered in the vicinity of the Proposed Development Site is a lead spindlewhorl, found in a garden in Gunness.

Post-medieval Period (1540 – 1900AD)

2.3.6. The post-medieval period saw dramatic and systematic drainage programmes on the Isle of Axholme, converting areas of marshland and moorland into organised, drained and fertile enclosures to create an entirely new landscape. The work comprised cutting of new drains, constructions of dykes, re-directing the flow of the island's bounding rivers, and warping systems. The ambitious programme began in the 1620s, designed by Cornelius Vermuyden, who had been commissioned by Charles I to drain the land.

Modern Period (1914 – present)

2.3.7. The first power station was constructed within the Proposed Development Site and opened in 1952. The power station was coal fired and comprised a coal store, compounds, chimneys, conveyors, turbine house, boiler house and further features. The power station operated until 1984 and was replaced in

1996 by Keadby 1 Power Station, a gas fired power station constructed on the main footprint of the previous station in the 1990s.

2.4 Project Aims and Objectives

2.4.1. The overarching aim of the project was:

- To provide further information on the archaeological resource within the Proposed Development Site to further inform baseline conditions for the DCO Application.

2.4.2. The specific aims of the geoarchaeological survey were:

- to identify the presence of peat deposits across the Proposed Development Site;
- to assess the geoarchaeological potential of the peat deposits;
- to produce a geoarchaeological deposit model of the Proposed Development Site to detail the sequence and distribution of sub-surface deposits across the area;
- to determine the location, nature, extent, date, condition, state of preservation, significance and complexity of geoarchaeological and palaeoenvironmental sequences;
- to provide information, within the limitations of the investigation, regarding the palaeoenvironment and the palaeo-topography and place the results into the context of the wider landscape; and
- to aid further evaluation and understanding of the archaeological potential within the Proposed Development Site.

2.4.3. A further objective was to assess the potential that the site has to address research questions outlined in regional research resource assessments and research frameworks for the East Midlands (Cooper 2006; Knight, Vyner & Allen 2012) and relevant elements for Yorkshire and the Humber (Roskams and Whyman 2005; 2007), as well as thematic and period-specific reviews such as the prehistoric period (HE 2010), the Palaeolithic and Mesolithic periods (Pettitt, Gamble & Last (eds) 2008; Prehistoric Society 1999), the Bronze Age (Roberts, 2008), the Iron Age (Haselgrove et al., 2001) the Roman period (James and Millett (eds) 2001; EH 2012; Van der Veen et al. 2007), environmental archaeology and wetland heritage (EH 2011; EH 2012; EH 2012) and Historic England's Introductions to Heritage Assets and Selection Guides.

3. GEOARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork Methodology

3.1.1 All elements of the investigation were carried out to an acceptable archaeological standard in accordance with the relevant Chartered Institute for Archaeologists standards and guidance (CIfA 2020a).

3.1.2 The fieldwork was carried out with reference to *Historic England Guidelines for Environmental Archaeology* and *Geoarchaeology* (HE 2011 and HE 2015b).

3.1.3 The location of each core was set out and recorded using GNSS.

3.1.4 The survey was carried out with an Eikjelcamp gouge auger fitted with an Edelman head and cores were undertaken until refusal. The deposits were recorded by a geoarchaeologist using the Troels-Smith (1955) system of sediment classification (Appendix 1). The scheme breaks down a sediment sample into four main components and allows the inclusion of extra components that are also present, but that are not dominant. Key physical properties of the sediment layers are darkness (Da), stratification (St), elasticity (El), dryness of the sediment (Sicc) and the sharpness of the upper sediment boundary (UB). A summary of the sedimentary and physical properties classified by Troels-Smith (1955) and a stratigraphic breakdown of the deposits is provided in Appendix 2.

3.2 Deposit model

3.2.1. A deposit model was constructed using the results of the purposive window samples, existing British Geological Survey records and any other GI works undertaken at the site. The modelling was undertaken with reference to *Historic England Guidance for Deposit Modelling and Archaeology* (2020). The data was entered into Rockworks in order to generate 3-D solid models, fence diagrams and cross sections. In addition, surfaces were created to aid visualisation using ArcGIS incorporating available lidar data as digital terrain models with multi-directional hillshading and/or local relief modelling used to aid interpretation.

3.2.2. The data is archived in an excel spreadsheet.

3.3 Fieldwork constraints

3.3.1 The gouge chamber was initially used for the survey but it became apparent that this was unsuitable due to the shallowness of the overlying warp deposits and the compact nature of the underlying sands.

3.3.2 Only one hand auger location was unable to be drilled: AG53 located to the north of Area 2, due to the presence of a spoilheap. Exclusion zones, relating to wind turbines, in Area 1 in the north-east corner meant that the full extent of the field was not subject to hand auger survey.

3.3.3 Attempts at drilling past the fine-grained sand immediately underlying any peaty deposits observed was unsuccessful due to the collapsing of the holes as a result of rapid ground water ingress

3.4 Archive

3.4.1. The site archive is currently held at the offices of TPA. The contents of the archive are tabulated below (Table 1).

Borehole/test pit digital file	excel spreadsheet
Section sheets	0
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	0
Sample register	0
Drawing register	0
Watching brief forms	0
Trench Record forms	0

Table 1: Quantification of site paper archive

4. RESULTS

4.1. Lithology

Area 1 Keadby Common

4.1.1. A total of 21 hand auger boreholes (AG01-22; Figures 02 and 03) were drilled along seven north-south transects laid out on a 50.00m grid spacing. The coordinates, elevations and total depths attained for the hand auger cores are outlined in Table 2. In addition, the depth/elevation at which the top of the peat deposits were recorded is summarised, as well as the thickness of the organic silt / silt peat deposits. The top of the fine-grained sand immediately underlying the silt peat deposits, indicative of the early Holocene land surface, is also shown.

4.1.2. The detailed core logs can be found in Appendix 2.

ID	Easting	Northing	Elevation (m OD)	Total Depth (m BGL)	Top of Peat (m BGL)	Top of Peat (m OD)	Peat Thickness (m)	Top of Sand (m BGL)	Top of Sand (m OD)
AG01	481869.91	412175.91	0.55	1.30	0.55	0.00	0.10	0.65	-0.10
AG02	481866.48	412126.57	0.43	1.20	-	-	0.00	0.65	-0.22
AG03	481862.83	412076.14	0.39	1.30	0.65	-0.27	0.15	0.80	-0.42
AG04	481859.11	412026.50	0.32	0.80	0.50	-0.18	0.30	-	-
AG05	481920.13	412172.91	0.47	1.30	0.55	-0.08	0.15	0.70	-0.23
AG06	481916.41	412122.33	0.49	1.30	0.70	-0.21	0.30	1.00	-0.51
AG07	481913.71	412071.61	0.60	1.20	0.70	-0.10	0.10	0.80	-0.20
AG08	481910.07	412021.90	0.44	1.20	0.65	-0.21	0.20	0.85	-0.41
AG09	481970.15	412168.84	0.38	1.30	0.55	-0.17	0.25	0.80	-0.42
AG10	481966.56	412118.36	0.56	1.20	0.80	-0.24	0.20	1.00	-0.44
AG11	481963.36	412069.35	0.49	1.30	0.80	-0.31	0.10	0.90	-0.41
AG12	481959.22	412019.11	0.65	1.80	0.70	-0.05	0.10	0.80	-0.15
AG13	482017.00	412115.54	0.38	1.20	0.55	-0.17	0.10	0.65	-0.27
AG14	482012.91	412064.71	0.74	1.20	0.60	0.14	0.05	0.65	0.19
AG15	482009.79	412015.71	0.75	1.20	-	-	0.00	0.55	0.20
AG16	482063.45	412061.95	0.76	1.20	0.40	0.36	0.13	0.53	0.23
AG17	482060.63	412012.41	0.72	1.20	-	-	0.00	0.55	0.17
AG18	482113.96	412057.92	0.89	1.20	0.60	0.29	0.02	0.62	0.27
AG19	482110.36	412007.92	0.85	1.20	0.55	0.30	0.03	0.58	0.27
AG20	482163.06	412055.21	0.82	1.20	0.50	0.32	0.05	0.55	0.27
AG21	482160.83	412005.24	1.03	0.75	0.70	0.33	0.05	0.75	0.28

Table 2: Summary of Area 1 auger locations

4.1.3. The sequence recorded across Area 1 was consistent: fine buff to pale grey sand was overlain by waterlogged black-brown silty organic sand / silty peat / organic silt often with visible fibrous woody fragments. Where this organic material was present, the top of the underlying fine buff-pale grey sand was immediately overlain by brown slightly organic sand, indicative of leached material from the overlying organic deposits.

4.1.4. Overlying the waterlogged organic material were fine-grained oxidised silts and clays representing alluvial material from overbank inundation events or deliberate warping activities (deliberate and purposive flooding of fields). The warp material was distinguished from the more homogenous and structureless oxidised alluvium by the presence of fine laminations, indicative of discrete warping 'events'. The oxidised alluvium / warp deposits were sealed by a mid-dark brown silt clay topsoil.

