Archaeological Monitoring and Recording Report: Ebbsfleet Primary Substation, Kent

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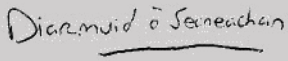
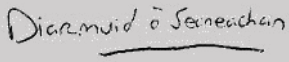
Author	Checked	Approved
 *Andrew Brown BA (Hons) MSc ACIfA*	 *Diarmuid O Seaneachain BA PhD MCIfA*	 *Diarmuid O Seaneachain BA PhD MCIfA*

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Revision History

Revision	Date	Amendment

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Summary

In February 2019 ADAS carried out archaeological monitoring and recording of six geotechnical pits being excavated in advance of the construction of the new Ebbsfleet Primary Substation at Ebbsfleet, Kent (NGR: TQ 61447 73516; Figure 1).

RSK ADAS Ltd were instructed by UK Power Networks to carry out archaeological monitoring of the geotechnical pits in support of an archaeological desk-based assessment which was also produced by ADAS in November 2018 (ADAS 2018).

The aim of the archaeological monitoring was to ground-truth the desk-based evidence that all parts of the proposed Site had been extensively quarried and back-filled in the recent past. The work was also carried out as a precautionary measure due to the discovery of significant archaeological and geoarchaeological remains during previous archaeological excavations to the north and south of the Site.

The results of the borehole survey confirmed that modern made ground within the former quarry extended to a depth of 20 m – 23.5 m below ground level across the Site.

The archaeological monitoring demonstrated that test pits 1A, and 3A-6A contained between 0.10 m to 0.60 m of topsoil overlying made ground to a depth of at least 3 m below the present ground level. Test Pit 2A contained only made ground to a depth of 2 m below present ground level.

No archaeological features, deposits or artefacts were observed during the archaeological monitoring carried out at the proposed site of the new Ebbsfleet Primary Substation. This was primarily due to the level of modern truncation from previous quarry activity carried out during the early and mid-20th century.

These results indicate that the monitoring methodology used was effective in demonstrating that the Site has been heavily truncated and subsequently back-filled with modern material.

This report concludes that there is no risk of buried archaeological remains being present within the Site boundary or along the route of the proposed access track to the north to the depth of the made ground on Site.

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Acknowledgements

This archaeological watching brief was commissioned by UK Power Networks (UKPN), and thanks are due in this regard. Fieldwork was carried out by Andrew Brown. The final report and supporting illustrations were prepared by Andrew Brown and checked by Diarmuid O Seaneachain. The archive was compiled by Andrew Brown.

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1 Introduction

Project Background

1.1.1 In February 2019 ADAS carried out archaeological monitoring and recording of six geotechnical pits being excavated in advance of the construction of the new Ebbsfleet Primary Substation at Ebbsfleet, Kent (NGR: TQ 61447 73516; Figure 1).

1.1.2 The works were carried out within the permitted development works rights of UKPN under the Electricity Act 1989, and were therefore not subject to a planning condition.

1.1.3 RSK ADAS Ltd were instructed by UK Power Networks to carry out archaeological monitoring of the geotechnical pits in support of an archaeological desk-based assessment which was also produced by ADAS in November 2018 (ADAS 2018).

1.1.4 The aim of the archaeological monitoring was to ground-truth the desk-based evidence that the proposed Site had been extensively quarried and back-filled in the recent past. The work was also carried out as a precautionary measure due to the discovery of significant archaeological and geoarchaeological remains during previous archaeological excavations to the north and south of the Site.

1.1.5 The fieldwork followed the *Standard and Guidance for an archaeological watching brief* (CIfA 2014), *the Management of Archaeological Projects 2* (English Heritage 1991) and the *Management of Research Projects in the Historic Environment* (MORPHE): *Project Manager's Guide* (EH 2006), and the RSK Technical Manual (RSK 2019).

Site Location, Description of Development and Geology

Site Location

1.2.1 The proposed development is located to the south of Ebbsfleet International Train Station, centred on NGR TQ 61447 73516. The field in which the Site is located is bordered by the A2260 Ebbsfleet Gateway to the south and the Channel Tunnel Rail Link rail way and associated car park to the north, east, and west. The Site is recorded to lie at a height of 8.30 m above ordnance Datum (m OD) in a largely flat and currently fallow field covered by vegetation. Historic mapping and borehole data indicate the Site was encompassed by chalk quarrying in the mid-20th century to a depth of approximately 19.50 m below present ground level.

Description of groundworks

1.2.2 The groundworks involved the excavation of six geotechnical test pits, each measuring up to 2 m by 0.50 m by up to 3 m deep. The grid references for each of the test pits are:

1: TQ 61437 73712

2: TQ 61448 73642

3: TQ 61448 73561

4: TQ 61461 73489

5: TQ 61489 73520

6: TQ 61449 73590

1.2.3 A further three boreholes were drilled on the site (BH1A-BH3A). These were not monitored on site. However only one borehole, which extended to a depth of 25 m below ground level (bgl) encountered natural chalk at a depth of 23.5 m below ground level. Above this depth only modern made ground was encountered. The other two boreholes each extended to 20 m in depth and both encountered only modern made ground.

