Archaeological Watching Brief Report

Northfleet West Substation Remediation Works, Southfleet Road, Swanscombe, Kent

Archaeological Watching Brief Report

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Northfleet West Substation Remediation Works, Southfleet Road, Swanscombe, Kent

Archaeological Watching Brief Report

Written by Francis Wenban-Smith

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Summary

An archaeological Watching Brief was carried out during remediation work in the 400kV compound at Northfleet West Substation. No archaeological remains were found. Made-ground was seen down to at least 1.30m below the present ground surface at Area 4 and Interceptor D. A deep sequence of colluvial deposits, predominantly fine-grained but gravelly at their base, was seen at the location of Interceptor E in the south-east corner of the compound, down to 2.60m below the road surface. These were similar to those previously seen in testpits and boreholes in the nearby vicinity, and they did not produce any archaeological remains.

No monitoring was carried out at the 275kV compound. Previous geotechnical and archaeological investigations have firmly established that the deposits here that are affected by the remediation works have no archaeological potential. They have been shown to comprise Thanet Sand under c 0.15m of modern gravel.

1 INTRODUCTION

1.1 Scope of work

1.1.1 In April 2014 Oxford Archaeology South was commissioned by Parsons Brinckerhoff on behalf of Erith Contractors Ltd to undertake an archaeological Watching Brief in connection with land remediation at the Northfleet West Substation (henceforth the “Site"). The remediation work involved the removal of surface-water drainage interceptor chambers in (and near) the 400kV and 275kV substation compounds and sampling the underlying natural sediments for contamination. Observations were also made on the removal of existing concrete slabs to confirm the presence of modern made-ground and truncation of natural deposits beneath (Areas 4, 5 and 6).

1.1.2 The Watching Brief was carried out in accordance with a Written Scheme of Investigation (WSI) prepared for Erith Contractors by Parsons Brinckerhoff (2014). Following advice from Kent County Council, the WSI specified that archaeological monitoring take place at locations of impact in both the 400kV and 275kV compounds. However, it was subsequently agreed with Kent County Council's Senior Archaeologist that archaeological monitoring was only required in (and near) the 400kV compound. Monitoring of previous geotechnical investigations in the 275kV compound (MoLA 2010) had established that pre-Quaternary deposits (Thanet Sand) were present immediately below the modern gravel that forms the present-day ground surface layer.

1.1.3 The Watching Brief took place on 15th April 2014, with attendance on site by Francis Wenban-Smith (Department of Archaeology, University of Southampton) acting as a geoarchaeological specialist with training in lithic artefact recognition, in accordance with the recommendations of Kent County Council.

1.2 Location, geology and topography

1.2.1 The Site is located *c* 1km to the south of Swanscombe in north-west Kent (Fig. 1). It lies on the north side of the A2 and is bounded to the west by a large chalk pit (Eastern Quarry) and to the east by Southfleet Road. The unquarried north-eastern part of Eastern Quarry extends across the Site's northern edge. The Site covers 36 hectares (90 acres), much of which would be affected by the proposed development.

1.2.2 According to current geological mapping (British Geological Survey 1998), the Site is mostly underlain by Thanet Sand, with clayey Lambeth Group deposits (Upnor Formation and Woolwich Beds) outcropping on its higher western side, and a dry valley filled with colluvial deposits crossing it, heading down from north-west to south-east. However, recent archaeological investigation of adjacent areas to the north - Eastern Quarry (Wessex Archaeology 2006, 2009) - and east - the Ebbsfleet Elephant site (Wenban-Smith 2013) - established that extensive unmapped Pleistocene deposits are present in the these adjacent areas, and that they contain important Palaeolithic remains (discussed below, Section 1.3). Archaeological investigations and geotechnical monitoring were therefore carried out across the Site between 2009 and 2010 (MoLA 2010, 2011). These established that Pleistocene deposits were absent from most of the Site, including the area of this Watching Brief. Deposits in the area of the 400kV compound were shown to comprise colluvial sands, silts (gravel-rich in their lowest part) down to a depth of *c* 3m below ground-surface, underlain by Thanet Sand.

1.2.3 The Site's topography broadly comprises the western half of a sub-circular basin, with higher ground to the north, west and south surrounding a central depression, which is fed into by various dry valleys which combine and then descend to the east, feeding into the Ebbsfleet Valley which drains north towards the Thames. The highest part of the Site is its north-west corner, where the ground surface is *c* 52m OD. The surface then dips to *c* 35m OD along the much of the Site's east and south perimeters, although the central depression dips below 20m OD at the central eastern side of the Site. The majority of the Site currently comprises arable farmland, with some wilder uncultivated scrub and woodland patches.

1.2.4 The smaller 400kV transformer substation compound is located in the central site depression, centred on NGR 560950, 173150. The larger combined 275kV/132kV compound is located in the southern part of the Site, with the 275kV compound centred on NGR 560800, 172950 (Fig. 2). Both compounds have been decommissioned, and at the time of fieldwork had a levelled ground surface covered with loose flint gravel, with the partly-broken remains of various concrete slabs and foundation structures.