4.1.5. The organic silt / silty peat was recorded in all auger hole locations with the exception of AG02, AG15 and AG17 (Figure 2). Upon reaching the underlying fine sand at depths between 0.50-1.00m BGL, the rapid ingress of groundwater meant that further progress was inhibited as the auger holes collapsed.

Area 2

4.1.6. A total of 60 hand auger cores (AG22-52 and 54-82; Figures 02 and 04) were drilled along ten north-south transects laid out on a 50.00m grid spacing. The coordinates, elevations and total depths attained for the hand auger boreholes are outlined in Table 3 below. In addition, the depth/elevation at which the top of the peat deposits was observed is summarised, as well as the thickness of the organic silt / silt peat deposits. The top of the fine-grained sand immediately underlying the silt peat deposits, indicative of the early Holocene land surface, is also shown.

4.1.7. The detailed core logs can be found in Appendix 2.

ID	Easting	Northing	Elevation (m OD)	Total Depth (m BGL)	Top of Peat (m BGL)	Top of Peat (m OD)	Peat Thickness (m)	Top of Sand (m BGL)	Top of Sand (m OD)
AG22	480541.29	411096.85	1.23	1.10	0.60	0.63	0.13	0.73	0.50
AG23	480531.97	411045.86	1.30	1.10	0.65	0.65	0.11	0.76	0.54
AG24	480523.64	410996.68	1.20	1.10	-	-	0.00	0.76	0.44
AG25	480515.28	410949.08	1.08	1.10	-	-	0.00	0.48	0.60
AG26	480591.16	411088.43	1.24	1.10	0.38	0.86	0.24	0.62	0.62
AG27	480581.19	411037.49	1.26	1.10	-	-	0.00	0.55	0.71
AG28	480572.97	410990.00	1.34	1.10	0.54	0.80	0.04	0.58	0.76
AG29	480564.50	410939.15	1.07	1.10	0.38	0.69	0.04	0.42	0.65
AG30	480647.12	411128.47	1.16	1.55	0.40	0.76	0.05	0.45	0.71
AG31	480637.89	411079.33	1.19	1.38	0.40	0.79	0.27	0.67	0.52
AG32	480630.45	411030.01	1.24	1.10	-	-	0.00	0.94	0.30
AG33	480621.22	410980.84	1.24	1.10	0.55	0.69	0.20	0.75	0.49
AG34	480614.64	410930.76	1.29	1.10	0.50	0.79	0.07	0.57	0.72
AG35	480726.40	411110.18	1.08	1.10	0.30	0.78	0.10	0.40	0.68
AG36	480718.04	411060.85	1.11	1.20	0.45	0.66	0.15	0.60	0.51
AG37	480709.70	411012.82	1.19	1.10	0.42	0.77	0.11	0.53	0.66

ID	Easting	Northing	Elevation (m OD)	Total Depth (m BGL)	Top of Peat (m BGL)	Top of Peat (m OD)	Peat Thickness (m)	Top of Sand (m BGL)	Top of Sand (m OD)
AG38	480701.05	410963.64	1.21	1.20	0.52	0.69	0.08	0.60	0.61
AG39	480692.36	410914.10	1.46	1.20	0.70	0.76	0.17	0.87	0.59
AG40	480782.00	411194.03	1.27	1.00	-	-	0.00	0.58	0.69
AG41	480775.66	411102.43	1.18	1.10	-	-	0.00	0.30	0.88
AG42	480767.94	411052.39	1.17	0.40	-	-	0.00	0.25	0.92
AG43	480758.81	411003.79	1.23	1.10	0.64	0.59	0.21	0.85	0.38
AG44	480750.20	410955.50	1.21	1.20	0.38	0.83	0.10	0.48	0.73
AG45	480742.95	410905.49	1.33	1.20	0.64	0.69	0.04	0.68	0.65
AG46	480830.46	411202.64	1.31	0.90	-	-	0.00	0.57	0.74
AG47	480832.34	411142.65	1.21	1.10	-	-	0.00	0.60	0.61
AG48	480824.23	411093.49	1.26	1.20	0.30	0.96	0.25	0.55	0.71
AG49	480816.47	411045.20	1.28	1.20	-	-	0.00	0.43	0.85
AG50	480808.27	410996.60	1.22	1.10	-	-	0.00	0.85	0.37
AG51	480799.65	410947.39	1.34	1.10	0.60	0.74	0.15	0.75	0.59
AG52	480791.44	410896.82	1.26	1.10	0.60	0.66	0.10	0.70	0.56
AG54	480882.89	411133.97	1.21	1.20	0.84	0.37	0.16	1.00	0.21
AG55	480874.19	411085.29	1.28	1.50	0.95	0.33	0.25	1.20	0.08
AG56	480866.09	411037.09	1.27	1.30	0.85	0.42	0.35	1.20	0.07
AG57	480856.94	410986.97	1.28	1.10	0.55	0.73	0.10	0.65	0.63
AG58	480847.94	410937.90	1.35	1.20	0.65	0.70	0.19	0.84	0.51
AG59	480839.70	410888.77	1.33	1.50	1.25	0.08	0.15	1.40	-0.07
AG60	480955.74	411227.62	1.15	1.00	0.50	0.65	0.10	0.60	0.55
AG61	480939.38	411126.67	1.31	1.10	-	-	0.00	0.60	0.71
AG62	480932.53	411076.08	1.33	1.10	-	-	0.00	0.60	0.73
AG63	480926.12	411027.45	1.24	1.20	0.60	0.64	0.10	0.70	0.54
AG64	480918.38	410978.37	1.26	1.30	0.90	0.36	0.10	1.00	0.26
AG65	480912.48	410928.27	1.31	1.40	1.18	0.13	0.12	1.30	0.01
AG66	480905.65	410879.61	1.18	1.60	1.35	-0.17	0.05	1.40	-0.22
AG67	481003.52	411237.27	1.35	2.00	0.76	0.59	0.08	1.40	-0.05
AG68	480993.53	411168.51	1.15	1.20	0.50	0.65	0.25	0.75	0.40
AG69	480987.99	411118.95	1.19	1.20	0.50	0.69	0.25	0.75	0.44
AG70	480981.65	411069.83	1.20	1.00	-	-	0.00	0.35	0.85
AG71	480976.15	411021.14	0.93	1.20	-	-	0.00	0.35	0.58
AG72	480969.35	410971.52	1.34	1.45	1.20	0.14	0.05	1.25	0.09
AG73	480962.96	410921.44	1.24	2.00	1.65	-0.41	0.10	1.75	-0.51
AG74	480957.13	410871.42	1.14	1.55	1.00	0.14	0.20	1.20	-0.06
AG75	481053.54	411248.14	1.53	1.20	-	-	0.00	0.71	0.82
AG76	481043.54	411161.66	1.30	1.20	-	-	0.00	0.40	0.90
AG77	481037.13	411113.43	0.97	1.30	0.75	0.22	0.05	0.80	0.17

ID	Easting	Northing	Elevation (m OD)	Total Depth (m BGL)	Top of Peat (m BGL)	Top of Peat (m OD)	Peat Thickness (m)	Top of Sand (m BGL)	Top of Sand (m OD)
AG78	481030.82	411063.84	0.82	1.20	0.45	0.37	0.05	0.50	0.32
AG79	481024.85	411013.31	1.14	1.20	0.60	0.54	0.15	0.75	0.39
AG80	481018.49	410965.07	1.32	1.20	0.90	0.42	0.10	1.00	0.32
AG81	481012.55	410915.95	1.26	1.50	0.95	0.31	0.10	1.05	0.21
AG82	481006.66	410865.51	1.33	1.30	0.75	0.58	0.05	0.80	0.53

Table 3. Summary of Area 2 auger locations

4.1.8. The sequence recorded across Area 1 was consistent: fine buff to pale grey sand. In contrast to Area 1, the organic deposits observed in Area 2 overlying the sand were more humified. The material in Area 2 was more consistently a black-grey organic silt or sand. Where this organic material was present, the top of the underlying fine buff / pale grey sand was immediately overlain by brown slightly organic sand, indicative of leached material from the overlying organic deposits.

4.1.9. As with Area 1, the deposits overlying the waterlogged organic material in Area 2 comprised fine-grained oxidised silts and clays representing alluvial material from overbank inundation events or deliberate warping activities (deliberate and purposive flooding of fields). The warp material was distinguished from the more homogenous and structureless oxidised alluvium by the presence of fine laminations, indicative of discrete warping ‘events’. The oxidised alluvium / warp deposits were sealed by a mid-dark brown silt clay topsoil.

4.1.10. The organic silt / silt peat was recorded in the majority of auger hole locations with the exception of AG24-25, 27, 32, 40-42, 46-47, 49-50, 61-62, 70-71 and 75-76, a total of 17 out of the 60 auger locations (Figure 02). Upon reaching the underlying fine sand at depths between 0.25-1.40m BGL, the rapid ingress of groundwater meant that further progress was inhibited as the auger holes collapsed.