1.2.4 ***Underlying Geology***

1.2.5 The underlying bedrock geology is recorded as undifferentiated Lewes Nodular Chalk, Seaford Chalk, and Newhaven Chalk Formations. No superficial deposits are recorded at the Site, although sinuous deposits of Head clay, silt, sand, and gravel are recorded to the north, east and south (BGS 2019).

1.2.6 A series of eight boreholes are located in close proximity to the Site, all of which are associated with the construction of the Channel Tunnel Rail Link. The eight boreholes were excavated to a depth of between 3.71 m to 24.97 m and exclusively revealed deposits of made ground. The most informative of these boreholes is located immediately to the north of the development (TQ67SW858 – Channel Tunnel Rail Link SA1883). This borehole recorded four distinct deposits of made ground to a depth of 19.50 m (-11.20 mOD). Chalk bedrock was recorded underneath these deposits, although traces of contamination were evident within the top 0.85 m (BGS 2019).

2 Objectives

Aims and Scope

2.1.1 The aims of the archaeological monitoring were:

- *To ensure that any archaeological features/deposits exposed during groundworks associated with the development area were identified, recorded and interpreted to an acceptable standard;*
- *To carry out archaeological monitoring and recording to ensure that any significant discoveries of artefactual evidence are recorded and analysed to an acceptable standard.*
- *The general aim of the project was to identify and record any unknown buried archaeological remains or artefacts that were revealed during the course of the scheme.*

- *The specific aim of the project was to identify and record any currently unknown buried archaeological remains or artefacts that were associated with the Palaeolithic Sites near Baker's Hole (List No. 1003557) and Neolithic Sites near Ebbsfleet (List No. 1004206) Scheduled Monuments and to inform a strategy to avoid or mitigate the impacts of the proposed development on any surviving archaeological remains identified.*

2.1.2 The fieldwork took place within, and contributed to, the goals of the regional frameworks set out in the *South East Research Framework* (Kent County Council 2019).

2.1.3 The results are reported in Section 6 below.

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4 Archaeological and Historical Context

Introduction

4.1.1 Historic Environment Record HER) data obtained from the Kent Historic Environment Record (KHER) was obtained in order to assess the historic environment potential of a 1 km Study Area around the groundworks located at Ebbsfleet Primary (Figure 2). Detailed results of this assessment are reported in a separate archaeological desk-based assessment which accompanies this report (ADAS 2018). A summary of the historic environment record results are described below.

Summary of Archaeological and Historical Background

4.1.2 Three Scheduled Monuments were located within the Study Area. These were recorded as the Palaeolithic sites near Baker's Hole which was located between 474 m and 731 m to the north of the Site and Neolithic sites near Ebbsfleet which was located 205 m to the east and 340 m to the south of the Site. The Springhead Roman site was located 754 m to the south of the Site.

4.1.3 The development was confined to the redline boundary shown on Figures 1-4 and was situated over 200 m away from the closest Scheduled Monument. As such, the proposed development did not physically impact these designated assets.

4.1.4 The Kent HER records a total of two hundred sixty-seven heritage assets and one hundred thirty-six previous archaeological interventions within the Study Area.

4.1.5 The closest recorded heritage assets to the development are individual Palaeolithic and Neolithic finds spots and an Early Anglo-Saxon pit. A post-Medieval barn is recorded to the west of the Site, although this is no longer extent in the landscape. The Palaeolithic site of Baker's Hole is situated approximately 280 m to the north of the Site, although this asset has been largely truncated through quarrying. These assets will not be impacted by the proposed development as they are either no longer extant or have previously been impacted by archaeological intervention.

4.1.6 The archaeological desk-based assessment (ADAS 2019) identified very low to no potential for previously unknown archaeological deposits at the location of the proposed development. Historic mapping and previous borehole surveys indicate the site is severely truncated by mid-20th century quarrying. As such, the proposed development is highly unlikely to impact previously unknown archaeological deposits.

Previous Archaeological Investigations

4.1.7 The Kent HER records one hundred thirty-six previous archaeological interventions within the Study Area in the Study Area (Figure 4a and b).

4.1.8 Of these twenty are recorded by the Kent HER as archaeological watching briefs revealing archaeological remains ranging from the Palaeolithic to the Early Medieval periods.

4.1.9 The Kent HER records fifty-two evaluations including three evaluations specifically focused on geoarchaeology within the Study Area. These interventions have revealed archaeological remains ranging from the Palaeolithic to the 19th century.

