

National Grid
Cable Tunnel Replacement
Project

Environmental Statement
Volume IV

Chapter 17 Historic
Environment - Gravesend

December 2023



Quality information

Prepared by		Checked by		Verified by		Approved by
DH Senior Archaeological Consultant		IW Associate Director Archaeology		AJ - Technical Director - Archaeology		HT - Principal EIA Consultant

Prepared for:

National Grid Electricity Transmission

Prepared by:

AECOM Limited
Aldgate Tower, 2 Leman Street
London, E1 8FA
United Kingdom

T: +44 20 7061 7000
aecom.com

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Table of Contents

17	Historic Environment	17-1
17.1	Introduction	17-1
17.2	Relevant Legislation, Policy and Guidance	17-2
17.3	Consultation	17-4
17.4	Assessment Methodology.....	17-5
17.5	Methodology for Determining Baseline Conditions and Sensitive Heritage Assets.....	17-7
17.6	Historic Environment Baseline	17-12
17.7	Key Parameters for Assessment.....	17-22
17.8	Mitigation.....	17-22
17.9	Potential Impacts.....	17-24
17.10	Residual Effects.....	17-32
17.11	Summary	17-35
17.12	References	17-36
17.13	Abbreviations.....	17-38

Figures

Figure 17-1: Designated Heritage Assets.....	17-13
Figure 17-2: Non-designated Heritage Assets	17-15
Figure 17-3: Previous Archaeological Investigations	17-17

Tables

Table 17-1: National Planning Policy	17-2
Table 17-2: Local Planning Policy	17-3
Table 17-3: Consultation relevant to Historic Environment	17-4
Table 17-4: Heritage Value Criteria.....	17-8
Table 17-5: Magnitude of Change Criteria	17-10
Table 17-6: Impact Rating (Archaeology)	17-10
Table 17-7: Assessment of Effect	17-10
Table 17-8: Heritage assets.....	17-21
Table 17-9: Assessment of Effects on the Historic Environment	17-32

17 Historic Environment

17.1 Introduction

- 17.1.1 This chapter assesses the likely significant effects of the Tilbury to Grain and Tilbury to Kingsnorth (TKRE) Cable Tunnel Replacement Project (“the Proposed Development”) on the Historic Environment during the construction and operational phases.
- 17.1.2 This chapter also identifies any additional mitigation measures to prevent, minimise or control likely adverse effects on built heritage and archaeological assets arising from the Proposed Development.
- 17.1.3 This chapter should be read together with the introductory chapters of this Environmental Statement (ES) (ES Volume II Chapters 1 – 6). This historic environment assessment has been informed by data from other technical chapters comprising:
- Chapter 16: Landscape and Visual – Gravesend;
 - Chapter 18: Traffic and Transport – Gravesend; and
 - Chapter 19: Noise and Vibration – Gravesend.
- 17.1.4 This chapter is supported by the following appendices (ES Volume VI) and figures and:
- Appendix 9.1: Historic Environment Desk Based Assessment;
 - Appendix 9.2: Desk-Based Geoarchaeological Deposit Modelling Report;
 - Appendix 9.3: Written Scheme of Investigation for Geoarchaeological Deposit Modelling and Borehole Investigation;
 - Figure 17-1: Designated Heritage Assets;
 - Figure 17-2: Non-designated Heritage Assets; and
 - Figure 17-3: Previous Archaeological Investigations.

17.2 Relevant Legislation, Policy and Guidance

Introduction

17.2.1 This assessment has been undertaken taking into account relevant legislation and guidance set out in national, regional and local planning policy (summarised within ES Volume VI: Appendix 9-1). The legislation and policy requirements have informed the preparation of this ES chapter.

Legislation

17.2.2 The following pieces of legislation apply specifically to the historic environment assessment:

- Ancient Monuments and Areas Act (1979) (Ref 17-1); and
- The Planning (Listed Buildings and Conservation Areas) Act (1990) (Ref 17-2)

National Policy

17.2.3 National Planning Policy relevant to this historic environment assessment are detailed in Table 17-1 below:

Table 17-1: National Planning Policy

Policy Reference	Policy Context
National Planning Policy Framework (NPPF) (Ref 17-3)	Section 16: Conserving and Enhancing the Historic Environment of the NPPF sets out the Government's planning policies for England and how these should be applied to contribute to the achievement of sustainable development.
Planning Practice Guidance (PPG) (Ministry of Housing, Communities and local Government, 2019) (Ref 17-4)	PPG provides further advice and expands on the guidance and policy outlined in NPPF.
Overarching National Policy Statement for Energy (EN-1) (Ref 17-5)	Section 5.9 highlights the potential impacts to the historic environment through the construction, operation and decommissioning of energy infrastructure. EN-1 provides guidance on assessing the impacts to the historic environment in paragraphs 5.9.9 to 5.9.15. The EN-1 2011 version is currently in force until early 2024, when the updated EN-1 (2023) comes in.
National Policy Statement for Electricity Networks (EN-5) (Ref 17-6)	This NPS, together with EN-1, is the primary decision-making guidance document for the Secretary of State when considering development consent applications for Nationally Significant Infrastructure Projects (NSIPs) for electricity networks infrastructure in England and Wales. The EN-5 2011 version is currently in force until early 2024, when the updated EN-5 (2023) comes in.

Local Planning Policy

17.2.4 Local Planning Policies relevant to this historic environment assessment are detailed in Table 17-2.

Table 17-2: Local Planning Policy

Policy Reference	Policy Context
Gravesend	
The Gravesham Local Plan (2014) (Ref 17-7)	The Gravesham Local Plan 2011 to 2028 was adopted in 2014 to replace the Gravesham Local Plan First Review 1994. It recognises the significant role the historic environment plays in providing a sense of community identity and local distinctiveness and seeks to employ a positive approach to historic environment to ensure the historic character and distinctiveness of the Borough is conserved and enhances.

Guidance

17.2.5 This historic environment assessment has been carried out in accordance with the following:

- Historic England Good Practice Advice Note 2: Managing Significance in Decision Taking in the Historic Environment (2015) (Ref 17-8);
- Historic England Good Practice Advice Note 3: The Setting of Heritage Assets (2nd Edition; 2017) (Ref 17-9);
- Historic England Advice Note 12: Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019) (Ref 17-10);
- Institute of Environmental Management and Assessment (IEMA), Principles of Cultural Heritage Impact Assessment in the UK (2021) (Ref 17-11);
- Chartered Institute for Archaeologists (CIfA) Standard and guidance for historic environment desk-based assessment (Ref 17-12); and
- CIfA Code of Conduct: professional ethics in archaeology (Ref 17-13).

17.3 Consultation

- 17.3.1 A request for an EIA Screening Opinion, supported by an initial version of Appendix 9.1 Desk Based Assessment (DBA) was submitted to Gravesham Borough Council in June 2023. In Gravesham Borough Council's Screening Opinion, received 3rd August 2023, which contained multiple comments relating to the Historic Environment. These are presented in ES Volume VI Appendix 4.3 EIA Screening Opinion Project Responses.
- 17.3.2 Independent consultation has been undertaken with heritage officers at Historic England and Kent County Council. The comments received from each of these stakeholders has been provided in Table 17-3 below:

Table 17-3: Consultation relevant to Historic Environment

Consultee	Consultation Response
Historic England	The consultation response from Historic England, received on 31 July 2023, supported the key designated assets identified in the screening assessment and highlighted the potential for surviving palaeoenvironmental remains within the Proposed Development site; these were considered to be of high value by Historic England with the recommendation that further consultation be undertaken with Archaeological and Conservation officers at Kent County Council.
Kent County Council	Further consultation was undertaken with the Kent County Council's Heritage Conservation team, dated 21 st July 2023. The response noted that the Proposed Development lies within an area of multi-period archaeological potential being underlain by alluvial deposits with the potential to contain nationally important waterlogged archaeological remains and lies within the extent of the non-designated former Milton Rifle Range. It was recommended that the project should also include 'purposive field evaluation data to investigate the below-ground archaeological potential and a detailed assessment of the full extent of the historic rifle range and the impact of the proposed development'.
Historic England and Kent County Council	Consultation meetings were held with Historic England, Essex Council and Kent County Council on 29th August and 9th October 2023, during which the potential impacts of the Proposed Development and a staged approach to geoarchaeological deposit modelling and borehole investigation within both Headhouse and Sealing End Compound (SEC) sites were discussed. Written Scheme of Investigations and desk-based assessments have been reviewed and approved by the Senior Archaeological Officer at Kent County Council and Historic England Regional Science Advisor and their comments have been taken into account when finalising the documents.

17.4 Assessment Methodology

Assessment Methodology

17.4.1 This section of this chapter presents the following:

- Information sources that have been consulted throughout the preparation of this chapter;
- The potential impacts considered in the assessment;
- The methodology behind the assessment of historic environment effects, including the criteria for the determination of heritage value of an asset and magnitude of change from the existing of 'baseline' condition;
- An explanation as to how the identification and assessment of potential cultural heritage effects has been reached; and
- The criteria and terminology for the assessment of historic environment residual effects.

17.4.2 The detailed plans and elevations that define the Proposed Development have been reviewed and form the basis of the assessment of likely significant effects on the historic environment.

17.4.3 This assessment has been undertaken in accordance with guidance contained within the Energy Policy EN-1 and EN-5.

Information Sources

17.4.4 The following sources of information have been consulted to inform the assessment within this chapter:

- Kent Historic Environment Data (KHER);
- National Heritage List for England (NHLE);
- Ordnance Survey historic mapping data;
- Kent History and Library Centre;
- British Geological Survey (BGS) online (<https://www.bgs.ac.uk/geoindex/>);
- Aerial photographs viewed online via the National Collection for Aerial Photographs, Historic England Aerial Photo Explorer and Google Earth;
- Archaeology Data Service (<https://archaeologydataservice.ac.uk>) for information on previous cultural heritage assessments and fieldwork surveys;
- Previous assessments and archaeological watching briefs reports relating to the Proposed Development (Refer to DBA in Volume VI Appendix 9.1: Historic Environment Desk-Based Assessment of this ES); and
- Geoarchaeological report of the Proposed Development prepared by Quaternary Scientific (Quest) (Refer to Volume VI Appendix 9.2).

Walkover Survey of the Proposed Development

17.4.5 A Site Visit was carried out on 24th March 2023 in order to:

- assess the general historic character of the area incorporating the Proposed Development, the surrounding study area and the topographic setting;
- assess the condition of known archaeological and historic building assets and their setting;
- identify areas of potential within the proposed development that may contain previously unidentified archaeological remains; and
- identify the location, extent and severity of modern ground disturbance and previous construction impacts within the proposed development.