4.2 Deposit model

4.2.1. The data from the auger survey was entered into a Rockworks database and 3-dimensional fence diagrams were produced (Figure 3 and 4). In addition surfaces were produces in QGIS (Figure 5).

Area 1

4.2.2. The deposit model of Area 1 demonstrates the variation in the surface of the sand with two lower lying areas in the western half of the area, centred on AG6 and AG04 (Figure 2). The difference between the depressions and the higher ground is slight, c. 70cm, and was expressed by areas of standing water observed in the surface of the field. The organic deposits infilling these depressions were less well-humified and more waterlogged that those recorded on the higher areas.

4.2.3. The thickness of peat has also been modelled so that comparison with the proposed geophysical survey can be undertaken (Figure 3). Again these thicker areas of accumulation related to the depressions in the surface of the sand and represent localised waterlogging.

Area 2

4.2.4. The modelled surface of the sand again shows small changes in elevation across the area which illustrate the subtle undulations in the underlying deposits (Figure 2). There are two areas of deeper accumulation, one centred on AG73 and one centred on AG67 (Figure 2). Again the organics within this area were more like true peats and sit within localised depressions in the sand surface.

4.2.5. The modelled deposits show the warp deposits are thicker in the south east of the area and are beginning to pinch-out to the north (Figure 4). The organic deposits also varying in thickness across the area likely reflecting localised waterlogged conditions.

4.2.6. The modelling has demonstrated an absence of channels within the two areas and that the organic accumulation is as a result of the undulations in the soft sand surface.

5. DISCUSSION AND CONCLUSIONS

5.1 Overview of lithological sequence

5.1.1. The auger survey has demonstrated a rather simple sequence of deposits in both areas of the site that was largely consistent. The deposits recorded have been modelled and projected as fence diagrams for both Area 1 (Figure 03) and Area 2 (Figure 04).

5.1.2. Both the accumulation of organic deposits immediately overlying the fine sand and the oxidised alluvium/warp deposits are visibly more substantial where the elevation of the sub-surface is lowest, as represented by undulations, hollows and depressions in the sand. This sub-surface topography was also expressed on the ground surface level in both Areas 1 and 2, but more visibly so in Area 1.

5.1.3. The organic deposits overlying the sands were mainly well humified and dry although within the deeper undulations in the subsurface topography the deposits were more consistently saturated and hence had a higher organic content.

5.2 Deposit survival and existing impacts

5.2.1. The deposits at both sites showed little sign of disturbance and no evidence of contamination. It was initially thought that Keadby Common was an area of former landfill but the auger survey has demonstrated an intact sediment sequence is preserved. The water table was encountered fairly consistently between 0.80-1.00m bgl across both areas.

5.2.2. The auger survey was unable to record the full extent of the sand deposits due to hole collapse. It is possible that the fine-grained nature of the sand would lend itself to reworking and the possibility that these sands mask deeper organic sediment cannot be ruled out.

5.2.3. For the most part the organic deposits overlying the sand were fairly dry and well humified. In Area 1 the sands were overlain by between 0.62-1.20m of organic and warp deposits and in Area 2 the sands were overlain by between 0.40-1.00m. It is suggested that deposits within the hollows and undulations of the sand surface, particularly those below 1.00mbgl, are likely to have been more consistently waterlogged and therefore may have a better preservation potential for palaeoenvironmental and organic archaeological remains. In addition these deposits may also mask former land surfaces which may preserve archaeological features and artefacts, i.e lithic scatters.

5.2.4. The overlying warp/alluvium was highly oxidised and dry across both areas and has a low palaeoenvironmental potential. In some areas this directly overlies the sand (Figures 3 and 4) and may mask archaeological deposits.

5.3 Discussion of deposits

Sutton sands/fluvial sand

5.3.1. The deposits encountered at the base of the sequence were characterised as fine sand (Figure 02). These sand deposits likely represent the fluvially reworked Sutton Sand Formation deposits mapped 2.8km west of Area 1 and 1.0km west of Area 2, at the western extreme of the floodplain edge. Isolated, topographically raised outcrops of mapped Sutton Sand Formation deposits have also been observed 0.90km east and 0.97km south-east of Area 2, the latter to the south of the Three Rivers system, as well as 0.70km north-west of Area 2 at Ealand Grange to the north of the Stainforth and Keadby Canal.

5.3.2. The Sutton Sand Formation has been shown to have accumulated at the end of the Devensian, after c. 12,879 +/- 168 cal yr BP between *c.* 10,700-9,950 years BP (Bateman et al 2015). These deposits are aeolian in origin and are prone to reworking which is likely to have occurred throughout the Holocene. This reworking is difficult to characterise in hand auger cores and test pitting and boreholes would be required to test this assumption. The areas lies at the edge of the Trent floodplain which is likely to add complexity to the issue of reworking. Work carried out at Flixborough, 5km north of Keadby, demonstrated reworking of the underlying sands from the Late Bronze Age to the end of the Roman period (McDonnell 2003).

5.3.3. The surface of the sand demonstrated topographic variation across both areas. The modelled sub-surface elevations of the fine sand recorded in the auger cores in Area 1, show a clear area of higher sub-surface elevation to the east (Figure 02 indicated by warm, red colour shading) whilst to the west there is a minor depression within the sand which is lower by 0.50-0.75m (indicated by cool, blue colour shading).

5.3.4. In Area 2 more variation can be seen, with slight depressions and hollows within the sand sub-surface visible across the area (Figure 02). These depressions and hollows are also the locations of the more substantial peat/organic silt accumulation (Figures 03 and 04) whilst the sand encountered at higher elevations correlated with areas either absent of peat or with very thin deposits. These slightly higher areas of outcropping sand have the potential to be locations for buried ‘dryland’ archaeological remains, given their advantageous relief within the historically marshy / waterlogged wider floodplain.

Organic deposits / Peat

5.3.5. Across both areas an organic deposit was recorded with varying degrees of humification. The deposits represent paludification of the edge of the floodplain and are likely to have been only seasonally wet. The undulations in the sand would have allowed deeper pockets of organics to form and to remain waterlogged for longer periods. The character of the vegetation is likely to have been areas of sedges with fringing floodplain alder carr surrounding small open pools.

5.3.6. The modelled thickness of the organic silt /peat in Area 1 are shown in Figure 03, with an average thickness of 0.17-0.34m across Area 1 and between 0.13-0.26m in Area 2. The deposits which have a less well humified organic content and are characterised more a true peat are largely confined to the west of the area where the elevation of the fine sand deposits is lowest. These areas are likely to have been more consistently waterlogged. This is further emphasised by the presence of woody/rooty remains recorded in the surface of the peat in Area 1, indicating the drying out of the peat surface allowing non-wetland vegetation to colonise the area.

5.3.7. In Area 2 (Figure 04) the more extensive organic silt/sand/peat deposits are shown to correlate with the slight depressions and hollows within the underlying fine sands. This reflects the generally undulating nature of the sand surface which would have been represented as intermittent pools within the wider mosaic wetland of the floodplain edge.

5.3.8. In 2013 eight samples from two cores (Cores 1 and 2) were submitted by Headland Archaeology for radiocarbon age determination from substantial peat deposits. Core 1 was located 1.30km to the north of Area 1 (Keadby Common) with Core 2 located 0.68km to the south-east of the Area 2 (Headland Archaeology 2013). In 2018 two samples were dated from Borehole 27, located 0.35km to the south-east of Area 1 (Headland Archaeology 2018). The location of these cores is now covered by the Keadby 2 compound.

5.3.9. Using the data from these investigations, it is possible to estimate the likely period of organic accumulation in Areas 1 and 2 (Table 5). Overall the sand unit in both areas may represent a pre-Iron Age land-surface with the area subsumed by the encroaching floodplain by the Iron Age. This estimation is based on the relative OD heights of the previously investigated peat units and does not take into account more localised accumulation/waterlogging.

5.3.10. It seems likely that the deposits recorded in the auger survey may correlate to Peat 3, or even 4, in the Headland sequence (section 2.2). Although independent dating is required to confirm this.