4.1.10 The Kent HER records thirty-four excavations within the Study Area. These interventions have revealed archaeological remains ranging from the Palaeolithic to Post-medieval periods.

Historic Mapping and Aerial Photography Analysis

4.1.11 The earliest historic mapping consulted online was the Northfleet Parish Tithe map from 1839 and the Swanscombe Parish Tithe map of 1843. These maps indicate that the Site was on the border of the two parishes but may have been a tidal marsh land as no land owners or occupiers are recorded on either Tithe register (The Genealogist 2019).

4.1.12 The earliest Ordnance Survey (OS) mapping of the Site consulted was the OS County Series: Kent map of 1869. The Site is located in an established agrarian landscape and, specifically, in a large field bounded by trackways to the north and west, Watling Street to the south, and the Ebbsfleet

to the east. A single structure, labelled New Barn, is recorded in this field. The location of the Roman town *Vagniacae* (3 and 225) is recorded to the south of the Site (Old Maps 2019).

4.1.13 The remaining maps from the late 19th century show no changes to the Site or the field in which it is located. An old chalk pit is labelled for the first time on the OS County Series: Kent map of 1879, which is replaced by a much larger quarry and gravel pit by 1897. An old clay pit first appears to the west of the Site on the 1897 map (Old Maps 2019).

4.1.14 The OS County Series: Kent map of 1938-1946 shows the first change to the Site, where a large 'old chalk pit', a chalk pit, and a tramway situated between the pits are recorded. These features encompass the full extent of the Site. The quarry and gravel pit first recorded in 1897 are labelled as Baker's Hole for the first time on this map (Old Maps 2019).

4.1.15 There is no change in the landscape until the 1970's where the remainder of the field in which the Site is situated is shown to have been quarried and the quarries turned to ponds. Only the western edge of the field is recorded as undisturbed (Old Maps 2019).

4.1.16 The OS Plan map of 1980-1988 records the final change to the Site, where the ponds had been infilled and the field reinstated as a large open space bounded by a road and paths to the north and west, Watling Street to the south and the Ebbsfleet to the east (Old Maps 2019).

5 Methodology

Introduction

5.1.1 The fieldwork was carried out with archaeological monitoring of the geotechnical pits in support of an archaeological desk-based assessment which was also produced by ADAS in November 2018 (ADAS 2018).

5.1.2 The aim of the archaeological monitoring was to demonstrate and prove that the proposed Site had been extensively quarried and back-filled in the recent past. The work was also carried out as a precautionary measure due to the discovery of significant archaeological and geoarchaeological remains during previous archaeological excavations to the north and south of the Site.

5.1.3 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with the Chartered Institute for Archaeologists *Standard and Guidance: Archaeological watching brief 2014.*

Artefacts, Human Remains, Treasure and Environmental Sampling

5.1.4 No archaeologically significant artefacts or human remains were encountered during any of the archaeological monitoring of the ground works. No archaeologically significant deposits were disturbed by the groundworks, so no environmental sampling was undertaken.

Post-Excavation Analysis

5.1.5 No archaeologically significant artefacts or deposits were encountered during the archaeological monitoring, and therefore no specialist post-excavation analysis was required.

Archives and Deposition

5.1.5 The archive is currently held by ADAS at their offices in Milton Park. No archaeologically significant artefacts were recovered during the monitoring and therefore no artefacts will need to be deposited with an approved local museum.

5.1.6 A paper or digital archive will be deposited with the local museum within six months of the completion of the fieldwork and gaining an accession number. A summary of information from this project, set out within Appendix C, will be entered onto the OASIS database of archaeological projects in Britain. An OASIS form, ID reference *adasuklt1-344813* has been provisionally completed and will be submitted at the time of completion.

ADAS Project Team

5.1.7 Fieldwork was undertaken by Andrew Brown. The report was written by Andrew Brown. The illustrations were prepared by Andrew Brown. The archive was compiled and prepared for deposition by Andrew Brown. The project was managed for ADAS by Diarmuid O Seaneachain.

6 Results

6.1.1 This section provides an overview of the monitoring results; detailed summaries of the recorded contexts and finds are to be found in Appendix A.

6.1.2 The works were carried out on the 6th February 2019. The works consisted of the machine digging of six geotechnical test pits and three boreholes (BH1A-BH3A) were also drilled on the Site.

1.2.7 Only one borehole, which extended to a depth of 25 m below ground level (bgl) encountered natural chalk at a depth of 23.5 m below ground level. Above this depth only modern made ground was encountered. The other two boreholes each extended to 20 m in depth and both encountered only modern made ground.

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6.1.3 The results of the borehole survey confirmed the maximum depth of the made ground within the former quarry. The results of the archaeological monitoring of the test pitting are described below.

