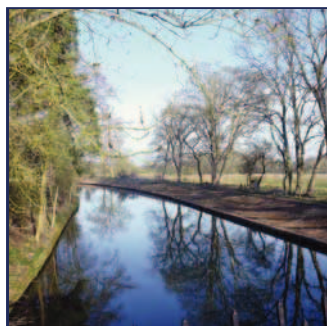


# Cookham Fish Pass Project Cookham Sashes Berkshire



## Geoarchaeological Assessment



June 2009



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**Cookham Sashes Fish Passes Project  
Berkshire**

**NGR: SU 900 865**

***GEOARCHAEOLOGICAL ASSESSMENT REPORT***

FOR

ENVIRONMENT AGENCY

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## SUMMARY

*The Environment Agency commissioned Oxford Archaeology (OA) in March/April 2009 to undertake a geoarchaeological borehole survey to examine the archaeological resource at land at Cookham Sashes in Berkshire. Sashes Island is located to the north east of the town of Cookham in Berkshire, and is encircled by the River Thames. It is centred on NGR SU 900 865, and is within the administrative area of the Royal Borough of Windsor and Maidenhead.*

*The Environment Agency propose to create a fish and wildlife channel across Sashes Island to alleviate the environmental consequences of the existing weir. To achieve this a channel will need to be dug along one of three potential routes, and cut to below the water-table. This survey was commissioned to assess which of the route options would cause least damage to any surviving archaeological resource.*

*Sashes Island is believed to have been the site of a Saxon burgh, and the probable location of a Roman road and bridge. There is also a possible Roman cemetery within the south east of the island, and although this may not affect the route options to the west, associated settlement evidence may be present. Therefore any work on the island carries a high risk of discovering archaeological remains. The desk-based assessment identified the need to undertake archaeological works in order to further assess the archaeological potential for each of the proposed routes.*

*A total of 30 boreholes spaced on a 20 m grid were used to create a sedimentary deposit model for the site. It was hoped that this information would provide baseline data on the underlying buried sequence.*

*The survey revealed a sequence of thick made-ground deposits overlying a buried alluvial and organic sequence. There is the potential for early prehistoric archaeology to be preserved at this level, associated with a buried dry land surface. It is possible that this surface was transformed by rising ground water-levels from the late prehistoric period. This was followed by widespread alluviation in the Middle Thames during the late Roman Period.*

*The site appears to have been prone to flooding from the late prehistoric period onwards, making it less suitable for settlement activity. No evidence for either the Roman settlement or the Saxon burgh was identified within the site. Only the high gravel elevations to the east and two islands toward the centre of site may have remained dryer for longer in the Mid Holocene before eventually being submerged.*

*In terms of the preferred options for the fish passes, the survey was able to assess the potential impacts of the three proposed routes. Based on the findings of the survey, option 1 is considered to have the least impact on any potential archaeological deposits, being the shortest and most fluvial active area. This is followed by option 2 that crosses the main low-lying area of the site which may have been submerged by the late prehistoric period. Option 3 is considered to have the highest archaeological potential of all the routes, crossing the higher ground to the south east.*



# COOKHAM FISH PASS PROJECT, COOKHAM SASHES

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## GEOARCHAEOLOGICAL ASSESSMENT FOR The Environment Agency

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### 1 INTRODUCTION

#### 1.1 Project scope

- 1.1.1 Oxford Archaeology (OA) have been commissioned by The Environment Agency to undertake a geoarchaeological field survey for an area of land on Cookham Sashes Island in Berkshire, henceforth called the 'Site'. The Environment Agency is investigating the potential to excavate a channel across Sashes Island, and three potential route options have been identified. The Site is situated to the north east of Cookham, on the island of Cookham Sashes encircled by the River Thames. The three possible routes are all located in the south west of the island.
- 1.1.2 A borehole survey was undertaken within the area of the proposed routes in order to assess the archaeological implications of the Scheme. This followed recommendations made within the desk-based assessment (OA 2007) that identified the Site as an area of high archaeological potential. The site is believed to be the location of a Saxon *burgh* and Roman crossing point.
- 1.1.3 A total of 30 boreholes spaced on a 20 m grid were recovered to record the sediment sequence across the site. The lithological data of each borehole was correlated into broad stratigraphic units in order to develop a deposit model specific to the site. It was hoped that this information would provide baseline data on the underlying sequence which could inform the selection of a preferred route from a heritage perspective.

#### 1.2 Location, geology and topography

- 1.2.1 The Site is located in the south west of the island of Cookham Sashes. The Site lies within the Parish of Cookham, and is situated within the County of Berkshire, and under the administration of The Royal Borough of Windsor and Maidenhead.
- 1.2.2 The whole island of Cookham Sashes lies on alluvium overlying First Terrace Gravels (BGS Sheet 255, Solid and Drift 1:50,000). The underlying bedrock is chalk.
- 1.2.3 The Site is located on a parcel of land that is approximately 1m higher than the land to the north, and this appears to be the results of redeposited earth and rubble dredged from the canal onto Sashes Island. The ground level of the Site is approximately 25 m OD, and it gently slopes down from east to west.

### 1.3 Proposed Impact

- 1.3.1 The Environment Agency wishes to create a fish and wildlife channel across Sashes Island to alleviate the environmental consequences of the existing weir. To achieve this a channel will need to be dug along one of three potential routes (Options 1-3, Fig. 2) which will cause impacts on any archaeological deposits present. The water channel will be dug to a depth of 3m with a width of 7.5 m at the top, and slope in to a width of 1.5 m at the base.
- 1.3.2 The proposed channel area is located on alluvium, which overlies First Terrace gravels. It is possible that the alluvium seals evidence of early prehistoric activity, and as such there is some potential for prehistoric archaeology within the Site, which may be in the form of waterlogged deposits below the alluvium. The depth of the proposed channel will undoubtedly be deeper than the lowest archaeological horizon, and as such all archaeological deposits and features within its footprint will be affected.

## 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

### 2.1 Introduction

- 2.1.1 The site is located in an area of significant known archaeological activity, much of which dates to the Roman and Saxon periods. A detailed discussion of the archaeological background to the site can be found within the desk-based assessment report produced by OA (2007). The main points are summarised below, updated with information from recent archaeological investigations.
- 2.1.2 The desk-based assessment identified Sashes Island as the site of a Saxon *burgh*, and the probably location of a Roman road and bridge. For these reasons alone any work on Sashes Island is undertaken with a high level of risk of discovering significant archaeological remains. There is also the possibility of a Roman cemetery within the southeast of the Island, although this should not affect the route options to the west. In addition there is the possibility of an associated settlement and/or possible fort, or further evidence of the use of the island as a crossing for, or even part of the Camlet Way. The Site therefore has a high potential for Saxon and Roman features, as well as the potential to contain hitherto undetected archaeological deposits beneath the made ground.