Location	**Ground Level (m OD)**	**Sample Depth Top (m BGL)**	**Sample Depth Base (m BGL)**	**Sample Elevation Top (m OD)**	**Sample Elevation Base (m OD)**	**Radiocarbon Age (BP)**	**Date cal BC (95.4%)**	**Period**	**lab id**
Core 2	0.57	0.84	0.85	-0.27	-0.28	2132 ± 27	350-54	IA	SUERC 42955 Peat - Humic
Keadby 2 BH27	0.83	1.56	1.6	-0.73	-0.77	4100 ± 30	2870-2500	Neolithic	Beta 498421 *Larix/Picea/ Pinus* charcoal
Keadby 2 BH27	0.83	1.56	1.6	-0.73	-0.77	3960 ± 30	2570-2350	Neolithic-EBA?	Beta 498422 non-oak root/stem frags
Core 1	0.01	0.89	0.9	-0.88	-0.89	2369 ± 29	537-387	IA	SUERC 42948 Peat - Humic
Core 2	0.57	1.7	1.71	-1.13	-1.14	3584 ± 29	2027-1881	EBA	SUERC 42956

Location	Ground Level (m OD)	Sample Depth Top (m BGL)	Sample Depth Base (m BGL)	Sample Elevation Top (m OD)	Sample Elevation Base (m OD)	Radiocarbon Age (BP)	Date cal BC (95.4%)	Period	lab id
									Peat - Humic
Core 2	0.57	2.33	2.34	-1.76	-1.77	4107 ± 29	2865-2573	Neolithic	SUERC 42957 Peat - Humic
Core 2	0.57	2.58	2.59	-2.01	-2.02	4476 ± 27	3339-3029	Neolithic	SUERC 42958 Peat - Humic
Core 1	0.01	2.45	2.47	-2.44	-2.46	4457 ± 34	3341-3013	Neolithic	SUERC 42949 Peat - Humic
Core 1	0.01	3.9	3.91	-3.89	-3.9	9963 ± 40	9660-9304	LUP	SUERC 42950 Peat - Humic
Core 1	0.01	4.27	4.28	-4.26	-4.27	11397 ± 40	11423-11196	LUP	SUERC 42954 Peat - Humic

Table 4: Previously dated deposits from the environs of the site (Headland 2013 and 2018)

Location	Ground Level (m OD)	Peat Depth Top (m BGL)	Peat Depth Base (m BGL)	Peat Elevation Top (mOD)	Peat Elevation Base (mOD)	Period Estimate
Area 1 AG06	0.49	0.70	1.00	-0.21	-0.51	IA/RB/ and later
Area 2 AG73	1.24	1.65	1.75	-0.41	-0.51	IA/RB?

Table 5: Estimated / anticipated ages of peat deposits observed in Area 1 and 2 based on previous work

Warp/alluvial deposits

5.3.11. The organic deposits were overlain by laminated warp, although in places this deposit was more homogenous and has been suggested to represent natural alluviation. In both cases the deposits were highly oxidised and dominated by minerogenic sediment. In places these deposits directly overlay the sand unit, particularly the north-western half of Area 2 and the southern end of Area 1 (Figures 03 and 04). This correlates with the higher areas of the underlying sand which were presumably above the level of general waterlogging for much of the time period represented.

5.3.12. Warping was undertaken within the lower Trent valley for two principal reasons: to make unproductive peaty and acidic soils workable and to reduce the impact of seasonal inundations and waterlogging by artificially increasing the ground surface level (Lillie 1998). This process was largely achieved by the deliberate ‘flood-warping’ of areas, with material (silts and clays) carried in suspension being allowed to settle and accumulate throughout areas where warping was desirable. Warping was undertaken around and within Keadby from the late 18th into the early 19th centuries with no evidence or records of warping events having taken place after 1860 (Lillie 1998, 110). It is therefore likely that where warp deposits overlie the sands, pre-18th century archaeological material and remains may be preserved.

5.4 Potential impact on deposits

5.4.1. The proposed development is likely to include ground reduction across both areas and given the relatively thin level of warp/organic alluvial cover the underlying surface of the sand is likely to be impacted upon.

5.4.2. The work carried out at Flixborough demonstrates reworking of the sands within the Trent Valley from the later prehistoric period onwards which is likely to mask former land-surfaces at a variable elevations. The data available from previous work suggests that in other locations the upper overlying organic deposits are likely to have been deposited by the Iron Age- Roman Period. It is therefore inferred that the organic deposits recorded in Areas 1 and 2 may also be of similar age and that the surface of the sands may preserve earlier prehistoric, i.e pre-Iron Age remains.

5.4.3. There also remains the possibility that the underlying sands have the potential to preserve multi-period land-surfaces owing to this later reworking of the deposits. Selected test pitting as part of trial trench evaluation would allow the investigation and characterisation of both the deposits and any associated archaeological remains, especially lithics (HE 2019).

5.4.4. For the most part the organic deposits recorded at the site demonstrated extensive desiccation. Only in areas of deeper accumulation did the deposits display a better potential for the preservation of palaeoenvironmental and waterlogged archaeological remains.

5.5. Consideration of research aims

5.5.1. No specific research aims were identified prior to fieldwork however the site does have the potential to address the following East Midlands Research Objectives;

MESOLITHIC (c.9500-c.4000 cal BC)
2B Characterise the regional and local evidence of Mesolithic Activity
2.3 Identification of site types
23.3.3 What range of structural remains may survive on open-air sites across the region (particularly below alluvium and other masking deposits)?
NEOLITHIC AND EARLY TO MIDDLE BRONZE AGE (c.4000-c.1150 cal BC)
3I Investigate the development and intensification of agriculture
3.4 Exploitation of landscape zones
3.4.3 Can we further refine our knowledge of the selective use of particular landscapes for ritual, agriculture and other activities

5.5.2. The recent draft guidance for the management of lithic scatters provides the methodological approach to investigate such landscapes (HE 2019). Test pitting and sieving for lithic recovery is often the only method by which earlier archaeological remains area able to be prospected for.

5.5.3. The site also has the potential to add further to the chronological framework for the deposition and reworking of the underlying sands. The OSL dates recovered from the work at Flixborough demonstrate the efficacy of the technique and a dating programme to establish any reworking will help better understand the significance of the underlying deposits (McDonnell 2003).

5.5.4. The survey demonstrates a relatively simple sequence of deposits overlying the sands which for the most part are desiccated and are likely to have better preservation of palaeoenvironmental remains in areas of deeper accumulation.

5.6. Conclusions

5.6.1. The site has demonstrated that a relatively thin overlying organic and warp sequence is represent in both areas. These deposits mask a buried land surface of potentially pre-Iron Age date, although this requires confirmation by a dating programme. The sands have the potential to also preserve earlier landsurfaces or reworked archaeological remains and again require further evaluation, i.e test pitting, to better understand this potential.

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Appendix 1-Troels-Smith table

Darkness	
nig.4	black
nig.3	
nig.2	
nig.1	
nig.0	white

Degree of Stratification	
strf.4	well stratified
strf.3	
strf.2	
strf.1	
strf.0	no stratification

Degree of Elasticity	
elas.4	very elastic
elas.3	
elas.2	
elas.1	
elas.0	no elasticity

Degree of Dryness	
sicc.4	very dry
sicc.3	
sicc.2	
sicc.1	
sicc.0	water

	Sharpness of Upper Boundary
lim.4	< 0.5mm
lim.3	< 1.0 &> 0.5mm
lim.2	< 2.0 &> 1.0mm
lim.1	< 10.0 &> 2.0mm
lim.0	> 10.0mm

	Sh	*Substantia humosa*	Humous substance, homogeneous microscopic structure
I Turfa	*Tb*	*T. bryophytica*	Mosses +/- humous substance
	Tl	*T. lignosa*	Stumps, roots, intertwined rootlets, of ligneous plants
	Th	*T. herbacea*	Roots, intertwined rootlets, rhizomes of herbaceous plants
II Detritus	*Dl*	*D. lignosus*	Fragments of ligneous plants >2mm
	Dh	*D. herbosus*	Fragments of herbaceous plants >2mm
	Dg	*D. granosus*	Fragments of ligneous and herbaceous plants <2mm >0.1mm
III Limus	*Lf*	*L. ferrugineus*	Rust, non-hardened. Particles <0.1mm
IV Argilla	*As*	*A.steatodes*	Particles of clay
	Ag	*A. granosa*	Particles of silt
V Grana	*Ga*	*G. arenosa*	Mineral particles 0.6 to 0.2mm
	Gs	*G. saburralia*	Mineral particles 2.0 to 0.6mm
	Gg(min)	*G. glareosa minora*	Mineral particles 6.0 to 2.0mm
	Gg(maj)	*G. glareosa majora*	Mineral particles 20.0 to 6.0mm
	Ptm	*Particulaetestaemolloscorum*	Fragments of calcareous shells

Physical and sedimentary properties of deposits according to Troels-Smith (1955)

Appendix 2 Core Logs

Area 1 (AG01-21)

Transect 1

<u>AG01</u>

0-0.35m	Topsoil				
0.35-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.65m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh2 Tl++				
	Organic silt, well humified with wood fragments at top, wood is fibrous				
065-0.75m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.75-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, water strike at 0.80m				

<u>AG02</u>

0-0.35m	Topsoil				
0.35-0.65m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.65-0.75m	DA	ST	EL	SICC	UB
	4	0	0	4	2
	Ga3 Ag1				
	Brown silt sand				
0.75-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Orange- buff sand trending to buff sand				

<u>AG03</u>

0-0.35m	Topsoil				
0.35-0.65m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.65-0.88m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh2 Tl				
	Organic silt, well humified with wood fragments at top, water strike at 0.70m				
0.80-0.98m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga1 Ag1				
	Brown silty sand				
0.98-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Pale grey sand silty sand				

<u>AG04</u>

0-0.35m	Topsoil				
0.35-0.50m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.05-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh2 Tl				
	Organic silt, well humified with wood fragments at top obstruction at base				

Transect 2

<u>AG05</u>

0-0.35m	Topsoil				
0.35-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.70m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh2 Tl				
	Organic silt, well humified with wood fragments at top				
0.70-0750m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.75-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, water strike at 0.80m				