The Geotechnical Test Pits

Test Pit 1A

6.1.4 Test Pit 1A was located on the route of a proposed access track approximately 128 m to the north of the Site boundary. The test pit measured 2 m by 0.50 m and was 2 m deep (Plate 1).

6.1.5 The observed stratigraphic sequence was 0.20 m of topsoil (1001) overlying 0.90 m of compact chalk (1002). This compact chalk in turn overlay 1.20 m of very compact light-mid brown silty sand containing chalk rubble and felt matting (1003).

6.1.6 No archaeological remains were recovered from Test Pit 1A.

Test Pit 2A

6.1.7 Test Pit 2A was located also located along the route of a proposed access track approximately 57 m to the north of the Site boundary. The test pit measured approximately 2 m by 0.50 m and was 2 m deep.

6.1.8 The stratigraphic sequence observed was approximately 1 m of chalky made ground (2001) overlying 1 m of light-mid brown silty sand containing chalk rubble and felt matting (2002).

6.1.9 No archaeological remains were observed in Test Pit 2A.

Test Pit 3A

6.1.10 Test Pit 3A was located approximately 21 m inside the northern boundary of the proposed development. The test pit measured 2 m by 0.50 m and was 2 m deep.

6.1.11 The observed stratigraphic sequence was 0.60 m of topsoil (3001) overlying 2.40 m of compact light-mid brown silty sand containing chalk rubble, felt matting and modern plastic rubbish (3002).

6.1.12 No archaeological remains were observed in Test Pit 3A.

Test Pit 4A

6.1.13 Test Pit 4 was located 18 m inside the southern boundary of the proposed development and measured approximately 2 m by 0.50 m and was 2 m deep (Plate 2).

6.1.14 The stratigraphic sequence of the test pit was 0.30 m of topsoil (4001) which overlay 1.70 m of light-mid brown silty sand made ground containing chalk and tarmac rubble fragments (4002).

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6.1.15 No archaeological remains were observed in Test Pit 4A.

Test Pit 5A

6.1.16 Test Pit 5A was located 13 m inside the south-eastern corner of the Site boundary and measured 2 m by 0.50 m and was 3 m deep.

6.1.17 The observed stratigraphic sequence was 0.60 m of topsoil (5001) overlying 2.40 m of compact light-mid brown silty sand containing chalk rubble, felt matting and modern plastic rubbish (5002).

6.1.18 No archaeological features were observed in Test Pit 5A

Test Pit 6A

6.1.19 Test Pit 6A was located approximately 6 m outside the northern Site boundary on the route of a proposed access track. The test pit measured 2 m by 0.50 m and was 2 m deep.

6.1.20 The observed stratigraphic sequence of the test pit was 0.10 m of topsoil (6001) overlying 1.90 m of light-mid brown silty sand made ground containing chalk rubble and fragments of tarmac (6002).

6.1.21 No archaeological features were observed in Test Pit 6A.

7 Discussion and Conclusions

7.1.1 No archaeological features, deposits or artefacts were observed during the archaeological monitoring carried out at the proposed site of the new Ebbsfleet Primary Substation. This was primarily due to the level of modern truncation from previous quarry activity carried out during the early and mid-20th century.

7.1.2 The archaeological monitoring demonstrated that test pits 1A, and 3A-6A contained between 0.10 m to 0.60 m of topsoil overlying made ground to a depth of at least 3 m below the present ground level. Test Pit 2A contained only made ground to a depth of 2 m below present ground level.

7.1.3 The results of the borehole survey confirmed that modern made ground within the former quarry extended to a depth of 20 m – 23.5 m below ground level across the Site.

7.1.4 These results indicate that the monitoring methodology used was effective in demonstrating that the Site has been heavily truncated and subsequently back-filled with modern material.

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7.1.5 This report concludes that there is no risk of buried archaeological remains within the Site boundary or along the route of the proposed access track to the north to the depth of the made ground.

8 References

(ADAS 2018) *Archaeological Desk-Based Assessment: Ebbsfleet Primary Central Substation, Ebbsfleet, Kent.* Unpublished Client Report.

(ADS 2019) Archaeology Data Service 2019. Available at: http://archaeologydataservice.ac.uk/ [accessed March 2019].

Ancient Monuments and Archaeological Areas Act 1979. Available at: https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/ [accessed March 2019].

Brown, D.H. 2007 Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation. Available at http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-799-1/dissemination/pdf/AArchives_v2.pdf [accessed March 2019].

Chartered Institute for Archaeologists (CIfA) 2014 Standard and Guidance for an archaeological watching brief. Available at http://www.archaeologists.net/sites/default/files/node-files/IfASG-Watching-Brief.pdf [accessed March 2019].

English Heritage 1991 The Management of Archaeological Projects 2. Historic England Guidance.

English Heritage 2006 Project Managers' Guide. Historic England Guidance.