### 2.2 Palaeohydrology

- 2.2.1 The palaeohydrology of the Middle Thames is not so well understood as the Upper or Lower Thames, partly due to lack of published sites and partly due to less development occurring along the Middle Thames. The sites that are known have been recently summarised within *Thames Through Time* (Booth *et al* 2007).
- 2.2.2 The early changes on the floodplain were almost certainly related to climatic change, and human activity since the end of the last glaciation. It is clear that water-levels were significantly lower in the early Holocene than present day due to factors like greater woodland coverage and lower sea-levels. The floodplain would have been relatively dry throughout much of the early prehistoric period with areas of only localised flooding. Evidence of prehistoric activity has been previously identified on the



floodplain. This activity was based on dry land soils that developed on top of the gravels and were preserved under later accumulations of alluvium.

- 2.2.3 At Marsh Lane East, on the Maidenhead, Windsor and Eton Flood relief channel, middle Bronze Age features preserved evidence of earlier peats, derived from a higher water-table (Robinson 2007). At Dorney, the low-lying areas of the floodplain appears to have experience alluviation for much of the Holocene and it is possible that there may have been some Iron Age overbank alluviation (Parker and Robinson 2003). However in spite of these localised episodes, the Thames floodplain appears to have experienced little alluviation prior to the Iron Age. The palaeochannel at Dorney indicated a typical profile of the Middle Thames during the early prehistoric period, being broad and shallow, with the environmental evidence indicating clean flowing water.
- 2.2.4 The Thames Valley was experiencing major hydrological change by the first millennium BC caused by woodland clearance and agriculture (Robinson and Lambrick 1984; Robinson 1992a). This resulted in a rise in the water-table on the floodplain and by the Middle Iron Age, seasonal inundation of the low-lying areas. However much of the floodplain may still have been above flood levels, creating islands of dry ground. The river system was divided up into an anastomising system of channels (parallel channels with sinuous links) in a largely open landscape.
- 2.2.5 The Roman town of Staines, at a crossing point of the Thames with the River Coln, was built on a low-lying island on the floodplain gravel fringed with alluvium. Alluviation continued around the edges of the island throughout the early Roman period (Mckinley 2004).
- 2.2.6 By the late Roman period seasonal flooding and alluviation probably extended over almost the entire floodplain. Flood levels were seen to increase at Dorney in the late Roman period (Robinson forthcoming). Early Roman features around the edges of the gravel island gave no evidence of flooding whereas the late Roman features contained shells of flowing water species. Alluvial silts were also identified within many of the late Roman features.
- 2.2.7 In the early Saxon period there was widespread reduction in alluviation in the Thames Valley, coinciding with woodland regeneration and less intensive agriculture. This was reversed in the mid and late Saxon periods, although it never reached the levels attained during the Roman period. The preservation of organic remains from archaeological features from the 1st terrace shows that the water-table has remained high to the present day.

### **2.3 Previous work**

- 2.3.1 A geophysical survey of the eastern extent of the island was undertaken by Minas Tirith Ltd in 2000, in which a series of linear features were observed, which were interpreted as being part of a possible Roman fort. This possible fort is located at the opposite end of the island to the three proposed routes, but may provide additional potential for Roman activity within the western part of the island.
- 2.3.2 There has been no previous intrusive, archaeological work carried out within the Site, nor within the island of Cookham Sashes. Within the broader area there have been only

four recorded investigations that have revealed archaeological material. Three of these are located within the Lock Cut to the south of the island, which comprise:

- A Roman cemetery at Sashes Field/New Cut, Cookham, Berkshire. A number of skeletons, Roman swords and javelin heads were found in the making of the new cut through Sashes Field (*c* 190 m to the east of Option 3);
- Work at Cookham Lock was monitored by the Environment Agency. Samples of burnt clay were retrieved, five of which dated to the Bronze Age (*c* 480 m to the south east of Option 3);
- A possible timber revetment was found at Cookham Lock in the late 19th century (*c* 500 m to the south east of Option 3).

2.3.3 A fourth archaeological investigation was undertaken to the north of the River Thames in Hedsor (*c* 450 m to the north east of Option 3), this revealed evidence of settlement in the form of midden-type deposits. These deposits possibly date to the early to mid-Saxon period, and pits and possible post-holes dating to the 11th-12th centuries, overlay deep colluvial deposits, containing small amounts of Neolithic/Bronze Age worked flint.

2.3.4 No new archaeological sites were recorded during the desk-based assessment. The only feature visible during the walkover was the ditch, which could be seen running across the Island, although it gradually disappeared to the east. The land south of the ditch (the Site area) was noted to be approximately 1 m higher than the land to the north of the ditch.

### 3 AIMS

#### 3.1 Aims of the survey

3.1.1 The principle aims of the geoarchaeological survey were to:

- Establish the potential survival, character and extent of any archaeological remains;
- Assess the archaeological impacts of each potential route of the fish passes;
- Create preliminary interpretation of the archaeological and sedimentary site formation processes;
- Create a preliminary interpretation of the vegetation and aquatic conditions;
- To develop a deposit model for the Site based on the results of the borehole survey;

#### *Site specific research questions:*

- Identify any evidence that could be associated the Saxon *burgh*;
- Confirm whether any Roman activity extents into the western area of the Site;

## 4 METHODOLOGY

### 4.1 Geoarchaeological survey

- 4.1.1 Thirty boreholes spaced on a 20 m grid were undertaken across the area covered by the three proposed routes. The boreholes were drilled using a Terrier percussion rig in order to recover undisturbed samples suitable for sediment description. Each borehole was drilled to a maximum depth of 4 m, with all boreholes going to full depth to Pleistocene gravels. A continuous sequence of undisturbed core samples (0.125 m in diameter and 1.4 m in length) were retrieved from each location.
- 4.1.2 The sedimentary sequences were recorded on site by a qualified geoarchaeologist. The cores were extruded, photographed and logged using standard sediment terminology according to Jones *et al* 1999. This included information on colour, composition, texture, structure, compaction, erosional contacts, artefactual and ecofactual inclusions. Recording of the sequence was undertaken according to English Heritage guidelines for geoarchaeology recording (2004) and environmental sampling (2002).
- 4.1.3 The lithological data from the boreholes was inputted into geological modelling software (Rockworks 14) to allow correlation of key stratigraphical units. A deposit model was developed based on the results of the survey.

## 5 RESULTS OF THE BOREHOLE SURVEY

### 5.1 Description of deposits

- 5.1.1 The boreholes survey identified a range of different sediment types are present across the site. A number of commonly occurring lithological units were identified and these were correlated into the following sequence of stratigraphy (in order of deposition):
- Sandy gravels
  - Organic silts/peats
  - Silty clay alluvium
  - Buried ploughsoil
  - Made-ground
  - Modern topsoil
- 5.1.2 The survey revealed a sequence of lateral equivalent deposits that made firm assignment to particular stratigraphic units to be made with a high level of confidence. These units were correlated on the basis of sediment types, elevation and descriptions.