Potential Impacts

Construction

17.4.6 An assessment of the impacts relating to the construction of the Proposed Development upon designated and non-designated heritage assets is included within this chapter. Potential impacts arising from the construction of the Proposed Development include:

- presence and movement of construction plant and equipment which has the potential to impact upon the setting of heritage assets;
- siting of construction activities within working areas, including associated construction noise and lighting, which have the potential to impact on the upon the setting of heritage assets;
- the use of traffic management and increased volumes of traffic on the local road network, which may impact on the upon the setting of heritage assets;
- potential to encounter, disturb or truncate to the depth of construction, known surface earthworks, buried archaeological remains; and
- compaction of archaeological deposits due to plant movement etc.

Operation

17.4.7 An assessment of the impacts relating to the operation of the completed and operational Proposed Development upon designated and non-designated heritage assets is included within this chapter. Potential impacts arising from the operation of the Proposed Development include:

- Impacts on archaeological remains, historic buildings and the historic landscape associated with the introduction of the physical form and appearance of the Proposed Development in their setting;
- Changes to traffic movements (and associated vehicle lighting), which could affect the value (significance) of heritage assets caused by changes to their setting;
- Changes in the noise environment due to the additional noise produced by the headhouse, which may affect the setting of heritage assets; and
- The operational lighting introduced as part of the Proposed Development, which may affect the setting of heritage assets.

17.5 Methodology for Determining Baseline Conditions and Sensitive Heritage Assets

Study Area

- 17.5.1 The study area for the assessment is defined as a 1km buffer surrounding the Proposed Development at Gravesend (hereafter “the Site”) and has been used to identify designated and non-designated assets, their settings and geographical extents, and to inform the context for and potential survival of archaeological remains within the Proposed Development boundary and its immediate surrounding area.
- 17.5.2 The baseline was developed through collation of existing data sources, consultation with statutory bodies and fieldwork surveys in line with the standard and guidance for historic environment desk-based assessment (Ref 17-12).
- 17.5.3 All heritage assets identified within the study area are listed in relevant gazetteers within the historic environment DBA contained in ES Volume VI, Appendix 9.1.

Methodology for Determining Construction Effects

- 17.5.4 The impact assessment considers the design of the Proposed Development and identifies the level and degree of impact that would arise as a result of the construction phase. The heritage value of an asset is then combined with the predicted magnitude of change arising from the Proposed Development, in order to determine the significance of effect. This takes into account any mitigation that has been embedded into the design (defined in Section 9.6), in order to minimise impacts to known heritage assets. Additional mitigation, such as archaeological investigation and reporting, may be proposed to compensate for any significant adverse effects.
- 17.5.5 Effects from the construction phase of the Proposed Development can either be temporary or permanent.
- 17.5.6 Temporary construction impacts lasting for all or part of the construction phase of the Proposed Development potentially include the following:
- The presence and movement of construction plant and equipment, which may impact on the significance of heritage assets caused by changes to their setting;
 - The siting of construction compounds and activities within working areas, including associated construction noise and lighting, which may impact on the significance of heritage assets caused by changes to their setting; and
 - The use of traffic management and increased volumes of traffic travelling on the local road network, which may impact on the significance of heritage assets caused by changes to their setting.
- 17.5.7 Permanent construction impacts lasting beyond the construction phase of the Proposed Development potentially include the following:
- Physical impacts on known heritage assets arising from construction activities such as earthworks excavation, the formation of construction compounds and the installation of drainage infrastructure;
 - Physical impacts on landscapes of historical, cultural or archaeological significance as a consequence of construction, such as the loss of important elements of the landscape as a result of site clearance;
 - The disturbance, compaction or removal of previously unrecorded sub-surface archaeological and palaeoenvironmental deposits through construction activities; and
 - Impacts caused by the presence of the construction activity within the settings of heritage assets;

Methodology for Determining Operational Effects

17.5.8 It is not anticipated that there will be any impacts to archaeological or palaeoenvironmental remains arising from operation of the completed development. An assessment of the impacts relating to the operation of the Proposed Development upon the setting of heritage assets is included within this chapter. Potential impacts arising from the operation of the proposed development include:

- Impacts on archaeological remains, historic buildings and the historic landscape associated with the introduction of the physical form and appearance of the Proposed Development in their setting;
- Changes to the noise environment, due to noise produced from the headhouse operation, which could affect the significance of heritage assets caused by changes to their setting;
- Changes in lighting, which may affect the setting of heritage assets.

Assessment criteria

Determining Heritage Value

17.5.9 The heritage value of an asset is guided by its designated status but is derived also from its heritage interest, which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary).

17.5.10 Following assessment of the heritage interests, heritage assets are assigned a level of heritage value in accordance with the criteria set out in Table 17-4. These criteria have been developed using professional judgement and the results of consultation, taking into account regional variations and individual qualities where applicable.

Table 17-4: Heritage Value Criteria

Heritage Value	Asset Categories
High	• World Heritage Sites • Scheduled Monuments • Registered battlefields • Grade I and II* Listed Buildings • Grade I and II* Registered historic Parks and Gardens • Non-designated archaeological assets that can be shown to have demonstrable national or international importance • Well preserved historic landscape character areas, exhibiting considerable coherence, time-depth or other critical factor(s)
Medium	• Grade II Listed Buildings • Grade II Registered historic Parks and Gardens • Non-designated archaeological assets that can be shown to have demonstrable regional importance • Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth or other critical factor(s) • Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible
Low	• Locally Listed Buildings • Non-designated archaeological that can be shown to have demonstrable local importance • Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade • Historic landscape character areas whose value is limited by poor preservation and/ or poor survival of contextual associations
Very Low	• Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic value

Heritage Value	Asset Categories
	- Assets whose values are too compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade - Landscape with no or little significant historical merit

Determining Magnitude of Change

- 17.5.11 Having identified the value of the heritage asset, the next stage in the assessment is to identify the level and degree of change (impact) to an asset arising from the development. Impacts may arise during construction or operation and can be temporary or permanent. Impacts can occur to the physical fabric of the asset or affect its setting.
- 17.5.12 The level and degree of change (magnitude of change) is assigned with reference to a four-point scale as set out in Table 17-5. In respect of archaeology, an assessment of the level and degree of impact is made in consideration of any scheme design mitigation (embedded and committed mitigation) as set out in Table 17-6. If no impact on heritage value is identified, no impact rating is given and no resulting effect reported.

Table 17-5: Magnitude of Change Criteria

Change Rating	Description of Change
High	Changes such that the heritage value of the asset is totally altered or destroyed through physical impact or comprehensive alteration to its setting affecting its value, seriously impeding the ability to understand and appreciate the asset.
Medium	Change such that the heritage value of the asset is affected due to alterations to its physical form or noticeable change to its setting through alterations resulting in erosion in the ability to understand and appreciate the asset.
Low	Changes such that the heritage value of the asset is slightly affected due to changes to its physical form or to changes to its setting that slightly affect the ability to understand or appreciate the asset.
Very Low	Changes to the asset or its setting that hardly affect heritage value resulting in no real change in our ability to understand and appreciate the heritage value of the asset.

Table 17-6: Impact Rating (Archaeology)

Impact Rating	Description of Impact
High	Changes such that the heritage value of the asset is totally altered or destroyed through physical impact or comprehensive alteration to its setting affecting its value, seriously impeding the ability to understand and appreciate the asset.
Medium	Change such that the heritage value of the asset is affected due to alterations to its physical form or noticeable change to its setting through alterations resulting in erosion in the ability to understand and appreciate the asset.
Low	Changes such that the heritage value of the asset is slightly affected due to changes to its physical form or to changes to its setting that slightly affect the ability to understand or appreciate the asset.
Very Low	Changes to the asset or its setting that hardly affect heritage value resulting in no real change in our ability to understand and appreciate the heritage value of the asset.

17.5.13 The classification of an effect, having taken into consideration any embedded mitigation, is determined by cross-referencing between the value of the asset (Table 17-4) and the magnitude of change (Table 17-5) with a level of professional judgment included in the determination. The resultant significance of the effect can be neutral, adverse or beneficial as determined using Table 17-7.

Table 17-7: Assessment of Effect

		Magnitude of Change			
		High	Medium	Low	Very Low
Sensitivity (value) of asset	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Minor
	Low	Moderate	Minor	Minor	Negligible
	Very Low	Minor	Minor	Negligible	Negligible

17.5.14 Residual major or moderate effects are deemed to be 'significant' for the purposes of the EIA Regulations, in accordance with standard EIA practice. Minor and negligible effects are deemed to be 'not significant' and may not be important or relevant to the decision-making process, although they may be matters of local concern.