1.3 Archaeological and historical background

1.3.1 The local Swanscombe area and adjacent areas to the Site are rich in Palaeolithic and post-Palaeolithic remains. These have been fully reviewed in the previously produced desk-based assessments (MoLAS 2003; 2006, revised/reissued in 2009). The present use of the Site as arable fields may extend back significantly, so the surface of the Site has probably been affected by ploughing, perhaps for millennia. The desk-based assessments found no evidence of archaeological remains on the Site itself, apart from Palaeolithic flakes found in the plough soil during walkover surveys, but drew attention to important Palaeolithic, Mesolithic, Neolithic and Roman remains in the surrounding area. In particular, Pleistocene sediments that were laterally equivalent to deposits containing important Palaeolithic remains at the HS1 elephant butchery site (Wenban-Smith 2013), immediately to the east of the northern part of the Site, were known to extend into the north-eastern part of the Site to an unknown degree. It was therefore recommended that field evaluation should take place before granting of outline planning permission.

1.3.2 The whole Site area was therefore targeted for detailed archaeological and geoarchaeological investigation. An *Archaeological Historic Environment Framework* was developed for the Site. A sub-surface deposit model was developed, and the Site

was divided into areas N1-N10 of different deposit character and archaeological potential (MoLA 2009, 2010; see below, Section 1.4 and Fig. 2).

1.4 Previous site investigations

1.4.1 The site was subject to three phases of geotechnical investigations (Table 1) prior to the archaeological evaluation work of 2009-2010. The first phase, of uncertain date but probably in the 1970s and associated with initial construction of the substation, involved drilling two boreholes in the 400kV transformer compound to a depth of *c* 7m. These revealed gravelly deposits towards their bases, suggesting the presence of Quaternary sediments. The second phase, in 1990, involved drilling a single borehole in the 275kV compound to a depth of over 15m. This demonstrated a shallow thickness of made-ground (0.2m) and an absence of Quaternary sediments, with the full depth of the borehole beneath 0.2m comprising Thanet Sand. The third phase, carried out by RSK in 2007, was more substantive, involving drilling in all three compounds with 19 boreholes done in total. These boreholes produced varied results, with some of them showing nothing but Tertiary Thanet Sand, and others revealing silty and gravelly sediments indicative of Quaternary deposition. The data from these early phases of investigation were included in the sub-surface deposit model and the *Archaeological Historic Environment Framework*.

Table 1: Previous geotechnical investigations

Date	Project code	Investigation details	No. of BHs	BH ref. nos	Report reference
1970s	-	Geotechnical investigation at 400kV transformer compound	2	BH1-2	CEGB Northfleet West 12/2712
1990	SM794	Geotechnical investigation at 275kV transformer compound	1	BHA	National Grid PLC, Civil Engineering Branch, Site Survey Report SM794
2007	10725	RSK geotechnical investigation at 400kV transformer compound	6	BH12-17	RSK 2007. Northfleet West 400kV and 132/275kV Compound Investigation
	10725	RSK geotechnical investigation at 275kV transformer compound	10	BH2A, 2B, 3-4, 6-11	
	10725	RSK geotechnical investigation at 132kV transformer compound	3	BH1-2, 5	

1.4.2 Three further phases of geotechnical and archaeological evaluation work were then carried out between 2009 and 2010 (Table 2). Phase 1 involved geoarchaeological monitoring of 13 geotechnical boreholes and 34 testpits, distributed across the Site. Phase 2 involved a geoarchaeological window sample programme of 74 separate 5m window samples drilled in various transects across the Site (Fig. 2). The combined results of Phases 1 and 2 led to a preliminary deposit model and *Archaeological Historic Environment Framework* for the Site (MoLA 2010), identifying six areas (A'-F') of differing Palaeolithic potential. The majority of the Site was shown to be of little or no Palaeolithic or post-Palaeolithic archaeological potential. However, a few smaller areas of the Site were identified as either of high, or uncertain, Palaeolithic potential. And there were certain parts of the Site of low Palaeolithic potential, but where the potential for later archaeological remains remained uncertain. Further testpit investigation was therefore carried out for these areas, as Phase 3 of the evaluation process, which involved excavation of 52 testpits in the eastern part of the site. Following from Phase

3, an updated deposit model was produced for the site (Table 3), together with an updated *Archaeological Historic Environment Framework* that defined ten areas of Palaeolithic potential N1-N10 (Table 4, Fig 2).

Table 2: Geotechnical and archaeological investigations, Phases 1-3, 2009-2010

Phase	Date	Project code	Investigation details	Quantity	Numbering details	Comments	Report reference
1	Aug 2009 - Feb 2010	KT-SFL 03 NWS 09	Geotechnical boreholes, with geoarchaeological monitoring	13 boreholes	BH 101-103, 105-109, 111-115	Intended boreholes BH 104 and BH 110 were not done	MoLA 2010
		KT-SFL 03 NWS 09	Geotechnical testpits, with archaeological monitoring	34 testpits	TP 101-133, 135	Intended testpit TP 134 was not done	
2	Aug-Sep 2009	KT-SFL 03	Geoarchaeological window samples	74 window samples	WS 100-119, 121-174	Window sample WS 168 just had a starter pit to 1.20 m, but no deeper sampling; intended window sample WS 120 was not done	
3	Nov 2010	KT-SFL 03	Geoarchaeological testpits	52 testpits	TPs 200-256	TPs 203 and 211-214 were not done	MoLA 2011

Table 3: Major sediment groups present at site (MoLA 2011)