### 5.2 Pre-Holocene deposits

- 5.2.1 Unit I: River gravels: Gravels and sandy gravels appear to extend across the whole site overlying bedrock and in all locations are sealed by later Holocene deposits. These deposits were matrix supported well-sorted rounded medium cobble gravels. The base of the gravels was not reached as a limit of 4 m depth was exercised for all boreholes.
- 5.2.2 The coarse grained character of the deposits suggests accumulation under cold climate periglacial conditions within high-energy braided streams. These deposits represent

high-energy deposits that accumulated in a cold environment relating to the development of braided river systems that date from the late Pleistocene (*c* 20-10,000 BP). These types of deposits are typically found in river valleys and consist of gravel bars that formed due to high seasonal flow associated with spring snow melt. Any archaeological material within these deposits is unlikely to be *in situ* and may have undergone a high degree of modification.

- 5.2.3 The elevation data from the surface of the gravels has been used to create a buried topographic map of the site (Fig. 3). This modelled surface varies from 23.17 m to 25.12 m OD. The shape of this surface essentially defines the topography of the early Holocene landscape. Bates (2000) refers to this as the 'topographic template' and suggests that variations in the template largely dictated patterns of subsequent landscape evolution as flooding ensued during the Holocene. By developing an understanding of this template it is possible to attempt to establish a model of sedimentary formation of the site.
- 5.2.4 The lowest elevations at the site are between 23.00 m and 24.10 m OD, these appear to form low-lying areas within the western part of the site. For the rest of the site area, the gravel surface averages between 24.00 m OD. Only to the east of site does the gravel rise to 25.12 m OD and two gravel islands near to OABH20 and OABH4 reach 24.45 m OD. As water-levels rose in the early Holocene these elevations would have been inundated, leaving the high elevations as dry land. These higher elevations could have been the focus for later prehistoric activity before being submerged and buried by later riverine flooding.

### 5.3 Holocene deposits

- 5.3.1 Unit II: Organic deposits: The organic silt/peat deposits directly overlying the sandy gravels. These deposits consisted of well humified peat deposits or highly organic silts, that accumulated between 23.00 m and 24.40 m OD. They were typically 0.30 m in thickness (Fig. 4 and 5), and variable in terms of their organic and silt content. Small concentrations of sub-angular fire-cracked and burnt cobbles were recovered within boreholes OABH4, OABH6, OABH17, OABH22 from this context. Fine fragments of charcoal were also identified within these deposits.
- 5.3.2 The botanical and molluscan evidence from this unit indicates shallow water and marsh taxa within what must have been a wetland environment. These deposits appear to represent a rise in the water-table, possibly during the late prehistoric period, which created a drowned landscape over much of the lower elevations of the Site. Not all of the area was drowned during this period; the levels of gravel towards the south east and the gravel islands in the centre would have remained dry.
- 5.3.3 In parts of the floodplain these organic deposits appeared to be overlying a potential dry land prehistoric soil. This would have been the pre-alluvial surface mentioned previously that may have formed under dry conditions during the early to mid Holocene. In other areas, evidence of this palaeosol was less identifiable in the boreholes and may have either been eroded or obscured by later post-depositional processes.
- 5.3.4 Any artefacts from this submerged surface are likely to be *in situ*, only undergoing minor modification if any. These remains could be of significant archaeological

interest as they are likely to have remained waterlogged and may preserve important biological and archaeological remains.

- 5.3.5 Unit II: Silt clay alluvium: These deposits consist of soft pale reddish brown, sandy clays and silty clays. These deposits range in thickness from 0.55 m to 1.8 m (Fig. 6), and are located at approximately 23.3 m OD to 25.85 m OD. The accumulation of minerogenic over organic deposits, reflecting a major change in the deposition environment from low-energy ground-water flooding to overbank alluviation.
- 5.3.6 Any artefacts identified within these silty clay deposits are likely to have undergone a moderate degree of lateral transportation and possible size sorting. Any activity associated with these deposits is likely to be found towards the river edges which could have acted as natural harbours/activity areas.
- 5.3.7 Unit IV: Buried ploughsoil: The upper surface of the alluvium shows signs of weathering and disturbance by late 20th-century activity. The elevation of the modelled surface varies from 25.10 m and 25.40 m OD. The best preserved deposits are recorded within the west of the site and the lowest towards the river. In some localised areas of the site the original landsurface of the upper alluvium could be identified.
- 5.3.8 The homogenous nature of the deposits suggested that it likely represents a buried ploughsoil. Any finds recovered from these deposits are likely to have undergone a degree of lateral and vertical movement, mixing together the remains from different periods.
- 5.3.9 Unit V: Made-ground: Thick modern made-ground deposits were found to overlie all of site, ranging in thickness between 1 m and 2.2 m. Evidently these deposits were distributed across the Site to create a level surface. The modelled thickness of the made-ground deposits is shown in Figure 7.
- 5.3.10 Beneath the topsoil lay made-ground deposits with variable silt, sand, gravel and chalk. This could be seen as two separate deposits, with the upper deposit potentially relating to the lock cutting event of 1969, whilst the lower made ground deposit may from the original lock cut in 1830. Fragments of clinker, charcoal and clay pipe were recovered from these deposits.
- 5.3.11 Unit VI: Modern Topsoil: This unit consists of sandy loam that has developed on top of the made-ground deposits. The modern topsoil varied from 0.12 m to 0.35 m in thickness, suggesting that soil has likely been added to the field.

## 6 DISCUSSION

### 6.1 Sedimentary sequence

- 6.1.1 Throughout the early to mid Holocene soil formation processes would have started to develop on Sashes Island. Localised flooding may still have occurred but this may not necessarily have involved any alluviation. At the lower elevations of the floodplain (23.00 m to 24.00 m OD), towards the west of site a wetland environment may have started to developed from the later prehistoric period. Towards the higher, east of the

Site, lying above 24.65 m OD, flooding would probably have occurred much later, possibly during the early historic period.

- 6.1.2 This meant that for much of the early Holocene the main area of the Site could have been relatively dry, and that archaeological activity, dating from the Mesolithic period to the later prehistoric period, could potentially be preserved within the buried land surfaces overlying the gravel. The topography of the floodplain would have been an important factor in determining the location of settlement and ritual monuments. On the higher ground located at the south-eastern edge of the site, and on the gravel island, activity could have continued for longer as flooding would have occurred much later.
- 6.1.3 The accumulation and transformation of organic deposits overlying the gravels at the edge of the island could relate to the rising water-levels from the middle Iron Age onwards. These deposits will require dating before any firm confirmations can be made as to their potential date. Environmental assessment of these deposits has shown that they appear to represent a transition to wetter conditions. These organic deposits may have continued to accumulate further up at the edge of the island into the early historic period, whilst other low-lying areas could have started to experience the first signs of over-bank alluviation.
- 6.1.4 The deposition of the silty clay alluvium (Unit III) in the west of site overlying the organic deposits, represents the beginning of overbank alluviation at the edge of the island and floodplain. A similar sequence of deposits has been identified within other sites along the Middle Thames. This is thought to have been the result of increased arable agriculture on the slopes of the catchment during the late Iron Age and Roman period (Robinson in Dodd 2003). This saw a transition from the deposition of organic to minerogenic deposits in the western side of the floodplain. Similar deposition of inorganic alluvial clay has been recorded at other sites within the Middle Thames. This would have created areas of seasonally flooding at the edges of the island, which would have made the majority of the Site unsuitable for tillage and settlement activity.
- 6.1.5 The main phase of clay alluviation may have accumulated before the Saxon *burgh* was established. The depth of organic preservation in later archaeological features shows that the water-table on the floodplain remained high to the present day, and historical records show that seasonal flooding continued throughout the medieval and post-medieval periods. Alluviation, appears to have significantly decreased in the post-medieval period onwards.