English Heritage 2011 Environmental Archaeology. A guide to the theory and practice of methods from sampling and recovery to post-excavation (second edition) [pdf] Available at https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/ [accessed March 2019].

Historic England (2015) *Management of Research Projects in the Historic Environment, The MoRPHE Project Managers' Guide*. Historic England Guidance

(KHER) Kent Historic Environment Record [accessed December 2018]

National Heritage List 2019. Available at: http://list.historicengland.org.uk/resultsingle.aspx?uid=1003328 [accessed March 2019].

The Health and Safety at Work Act 1974. Available at:

http://www.legislation.gov.uk/all?title=Health%20and%20Safety%20Act%20 [accessed March 2019].

(RSK 2017) RSK Technical Procedure Manual 2018. Available at: http://he_wss/root/ba/Archaeology/RSK%20Archaeology%20Document%20Examples/Forms/AllItems.aspx [accessed March 2019].

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RSK 2019 *Geo-environmental and Geotechnical Site Investigation: Land off International Way, Ebbsfleet*. Unpublished Geo-technical report Number 1920296-R01 (00).

The Town and Country Planning (General Permitted Development) (England) Order 2015. Available at: http://www.legislation.gov.uk/uksi/2015/596/contents/made [accessed March 2019]

The Treasure Act 1996. Available at: http://www.legislation.gov.uk/ukpga/1996/24/contents [accessed March 2019].

Online Resources

(BGS 2019) British Geological Survey Geology of Britain Viewer. Available at: http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html [accessed March 2019].

(Getmapping 2019) Getmapping.com 2019. Available at: https://www1.getmapping.com/Webshop/Web/CommonPages/Main/preview.aspx?srid=27700&x=402678&y=201178&searchType=&microsite=none [accessed March2019]

Google Maps 2019. Available at: https://www.google.co.uk [accessed March2019].

National Heritage List 2019. Available at: http://list.historicengland.org.uk/resultsingle.aspx?uid=1003328 [accessed March2019].

(NLS 2019) National Library of Scotland Maps. Available at: Explore georeferenced maps - Map images - National Library of Scotland [accessed March2019].

(Old Maps 2019) Oldmaps.co.uk. Available at: https://www.old-maps.co.uk/#/Map/564500/30350.html [accessed March2019].

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Appendix A: Context Descriptions

Test Pit 1

No.	Type	Description	Length (m)	Width (m)	Depth/ Thickness (m)
1001	Layer	Topsoil with chalk fragments throughout	5	0.50	0.10
1002	Layer	Compact chalk backfill	5	0.50	0.90
1003	Layer	Very compact light-mid brown silty sand with chalk rubble, felt matting and tarmac fragments present throughout	5	0.50	0.20

Test Pit 2

No.	Type	Description	Length (m)	Width (m)	Depth/ Thickness (m)
2001	Layer	Topsoil with chalk fragments throughout	5	0.50	1
2002	Layer	Very compact light-mid brown silty sand with chalk rubble, felt matting and tarmac fragments present throughout	5	0.50	1

Test Pit 3

No.	Type	Description	Length (m)	Width (m)	Depth/ Thickness (m)
TP3001	Layer	Topsoil with chalk fragments throughout	5	0.50	0.60

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TP3002	Layer	Very compact light-mid brown silty sand with chalk rubble, felt matting and tarmac fragments present throughout	5	0.50	2.40

Test Pit 4

No.	Type	Description	Length (m)	Width (m)	Depth/ Thickness (m)
TP4001	Layer	Topsoil with chalk fragments throughout	5	0.50	0.30
TP4002	Layer	Very compact light-mid brown silty sand with chalk rubble, felt matting and tarmac fragments present throughout	5	0.50	1.70

Test Pit 5

No.	Type	Description	Length (m)	Width (m)	Depth/ Thickness (m)
1001	Layer	Topsoil with chalk fragments throughout	5	0.50	0.60
1002	Layer	Very compact light-mid brown silty sand with chalk rubble, felt matting and tarmac fragments present throughout	5	0.50	1.40

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Test Pit 6

No.	Type	Description	Length (m)	Width (m)	Depth/ Thickness (m)
2001	Layer	Topsoil with chalk fragments throughout	5	0.50	0.10
2002	Layer	Very compact light-mid brown silty sand with chalk rubble, felt matting and tarmac fragments present throughout	5	0.50	1.90

Appendix B: The Finds

No archaeological significant artefacts were identified during the course of the archaeological monitoring.