Sediment Group	Period	Description	Interpretive notes
IX	Pleistocene	CLAY-SILTY/SANDY GRAVEL. Flint gravel in sandy/clay-silty matrix with contorted clay-silt/sand patches	Possibly valley-side edge of fluvial gravel capping elephant site sequence (cf. Unit 5 of W-S *et al.* 2006)
VIII	Pre-Quaternary? Pleistocene? Holocene?	SAND/GRAVELLY SAND. Sand, variably clay-silty, sometimes very pale, and including flint pebbles and very abraded beach-like cobbles	Very uncertain; could be Palaeocene; most likely Pleistocene or Holocene slopewash
VII	Pleistocene	CLAY-SILT. Mod. firm, pliable & cohesive, yellowish brown clay-silt with occ. flint pebs, and basal flint gravel layer	Probably mostly colluvial slopewash, perhaps some aeolian input
	Pleistocene? Holocene?	SAND/GRAVELLY SAND. Pale yellowish/ brownish/greyish VF-F sand with occ. gravel beds; sometimes clay-silty, sometimes with reddish/orange staining	Probably a Holocene slopewash deposit in TPs 230, 233 and 234, banked against E-W hedge to NE of 275kV substation; probably a Pleistocene slopewash deposit in TP 240, associated W-facing side of Grp II clay slipped mass
V	Pleistocene (Late?)	SAND, CLAY-SILT. Variably sandy/clayey silt with occ. fine pebble trails and Tertiary shell fragments; often gravel-rich bed 10-50 cm thick at base	Colluvial deposits, accumulated in central depression of Site, fed by network of dry valleys from north, west and southwest
IV	Pleistocene (Middle)	CLAY, SAND, GRAVEL. Varied deposits, including firm clay, and variably clay-silty sands,	Equivalent to lower parts of CTRL elephant sequence (cf. Units 1-3 of W-S *et*

Sediment Group	Period	Description	Interpretive notes
		gravels and chalk-rich layers	*al.* 2006), though precise correlations are often uncertain
III	Pleistocene (Middle)	BRICKEARTH. Mod. stiff, sandy clay-silt; reddish-brown with flint gravel trails/patches, and sandier beds	Probably mostly colluvial slopewash, perhaps some aeolian input [Prob. equivalent to unit 6 brickearth of CTRL elephant site]
II	Pleistocene (Middle)	PEBBLY CLAY. Stiff clay, usually dark brown/grey although sometimes reddish or greenish, with sand-rich bands and patches/lenses of flint gravel; occ. includes derived Tertiary shell fragments and/or pieces of septarian nodules	Slopewash, or slipped clay mass, derived from London Clay and Woolwich Beds previously outcropping on high ground to the west. Prob. equivalent to unit 4 clayey mass of CTRL elephant site]
I	Pleistocene (Middle)	GRAVEL. M-C flint gravel in clay-silty F-M sand mix; mod. consolidated	Possibly basal gravel bed of clay mass (dep II); alternatively, upslope extension of lower gravel rich beds of Grp IV
ThS	Palaeocene	Thanet Sand. Mod. soft, uncohesive, pale greyish-brown VF-F sand; sometimes sl. yellowish-reddish stained	Bedrock
Ch	Cretaceous	Chalk. Solid white Chalk	Bedrock

Table 4: Areas of Palaeolithic potential, N1-N10: summary (MoLA 2011)

Area	Quaternary deposits	Possible Palaeolithic remains	Palaeolithic potential
N1	None known; Palaeocene deposits present immediately beneath plough soil	Almost none; derived Palaeolithic artefacts could be present in the ploughsoil, or in thin slopewash veneers between the ploughsoil and the Palaeocene bedrock	LOW
N2			
N3			
N4a	Colluvial sands/clay-silts, more than 5m thick in places; shelly and gravelly in places, particularly towards base	Very unlikely to find any Palaeolithic remains, and any found would probably be reworked from much older sediments	LOW
N4b			
N4c			
N5	Major mass of pebbly clay, up to 10m thick; possibly sealing other sediments beneath it in places	Possibly occasional derived Palaeolithic remains within clay; any underlying sediments may contain less disturbed remains and biological evidence	LOW
N6			
N7	Wide range of sand, gravel and clay deposits, often chalk-rich, dipping and thickening to east	None known, but likely to be present in places	HIGH
N8	Fine clay-silt ("brickearth"), over pebbly clay, over chalk-rich sand and gravel deposits	None known, but likely to be present in places	HIGH
N9	Mostly colluvial clay-silt over pebbly clay; fluvial gravel and deeper colluvial sand/gravel slopewash deposits present in places	None known, but may to be present in places	MEDIUM
N10	Clay, over sand and gravelly sand	Abundant mint condition and refitting flint	GH

1.4.3 The 275kV compound is within Area N1 of the final *Archaeological Historic Environment Framework*. This is an area of low potential characterised by the presence of pre-Quaternary Tertiary deposits directly underlying modern made-ground and ploughsoil. Testpits 112 and 113 of the Phase 2 geotechnical/archaeological evaluation were dug immediately beside the locations earmarked for Watching Brief monitoring within the 275kV compound, namely remediation areas 1 and 2, and drainage interceptors A, B and C. These testpits both showed a sequence of Thanet Sand immediately below a thin covering of modern gravel. Therefore, following consultation with the Kent County Council Senior Archaeologist on the morning of 15th April 2014, these remediation areas within the 275kV compound were removed from the Watching Brief remit.