## 6.2 Archaeological potential

- 6.2.1 The survey did not identify any evidence of significant archaeological activity associated with a Roman Crossing or Saxon *burgh*. In fact the survey indicated that most of the western area of the Site may not have been suitable for settlement activity from the later prehistoric period onwards, as it appears to have been increasingly prone to flooding. However burnt and fire cracked stone identified within the organic deposit overlying the gravel surface, may indicate prehistoric activity from the Mesolithic through to the late Iron Age at the edge of the island. This activity may have been associated with a drier land surface that was later transformed by a rising water-table.
- 6.2.2 The sequence indicates that the Site would have been prone to flooding during the late prehistoric and early historical periods, making it less suitable for most types of

activity. Historic maps show Sashes Island to have been used for pasture and arable land throughout at least the later post-medieval period, and probably throughout the majority of the medieval periods. Plough lines have been identified on aerial photos, which would indicate that the island was previous under the plough.

- 6.2.3 The construction of the Cookham Lock and canal in the early 19th century, which cut straight through Sashes Island, caused considerable disturbance. This significantly disturbed and truncated the historical soil, but helped to protect the alluvial sequence within the Site.

### **6.3 Potential impact**

- 6.3.1 The level of impact will be determined by the route selected. The uppermost level of the channel, where it is at its widest, is likely to fall within the made-ground deposits, and therefore is unlikely to cause any serious impacts on archaeological deposits. However, the channel is proposed to be excavated to a depth of 3 m, and so will extend beyond the 20th century made-ground, through the alluvial layer and into the organic silts below. The survey data shows the base of the alluvial deposits to be between 1 m and 2.20 m deep, and it is here, at the base of the alluvium, where prehistoric deposits and artefacts are most likely to be present. The construction of the channel to a depth of 3 m therefore has the potential to affect potential waterlogged deposits associated with the buried land surface.

- 6.3.2 The proposed construction of a channel through the island will affect any archaeological deposits within the footprint of the chosen route if they occur in these locations. However, the survey has revealed that Options 1 and 2 are located at low-lying elevations and these would have been less suitable for settlement within the Roman and early medieval periods. The following archaeological impact has been identified for each route:

- Option 1, being located closest to the western edge of the island, and therefore the shortest route, will cause the least amount of below ground impact. This is in a fluvial active area and therefore has the least archaeological potential.
- Option 2, being neither the longest or shortest of routes, represents a compromise between the practicality of the route and the greater level of impact. This route crosses only the lower elevations of the Site and therefore would have been in an area prone to flooding in the late prehistoric and early historic periods.
- Option 3, being the longest route, and therefore potentially of greater impact than the other proposed routes. This route also crosses from the lower elevations up to the higher ground to the eastern edge of the Site. This option is believed to have the highest archaeological potential of all the routes.

- 6.3.3 Based on the findings of the survey Option 1 is considered to have the least impact on any archaeological deposits. This is followed by Option 2 and then 3 consecutively. Option 3 has the highest archaeological potential as skirts around the gravel islands near to borehole 4 and crosses the higher ground to the south east of the Site. This area of the site would have been less prone to flooding and would have provided a good location in which to exploit the resources of the river.

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**Appendix 1: Photo Record**