Appendix C: Oasis Report Form

OASIS ID: adasuklt1-344813

Project details

Project name	Archaeological Monitoring and Recording: Ebbsfleet Primary Substation, Kent
Short description of the project	In February 2019 ADAS carried out archaeological monitoring and recording of six geotechnical pits being excavated in advance of the construction of the new Ebbsfleet Primary Substation at Ebbsfleet, Kent (NGR: TQ 61447 73516). The aim of the archaeological monitoring was to demonstrate and prove that the proposed Site had been extensively quarried and back-filled in the recent past. The work was also carried out as a precautionary measure due to the discovery of significant archaeological and geoarchaeological remains during previous archaeological excavations to the north and south of the Site. No archaeological features, deposits or artefacts were observed during the archaeological monitoring carried out at the proposed site of the new Ebbsfleet Primary Substation. This was primarily due to the level of modern truncation from previous quarry activity carried out during the early and mid-20th century.
Project dates	Start: 06-02-2019 End: 06-02-2019
Previous/future work	Yes / No
Any associated project reference codes	EBBS19 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Other 7 - Mineral extraction
Monument type	NONE None
Monument type	NONE None
Significant Finds	NONE None
Significant Finds	NONE None
Investigation type	""Watching Brief""
Prompt	National Planning Policy Framework - NPPF

Project location

Country	England
Site location	KENT DARTFORD SWANSCOMBE AND GREENHITHE Ebbsfleet Primary Substation
Study area	20 Square metres
Site coordinates	TQ 61437 73712 51.43884127168 0.323014298197 51 26 19 N 000 19 22 E Point
Site coordinates	TQ 61448 73642 51.438209165056 0.323140519317 51 26 17 N 000 19 23 E Point
Site coordinates	TQ 61448 73561 51.437481366223 0.323103579208 51 26 14 N 000 19 23 E Point
Site coordinates	TQ 61461 73489 51.436830717292 0.323257636376 51 26 12 N 000 19 23 E Point

Site coordinates	TQ 61489 73520 51.43710125164 0.323674312265 51 26 13 N 000 19 25 E Point
Site coordinates	TQ 61449 73590 51.437741650302 0.323131181058 51 26 15 N 000 19 23 E Point
Height OD / Depth	Min: 8m Max: 9m

Project creators

Name of Organisation	RSK ADAS Ltd
Project brief originator	RSK ADAS Ltd
Project design originator	RSK ADAS Ltd
Project director/manager	Diarmuid O Seaneachain
Project supervisor	Andrew Brown
Type of sponsor/funding body	Electricity Authority/Company
Name of sponsor/funding body	UK Power Networks

Project archives

Physical Archive Exists?	No
Digital Archive recipient	RSK ADAS Ltd- Milton Park
Digital Contents	"none"
Digital Media available	"GIS","Images raster / digital photography","Text"
Paper Archive recipient	RSK ADAS Ltd- Milton Park
Paper Contents	"none"
Paper Media available	"Notebook - Excavation',' Research',' General Notes"

Entered by	Andrew Brown (andrew.brown@adas.co.uk)
Entered on	6 March 2019

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Plates

Plate 1: General shot across the Site looking south-west.

Plate 2: General shot across the Site looking north-west.

Plate 3: View of the east facing section of Test Pit 1A.

Plate 4: Oblique view of the north facing section of Test Pit 2A.

Plate 5: Oblique view of the north facing section of Test Pit 3A.

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Plate 6: Oblique view of the west facing section of Test Pit 4A.

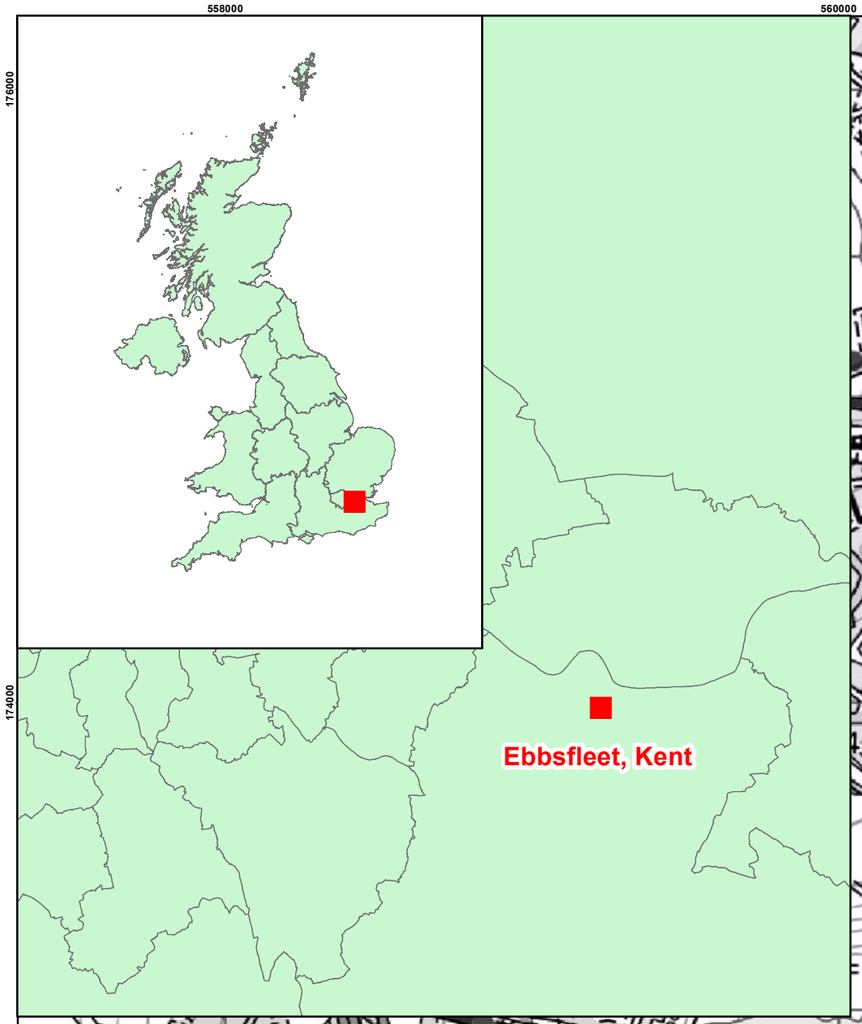
Plate 7: Oblique view of the east facing section of Test Pit 5A.