Limitations and Assumptions

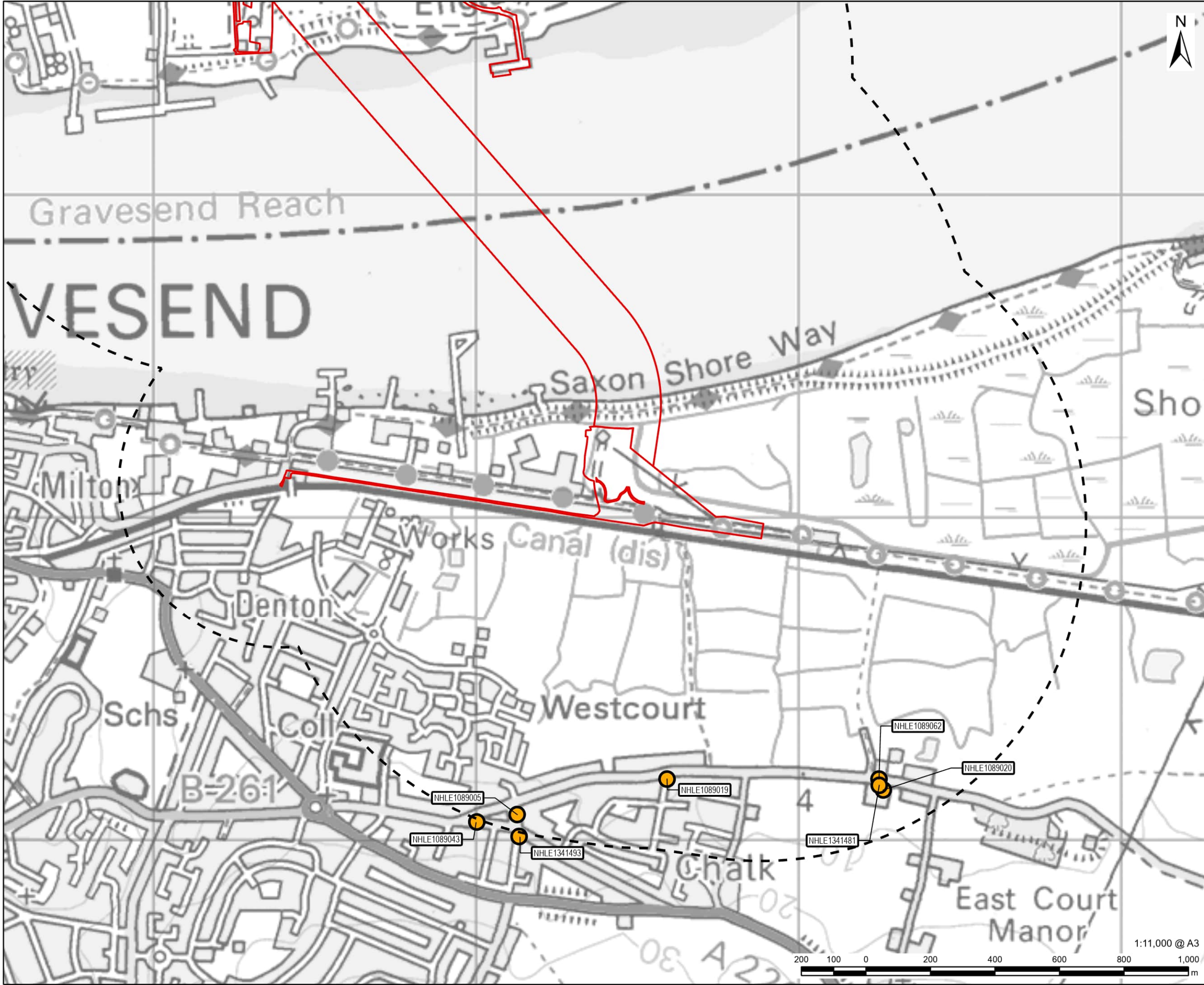
- 17.5.15 The assessment is based in part on data received from the KHER on 8th March 2023. The assessment has been undertaken with reference to the baseline data, information and records pertaining to the historic environment derived from desk-based sources.
- 17.5.16 The baseline data and records obtained are considered to be representative of the conditions that would exist at the point of commencing construction of the Proposed Development and the year of its operation. The nature of the historic environment is such, that no material changes to its form, character and appearance are predicted to occur during this time.
- 17.5.17 Due to the sensitivities of the foreshore area being intrinsically linked to the European designations further along the foreshore to the east, intrusive archaeological and geo-archaeological surveys have been unable to be undertaken and will not resume until April 2024.
- 17.5.18 The Written Scheme of Investigation (WSI) (ES Volume VI Appendix 9.3) and historic environment DBA ES (Volume VI Appendix 9.1) have been reviewed by the Senior Archaeological Officer at Kent County Council and Historic England Regional Science Advisor and their comments have been taken into account when finalising the documents.

17.6 Historic Environment Baseline

- 17.6.1 The DBA (Volume VI Appendix 9.1: Historic Environment Desk-Based Assessment) presents a detailed assessment of the archaeological and heritage baseline, a full overview of the designated and non-designated heritage assets located within the study area, and an assessment of the baseline in which the significance and contribution of setting to significance of the assets are described. This discussion has enabled assets within the 1km study area which are not considered likely to experience any significant impacts or effects as result of the Proposed Development to be identified and scoped out of the assessment within this chapter.
- 17.6.2 Key heritage assets which have the potential to be impacted by the Proposed Development are identified in this Chapter and their value detailed such that the potential impacts can be proportionally assessed. The DBA baseline likewise informs the context and potential survival of both known and previously unrecorded archaeological remains within each of the headhouse and SEC sites and their immediate surroundings. This baseline enables an assessment of whether heritage assets may be directly or indirectly impacted by the Proposed Development.
- 17.6.3 Designated heritage assets are pre-fixed with (NHLE) for National Heritage List for England, each, and their location is shown on Figure 17-1. Non-designated assets are referenced using the Kent HER unique identifier number. These are pre-fixed with (TQ) and are shown on Figure 17-2.

Designated Assets

- 17.6.4 The significance of designated heritage assets is discussed in Section 6 of the DBA (Volume VI Appendix 9.1: Historic Environment Desk-Based Assessment). The location of all designated heritage assets in relation to the Proposed Development is shown on Figure 17-1: Designated Heritage Assets.
- 17.6.5 There are no World Heritage Sites, scheduled monuments, registered parks and gardens, registered battlefields or conservation areas located within 1km of the Proposed Development.
- 17.6.6 Seven grade II listed buildings are located within the 1km study area and are located to the south-west of the Proposed Development. These comprise The Readers (**NHLE 1089019**), 54-58 Vicarage Lane (**NHLE 1089005**), 44 Chalk Road (**NHLE 1341493**) and a cottage at 1 Chalk Road (**NHLE 1089043**), Granary at Little Filborough Farm (**NHLE 1089062**), Barn to North West of Filbrough Farm (**NHLE 1341481**) and Filborough Farmhouse (**NHLE 1089020**).



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2 City Walk
Holbeck, Leeds
LS11 9AR
www.aecom.com

LEGEND
Red Line Boundary
Study Area
Listed Building
Grade II

NOTES
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ISSUE PURPOSE
Environmental Statement

PROJECT NUMBER
60677311

FIGURE TITLE
Gravesend Designated Heritage Assets

FIGURE NUMBER
Figure 17.1

Non-Designated Heritage Assets

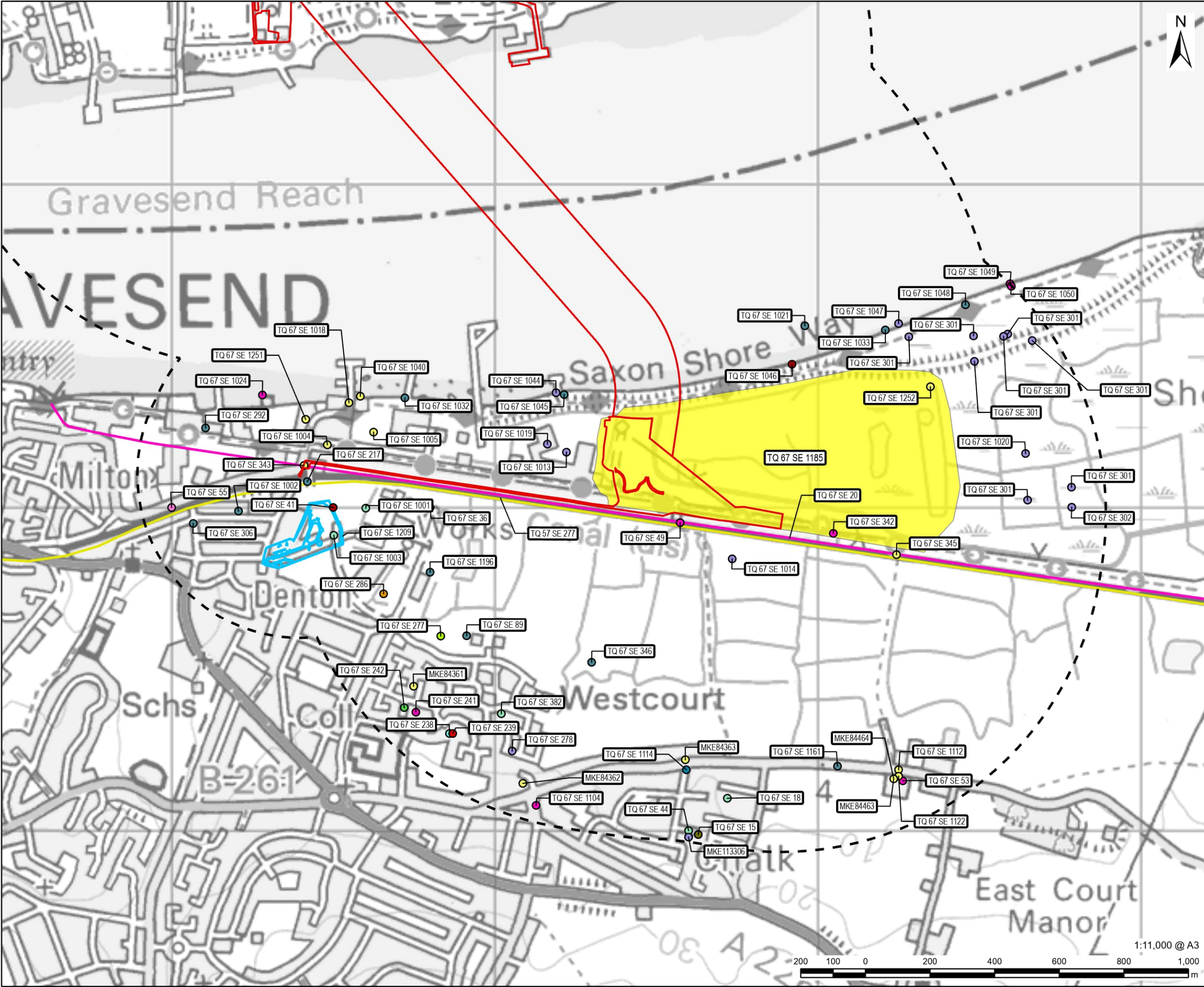
- 17.6.7 The significance of non-designated heritage assets is discussed in Section 6 of the DBA (Volume II Appendix 9.1: Historic Environment Desk-Based Assessment).
- 17.6.8 The location of all non-designated heritage assets in relation to the Proposed Development is shown on Figure 17-2.
- 17.6.9 A single non-designated archaeological asset, Milton Rifle Range (**TQ 67 SE 1185**) has been recorded within the limits of the Proposed Development.
- 17.6.10 A further 53 non-designated archaeological assets have been recorded within 1km of the Proposed Development.

Geology

- 17.6.11 The underlying bedrock geology of the Proposed Development is Lewes Nodular Chalk Formation, comprising Seaford Chalk and Newhaven Chalk, formed approximately 72.1 to 93.9 million years ago during the Cretaceous Period. The Site is located on the Thames floodplain with superficial geology recorded as Alluvium, comprising clay, silt, sand and peat, formed between 11.8 thousand years ago and present during the Quaternary Period. Soils within the Proposed Development area are recorded as being loamy and clayey soils of coastal flats with naturally high groundwater (Ref 17-14).