1.4.4 The 400kV compound is within Area N4a of the final *Archaeological Historic Environment Framework*, corresponding with Area C' of the preliminary framework (Fig. 2). This is an area of low potential characterised by the presence of thick colluvial sediments underlying ploughsoil and varying thickness of modern made-ground. It was thought very unlikely to find any Palaeolithic remains in these deposits, and that any found would probably be reworked from much older sediments. Numerous boreholes had been drilled in the 400kV compound during geotechnical investigations in 2007 (see Table 1), and further boreholes and testpits were added during Phases 1 and 2 geotechnical and archaeological investigations in 2009-2010 (see Table 2). Therefore, there was high confidence in the likely sediments to be encountered.

1.4.5 Two remediation areas within the 400kV compound, drainage interceptor chambers (D and E), were earmarked for archaeological monitoring. Observations were also made during the removal of concrete slabs in Areas 4, 5 and 6 (Fig. 3). The remediation work had the potential to affect shallowly-buried soils and deeper-lying Quaternary sediments beneath foundation slabs and drainage interceptors. Therefore archaeological monitoring was recommended by the Senior Archaeologist at Kent County Council.

2 Project Aims and Methodology

2.1 Aims

2.1.1 The aims and objectives of the archaeological Watching Brief were defined in Section 2.1 of the WSI (Parsons Brinckerhoff 2014). These were;

- to establish the presence or otherwise of archaeological deposits/features,
- to establish the nature of the deposits,
- to preserve by record any archaeological deposits encountered,
- to allow the presence of significant remains to be brought to the attention of relevant interested stakeholder parties,
- to contribute to heritage knowledge of the area.

2.2 Methodology

2.2.1 The methods for the archaeological Watching Brief were defined in detail in Section 2.2 of the WSI (Parsons Brinckerhoff 2014). There were three phases: preliminary research, fieldwork and reporting.

2.2.2 Preliminary research was carried out involving familiarisation with the historical and archaeological background of the site. Consultation with the HER, map regression and

a review of previous geotechnical investigations had been carried out during earlier stages of investigation at the Site (MoLAS 2003; 2006). All previous relevant archaeological reports were reviewed, some of which were co-authored by the Palaeolithic specialist contracted for this stage of work.

2.2.3 In summary, fieldwork involved monitoring of mechanical excavation of the remediation areas, with recording of the sequence of deposits revealed and any archaeological remains encountered following standard archaeological protocols. Fieldwork was carried out under the project code NFREME14. Further details of the archaeological recording protocols are given in the WSI.

2.2.4 For Areas 4, 5 and 6, mechanical excavation required the breaking up and removal of substantial (at least 0.4m thick) slabs of concrete, followed by sampling for contaminated ground in the exposed sediments underneath the slabs. The slab in Areas 4 and 5 was already broken-up when the Watching Brief began, and the underlying deposits had been interpreted as modern made-ground. A testpit - labelled as TP4 in the project archive - was dug down to a depth 1.30m, and this interpretation was verified, establishing (in conjunction with previous borehole records from this part of the 400kV compound) that the slabs of Areas 4 and 5 were underlain by made-ground, and that the remediation work did not affect any natural sediments or archaeological remains. For Area 6, the concrete slab was only partly broken-up prior to the Watching Brief, although previous remediation work in the vicinity also suggested it was underlain by modern made-ground. The deposits under Area 6 were not seen as part of the Watching Brief. It was agreed (with consent of the Senior Archaeologist at Kent County Council) that, if subsequent remediation work under Area 6 revealed natural deposits, remediation work would cease to allow a separate archaeological monitoring visit. Photos were later provided confirming the presence of modern made-ground under the Area 6 slab, and so no records of deposits here were made as part of the archaeological Watching Brief.

2.2.5 For Interceptor D, it was required to dig out an existing brick-lined chamber that extended *c* 1.5m below the ground surface and take samples for contaminated ground in the exposed sediments. The resulting excavation was *c* 3m long by 1.5m wide with a maximum depth of 1.75m. The exposed sequence, which proved to entirely consist of modern made-ground, was recorded and photographed.

2.2.6 For Interceptor E, it was required to dig out a substantial fibre-glass tank that was deeply buried and embedded within a substantial thickness of concrete on all sides. The concrete had to be broken up with a pneumatic pecker, and then the pieces extracted from the hole by mechanical excavator. The resulting excavation was *c* 5m long by 4m wide with a maximum depth of *c* 3.5m on its southern side (where the excavation cut into a sloping bank) but was only 2.60m deep on its northern side (where it abutted the access road into the compound). The exposed sequence, which consisted of *c* 1m of made-ground overlying 2.5m of natural deposits, was recorded and photographed.

3 RESULTS

3.1 Description of deposits

3.1.1 The deposits seen at each of Area 4, Interceptor D and Interceptor E are fully described below (**Appendix A**). In summary, the sequences in Area 4 and Interceptor D consisted entirely of modern made-ground, recorded as contexts 401 and D01 respectively. The

made-ground probably comprises fill, built up as part of levelling the 400kV compound ground surface when it was constructed in the 1970s.