Plate 1: Cookham lock and canal



Plate 2: The Site



Plate 3: Borehole drilling



Plate 4: Core sequence

## **Appendix 2: Summary of site details**

**Site name:** Cookham Sashes, Cookham

**Site code:** COFPEV

**Grid Ref:** SU 900 865

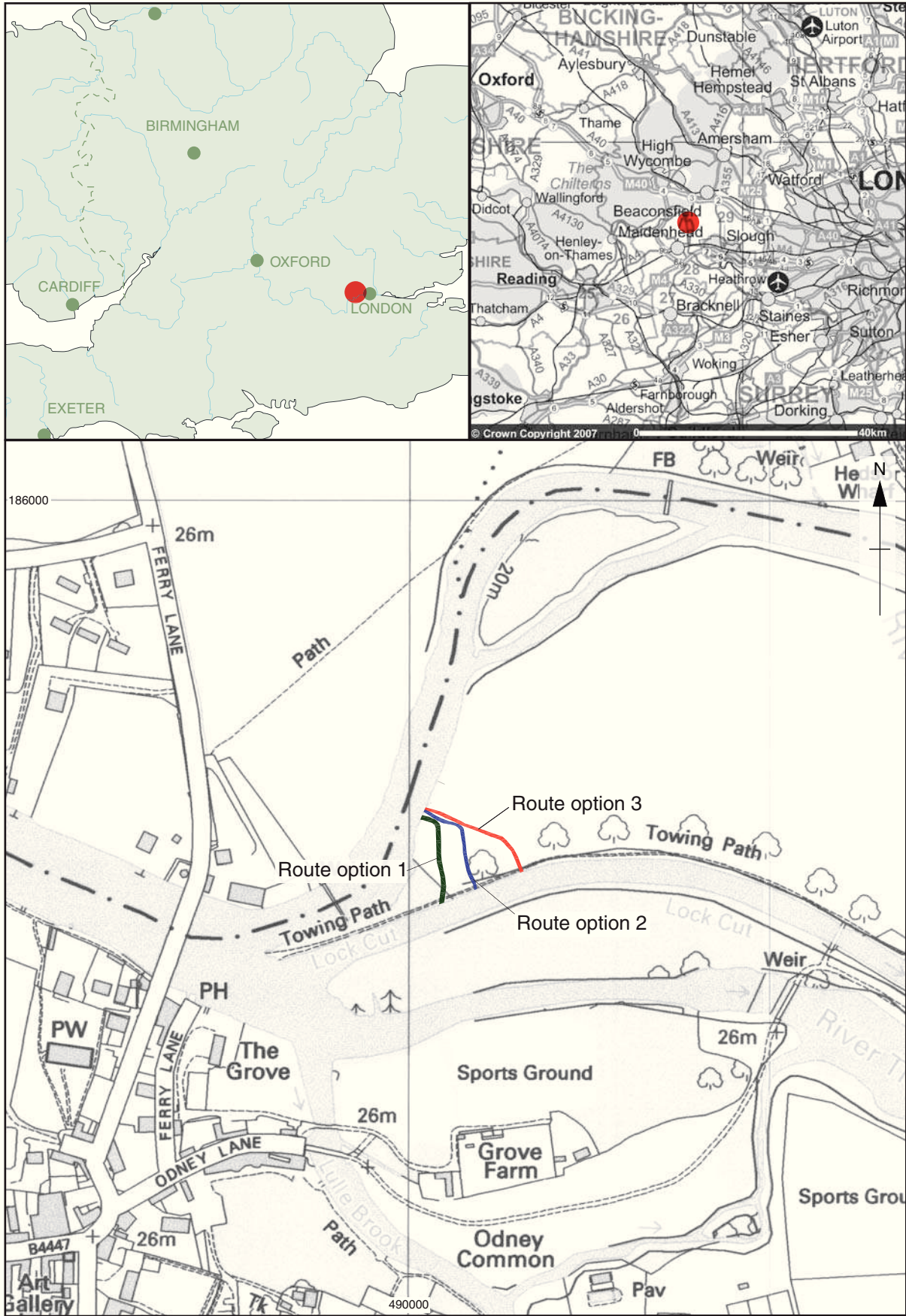
**Type of evaluation:** Borehole Survey

**Date and duration of project:** April 2009

**Area of site:** 1.18 ha

**Summary of results:** A geoarchaeological survey of 30 boreholes were undertaken across an area of Cookham Sashes, an island within the Middle Thames. Samples were retrieved for sediment description and palaeoenvironmental assessment.

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited at Reading Museum.



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Figure 1: Site location

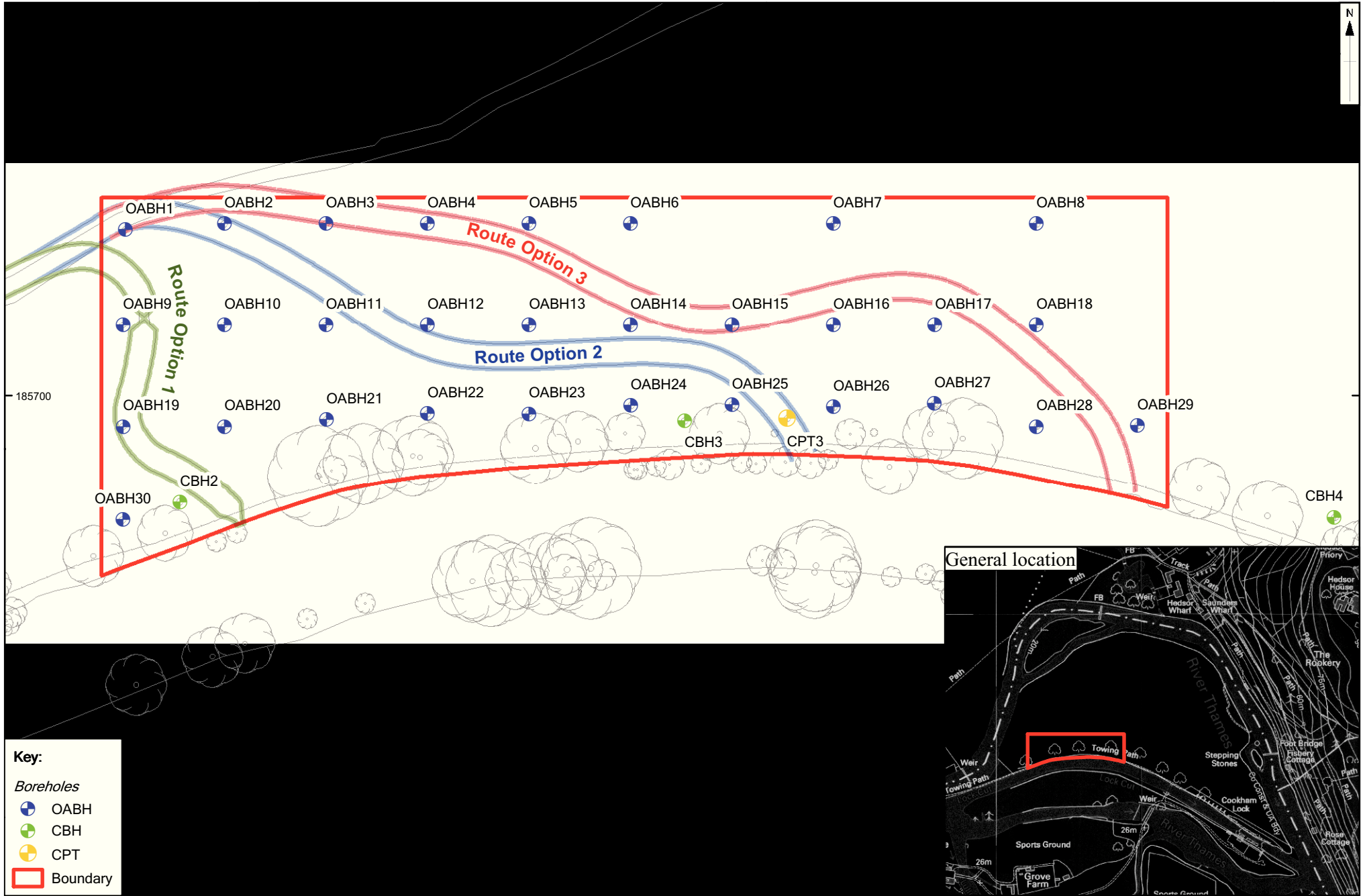
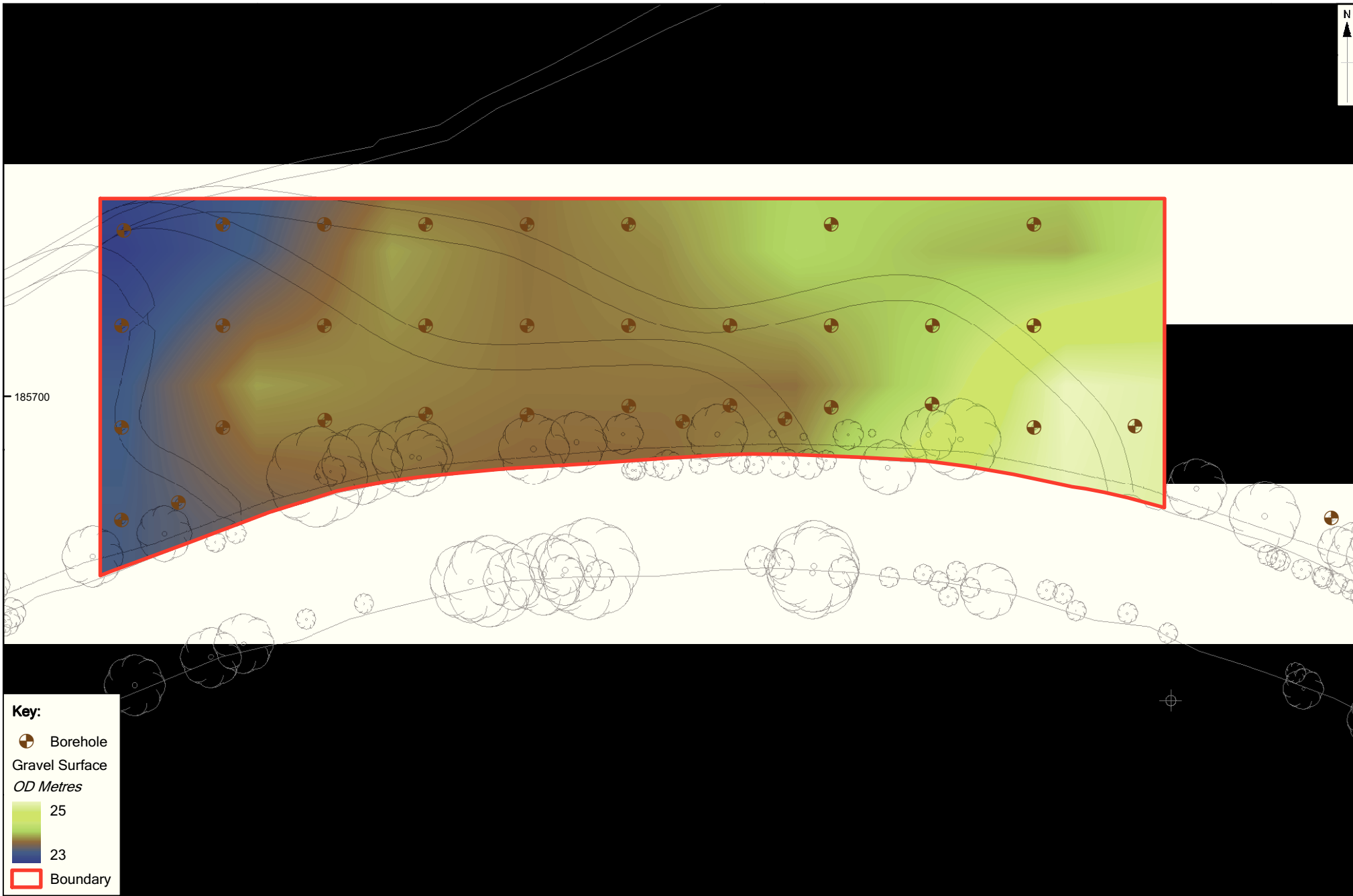