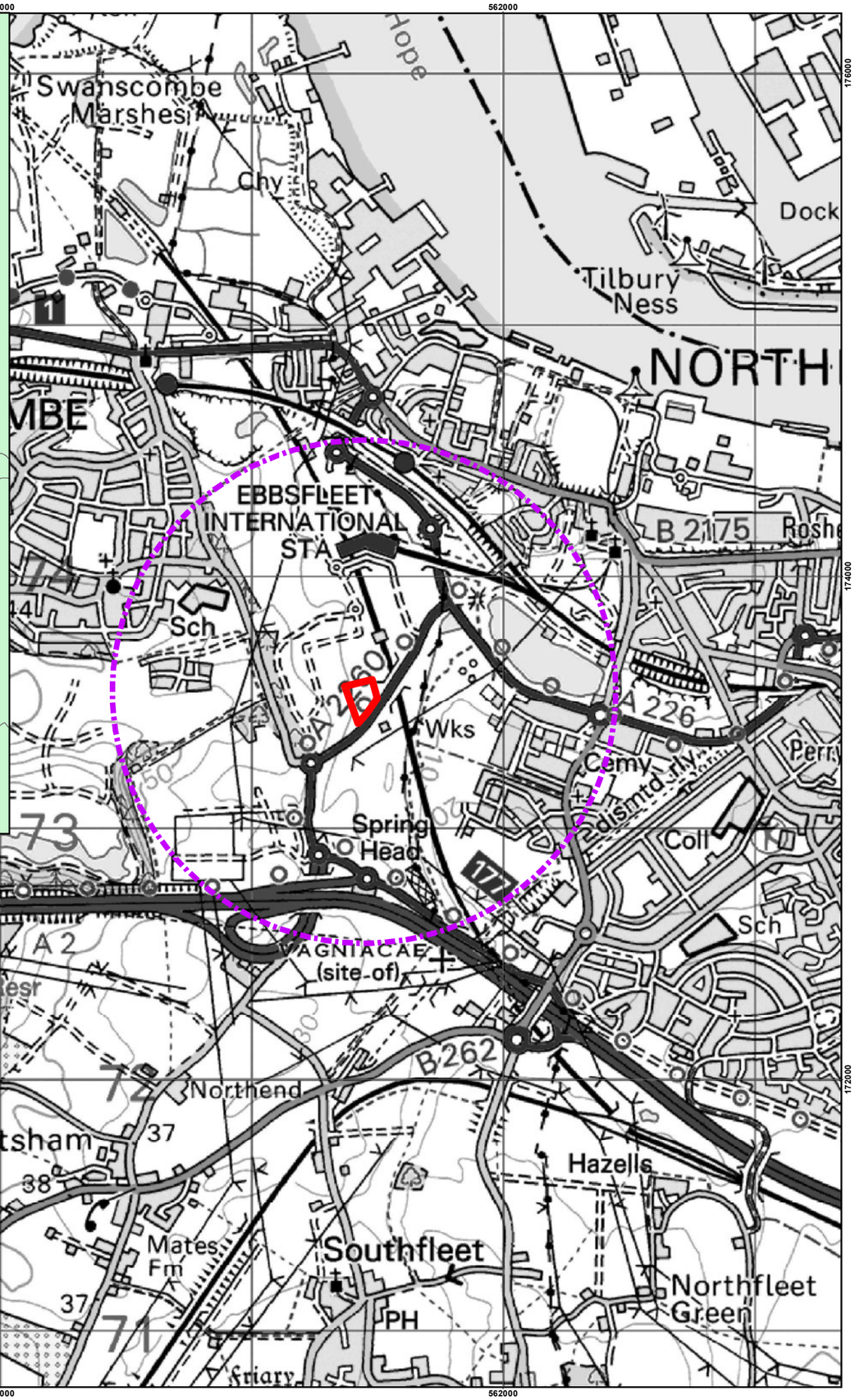
Plate 8: Oblique shot of the north-east facing section of Test Pit 6A.