Deposit Model

- 17.6.12 A geo-archaeological deposit model was undertaken in September 2023 by Quest (Refer to ES Volume VI Appendix 9.2: Desk-Based Geo-archaeological Deposit Modelling Report), to determine the depth of deposits within the Site and the wider study area, and to assess the potential for Mesolithic and later prehistoric alluvial silts and clays and peat deposits to be located within the Proposed Development.
- 17.6.13 At the Proposed Development, the Shepperton Gravels have been recorded at a depth of between -11m and -14m Ordnance Datum (OD). The geo-archaeological report highlights that whilst the Shepperton Gravels have been recorded at a depth of -14m OD they have been more consistently recorded at a depth of -11m OD.
- 17.6.14 The lower alluvial deposits have been identified as dating to the early to mid-Holocene Period, when the River Thames was a single channel. Horizons and lenses of organic peat have been identified within the lower alluvium. The lower alluvium is present within the Proposed Development, with the top of these alluvial deposit recorded at a depth of between 0 and 1m aOD and extending to a maximum depth of -14.5m OD.
- 17.6.15 The lenses and horizons of peat within the lower alluvium have been defined in the Quest deposit model as Lower Peat. Whilst Lower Peat deposits have not been identified in the Proposed Development, they have been identified in close proximity to the Proposed Development. The report therefore highlights that there is a high probability these are present within the Gravesend Site. There is a good potential for palaeoenvironmental data to be present within these lower peat deposits.
- 17.6.16 The Quest deposit model also highlighted that very thin deposits of Middle Peat, which date to the late Mesolithic and Neolithic periods, were identified at the nearby Metropolitan Police Specialist Training Centre at a depth of approximately -3m OD. Middle Peat deposits were not identified within the boundary of the Proposed Development, but there is potential for these deposits to extend within the Proposed Development based on their thin nature which may have been missed due to the nature of the geotechnical drilling and recovery.
- 17.6.17 Based upon the possible presence of lower and middle the peat deposits within the Proposed Development, there is **high** potential for surviving Mesolithic to Bronze Age environmental remains within this Site that may contain palaeoenvironmental and macrofaunal data that may help contribute to the ongoing study of sea level rises at Gravesend and the Lower Thames Valley.



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AECOM Limited
2 City Walk
Holbeck, Leeds
LS11 9AR
www.aecom.com

LEGEND

- Red Line Boundary**
- Study Area**
- Non-Designated Asset (Point)**
- Early Mesolithic to Late Neolithic
 - Bronze Age
 - Later Prehistoric
 - Early Iron Age to Roman
 - Late Iron Age
 - Late Iron Age to Roman
 - Roman
 - Medieval
 - Medieval to Post Medieval
 - Medieval to Modern
 - Post Medieval
 - Post Medieval to Modern
 - Modern
 - Unknown
- Non-Designated Asset (Line)**
- Modern
 - Post Medieval
 - Post Medieval to Modern
- Non-Designated Asset (Polygon)**
- Post Medieval

NOTES

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Environmental Statement

PROJECT NUMBER

60677311

FIGURE TITLE

Gravesend Non-Designated Heritage Assets

FIGURE NUMBER

Figure 17.2

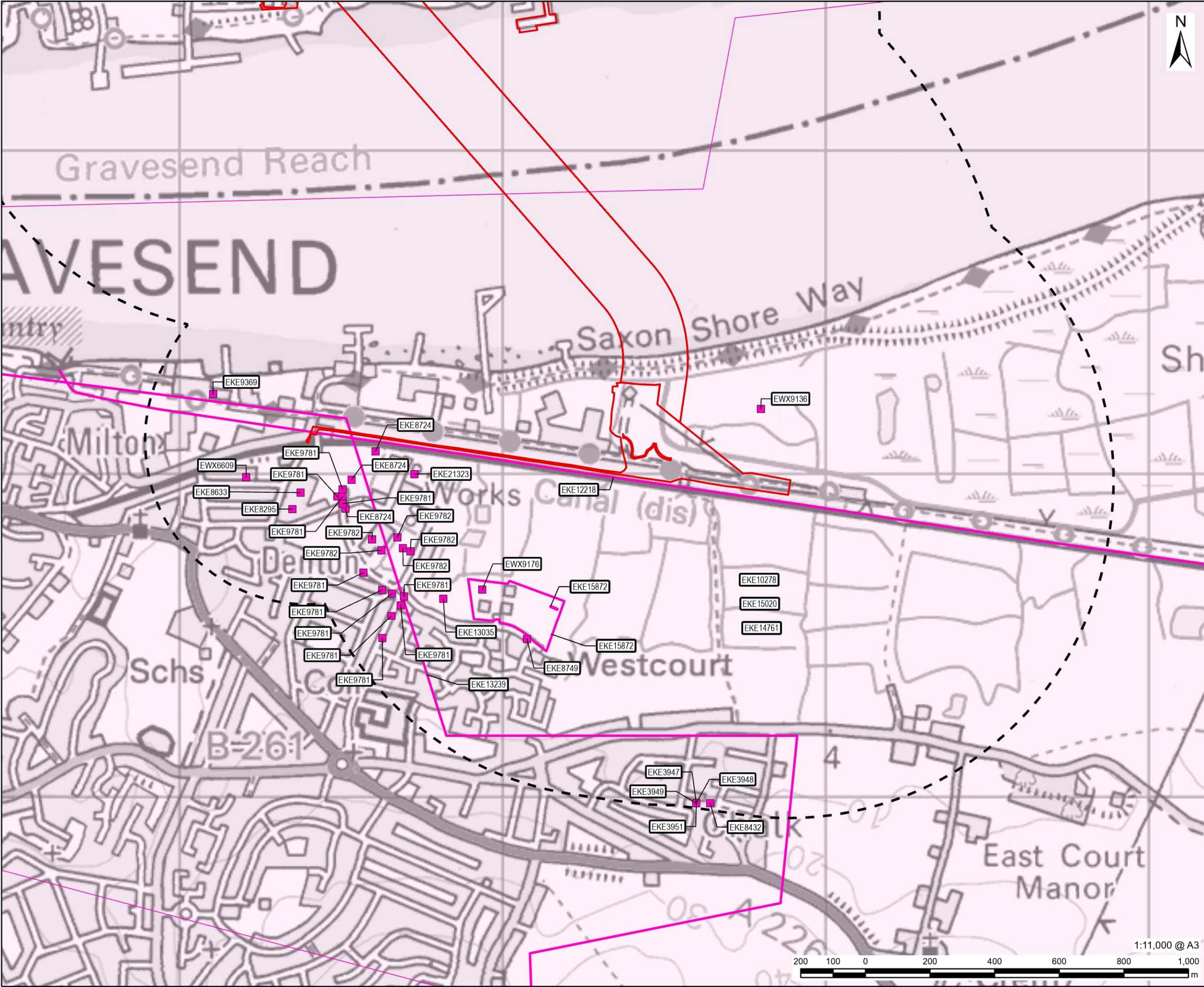
Historic Baseline Summary

Prehistoric (Up to 43 AD)

- 17.6.18 The Anglian glacial icesheets extend southwards down to the north of London, with this glaciation responsible for shifting the route of the River Thames further southward and the scouring of the pre-Anglian land-surface. Very little Palaeolithic in-situ remains survive north of London, with most archaeological remains isolated findspots that have been re-deposited.
- 17.6.19 The Site is located within the North Kent Marshes, which has previously identified prehistoric remains within the wider area, these include several areas of flint knapping.
- 17.6.20 Evidence of Neolithic settlement and activity has been identified within the study area, with archaeological investigations at Lion Business Park, approximately 740m south-west of the Proposed Development recording Neolithic flints, burnt flint and Late Neolithic/Early Bronze Age pottery (**TQ 67 SE 286**). Further archaeological investigations during the construction of the Denton Relief Road, approximately 850m west of the Proposed Development identified further examples of Neolithic pottery and flints, including a transept axe (**TQ 67 SE 41**).
- 17.6.21 Bronze Age and Iron Age activity has been widely recorded across the wider North Kent area. Within the study area remains from the Bronze Age are limited to four circular cropmarks (**TQ 67 SE 277**), identified as likely Bronze Age enclosures, recorded through aerial photography approximately 670m south-west of the Proposed Development. Iron Age activity has been identified approximately 880m south-west of the Proposed Development, with a pit (**TQ 67 SE 238**) that contained animal bone and several linear ditches (**TQ 67 SE 239**) that have been identified as field boundaries.
- 17.6.22 Based upon the limited prehistoric archaeological remains recorded within the study area, there is a **low** potential to encounter archaeological remains dating to the prehistoric period.

Roman (43 AD to 410)

- 17.6.23 Following the invasion and subsequent conquest of Britain in 43 AD, many of the tribes in the south-east were either quickly defeated by the Romans or aligned themselves with Rome. Kent was quickly subdued by the Romans, with many settlements and villas established in the first century AD such as Rochester, Canterbury and the settlement of Springhead at Southfleet to the south of the Proposed Development.
- 17.6.24 Excavations at Chalk Farm (**TQ 67 SE 15**), approximately 940m south of the Proposed Development have identified a villa complex, that also included a bath house, several pits, and three inhumations, that likely date to the 1st century AD. Further human remains including a skull (**TQ 67 SE 18**), and a poppy-headed beaker were also recorded close to the villa complex.
- 17.6.25 Roman finds have been identified across the study area indicating wider Roman activity within the study area; Samian ware was recovered approximately 570m west of the Proposed Development (**TQ 67 SE 36**), with a several ditches (**TQ 67 SE 382** and **TQ 67 SE 1001**), recorded approximately 800m south and 790m west of the Proposed Development respectively.
- 17.6.26 Whilst some Roman archaeological remains associated with the Chalk Farm Villa have been recorded within the study area, these are located nearly 1km south and will not extend within the Proposed Development. Therefore, the potential to encounter Roman archaeological remains is deemed to be **low**.



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2 City Walk
Holbeck, Leeds
LS11 9AR
www.aecom.com

LEGEND

- Red Line Boundary
- Study Area
- Event (Point)
- Event (Line)
- Event (Polygon)

NOTES

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ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60677311

FIGURE TITLE

Gravesend Archaeological Events

FIGURE NUMBER

Figure 17.3

Early Medieval (410-1066)

- 17.6.27 Following the withdrawal of the Roman Empire from Britain in 410, Germanic tribes from northern Europe started to settle across southern England. During this period, parishes were formed and some settlements nucleated, however open field systems that were common at the time in other parts of the country were not utilised within the county. Many of the settlements and roads were re-used during this period of transition. There is evidence for significantly sized Anglo-Saxon communities in north Kent during this transitional period, with much of this evidence recovered from the burial sites that have survived; this includes Darenth Park (**NHLE 1003126**), located approximately 5km west from the Proposed Development.
- 17.6.28 No early medieval heritage assets have been recorded within the 1km study area, therefore the potential to encounter early medieval archaeological remains within the Proposed Development is deemed to be **low**.