Figure 2: Borehole locations

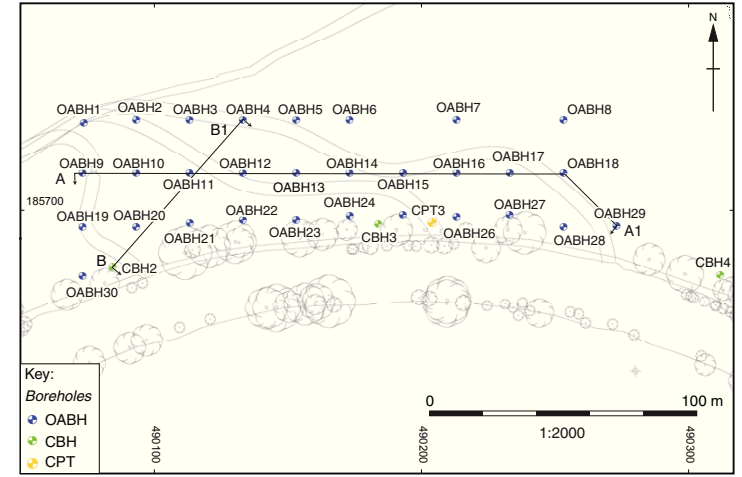
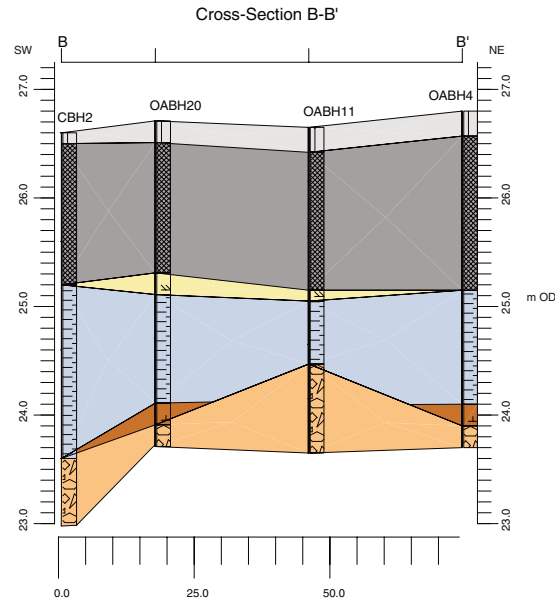
X:\Cookham\_Sashes\010\Geomatics\03\_GIS\current\001\_projects\Figures\280409\Figure\_3\_Gravel\_290409.mxd\*G:\290409