<u>AG06</u>

0-0.40m	Topsoil				
0.40-0.70m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.70-1.00m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top, wet at 1.00m				
1.00-1.05m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
1.05-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, water strike at 1.00m				

<u>AG07</u>

0-0.30m	Topsoil				
0.30-0.70m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.70-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top				
0.80-0.90m	DA	ST	EL	SICC	UB

	4	0	0	3	2
	Ga4				
	Brown sand				
0.90-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, water strike at 1.00m				
<u>AG08</u>					
0-0.35m	Topsoil				
0.35-0.65m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.65-0.85m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Tl				
	Silty peat, well humified with wood fragments at top				
0.85-0.95m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand water at 0.90m				
0.90-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, poor recovery				
Transect 3					
<u>AG09</u>					
0-0.45m	Topsoil				
0.45-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh2 Tl				
	Organic silt, well humified with wood fragments at top				
080-0.90m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.90-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, water strike at 1.00m				
<u>AG10</u>					
0-0.40m	Topsoil				
0.40-0.80m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.80-1.00m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top, water strike at 0.80m, rooty				
1.00-1.05m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga3 Ag1				

	Brown silty sand				
1.05-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Buff sand				
<u>AG11</u>					
0-0.35m	Topsoil				
0.35-0.80m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.80-1.10m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat well humified with wood fragments at top, occasional roots				
1.10-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Orange- buff silty sand, water strike at 1.00m				
<u>AG12</u>					
0-0.40m	Topsoil				
0.40-0.70m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand, mottled softer with depth				
0.70-0.90m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh2 Tl				
	Organic silt, well humified with wood fragments at top				
0.90-1.05m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand, water strike at 0.90m				
1.05-1.80m	DA	ST	EL	SICC	UB
	2	1	0	2	2
	Ga4 As+				
	Pale grey sand trending into buff sand very wet occasional clay lenses				
Transect 4					
<u>AG13</u>					
0-0.35m	Topsoil				
0.35-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat well humified with wood fragments at top				
0.80-0.90m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand water at 0.90m				
0.90-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	buff sand				
<u>AG14</u>					
0-0.35m	Topsoil				

0.35-0.60m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.60-0.65m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top				
0.65-0.70m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.70-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Pale grey-buff silty sand, dry				
<u>AG15</u>					
0-0.35m	Topsoil				
0.35-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.60m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.60-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Pale grey-buff silty sand				

Transect 5

<u>AG16</u>					
0-0.35m	Topsoil				
0.35-0.40m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.40-0.53m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3				
	Silty peat, well humified very dry				
0.53-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand				
<u>AG17</u>					
0-0.30m	Topsoil				
0.30-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.60m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga3 Ag1				
	Brown silty sand				
0.55-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				

	Pale grey sand				

Transect 6

<u>AG18</u>

0-0.35m	Topsoil				
0.35-0.60m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.60-0.62m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top				
0.62-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand				

<u>AG19</u>

0-0.35m	Topsoil				
0.35-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.55-0.58m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, very dry				
0.58-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand				

Transect 7

<u>AG20</u>

0-0.35m	Topsoil				
0.35-0.50m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.50-0.55m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top				
0.55-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand				

<u>AG21</u>

0-0.35m	Topsoil				
0.35-0.70m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.70-0.75m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh3 Tl				
	Silty peat, well humified with wood fragments at top				
0.62-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				

Pale grey sand

Area 2 (AG22-51, 53-82)
Transect 1

AG22

0-0.3m	Topsoil				
0.34-0.40m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ag1 As2 Ga1				
	Oxidised warp, laminated silt clay sand				
0.40-0.60m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ag2 As2				
	Oxidised alluvium, mottled grey brown silt clay				
0.60-0.73m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.73-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Brown fine sand trending into buff sand				

AG23

0-0.30m	Topsoil				
0.30-0.50m	DA	ST	EL	SICC	UB
	4	1	0	4	4
	Ga4				
	Brown fine sand				
0.50-0.58m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ag2 As2				
	Oxidised alluvium, mottled grey brown silt clay				
0.58-0.65m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.65-0.76m	DA	ST	EL	SICC	UB
	3	0	0	3	4
	Ga4				
	Brown fine sand				
0.76-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.80m				

AG24

0-0.30m	Topsoil				
0.30-0.45m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.0.45-0.63m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ag2 As2				
	Oxidised alluvium, mottled grey brown silt clay				
0.65-0.76m	DA	ST	EL	SICC	UB
	3	0	0	3	4
	Ga4				

	Brown fine sand				
0.76-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.90m				

<u>AG25</u>

0-0.28m	Topsoil				
0.28-0.45m	DA	ST	EL	SICC	UB
	4	0	0	4	4
	Ga2Ag2				
	Mottled brown silty sand				
0.45-0.48m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ga4				
	Dark brown fine sand				
0.48-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.80m				

Transect 2

<u>AG26</u>

0-0.30m	Topsoil				
0.30-0.34m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.34-0.38m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ag2 As2				
	Oxidised alluvium, mottled grey brown silt clay				
0.38-0.62m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.62-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.70m				

<u>AG27</u>

0-0.30m	Topsoil				
0.30-0.38m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.38-0.55m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Pale brown fine sand				
0.55-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.80m				

<u>AG28</u>

0-0.30m	Topsoil				
0.30-0.45m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				

	Oxidised warp, laminated silt clay sand				
0.45-0.54m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ag2 As2				
	Oxidised alluvium, mottled grey brown silt clay				
0.54-0.58m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.58-0.64m	DA	ST	EL	SICC	UB
	3	0	0	3	3
	Ga3 Ag1				
	Brown mottled silt sand				
0.64-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand water at 0.70m				
<u>AG29</u>					
0-0.30m	Topsoil				
0.30-0.38m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.38-0.42m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.42-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand water at 0.50m				
Transect 3					
<u>AG30</u>					
0-0.40m	Topsoil				
0.40-0.45m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.45-1.55m	DA	ST	EL	SICC	UB
	2	2	0	3	4
	Ga4				
	Buff fine sand with occasional silt laminations, water at 0.60m				
<u>AG31</u>					
0-0.40m	Topsoil				
0.40-0.67m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga2 Ag2				
	Brown silty sand				
0.67-1.38m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.70m				
<u>AG32</u>					
0-0.40m	Topsoil				
0.40-0.94m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ag2 As2 Ga+				
	Oxidised warp, mottled grey brown silt clay				

0.94-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 1.00m, oxidised at the top				
<u>AG33</u>					
0-0.33m	Topsoil				
0.33-0.50m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga3 Ag1				
	Orange brown occasionally silty sand, warp				
0.50-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ag2 As2 Ga+				
	Oxidised warp, mottled grey brown silt clay				
0.55-0.76m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.76-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.80m				
<u>AG34</u>					
0-0.30m	Topsoil				
0.30-0.50m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ag2 As2 Ga+				
	Oxidised warp, mottled grey brown silt clay				
0.50-0.57m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh2 Ga1				
	Silty organic sand, well humified				
0.57-0.77m	DA	ST	EL	SICC	UB
	3	0	0	3	4
	Ga3 Ag1				
0.77-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand water strike at 0.80m				

Transect 4

<u>AG35</u>					
0-0.30m	Topsoil				
0.30-0.40m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.40-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.70m, oxidised at top				
<u>AG36</u>					
0-0.25m	Topsoil				
0.25-0.45m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				

0.45-0.60m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh+ Ga3				
	Silty organic sand, well humified				
0.60-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Buff fine sand water strike at 0.80m, trending into pink-buff sand				
<u>AG37</u>					
0-0.35m	Topsoil				
0.35-0.42m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.42-0.53m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified trends into				
0.53-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Buff fine sand water strike at 0.80m				
<u>AG38</u>					
0-0.35m	Topsoil				
0.35-0.48m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.48-0.52m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ag2 As2				
	Oxidised alluvium, mottled grey brown silt clay				
0.52-0.60m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.60-0.70m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Dark brown sand				
0.70-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand water strike at 0.70m				
<u>AG39</u>					
0-0.39m	Topsoil				
0.39-0.74m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.74-0.77m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.77-0.87m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				

	Dark brown sand				
0.87-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand water strike, oxidised at the top				

Transect 5

<u>AG40</u>

0-0.42m	Topsoil				
0.42-0.58m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga3 Ag1				
	Pale grey sand silty sand				
0.58-1.00m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand water strike at 0.80m				

<u>AG41</u>

0-0.30m	Topsoil				
0.30-0.50m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand				
0.50-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Oxidised orange sand, water strike at 0.60m, becoming pink at base				

<u>AG42</u>

0-0.25m	Topsoil, very dry and clayey				
0.25-0.40m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Pale grey sand trending into buff fine sand, water strike at 0.80m				

<u>AG43</u>

0-0.25m	Topsoil				
0.25-0.40m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.40-0.54m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga 4				
	Orange sand, warp				
0.54-0.64m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.64-0.85m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic silt with sand, well humified				
0.85-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand, very stiff				