Medieval (1066-1640)

- 17.6.29 Gravesend is recorded in the Domesday survey of 1086AD as being within the hundred of Tollingtrough and owned by Bishop Odo of Bayeux. Evidence of a manor house (**TQ 67 SE 242**) has been identified approximately 940m south-west of the Proposed Development.
- 17.6.30 The Wealden pastures were opened and a move to agricultural farming instigated, surviving evidence of farming activity has been previously identified approximately 200m west of the Proposed Development with ridge and furrow recorded here (**TQ 67 SE 1019**) and the site of a possible Deserted Medieval Village is recorded at Denton (**TQ 67 SE 55**) approximately 400m south west of the Site.
- 17.6.31 Due to the location of the Site within what would either been low lying marshland or seasonally grazed pasture during the period and limited medieval archaeological remains recorded within the study area, the potential to encounter medieval archaeological remains within the Proposed Development is deemed to be **low**.

Post-medieval (1640-1900)

- 17.6.32 The industrial expansion of Gravesend began in the mid-17th century, starting with the construction of the Thames and Medway Canal in 1778 (**TQ 67 SE 20**) to allow the transportation of military craft between Dartford, Woolwich and Chatham Dockyard. Three post-medieval bridges are recorded crossing this canal located 90m south-east (**TQ 67 SE 49**), 760m east (**TQ 67 SE 345**) and 870m west (**TQ 67 SE 343**) of the Proposed Development.
- 17.6.33 Expansion at the Gravesend Docks started in the mid-19th century with the construction of Denton Wharf in 1852 (**TQ 67 SE 1005**); the wharf is located approximately 660m west of the Proposed Development. Historic mapping indicates that a quay (**TQ 67 SE 1018**) and a jetty (**TQ 67 SE 1040**) were constructed between 1852 and 1869, approximately 650m east of the Site.
- 17.6.34 Reflecting the agricultural nature of the area surrounding Gravesend in the 18th and 19th centuries, a number of farmhouses have been recorded between 800m and 1km south of the Proposed Development. The Readers (**NHLE 1089019**), originally dates to the 16th century, with 54-58 Vicarage Lane (**NHLE 1089005**) dating to the 18th century. Both 44 Chalk Road (**NHLE 1341493**) and 1 Chalk Road (**NHLE 1089043**) date to the 19th century; are all grade II listed cottages.
- 17.6.35 Filborough Farmhouse (**NHLE 1089020**) and its associated Granary at Little Filborough Farm (**NHLE 1089062**) and Barn to North West of Filbrough Farm (**NHLE 1341481**) is a grade II listed farm complex, that is located approximately 1km south-east of the Proposed Development.
- 17.6.36 Milton Rifle Range (**TQ 67 SE 1185**) was first established in 1862 within the Eastcourt Marshes, comprising several earthen banks and 'butts' used for target practice by the local Chatham regiments. The range was located on an isolated area of the Eastland Marshes. The original rifle range was established to the east of the Proposed Development and comprised a north-south aligned drainage ditch and a series of low earthen mound firing points at 50 yards (46 m) intervals

west to east over a distance of 900 yards (823 m) towards the target mounds and linear butts. The butts were a series of five earthen mounds that were approximately 25 yards (23m) from one another and were designed to stop musket rounds once fired. These earthen butts were incorporated into a single, continuous bank prior to 1895, however, there is potential for remains of these individual banks to survive beneath the later butt.

- 17.6.37 In addition, two all-weather shelters were constructed approximately 70m east of the southern headhouse and SEC compound; these were located behind the 900-yard firing point with a second eastern shelter and range Policeman's/range warden's accommodation located alongside the canal towpath just south of the 300-yard firing point and beyond the limits of the Proposed Development.
- 17.6.38 During the mid-1890s, the firing range was re-organised to allow practice for the new Lee-Metford rifles. The original butts (now located within the RSPB reserve to the east of the Proposed Development) were abandoned and a new single, continuous 230m long butt was built with new 50 yard (46m) interval firing positions were established. A new iron mantlett (a long gallery formed of steel plates with a roof that housed iron target frames) was built approximately 18m west of the new butt. The 700-, 750- and 800-yard firing positions were located within the Site and comprised two lines of parallel earthen banks separated by an open space behind the western shelter shed.
- 17.6.39 The Proposed Development is located within the western extent of Milton Rifle Range, with a **High** potential to encounter surviving earthwork remains of former firing positions and buried remains of the Miniature Firing Range and associated structures.
- 17.6.40 Whilst there is a high potential to encounter previously unrecorded archaeological remains associated with the Milton Rifle Range, there are very few archaeological remains dating to the post-medieval period in close proximity to the Proposed Development. Therefore the potential to encounter post-medieval remains not associated with Milton Rifle Range is deemed to be **low**.

Modern (1900-Present)

- 17.6.41 The Gravesend Docks expanded further in the early 20th century, with a causeway (**TQ 67 SE 1032**), mooring post (**TQ 67 SE 1033**), and dry dock (**TQ 67 SE 1048**), located between 160m and 970m west of the Proposed Development.
- 17.6.42 During World War II, Kent was heavily defended against potential invasion from German forces; many remnants of the defence of Britain are still extant within the landscape today. Denton Sewage Works Battle Headquarters (**TQ 67 SE 1196**) was the headquarters for the local home guard and was located approximately 510m south-west of the Proposed Development,
- 17.6.43 An air raid warden post (**TQ 67 SE 346**) is located approximately 470m south of the Proposed Development, with two searchlight positions identified approximately 610m south (**TQ 67 SE 89**), and 950m south-west (**TQ 67 SE 1156**) of the Proposed Development. Denton Heavy Anti-aircraft Battery (**TQ 67 SE 1209**) was located at Mark Lane 770m west of the Site boundary, comprising of four 4.5' guns south of the North Kent railway.
- 17.6.44 Further evidence relating to the Battle of Britain is recorded 320m west of the Site boundary comprising the crash site of a Hawker Hurricane. The fighter plane is recorded as having crashed into Barton's Timber Wharf on the 15th October 1940, however all attempts to locate the wreck have proved unsuccessful.
- 17.6.45 Two concrete platforms, which may be platforms for navigational beacons (**TQ 67 SE 1045**), are located approximately 150m north-west of the Thames foreshore. A roadblock (**TQ 67 SE 1161**) was located approximately 1km south of the Proposed Development, with a barrage balloon (**TQ 67 SE 1021**) located approximately 550m north-east of the Proposed Development.
- 17.6.46 Milton Rifle Range was used extensively during World War I and World War II, with a miniature rifle range built in the early 20th century prior to 1923. The miniature rifle range comprised two curvilinear earthen banks, which narrow towards a small square structure or firing position at the western end of the earthworks. The eastern end of the miniature rifle range is comprised of a rectangular target mount and curving butt/screen located behind the shelter shed and beyond the drainage ditch that runs along the eastern edge of the Proposed Development. A further square enclosure with a central

hut/structure can also be seen on the western limits of the range which now extend to a drainage ditch that forms the western boundary of the Proposed Development.

- 17.6.47 Aerial photography from 1960 shows the rifle range features and the miniature rifle range to have been demolished by this period and the small square enclosure on the western side of the Proposed Development has also been removed, although the central hut is still present.
- 17.6.48 The firing points and butts across the western area of the rifle range appears to have been unchanged and remained in military use until the 1980s, with last use by the Ministry of Defence in 1995. It is now used as a firing range for the Metropolitan Police Training Facility. A shooting stand (**TQ 67 SE 1252**) was located 890m east of the Proposed Development and would have been incorporated into Milton Rifle Range.
- 17.6.49 The miniature rifle range and square enclosure or firing position are located within the boundary of the Proposed Development and there is a high potential to encounter further unrecorded remains of the post-1900 rifle range within the Proposed Development. Whilst there are a number of modern heritage assets dating to World War II located within the study area, these are located at a distance where remains will not extend into the Proposed Development. Therefore, the potential to encounter modern remains not associated with Milton Rifle Range are deemed to be low.

Undated

- 17.6.50 A number of undated assets have been identified within the 1km study area including two salt-working sites (**TQ 67SE 1013** and **TQ 67 SE 1014**) located approximately 110m west and 350m south-west respectively.
- 17.6.51 A post-built structure (**TQ 67 SE 1047**), consisting of a row of 12 abraded small wooden posts running from the foreshore into the water has been recorded approximately 770m north-east of the Proposed Development.
- 17.6.52 A brick tank (**TQ 67 SE 278**) was located 800m south of the Site boundary. This comprises a brick-built structure, possibly used as a water tank in the early 20th century.

Historic Landscape Character

- 17.6.53 The Natural England National Character Area Profile: 81. Greater Thames Estuary highlights the area as broadly flat and low-lying, and is characterised by industrial development to the west and post-medieval residential to the south and south west, with the site itself being a pocket of open, managed coastal wetland.
- 17.6.54 The Proposed Development is located within the Kent Historic Landscape Character Area (KHLC) Reclaimed Marsh - Small Regular Enclosures. This KHLC type is defined by its small land parcels of marshland and low-lying grassland which are bounded by drainage ditches and the Thames. Whilst the marshland has been altered through the development of the Milton Rifle Range and through the construction of the Tilbury Power Station, the small rectilinear field enclosures are still visible within the wider landscape.
- 17.6.55 The grade II listed cottages and farmhouses The Readers(**NHLE 1089019**), 54-58 Vicarage Lane (**NHLE 1089005**), 44 Chalk Road (**NHLE 1341493**) and a cottage at 1 Chalk Road (**NHLE 1089043**), Granary at Little Filborough Farm (**NHLE 1089062**), Barn to North West of Filbrough Farm (**NHLE 1341481**) and Filborough Farmhouse (**NHLE 1089020**) are all located to the south of the Proposed Development and are remnants of this agricultural landscape surrounding the settlement of Gravesend. To the west of the Site, there are existing buildings that fit an industrial designation, with several industrial buildings along the Thames foreshore associated with Gravesend Docks.
- 17.6.56 No new heritage assets have been identified through review of the historic landscape character assessment.

Key Heritage Assets

- 17.6.57 Based upon the review of the baseline conditions, the following assets have been identified in Table 17-8 as being potentially affected by the Proposed Development. This takes into account the location

of the assets and their relationship to the Proposed Development. These receptors have been assigned a heritage value using the methodology outlined in Table 17-4 above.