**Key:**

- ⊕ Borehole
- Gravel Surface
- OD Metres
- 25
- 23
- Boundary

Figure 3: Gravel surface topography



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Borehole locations

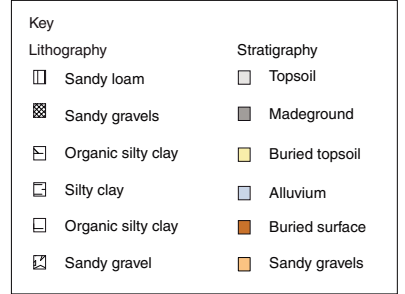
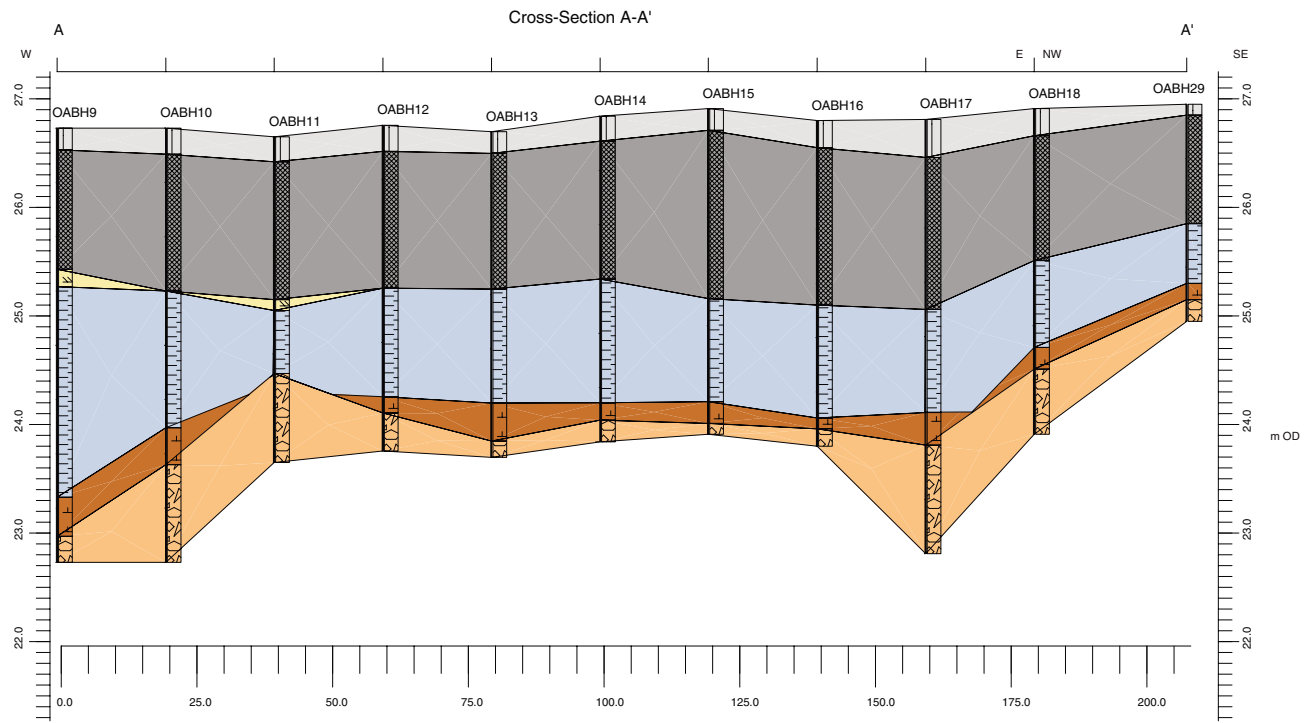