3.1.2 The top 0.95m of the sequence at Interceptor E consisted of modern made-ground, context E01. Below that, the deposits consisted of colluvial deposits similar to those seen and allocated to Phase V (see Table 3) during previous geotechnical monitoring and archaeological evaluation in the vicinity. The greater part of the colluvial sequence, represented by contexts E02 through to E04 down to *c* 2.4m below the depth of the adjacent road surface, comprised fine-grained silt and sand deposits, becoming slightly gravelly in their bottom part. The lowest part of the sequence comprised a thin gravelly sand bed of varying thickness (E05) and a sandy gravel bed (E06), rich in comminuted fragments of Tertiary shell. These lower sand/gravel beds are typical of the basal parts of colluvial deposits and dry valley fills seen in previous investigations in the vicinity of the 400kV compound.

3.1.3 Transect A-A' (Figs 2 and 4) illustrates the sequence at Interceptor E in relation to interventions from earlier phases of work (WS160, WS166, TP105, MoLA 2010, Table 2; BH13, RSK 2007, Table 1).

3.2 Finds

3.2.1 No archaeological finds were identified.

3.3 Environmental remains

3.3.1 No environmental remains were identified within the sediments exposed during the fieldwork and no deposits offered potential for environmental sampling.

4 Discussion and Conclusions

4.1.1 As predicted, and in accordance with the *Archaeological Historic Environment Framework* produced by MoLA, no archaeological remains were found in the areas covered by the Watching Brief. In Areas 4, 5 and 6 in the 400kV compound, and at Interceptor D, the only deposits seen were modern made-ground. All these locations correspond with parts of the Site where the original depression in the natural ground surface needed to be filled in to create a level surface for the compound.

4.1.2 At Interceptor E in the southeast corner of the compound, a deep sequence of colluvial deposits, predominantly fine-grained but gravelly at their base, was seen down to 2.60m below the road surface. These were similar to those previously seen in testpits and boreholes in the nearby vicinity and attributed to Phase V of the overall site deposit model (Table 3), and they did not produce any archaeological remains. This was in a part of the Site where the natural depression in its centre was filled by dry valleys, leading to accumulation of a substantial body of colluvium. Its date is uncertain, but, based on flint finds recovered from Phase V deposits further east during the 2010 testpitting (MoLA 2011), the bulk of the colluvial sequence (and certainly the finer-grained parts that form its main and upper parts) are probably of Holocene age.

APPENDIX A. ARCHAEOLOGICAL CONTEXT INVENTORY

Area	Context	Type	Depth (BGL)	Comments	Finds	Date
Area 4	401	Deposit	0.00-1.30m (GL 26.65m OD)	Well consolidated yellowish brown sandy clay with occasional chalk flecks, charcoal and brick fragments and dark grey (derived) Tertiary flint pebbles	-	Modern
Interceptor D	D01	Deposit	0.00-1.75m (GL 26.65m OD)	Dark yellowish/greyish brown clayey/silty sand, moderately well-consolidated, with chalk pebbles and larger chalk lumps in top 0.30-0.40m	-	Modern
Interceptor E	E01	Deposit	0.00-0.10m (GL = 25m OD)	Moderately soft, dark yellowish-brown clayey/silty sand with heavy rooting, contains common flint pebbles and occasional CBM	-	Modern
Interceptor E	E02	Deposit	0.10-0.85m	Pale yellowish-brown sand/silt with occasional flint pebbles [colluvium, filling dry valley axis?]	-	Holocene?
Interceptor E	E03	Deposit	0.85-1.50m	Similar to E02, but slightly darker and more clay-silty, and with only very occasional flint pebbles [colluvium, filling dry valley axis?]	-	Holocene?
Interceptor E	E04	Deposit	1.50-2.35m	Similar to E02, but paler and sandier towards base, with moderately common flint pebbles in bottom 20-30cm, basal junction sharp and dipping shallowly east [colluvium, filling dry valley axis?]	-	Holocene?
Interceptor E	E05	Deposit	2.35-2.50m	Thin seam varying 10-20cm thick of pale brownish/greenish-grey sand with occasional flint pebbles, uneven undulating base [colluvium, filling dry valley axis?]	-	Holocene?
Interceptor E	E06	Deposit	2.50-2.60m	Soft and loose, moderately well-sorted fine-coarse flint gravel in fine sand matrix with common Tertiary shell fragments [colluvium, filling dry valley axis?]	-	Holocene?