Table 17-8: Heritage assets

Asset	Sensitivity (Heritage Value)
The Readers(NHLE 1089019)	Medium
54-56 Vicarage Lane (NHLE 1089005)	Medium
1 Chalk Road (NHLE 1089043)	Medium
44 Chalk Road (NHLE 1341493)	Medium
Granary at Little Filborough Farm (NHLE 1089062)	Medium
Barn to North West of Filbrough Farm (NHLE 1341481)	Medium
Filborough Farmhouse (NHLE 1089020)	Medium
Milton Rifle Range (TQ 67 SE 1185)	Medium
Previously Unrecorded Mesolithic to Bronze Age and Palaeoenvironmental Remains	Medium

17.7 Key Parameters for Assessment

17.7.1 A detailed description of the Proposed Development is provided in Volume II Chapter 3 Project Description. The following aspects of the Proposed Development relevant to this chapter comprise:

- The site preparation and construction works, especially:
 - Excavation of the cable tunnel reception shaft;
 - Removal of top-soil and groundworks required for the creation of the proposed Sealing End Compound (SEC) and headhouse and associated new terminal end pylon and maintenance track;
 - Removal of top-soil and groundworks required for the creation of areas for plant maintenance, site offices and compound areas and storage areas for construction and for excavated materials and the tunnel shaft caisson segments;
 - Acoustic disturbance from construction activities;
 - Dust generation; and
 - Lighting during preparation and construction.
- Land uses within the operational Proposed Development in particular:
 - New SEC and headhouse;
 - Construction of terminal pylon;
 - New access roads and utilities;
 - New drainage; and
 - Lighting.

17.8 Mitigation

Embedded Mitigation

17.8.1 Embedded mitigation will be utilised at the Proposed Development and will include:

- Construction and implementation of a biodiverse headhouse roof which will be used to limit the visual intrusion of the headhouse structure; and
- Implementation and use of landscaping to the east of the Proposed Development which will provide some limited screening of the Gravesend SEC and headhouse.

Additional Mitigation

17.8.2 The Outline Construction Environmental Management Plan (CEMP) (ES Volume VI Appendix 3.1) sets out the additional mitigation measures identified. This section summarises the types of mitigation measures that will be considered to mitigate against the effects on landscape and visual receptors where required. These measures will be adopted during the construction phase.

17.8.3 The historic environment mitigation would comprise archaeological investigations during the enabling works and construction works phase to determine the presence/absence and extent of any surviving archaeological remains dating to the early prehistoric period and remains relating to Milton Rifle Range. Appropriate mitigation measures within the Site may take the form of archaeological trial trenching, archaeological monitoring, excavation and/or an earthwork survey.

17.8.4 A WSI (Written Scheme of Investigation) has been previously approved in relation to a Geoarchaeological Deposit Modelling and Borehole Survey by the Kent and Essex County Archaeologists.

- 17.8.5 The results of the archaeological/geoarchaeological investigation will inform the requirement for and design of an appropriate programme of archaeological and palaeoenvironment investigation, sampling and recording to mitigate any adverse effects of shaft construction on deeply buried peat horizons and alluvial deposits.
- 17.8.6 Any future mitigation work will be covered under a separate WSI for an Earthwork Survey and a Trial Trench Evaluation. The scope and specification of the mitigation would be agreed in consultation with the County Archaeologists for Essex and Kent County Council as advisers to Thurrock Council and Gravesham Borough Councils.
- 17.8.7 The following additional mitigation measures are presented within the Outline CEMP:
- Ongoing discussion and engagement with the County Archaeologist (or equivalent) relating to the archaeological mitigation strategy;
 - An appropriate programme of archaeological and palaeoenvironment investigation, sampling and recording to mitigate any adverse effects of shaft construction on deeply buried peat horizons and alluvial deposits is to be developed based on the results of the archaeological/geoarchaeological investigation;
 - A WSI for an Earthwork Survey and a Trial Trench Evaluation is to be developed, the scope and specification of the mitigation would be agreed in consultation with the County Archaeologists for Essex and Kent County Council as advisers to Thurrock Council and Gravesham Borough Councils;
 - In the event of human remains being found during the course of archaeological monitoring of construction works, works should stop, the local coroner, Project Manager and County Archaeologist (or equivalent) should be notified immediately. The local area around the remains should be immediately isolated and protected by the Archaeological Contractor. Work in this area should not recommence without the prior acceptance of the Project Manager and a Ministry of Justice (exhumation) licence being in place prior to their removal;
 - If archaeological finds are discovered during archaeological monitoring of construction works, the Applicant's Project Manager will be informed, and appropriate steps undertaken, in consultation with the County Archaeologist (or equivalent), to excavate and record the finds prior to construction works continuing; and
 - Ensure all written records of the archaeological investigations undertaken are completed and submitted in a timely manner. A copy of any analysis, reporting or publication required as part of the Mitigation Strategy should be deposited with the relevant local authority repositories as part of the Proposed Development archives within 1 year of completion of the Proposed Development or such other period as may be agreed in writing by the relevant planning authority. Archive should be deposited with an appropriate museum.
 - If archaeological finds that constitute treasure as defined in the Treasure Act 2023, are found during the course of archaeological monitoring, the works should stop, the local coroner, Project Manager and Historic Environment Officer (or equivalent) should be notified immediately. The Project Manager must ensure that the requirements of the Treasure Act 2023 should be followed. Artefacts that are classified as 'treasure' will be removed to a safe place but where removal cannot be achieved on the same working day as the discovery, suitable security measures must be taken to protect the finds from damage or unauthorised removal.

17.9 Potential Impacts

Potential Construction Phase

- 17.9.1 The current design for the Proposed Development indicate that the construction of the cable tunnel will extend for approximately 2.2km from headhouse to headhouse on a north-west to south-east alignment, with a width of 4m (internal), 4.5m (external) and a depth of approximately 35m below ground level (bgl). The cable tunnel will be excavated primarily through the chalk bedrock which was formed between 125-65 million years BC and is archaeologically sterile, with no potential to encounter archaeological remains within these chalk bedrock deposits.
- 17.9.2 The SEC will occupy an area of approximately 6210m², with two new overhead line gantry structures of a maximum height of 13m aOD. The Gravesend SEC will be surrounded by a 2.4m mesh or palisade security fence topped with an electric pulse fence to a height of 3.4m.
- 17.9.3 A reception shaft will be excavated and installed within the SEC at the Proposed Development at Gravesend, as a permanent access point to the cable tunnel. The Gravesend headhouse structure which sits on top of the reception shaft measures approximately 15m x 16m with a height of approximately 8m aOD and will have a foundation down to a depth of approximately 8-15m, with pile caps on top at a depth of approximately 1m.
- 17.9.4 The existing terminal Pylon 4VG042 would be removed and replaced with a new terminal Pylon 4VG042, and the existing Pylon 4VG041 would be refurbished. Piling associated with the terminal pylon would extend to a depth of approximately 20m below ground level (bgl) and concrete foundations/pile caps for each foot of the pylon to approximately 4m bgl.
- 17.9.5 The erection of the new terminal pylon will require the use of a mobile hydraulic crane. The mobile hydraulic crane will require a stable base and assembly area, measuring approximately 50m x 50m. It is likely that this area will be required to be stripped and laid down with a suitable material. There may be a requirement to reinforce the existing pylon 4GV041's foundations at Gravesend. This would require excavating a pit approximately 6m by 6m at each foot to expose the foundation. This would then be restored upon completion of the foundation upgrade.
- 17.9.6 Ground reduction and topsoil strip may be required as part of the installation of the reception shaft compound, which will encompass an area of approximately 400m²; the area of ground reduction will be located immediately south of the reception shaft.
- 17.9.7 Works relating to the decommissioning and removal of the existing pylon, and any associated overhead works such as stringing the new overhead cables will have no impact to the archaeological remains within the Proposed Development.

Designated Heritage Assets

The Readers (NHLE 1089019)

- 17.9.8 The Readers is a grade II listed building, located 750m south of the Proposed Development. The asset dates to the late 15th or early 16th century, and is a T-shaped, timber framed hall, with roughcast brick infilling, a casement window and still retains a Tudor arched stone doorway. The setting of the house was historically the wider agricultural landscape of Gravesend; however, this has been eroded by the 20th century housing estate. There is some limited inter-visibility with the Proposed Development, with the asset largely screened by modern urban housing to the north, however, there are views of the existing pylons within the Proposed Development site.
- 17.9.9 The Readers is considered to have **medium** value stemming from its historic and architectural value as a late 15th or early 16th century building.
- 17.9.10 The Readers will be largely shielded from views of the construction phase activities of the Proposed Development by urban housing to the north of the asset along Lower Higham Road. The construction of the Proposed Development will temporarily introduce noise intrusion associated with construction phase activities and increased traffic into the setting of The Readers. These changes will introduce noise into the suburban setting of the asset which will temporarily alter the character of the

surroundings in which the asset is experienced. These changes will not result in any real change in the ability to appreciate the heritage value of the asset which is derived from architectural and historic interest.

- 17.9.11 The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest, and there will be no alteration to the physical fabric of the asset. The heritage value of the asset will remain unaffected. These changes are assessed as having a **very low** magnitude of change, resulting in a **minor adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

54-56 Vicarage Lane (NHLE 1089005)

- 17.9.12 54-56 Vicarage Lane is a grade II listed building, located approximately 900m south of the Proposed Development. The asset is comprised of an 18th century farmhouse that has been divided into two cottages and cottage further to the north. The three cottages are 2-storeys high, with hipped tile roofs and constructed from red brick. The setting of the asset was the wider agricultural landscape of Gravesend but this has been eroded by the 20th century housing estate in which it is situated. There is some inter-visibility with the Proposed Development, with the asset largely screened by modern urban housing to the north, however, there are views of the existing pylons within the Proposed Development site.
- 17.9.13 The asset is considered to have **medium** value derived from its historical and architectural interest as an 18th century barn and cottage.
- 17.9.14 The asset will be largely shielded from views of the construction phase activities of the Proposed Development by urban housing to the north of the asset along Lower Higham Road. The construction of the Proposed Development will temporarily introduce noise intrusion associated with construction phase activities and increased traffic into the setting of the asset.
- 17.9.15 These changes will introduce noise into the suburban setting of the asset which will temporarily alter the character of the surroundings in which the asset is experienced. These changes will not result in any real change in the ability to appreciate the heritage value of the asset which is derived from architectural and historic interest.
- 17.9.16 The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest. These changes are assessed as having a **very low** magnitude of change, resulting in a **minor adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

1 Chalk Road (NHLE 1089043)

- 17.9.17 1 Chalk Road is a grade II listed early 19th century cottage, located approximately 1km south of the Proposed Development. The asset is two-storeys high with weatherboarding on its northern side and a tiled roof. Further architectural features include two sash windows with surviving glazing bars and a small tablet with a mask of Dickens and the inscription "*Charles Dickens, Born 1812, Died 1870*" above the door. The asset holds historical significance and is believed to have been the house Charles Dickens spent his honeymoon in 1836 and is where the early chapters of 'Pickwick Papers' were written.
- 17.9.18 The setting of the asset was the wider agricultural landscape of Gravesend but this has been eroded by the 20th century housing estate in which it is now situated. There is some inter-visibility with the Proposed Development, with the asset largely screened by modern urban housing to the north, however, there are views of the existing pylons within the Proposed Development site.
- 17.9.19 The asset is considered to have **medium** value based on its historical significance and association with famous 19th century author Charles Dickens and its architectural value as a well-preserved example of an early 19th century cottage.
- 17.9.20 The asset will be largely shielded from views of the construction phase activities of the Proposed Development by urban housing to the north of the asset along Lower Higham Road. The construction

of the Proposed Development will temporarily introduce noise intrusion associated with construction phase activities and increased traffic into the setting of the asset.