<u>AG44</u>

0-0.30m	Topsoil				
0.30-0.38m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.38-0.48m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.48-0.1.2m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand trending into buff fine sand water strike at 0.80m				

<u>AG45</u>

0-0.30m	Topsoil				
0.30-0.50m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.50-0.64m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.64-0.68m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Dark brown sand				
0.68-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand trending into buff fine sand water strike at 0.90m				

Transect 6

<u>AG46</u>

0-0.25m	Topsoil				
0.25-0.36m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 Ga2				
	Silty organic sand, well humified				
0.36-0.57m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Dark brown sand				
0.57-0.90m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand water strike at 0.80m				

<u>AG47</u>

0-0.38m	Topsoil				
0.38-0.60m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand				
0.60-0.92m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Oxidised orange sand				
0.90-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	4

	Ga4				
	Buff sand, damp				
AG48					
0-0.25m	Topsoil				
0.25-0.30m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic silt with sand, well humified				
0.30-0.55m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand				
0.55-0.60m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Oxidised orange sand				
0.90-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Buff sand, damp				
AG49					
0-0.35m	Topsoil				
0.35-0.43m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.43-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand trending into buff sand, water at 0.80m				
AG50					
0-0.35m	Topsoil				
0.35-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.40-0.54m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	G4				
	Brown sand				
0.85-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Orange sand water at 0.90m				
AG51					
0-0.31m	Topsoil				
0.31-0.60m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.60-0.75m	DA	ST	EL	SICC	UB
	4	0	0	4	4
	Ag2 Sh1 G1				
	Organic silt with sand, well humified, very stiff				
0.75-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey mottled sand water strike at 0.90m				

<u>AG52</u>

0-0.25m	Topsoil				
0.25-0.60m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.60-0.70m	DA	ST	EL	SICC	UB
	4	0	0	4	4
	Ag1 Sh1 Ga2				
	Organic silt sand				
0.70-0.75m	DA	ST	EL	SICC	UB
	4	0	0	4	4
	Ga4				
	Brown sand				
0.75-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff fine sand, water at 0.80m				

Transect 7

<u>AG53</u> – location under spoil heap, not drilled

<u>AG54</u>

0-0.30m	Topsoil				
0.30-0.84m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.84-1.00m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic sandy silt				
1.00-1.05m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.05-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand, water at 1.10m				

<u>AG55</u>

0-0.35m	Topsoil				
0.35-0.95m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.95-1.10m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag3 Sh1 G++ Tl				
	Organic silt with sand, well humified occasional woody macros				
0.95-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.20-1.50m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand, water at 1.30m				

<u>AG56</u>

0-0.38m	Topsoil

0.38-0.84m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.84-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag3 Sh1 G++ Tl				
	Organic silt with sand, well humified occasional woody macros				
0.85-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.20-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand, water at 1.30m				
<u>AG57</u>					
0-0.30m	Topsoil				
0.30-0.55m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.55-0.65m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic sand, well humified				
0.65-1.10m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey trending into buff fine sand				
<u>AG58</u>					
0-0.35m	Topsoil				
0.35-0.65m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.65-0.84m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic silt sand, well humified				
0.84-0.90m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
0.90-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Buff fine sand, very stiff				
<u>AG59</u>					
0-0.30m	Topsoil				
0.30-1.10m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
1.10-1.25m	DA	ST	EL	SICC	UB
	4	0	0	3	4

	Ag1 Sh1 G2				
	Organic silt sand, well humified				
1.25-1.40m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.40-1.50m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Buff sand, damp				
Transect 8					
<u>AG60</u>					
0.0.35m	Topsoil				
0.35-0.50m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.50-0.60m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic silt sand, well humified				
0.60-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
0.80-1.00m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Buff sand, damp				
<u>AG61</u>					
0-0.60m	Topsoil				
0.60-1.10m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga4				
	Buff sand water at 0.80m				
<u>AG62</u>					
0-0.60m	Topsoil				
0.60-1.10m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga4				
	Buff sand water at 0.80m				
<u>AG63</u>					
0-0.60m	Topsoil				
0.60-0.70m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic silt sand				
0.70-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand, water at 0.80m				
<u>AG64</u>					
0-0.30m	Topsoil				
0.30-0.90m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga1 Ag2 As1				

	Oxidised warp, structureless silt clay				
0.90-1.00m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic silt sand				
1.00-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.20-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand				

AG65

0-0.40m	Topsoil				
0.40-0.50m	DA	ST	EL	SICC	UB
	3	1	0	4	4
	Ga4				
	Orange sand, warp				
0.50-1.18m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
1.18-1.30m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic sandy silt, more organic at top				
1.30-1.40m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand, water at 1.10m				

AG66

0-0.40m	Topsoil				
0.40-1.10m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
1.10-1.35m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2 Tl				
	Organic sandy silt, occasional woody macros, wet at 1.10m				
1.35-1.40m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.40-1.60m	Orange sand				

Transect 9

AG67

0-0.51m	Topsoil, some elements of made ground (modern CBM)				
0.61-0.76m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.76-0.84m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2 Tl				
	Organic sandy silt, occasional woody macros,				

0.84-0.98m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
0.98-2.00m	Fine buff sand with occasional inorganic silt clay laminations				

<u>AG68</u>

0-0.45m	Topsoil				
0.45-0.50m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.50-0.75m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic sandy silt				
0.75-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand, trending into buff sand water strike at 0.90m				

<u>AG69</u>

0-0.45m	Topsoil				
0.45-0.50m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.50-0.75m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic sandy silt				
0.75-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Pale grey sand, trending into buff sand water strike at 0.90m				

<u>AG70</u>

0-0.35m	Topsoil				
0.35-1.00m	DA	ST	EL	SICC	UB
	2	0	0	3	4
	Ga4				
	Pale grey sand trending into buff sad, water strike at 0.80m				

<u>AG71</u>

0-0.35m	Topsoil				
0.35-0.60m	DA	ST	EL	SICC	UB
	2	0	0	4	4
	Ga4				
	Pale grey sand				
0.60-1.20m	DA	ST	EL	SICC	UB
	2	0	0	2	1
	Ga4				
	Buff sand, very wet at 0.60m				

<u>AG72</u>

0-0.45m	Topsoil				
0.45-1.00m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
1.00-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	4

	Ag1 Sh1 G2				
	Organic sandy silt				
1.20-1.25m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.25-1.45m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Buff sand				

<u>AG73</u>

0-0.35m	Topsoil				
0.35-1.20m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
1.20-1.65m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic sandy silt, water strike at 1,20.				
1.65-1.75m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Brown sand				
1.75-2.00m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand				

<u>AG74</u>

0-0.40m	Topsoil				
0.40-1.00m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
1.00-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag1 Sh1 G2				
	Organic sandy silt,				
1.30-1.55m	DA	ST	EL	SICC	UB
	2	0	0	3	3
	Ga4				
	Buff sand, oxidised at top				

Transect 10

<u>AG75</u>

0-0.48m	Topsoil, elements of made ground (modern CBM fragments)				
0.48-0.71m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.71-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Pale grey sand trending into buff sand, water strike at 0.70m				