APPENDIX B. BIBLIOGRAPHY AND REFERENCES

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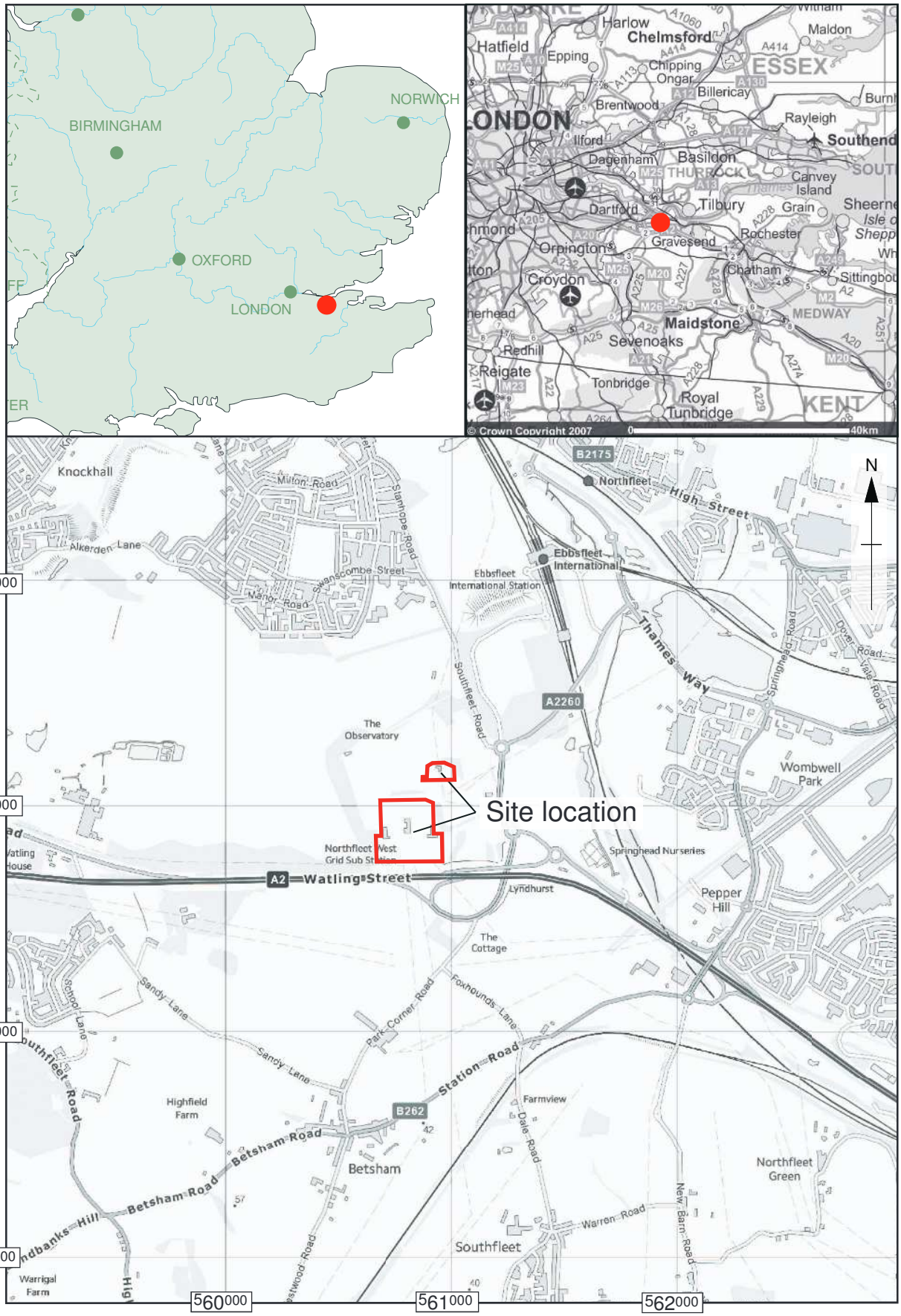
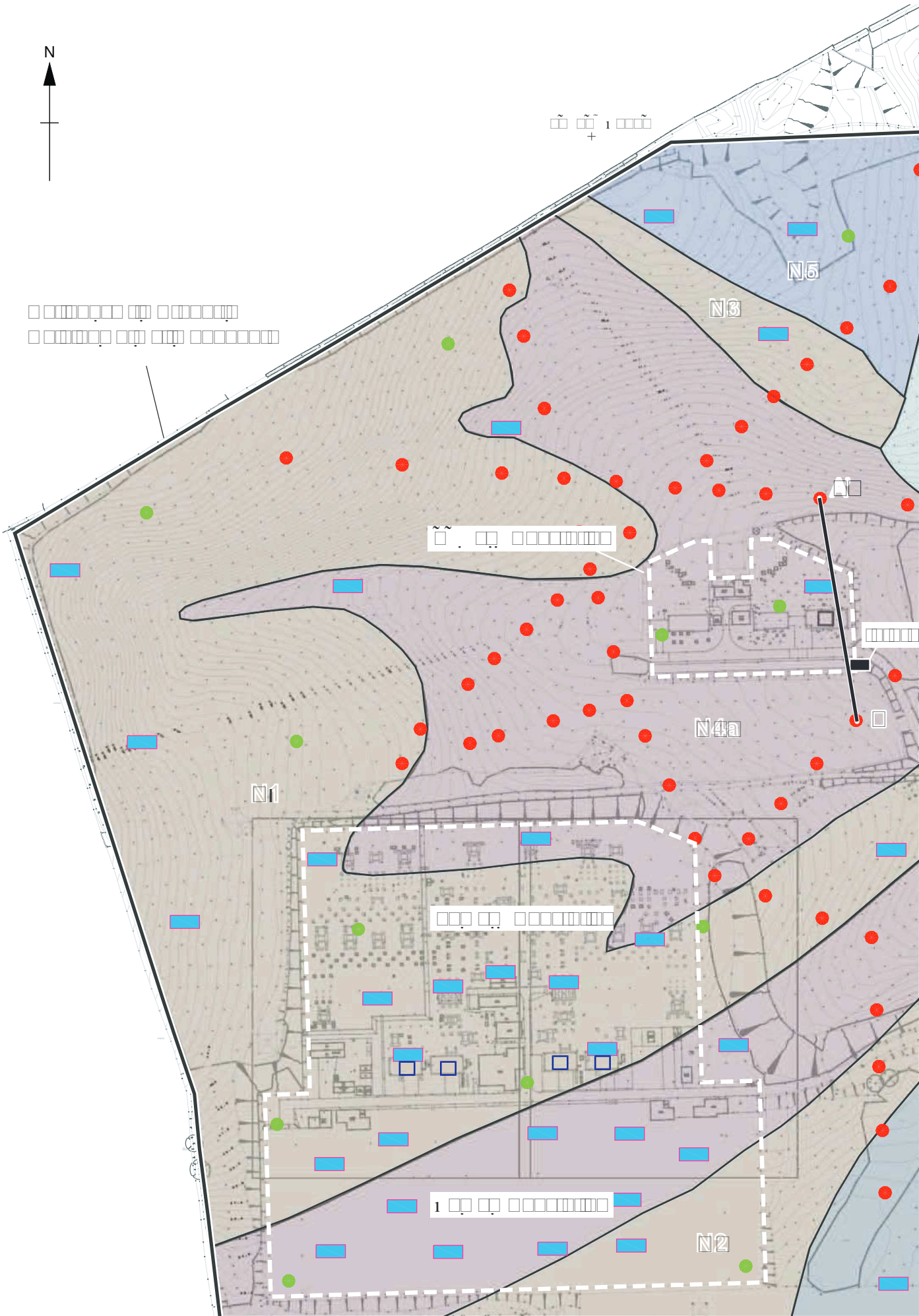
APPENDIX C. SUMMARY OF SITE DETAILS