- 17.9.21 These changes will introduce noise into the suburban setting of the asset which will temporarily alter the character of the surroundings in which the asset is experienced. These changes will not result in any real change in the ability to appreciate the heritage value of the asset which is derived from architectural and historic interest.
- 17.9.22 The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest. These changes are assessed as having a **very low** magnitude of change, resulting in a **slight adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

44 Chalk Road (NHLE 1341493)

- 17.9.23 44 Chalk Farm is an 18th century farmhouse, located approximately 1km south of the Proposed Development. The asset is two-storeys high with a tiled hipped roof and surviving architectural features such as five sash windows with glazing bars and a moulded wooden eaves cornice.
- 17.9.24 The setting of the asset was the wider agricultural landscape of Gravesend but this has been eroded by the 20th century housing estate along Chalk Road in which it is now situated.
- 17.9.25 There is some inter-visibility with the Proposed Development, with the asset largely screened by modern urban housing to the north, however, there are views of the existing pylons within the Proposed Development site.
- 17.9.26 The asset is considered to have **medium** value based on its historical significance and association with famous 19th century author Charles Dickens and its architectural value as a well-preserved example of an early 19th century cottage.
- 17.9.27 The asset will be largely shielded from views of the construction phase activities of the Proposed Development by urban housing to the north of the asset along Lower Higham Road. The construction of the Proposed Development will temporarily introduce noise intrusion associated with construction phase activities and increased traffic into the setting of the asset.
- 17.9.28 These changes will introduce noise into the agricultural setting of the asset which will temporarily alter the character of the surroundings in which the asset is experienced. These changes will not result in any real change in the ability to appreciate the heritage value of the asset which is derived from architectural and historic interest.
- 17.9.29 The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest. These changes are assessed as having a **very low** magnitude of change, resulting in a **minor adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

Granary at Little Filborough Farm (NHLE 1089062)

- 17.9.30 Granary at Little Filborough Farm is a grade II, 18th century granary located approximately 1km south-east of the Proposed Development. The asset is one-storey high and covered in weatherboarding, with a hipped tiled roof; the structure is supported on saddle stones. The setting of the asset is considered to be the local agricultural fields in which the asset was set and interrelationship with Filborough Farmhouse (**NHLE 1089020**) and Barn to Northwest of Filborough Farmhouse (**NHLE 1341481**), with which it holds a group value as part of the same 18th century farm complex.
- 17.9.31 The asset is considered to have a **medium** value based on its historical and architectural significance as a surviving example of an 18th century granary.
- 17.9.32 There is some inter-visibility between the asset and Proposed Development located approximately 1km north-west, with the existing electricity pylons forming part of the views northwest from the asset.

17.9.33 The construction of the Proposed Development will temporarily introduce noise and visual intrusion associated with construction activities and increased traffic into the setting of the asset. These changes will affect an area of agricultural land approximately 1km north-west of the asset, temporarily altering the character of the surroundings in which the asset is experienced. The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest.

17.9.34 These changes are assessed as having a **low** magnitude of change, resulting in a **minor adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

Barn to North West of Filborough Farm (NHLE 1341481)

17.9.35 A grade II listed, 18th century barn is located approximately 1km south-east of the Proposed Development. The asset is one storey high and clad in weatherboarding with a hipped slate roof. The setting of the asset is considered to be the local agricultural fields in which it is located and served. The setting of the asset is considered to be the local agricultural fields in which the asset was set and interrelationship with Filborough Farmhouse (NHLE 1089020) and Granary at Little Filborough Farm (NHLE 1089062) with which it holds a group value as part of the same 18th century farm complex.

17.9.36 The asset is considered to have a **medium** based on its historical and architectural significance as a surviving example of an 18th century barn.

17.9.37 There is some inter-visibility with the asset, with the Proposed Development located approximately 1km north-west of the asset, however, the asset is partially shielded by a hedgerow. The construction of the Proposed Development will temporarily introduce noise and visual intrusion associated with construction activities and increased traffic into the setting of the asset. These changes will affect an area of agricultural land approximately 1km north-west of the asset, temporarily altering the character of the surroundings in which the asset is experienced. The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest.

17.9.38 These changes are assessed as having a **low** magnitude of change, resulting in a **minor adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

Filborough Farmhouse (NHLE 1089020)

17.9.39 Filborough Farm is an 18th century, grade II listed building, located approximately 1km south-east of the Proposed Development. The farmhouse is a restored timber framed building, built with roughcast infilling with the ground floor partially rebuilt in red brick. The farmhouse also displays a tile hipped roof.

17.9.40 The setting of the asset is considered to be the local agricultural fields in which the asset was set and interrelationship with Barn to North West of Filborough Farm (NHLE 1341481) and Granary at Little Filborough Farm (NHLE 1089062) with which it holds a group value as part of the same 18th century farm complex. The asset is considered to have a **medium** based on its historical and architectural significance as a surviving example of an 18th century farmhouse.

17.9.41 There is some inter-visibility with the asset, with the Proposed Development located approximately 1km north-west of the asset, however, the asset is partially shielded by a hedgerow. The construction of the Proposed Development will temporarily introduce noise and visual intrusion associated with construction activities and increased traffic into the setting of the asset. These changes will affect an area of agricultural land approximately 1km north-west of the asset, temporarily altering the character of the surroundings in which the asset is experienced. The ability to appreciate heritage value will be largely unaltered as this is derived from the assets architectural and historic interest.

17.9.42 These changes are assessed as having a **low** magnitude of change, resulting in a **minor adverse** effect of temporary duration. This temporary effect is **not considered to be significant**.

Non-Designated Heritage Assets

Milton Rifle Range (TQ 67 SE 1185)

- 17.9.43 Milton Rifle Range extends across the Gravesend Marshes, just north-east of the settlement of Gravesend, and south of banks of the River Thames. Cartographic sources show the original layout of the Milton Rifle Range to extend just to the east of the Proposed Development, with the later re-development of the rifle range in the mid-1890s extending further west and within the limits of the Proposed Development. Cartographic sources and aerial photographs highlight the miniature rifle range and firing butts to have been located within the extent of the Proposed Development during the 20th century. The remains of the rifle range will likely consist of earthen banks of firing positions, the levelled earthworks and buried remains associated with the miniature rifle range, access tracks several small range structures and small finds such as bullet casings.
- 17.9.44 The asset holds historical and archaeological significance as a rifle range used by local army regiments, including the local Chatham regiments and archaeological significance, with the potential to provide further information relating to mid to late 19th century military history within Kent. The asset is considered to have **medium** value.
- 17.9.45 There is potential for the construction of the tunnel shaft, the head house and SEC compound, new terminal end pylon, landscaping, construction of temporary compounds, piling maintenance track and piling to truncate or partially remove remains of the Milton Rifle Range. In particular, the shelter shed has the potential to be truncated by the excavation of the tunnel, whilst the buried remains of the 700-yard butt has the potential to be truncated by the construction of the headway house. The buried remains of a small square structure and enclosure have the potential to be impacted by the access roadways. These activities have the potential to impact upon the previously disturbed western extent of the larger rifle range. The potential disturbance or loss of part of the rifle range will only slightly reduce the legibility of the asset, leaving better surviving key elements of the range to the east of the Proposed Development unaffected, resulting in a **low** magnitude of change to this asset.
- 17.9.46 Given the **low** magnitude of change upon the asset of **medium** value, this would result in a **minor adverse** effect. This permanent effect is **not considered to be significant**.

Previously Unrecorded Mesolithic to Bronze Age and Palaeoenvironmental Remains

- 17.9.47 The deposit model undertaken by Quest in September 2023 has highlighted the potential for surviving peat deposits to be present within the Proposed Development at a likely depth of approximately -10m OD. These peat deposits have the potential to contain palaeoenvironmental and faunal data, and to seal Holocene alluvial deposits. There is also potential for the peat horizons to contain archaeological remains in the form of lithic artefacts and possibly waterlogged wooden or organic remains relating human occupation of the marshes during the Mesolithic to Bronze Age. These archaeological and palaeoenvironmental deposits may provide further information on Mesolithic to Bronze age activity and lifestyle within the Lower Thames Valley.
- 17.9.48 Any peat deposits and associated archaeological remains identified within the Proposed Development would hold archaeological value in their ability to contribute to local and regional research frameworks, particularly palaeoenvironmental and environmental data to inform further deposit modelling, to understand relative sea level change, landscape development, settlement and resource exploitation within the Lower Thames Valley. Historic England and Kent County Council have previously identified the potential for the alluvial sequence and peat deposits to preserve prehistoric remains potentially equivalent to national significance. Any surviving archaeological or palaeoenvironmental remains of Mesolithic to Bronze Age date within the Site are therefore considered to have a **medium** value.
- 17.9.49 There is potential for the construction of the cable tunnel reception shaft, Gravesend SEC and headhouse, associated piling, and the foundations for the new terminal pylon, to truncate or partially remove any surviving archaeological or palaeoenvironmental remains. These impacts would be localised to the footprint of cable tunnel reception shaft and the headhouse and pylon foundations

within the extensive sequence of deposits across the Thames marshes, resulting in a low magnitude of change to the archaeological and palaeoenvironmental resource.

- 17.9.50 Given the **low** impact upon the asset of **medium** value, this would result in a **minor adverse** effect. This permanent effect is **not considered to be significant**.

Potential Effects During Operational Phase

The Readers (NHLE 1089019)

- 17.9.51 As noted in the discussion of the construction phase effects, there is some limited inter-visibility with the Proposed Development, and in particular the existing pylons. The existing terminal Pylon 4VG042 will be demolished and replaced with a new terminal pylon of similar dimensions. The new terminal pylon 49m in height, will be constructed adjacent to the proposed SEC; the permanent presence of the Proposed Development is considered to have no visual impact upon the setting of The Readers.
- 17.9.52 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset (Volume VI Chapter 19 Noise and Vibration). The operation of the Proposed Development is considered to have a **negligible** magnitude of change upon the medium value of the asset, resulting in a **negligible** effect. This effect is **not considered to be significant**.