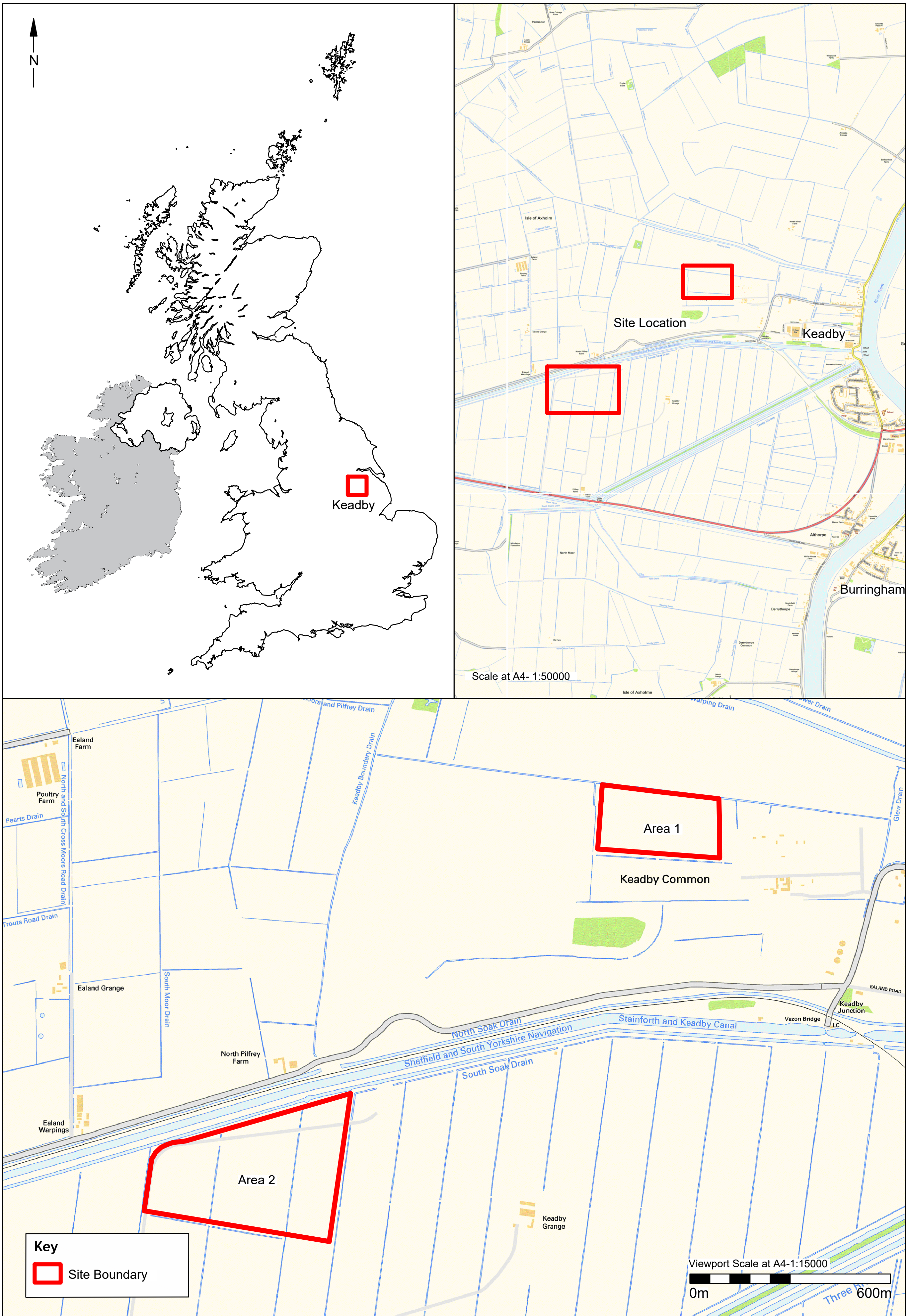
<u>AG76</u>

0-0.35m	Topsoil				
0.35-0.40m	DA	ST	EL	SICC	UB

	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, laminated silt clay sand				
0.40-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	3
	Ga4				
	Pale grey sand trending into buff sand, water strike at 0.40m				
<u>AG77</u>					
0-0.40m	Topsoil				
0.40-0.75m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.75-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1 Tl				
	Organic sandy silt, very dry occasional woody fragments				
0.80-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand trending into buff sand, water strike at 1.10m				
<u>AG78</u>					
0-0.45m	Topsoil				
0.45-0.50m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic sandy silt				
0.50-0.53m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.53-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand trending into buff sand, water strike at 1.10m				
<u>AG79</u>					
0-0.35m	Topsoil				
0.35-0.60m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.60-0.75m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic sandy silt,				
0.75-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
0.80-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand trending into buff sand, water strike at 1.00m				
<u>AG80</u>					
0-0.45m	Topsoil				
0.45-0.90m	DA	ST	EL	SICC	UB
	3	0	0	4	4
	Ga1 Ag2 As1				

	Oxidised warp, silt clay sand				
0.69-1.00m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic sandy silt, wet				
1.00-1.05m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
1.05-1.20m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand				
<u>AG81</u>					
0-0.45m	Topsoil				
0.45-0.95m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.95-1.05m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic sandy silt,				
1.05-1.20m	DA	ST	EL	SICC	UB
	4	0	0	3	2
	Ga4				
	Brown sand				
1.20-1.50m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	buff sand, water strike at 1.20m				
<u>AG82</u>					
0-0.45m	Topsoil				
0.45-0.75m	DA	ST	EL	SICC	UB
	3	2	0	4	4
	Ga1 Ag2 As1				
	Oxidised warp, silt clay sand				
0.75-0.80m	DA	ST	EL	SICC	UB
	4	0	0	3	4
	Ag2 Sh1 G1				
	Organic sandy silt,				
0.80-1.30m	DA	ST	EL	SICC	UB
	2	0	0	3	2
	Ga4				
	Pale grey sand trending into buff sand, water strike at 1.10m				

FIGURES



Trent & Peak ARCHAEOLOGY

Figure 01 - Site Location
KAS - Keadby 3 Power Station, Keadby, Lincolnshire

Scale at A4 - varies
Drawn by MI

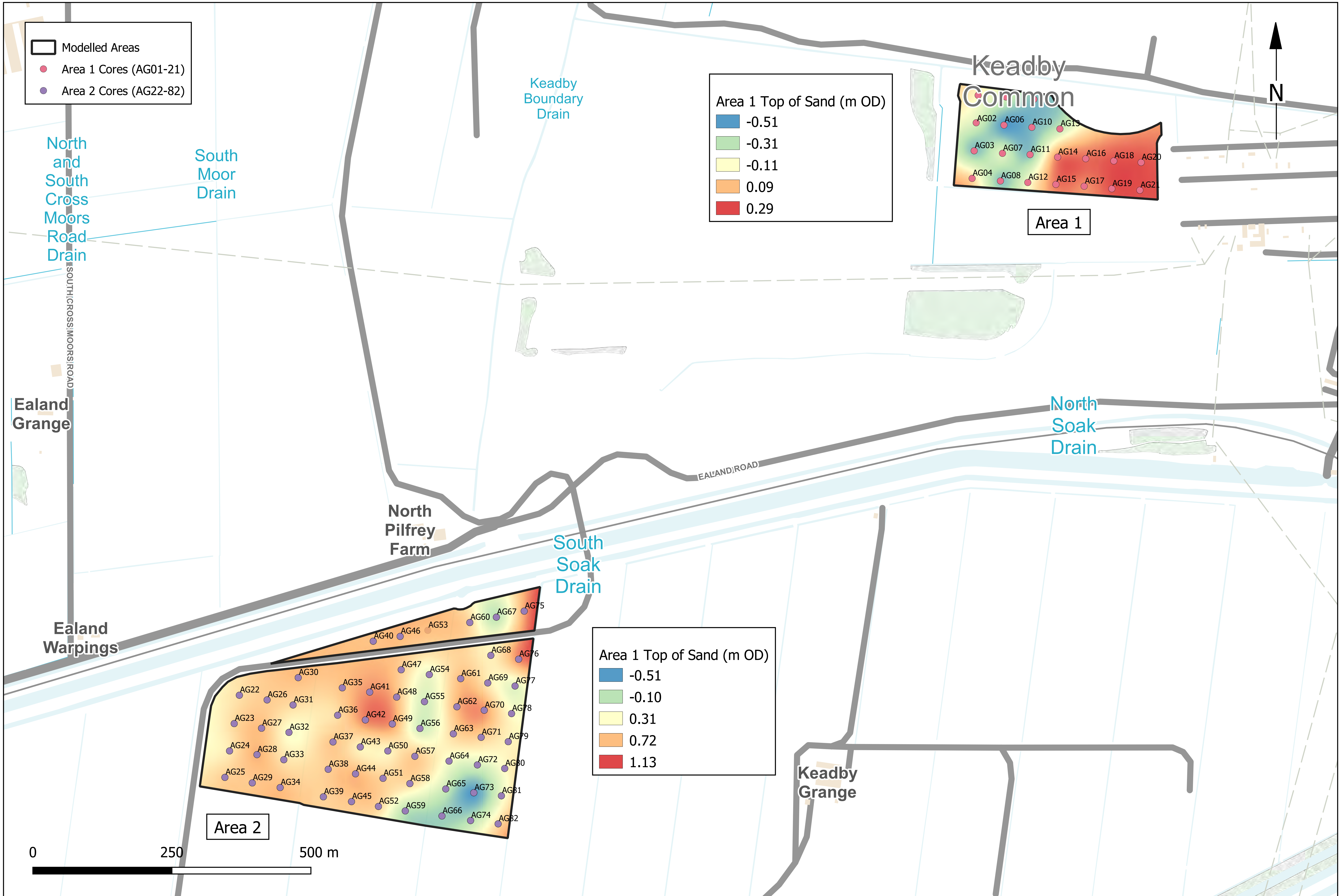


Figure 02 - Modelled Surface Showing The Top of Fine Sand (m OD) in Areas 1 and 2
Site Code: KAS