Site name:	Northfleet West Substation Remediation Works, Southfleet Road, Swanscombe, Kent
Site code:	NFREME14
Grid reference:	Centred at NGR TQ 608 729
Type of watching brief:	General
Date and duration of project:	15th April 2014 (one day visit)
Area of site:	Overall 36 ha – WB focused on 400kV compound
Summary of results:	An archaeological Watching Brief was carried out during remediation work in the 400kV compound at Northfleet West Substation. No archaeological remains were found. Made-ground was seen down to at least 1.30m below the present ground surface at Area 4 and Interceptor D. A deep sequence of colluvial deposits, predominantly fine-grained but gravelly at their base, was seen at the location of Interceptor E in the south-east corner of the compound, down to 2.60m below the road surface. These were similar to those previously seen in testpits and boreholes in the nearby vicinity, and they did not produce any archaeological remains. No monitoring was carried out at the 275kV compound. Previous geotechnical and archaeological investigations have firmly established that the deposits here that are affected by the remediation works have no archaeological potential. They have been shown to comprise Thanet Sand under *c* 0.15m of modern gravel
Location of archive:	Oxford Archaeology

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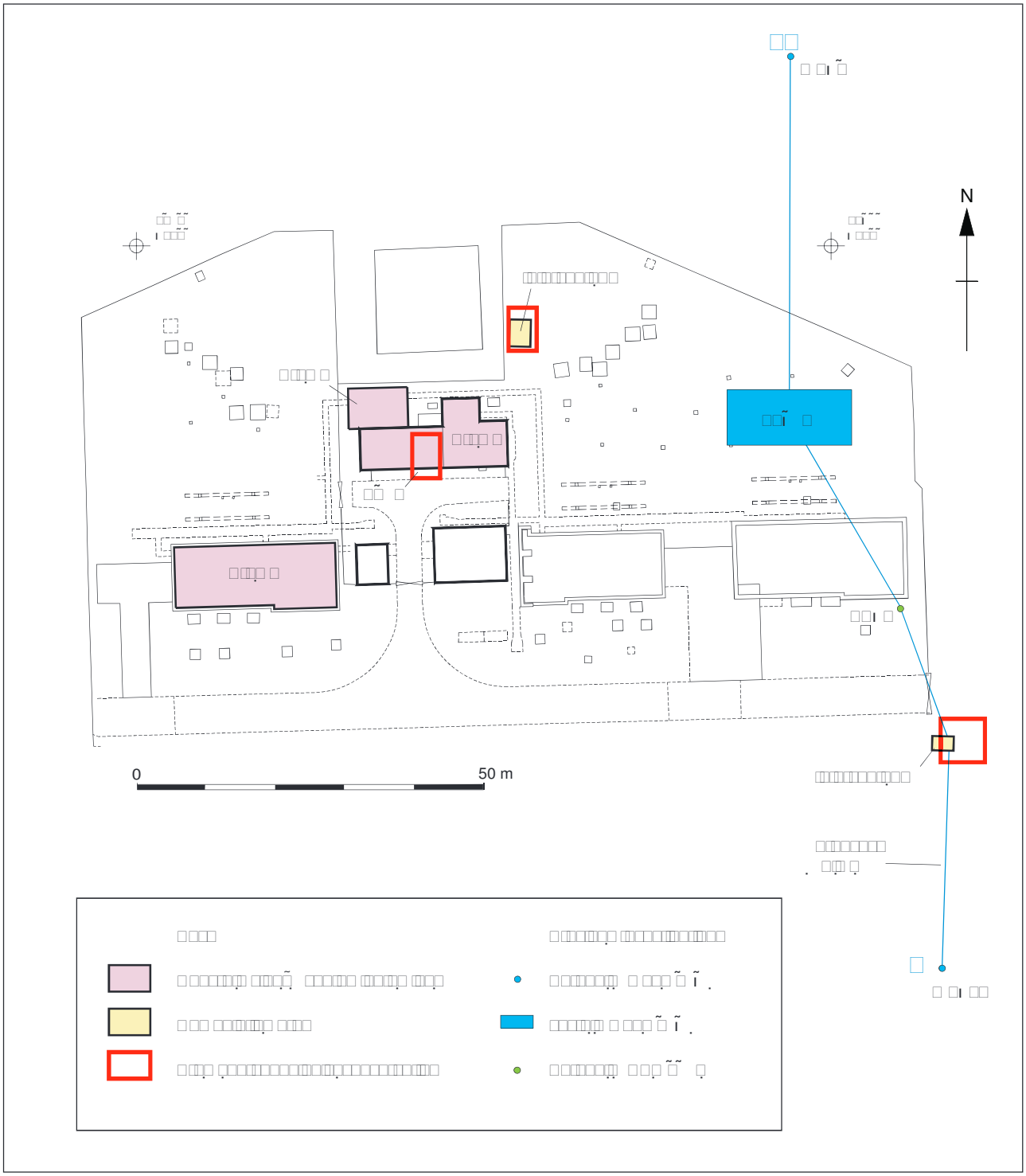
N1
N2