54-56 Vicarage Lane (NHLE 1089005)

- 17.9.53 There is some limited inter-visibility with the Proposed Development; the existing terminal Pylon 4VG042 pylon will be demolished and replaced with a new terminal pylon of similar dimensions. The new terminal pylon 49m in height will be constructed adjacent to the proposed SEC. The permanent presence of the Proposed Development is considered to have no visual impact upon the setting of 54-56 Vicarage Lane.
- 17.9.54 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset. The operation of the Proposed Development is considered to have a **negligible** magnitude of change upon the medium value of the asset, resulting in a **negligible** effect. This effect is **not considered to be significant**.

1 Chalk Road (NHLE 1089043)

- 17.9.1 There is some limited inter-visibility with the Proposed Development; the existing terminal Pylon 4VG042 pylon will be demolished and replaced with a new terminal pylon of similar dimensions. The new terminal pylon 49m in height will be constructed adjacent to the proposed headhouse and SEC. The permanent presence of the Proposed Development is considered to have no visual impact upon the setting of 1 Chalk Road.
- 17.9.2 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset. The operation of the Proposed Development is considered to have a **very low** magnitude of change upon the medium value of the asset, resulting in a **negligible** effect. This effect is **not considered to be significant**.

44 Chalk Road (NHLE 1341493)

- 17.9.3 There is some limited inter-visibility between the asset and the Proposed Development; the existing terminal Pylon 4VG042 pylon will be demolished and replaced with a new terminal pylon of similar

dimensions. The new terminal pylon, approximately 49m in height, will be constructed adjacent to the proposed headhouse and SEC. The permanent presence of the Proposed Development is considered to have no visual impact upon the setting of 1 Chalk Road.

- 17.9.4 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset. The operation of the Proposed Development is considered to have a **negligible** magnitude of change upon the **medium** value of the asset, resulting in a negligible effect. This effect is **not considered to be significant**.

Granary at Little Filborough Farm (NHLE 1089062)

- 17.9.5 As discussed in paragraph 17.8.30, there is inter-visibility between the asset and the Proposed Development; the existing terminal Pylon 4VG042 pylon will be demolished and replaced with a new terminal pylon of similar dimensions. The new terminal pylon 49m in height, will be constructed adjacent to the proposed headhouse and SEC. The removal and replacement of the pylon is considered to have a neutral effect on the agricultural setting of the asset. The permanent presence of these new structures are considered to have a negligible effect on the setting of the asset.
- 17.9.6 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset. The operation of the Proposed Development is considered to have a **negligible** magnitude of change upon the **medium** value of the asset, resulting in a **negligible** effect. This effect is **not considered to be significant**.

Barn to North West of Filborough Farm (NHLE 1341481)

- 17.9.7 There is some limited-intervisibility between the asset and the Proposed Development, with the asset partially screened by an existing hedgerow in the summer months. The existing terminal Pylon 4VG042 pylon will be demolished and replaced with a new terminal pylon of similar dimensions. The new terminal pylon 49m in height will be constructed adjacent to the proposed headhouse and SEC. The removal and replacement of the pylon is considered to have a neutral effect on the agricultural setting of the asset, whilst the construction of the headhouse and SEC will result in new structures, of which the tallest element is new overhead line gantry at a height of 13m in height. The permanent presence of these new structures are considered to have a negligible effect on the setting of the asset.
- 17.9.8 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset. The operation of the Proposed Development is considered to have a **negligible** magnitude of change upon the **medium** value of the asset, resulting in a **negligible** effect. This effect is **not considered to be significant**.

Filborough Farmhouse (NHLE 1089020)

- 17.9.9 There is some limited-intervisibility between the asset and the Proposed Development, with the asset partially screened by an existing hedgerow in the summer months. The existing terminal pylon 4VG042 will be demolished and replaced with a new terminal pylon of similar dimensions. The new terminal pylon (49m) will be constructed adjacent to the proposed headhouse and SEC. The removal and replacement of the pylon is considered to have a neutral effect on the agricultural setting of the asset, whilst the construction of the headhouse and SEC will result in a new structure that does not exceed 12m in height. The permanent presence of these new structures are considered to have a negligible effect on the setting of the asset.

17.9.10 The operation of the Proposed Development is not anticipated to increase traffic movement above existing levels and is not considered to affect the ability to interpret the heritage value of the asset. The level of noise generated from the Proposed Development is expected to increase by 5 decibels, however, the predicted distance of this noise impact will not extend to the asset. The operation of the Proposed Development is considered to have a **negligible** magnitude of change upon the **medium** value of the asset, resulting in a **negligible** effect. This effect is **not considered to be significant**.

17.10 Residual Effects

17.10.1 This assessment of historic environment effects has been undertaken after the implementation of embedded and additional mitigation. Please see Table 17-9 below.

Table 17-9: Assessment of Effects on the Historic Environment

Heritage Asset	Value/Sensitivity	Magnitude	Embedded Mitigation	Additional Mitigation	Assessment of Effect	Significance
Construction Phase						
The Readers (NHLE 1089019)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
54-56 Vicarage Lane (NHLE 1089005)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
1 Chalk Road (NHLE 1089043)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
44 Chalk Road (NHLE 1341493)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
Granary at Little Filborough Farm (NHLE 1089062)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
Barn to North West of Filborough Farm (NHLE 1341481)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
Filborough Farmhouse (NHLE 1089020)	Medium	Very Low	None	None Proposed	Minor Adverse	Not-Significant
Milton Rifle Range (TQ 67 SE 1185)	Medium	Low	None	A programme of geoarchaeological borehole survey followed by appropriate archaeological investigation and recording, to be defined in WSI	Minor Adverse	Not-Significant

Heritage Asset	Value/Sensitivity	Magnitude	Embedded Mitigation	Additional Mitigation	Assessment of Effect	Significance
				approved by the Local Planning Authority and the CEMP.		
Previously Unrecorded Palaeolithic and Mesolithic Remains	Medium	Low	None	A programme of geoarchaeological borehole survey followed by appropriate archaeological investigation and recording, to be defined in WSI approved by the Local Planning Authority and the CEMP.	Minor Adverse	Not Significant
Operational Phase						
The Readers (NHLE 1089019)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant
54-56 Vicarage Lane (NHLE 1089005)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant
1 Chalk Road (NHLE 1089043)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant

Heritage Asset	Value/Sensitivity	Magnitude	Embedded Mitigation	Additional Mitigation	Assessment of Effect	Significance
44 Chalk Road (NHLE 1341493)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant
Granary at Little Filborough Farm (NHLE 1089062)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant
Barn to North West of Filborough Farm (NHLE 1341481)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant
Filborough Farmhouse (NHLE 1089020)	Medium	Very Low	Biodiverse headhouse roof and screening using landscaping within the Proposed Development	None	Negligible	Not-Significant

17.11 Summary

- 17.11.1 The historic environment desk-based assessment (Appendix 9-1) prepared to inform this report has identified seven designated heritage assets and 54 non-designated heritage assets within the combined study area of the Proposed Development. The desk-based assessment also identified potential for the survival of previously unknown archaeological and palaeoenvironmental remains within the alluvial deposits at the Headhouse and CES sites and for remains of the Milton Rifle Range to extend within the Proposed Development.
- 17.11.2 Construction and operation of the Proposed Development will not significantly affect the setting of the seven grade II listed buildings, The Readers, a timber-framed house (**NHLE 1089019**), cottages at 54-58 Vicarage Lane (**NHLE 1089005**), a farmhouse at 44 Chalk Road (**NHLE 1341493**) and a cottage at 1 Chalk Road (**NHLE 1089043**), Granary at Little Filborough Farm (**NHLE 1089062**), Barn to North West of Filborough Farm (**NHLE 1341481**) and Filborough Farmhouse (**NHLE 1089020**).
- 17.11.3 There is potential for adverse effects on any surviving non-designated archaeological remains associated with the Milton Rifle Range (**TQ 67 SE 1185**) in addition to previously unknown buried archaeological and palaeoenvironmental remains within the Proposed Development. It is concluded that the potential adverse effects arising from the loss or disturbance of these remains arising from construction of the Proposed Development could be mitigated by an appropriate programme of archaeological investigation, sampling and recording developed in consultation with the Archaeological Officers at Kent County Council.
- 17.11.4 It is therefore not anticipated that the Proposed Development would give rise to any residual significant effects on the historic environment.

17.12 References

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Ref 17-2 The Planning (Listed Buildings and Conservation Areas Act (1990). Available at: <https://www.legislation.gov.uk/ukpga/1990/9/contents>

Ref 17-3 Ministry of Housing, Communities & Local Government (MHCLG) (2021). National Planning Policy Framework (NPPF). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf [Accessed 24 August 2023].

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Ref 17-6 Department for Energy Security and Levelling Up (2023). National Policy Statement for Electrical Networks Infrastructure (EN-5). Available at: <https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5>

Ref 17-7 Gravesham Local Plan (2014). Gravesham Local Plan Core Strategy. Available online at: <https://drive.google.com/file/d/1bJTgQLmhbjqZFibI-5WFb2tbvixXpLk/view>

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Ref 17-11 Institute of Environmental Management and Assessment (IEMA) (2021). Principles of Cultural Heritage Impact Assessment in the UK. Available at: https://www.archaeologists.net/sites/default/files/j30361_iema_principlesofchia_v8.pdf. [Accessed 24 August 2023].

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<https://www.archaeologists.net/sites/default/files/Code%20of%20conduct%20revOct2022.pdf>.
[Accessed 24 August 2023].

Ref 17-14 AECOM (2023). TKRE Cable Tunnel Replacement Project Environmental Screening Report. Available at: <https://regs.thurrock.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=RVVPCRQG0YG00>

Ref 17-15 British Geological Survey (2023). British Geology Viewer. Available at:
<https://geologyviewer.bgs.ac.uk/>. [Accessed 24 August 2023].

17.13 Abbreviations

Abbreviation	Meaning
bgl	Below Ground Level
BGS	British Geological Survey
CEMP	Construction Environmental Management Plan
CIfA	Chartered Institute for Archaeologists
DBA	Desk Based Assessment
ES	Environmental Statement
IEMA	Institute of Environmental Management and Assessment
KHER	Kent Historic Environment Data
KHLC	Kent Historic Landscape Character Area
NHLE	National Heritage List for England
NPPF	National Planning Policy Framework
OD	Ordnance Datum
SEC	Sealing End Compound
TKRE	Tilbury to Grain and Tilbury to Kingsnorth
WSI	Written Scheme of Investigation