Figure 4: Borehole cross sections

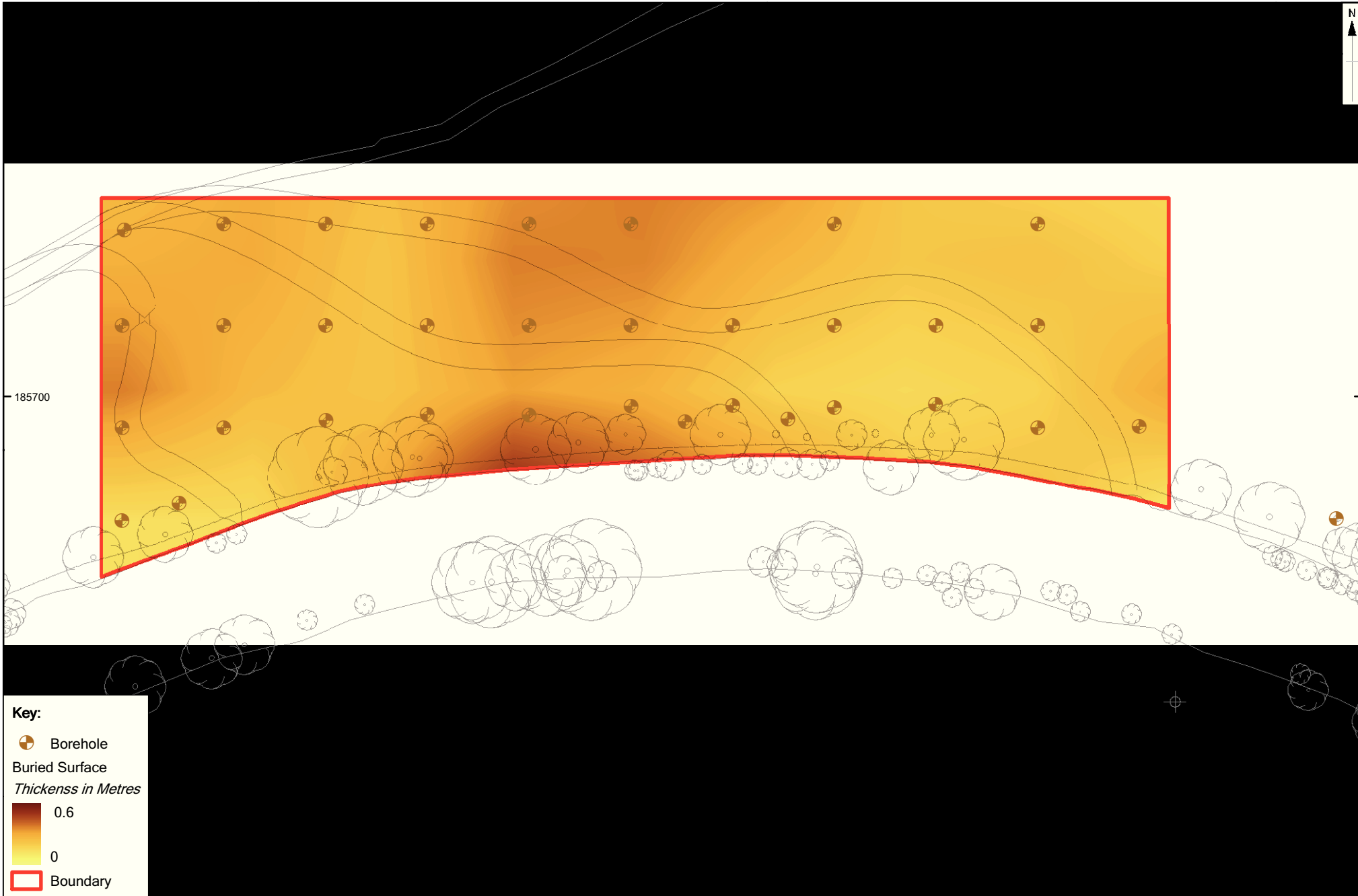


Figure 5: Thickness of organic deposits



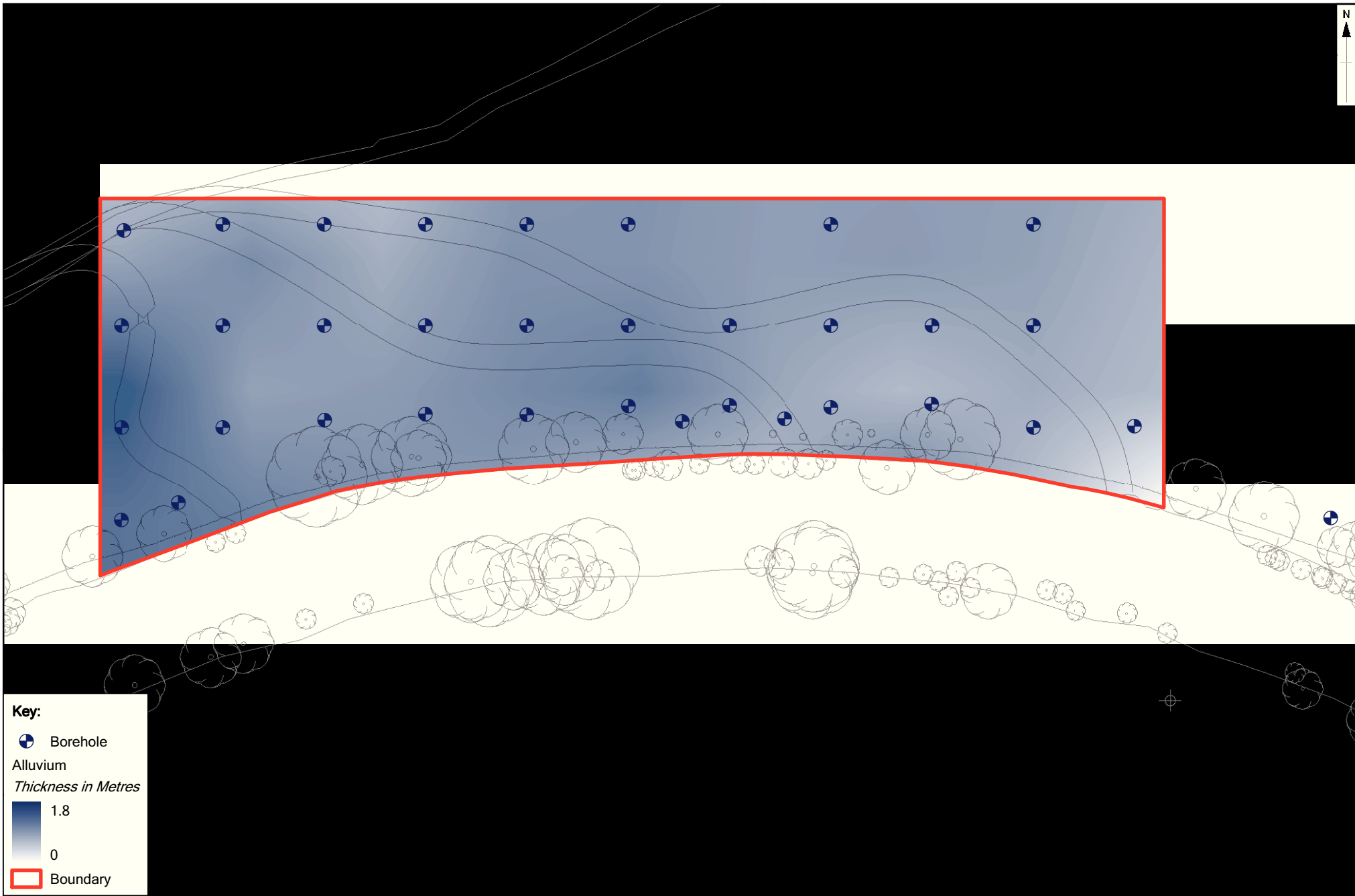


Figure 6: Thickness of Alluvium

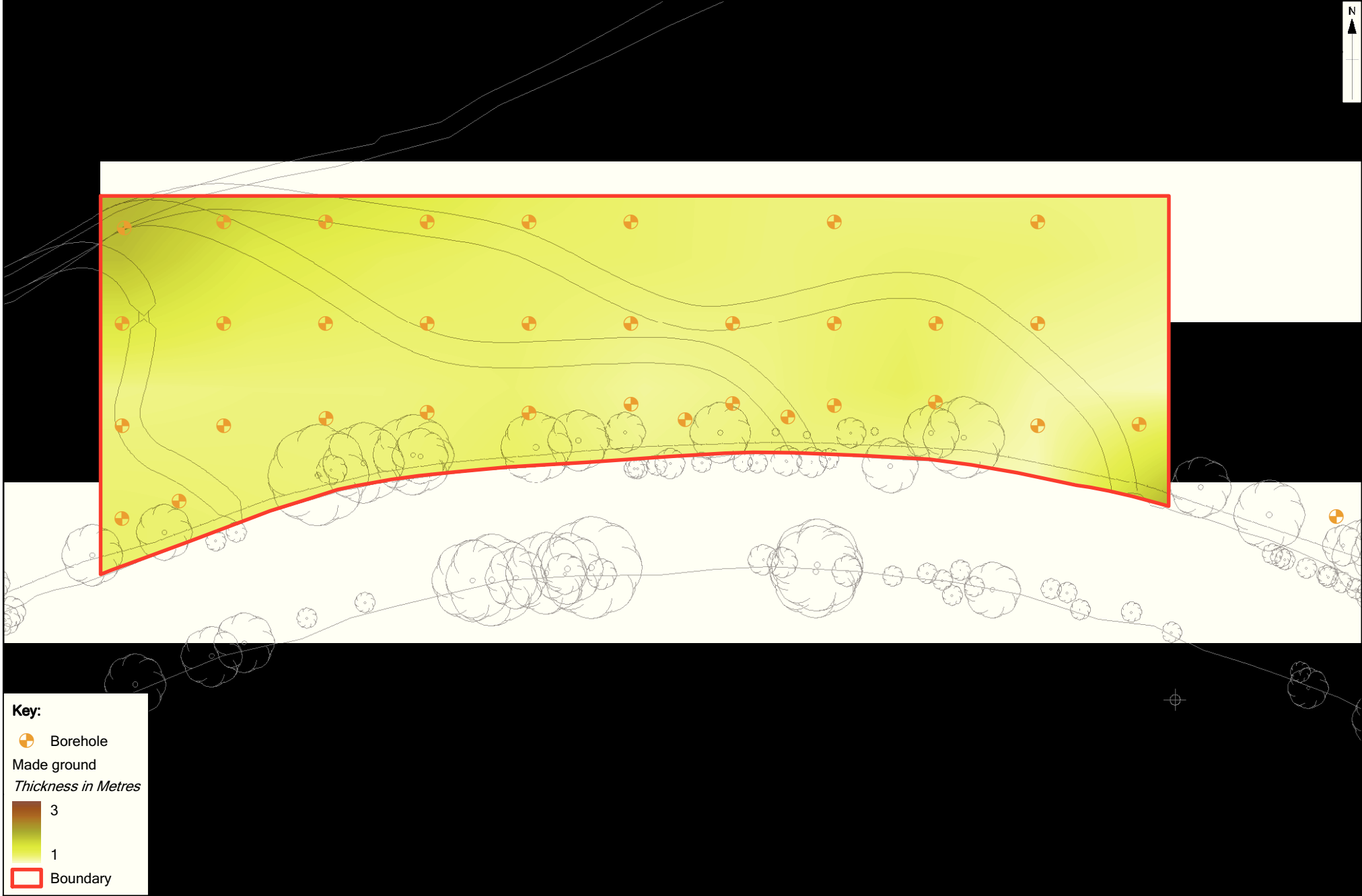


Figure 7: Thickness of made ground deposits



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