Scale at A3 - 1:6000
Drawn by: TK

Trent & Peak ARCHAEOLOGY

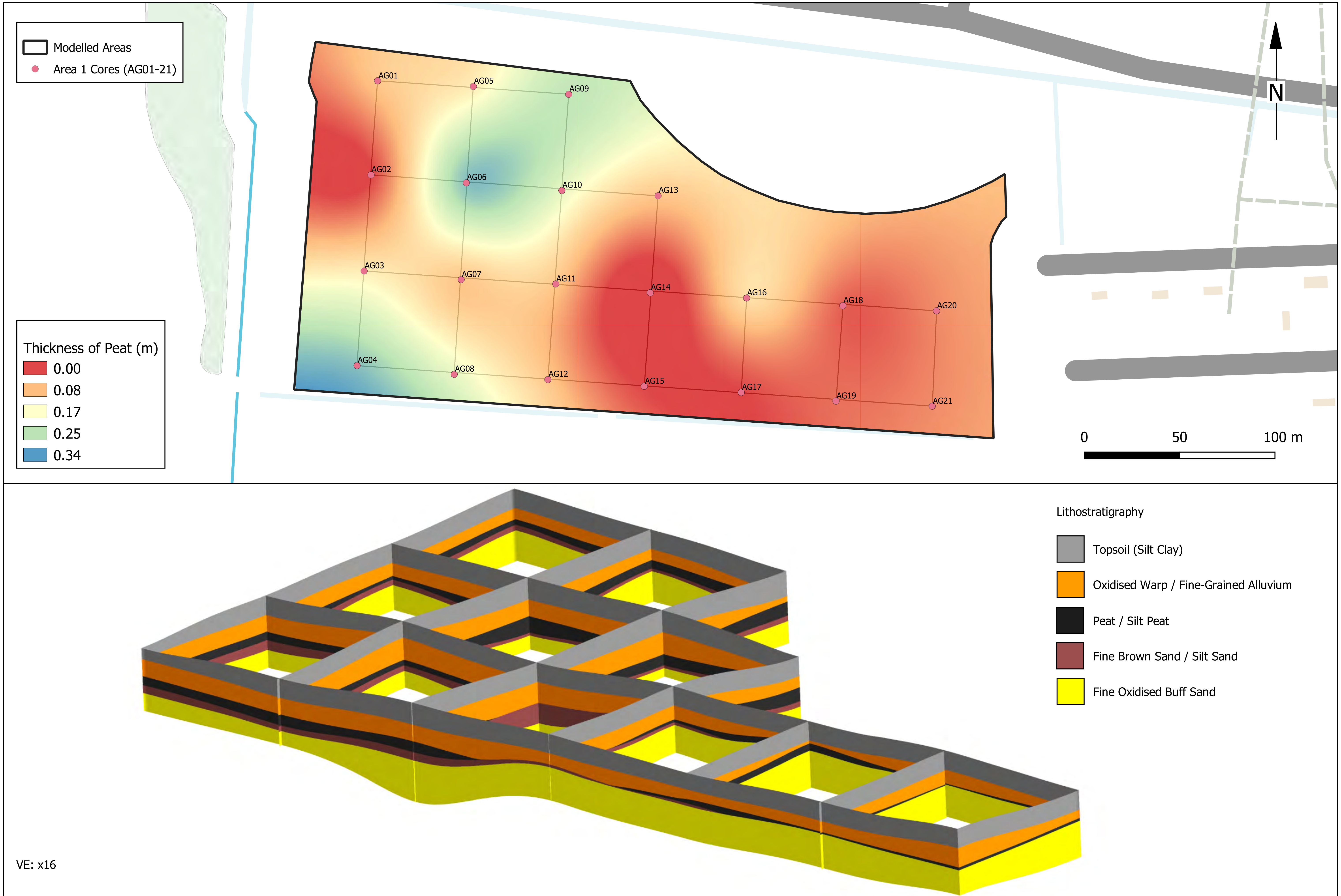


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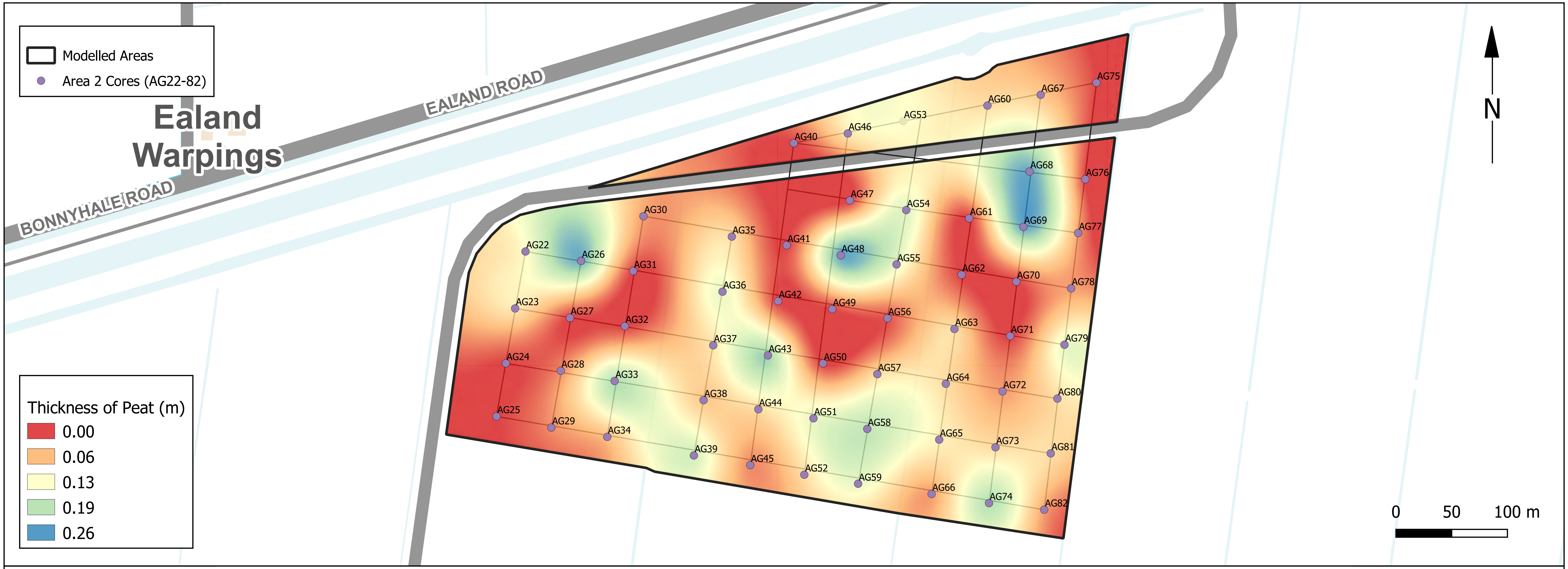
Figure 03 - Modelled Surface Showing Thickness of Peat Deposits (m) and fence diagram for deposits in Area 1
Site Code: KAS

Scale of plan A3 - 1:1750
Drawn by: TK



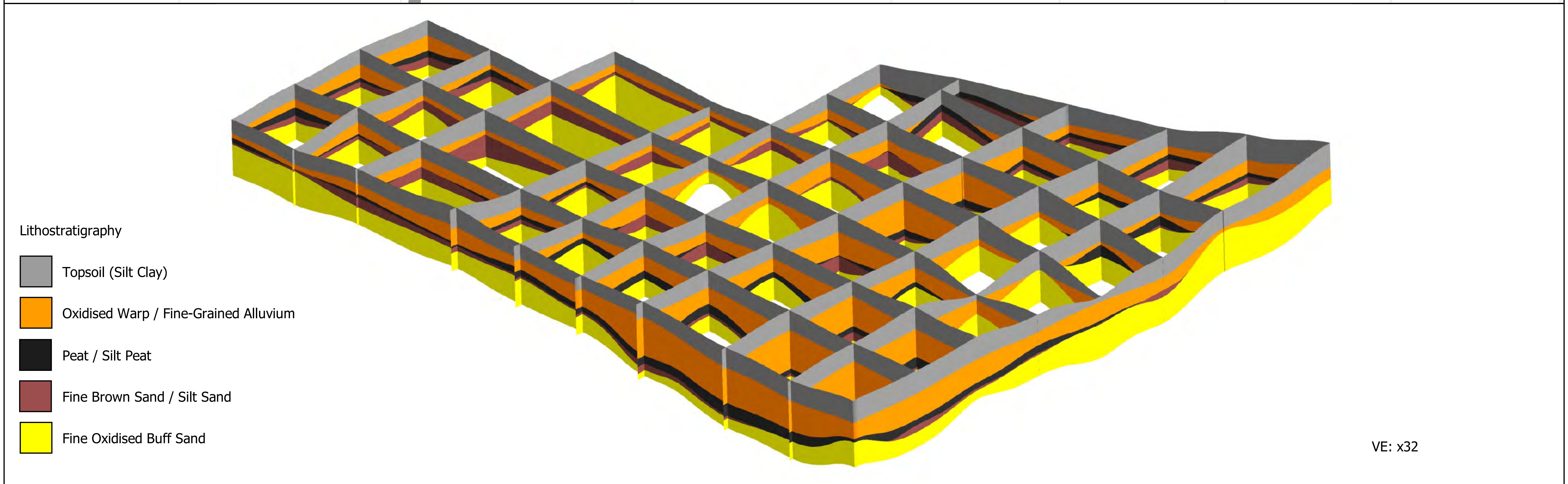


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Figure 04 - Modelled Surface Showing Thickness of Peat Deposits (m) amd fence diagram for deposits in Area 2
Site Code: KAS

Scale of plan A3 - 1:3500
Drawn by: TK

Figure 05 - Previous Radiocarbon Age Determination Locations (Headland 2013 and Headland 2018) in relation to Areas 1 and 2
Site Code: KAS

Scale at A3 - 1:12000
Drawn by: TK