UK Power Networks

Ebbsfleet Central Primary Substation

Figure 1: Location of Proposed Development





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Kilometers

Scale: 1:20,000 @ A3 Size

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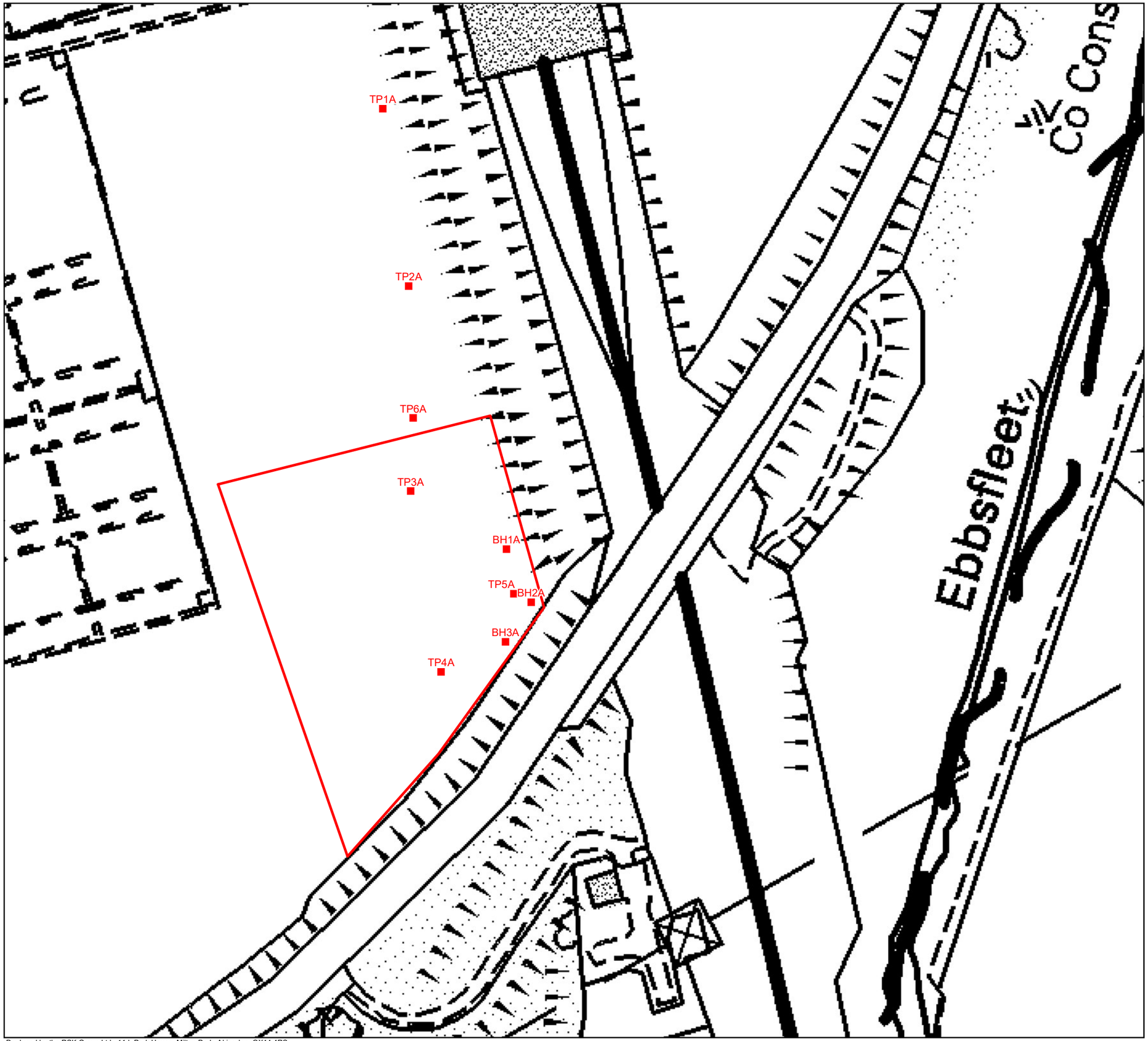

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Figure 2: Plan showing Geotechnical Pits and Borehole Locations

Site Boundary

Geotech Test Pit/ Borehole Locations

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Scale: 1:1,500 @ A3 Size

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