N
0
50 m

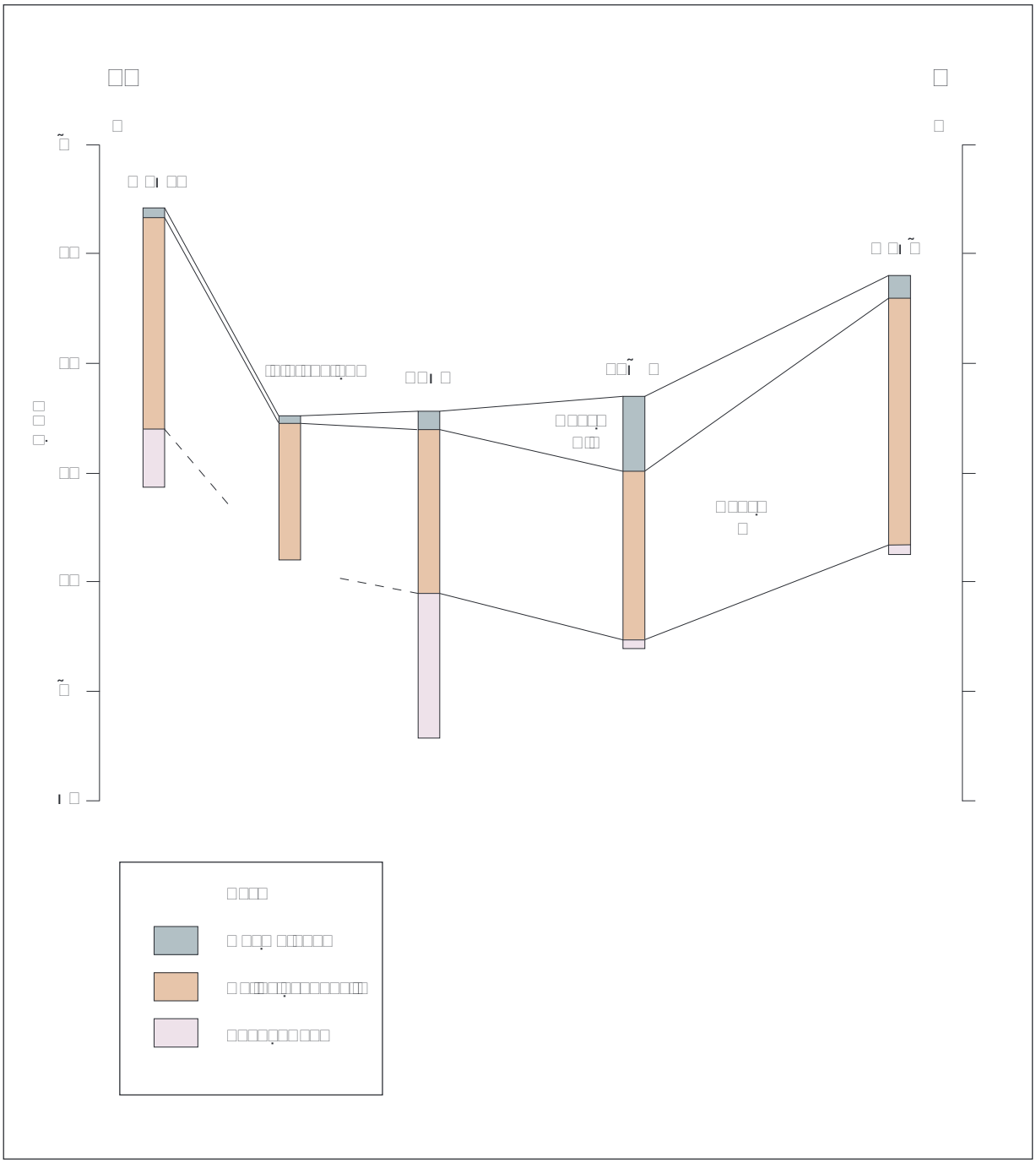


Plate 1: Interceptor D, prior to excavation

Plate 2: Made-ground deposits exposed to 1.75m depth at Interceptor D

Plate 3: Interceptor E, prior to excavation

Plate 4: Manholes exposed, Interceptor E

Plate 5: Colluvial sediments exposed beneath made-ground, Interceptor E

Plate 6: Colluvial sediments with gravel at the base of excavation at 2.60m, Interceptor E

Plate 7: Broken concrete slab, Area 5

Plate 8: Made-ground beneath concrete slab, Area 4

Plate 9: Made-ground beneath concrete slab, Area 6