

National Grid Cable Tunnel Replacement Project

Planning Statement - Gravesend

December 2023



Quality information

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1 Introduction

1.1 Overview of the Cable Tunnel Replacement Project

- 1.1.1 The Tilbury to Gravesend Cable Tunnel Replacement Project (hereafter referred to as ‘the Proposed Development’) relates to the replacement of National Grid’s 400 kiloVolt (kV) circuits beneath the River Thames.
- 1.1.2 The Proposed Development comprises the construction of a new bored tunnel under the River Thames to house new cross linked polyethylene (XLPE) cables.
- 1.1.3 In addition, the Proposed Development comprises the following above-ground components at both ends of the new tunnel:
- **A new cable sealing end compound (SEC):** consisting of:
 - **a new tunnel headhouse** which will cover the shaft into the tunnel;
 - **a new overhead line gantry structure** which will connect the overhead line downlead conductors and transfer them to six sealing end structures; and
 - **Modifications to the existing overhead line (OHL):** The new OHL conductors will be connected to the existing 400kV OHL conductors via new terminal pylons. The old OHL conductors and existing pylons will be either replaced, refurbished or removed.
- 1.1.4 It should be noted that modifications to the existing overhead lines are consented via Section 37 of the Electricity Act 1989 and, although described in the Environmental Statement accompanying the planning applications, do not form part of the Town and Country Planning Act planning application. An application for Section 37 consent is being submitted at the same time as the planning applications.
- 1.1.5 Each required SEC would fall within Thurrock Council and Gravesham Borough Council’s jurisdiction.
- 1.1.6 Figure 1.1 in Environmental Statement (ES) Volume II Chapter 1: Introduction in provides a site location plan.

1.2 Background

Project Need

- 1.2.1 National Grid Electricity Transmission (hereafter referred to as ‘National Grid’) owns and operates the national high-voltage electricity transmission system throughout England and Wales. The key role of the transmission system is to connect the electricity generators’ power stations with the local distribution networks of the regional electricity companies. National Grid holds the Transmission Licence for England and Wales and is thus obligated to develop and maintain an efficient, co-ordinated and economical system of electricity transmission and to facilitate competition in the generation and supply of electricity, as set out in the Electricity Act 1989.
- 1.2.2 The Proposed Development is part of the Ofgem’s new accelerated strategic transmission investment (ASTI) framework (published December 2022). National Grid is responsible for delivering the extensive onshore transmission system enhancements that are required to achieve the UK Government’s 2030 decarbonisation targets.
- 1.2.3 National Grid’s operations are dictated by the latest Future Energy Scenarios (FES) (Ref 1) and Electricity Ten Year Station (ETYS) reports (Ref 2). In recent years, these reports have begun forecasting a large amount of renewable and low carbon energy generation, connecting into the transmission network in the east coast of England, together with three interconnectors from the continent. Through these forecasts, National Grid Electricity System Operator (ESO) has identified

that the 400 kV circuits will be significantly overloaded in their current capacity and require upgrading. National Grid has named this wider project ‘Grain to Tilbury’.

- 1.2.4 Each year, the ESO undertakes an assessment of the options National Grid has available for meeting forecasted energy demands (the Network Options Assessment, NOA). This assessment comprises economic analysis to understand the balance between managing power flows across network boundaries. In the most recent NOA (2021/22), the ESO has recommended investment in upgrading the TKRE 400 kV circuits giving the project a ‘proceed’ signal with an Earliest in Service Date (EISD) of 2028. This was reconfirmed in the NOA refresh published July 2022.
- 1.2.5 The TKRE 400 kV circuits are currently predominantly overhead line, with a section installed within a deep tunnel beneath the River Thames. As the Transmission Licence Holder with responsibility for the TKRE circuits, National Grid are required to upgrade the existing circuits.

Options Appraisal

- 1.2.6 In 2022, National Grid undertook a Strategic Options Appraisal to inform the selection of a preferred option for the upgrade of the TKRE circuits. Three options were initially identified:
- the installation of new cables within the existing tunnel;
 - the installation of new cables within the new tunnel; and
 - the installation of a new overhead line across the River Thames.
- 1.2.7 The installation of new cables within the existing tunnel is not feasible due to the health and safety risks. The installation of a new overhead line across the River Thames, given its location and scale, would have had greater permanent environmental impacts. On balance, it was considered that the installation of new cables within a new tunnel was the most viable preferable option overall.
- 1.2.8 It should be noted the use of Horizontal Directional Drilling (HDD) as a construction method for the tunnel was initially reviewed. However, the ground profile contains a gravel layer which would present a significant challenge with horizontal penetration for any appreciable distance. The number and length of bores required would be significant resulting in larger launch and reception pits to accommodate. HDD is therefore considered high risk and without significant benefits when compared to the option for a new tunnel.

2 The Proposed Development

2.1 Overview

2.1.1 The Proposed Development comprises the construction of a new bored cable tunnel and the following above-ground components at both ends of the new tunnel:

- **A new cable sealing end compound:** consisting of:
 - **a new tunnel headhouse** which will cover the shaft into the tunnel;
 - **a new overhead line gantry structure** which will connect the overhead line downlead conductors and transfer them to six sealing end structures; and
- **Modifications to the existing overhead line (OHL):** The new OHL conductors will be connected to the existing TKRE 400kV OHL conductors via new terminal pylons. The old OHL conductors and existing pylons will be either replaced, refurbished or removed. This element of the project is not consented via the Town and Country Planning Act so is not discussed any further.

2.1.2 A full description of the Proposed Development is provided in ES Volume II Chapter 3: The Project Description and is summarised below.

Cable Tunnel

2.1.3 The new cable tunnel will be approximately 2.2km long (from headhouse to headhouse), 4m in internal diameter (4.5m external diameter) and with the alignment illustrated in Figures 3.1 and 3.2 in ES Volume II Chapter 3: Project Description (also provided below). The depth of the tunnel is approximately -34mAoD to - 32m above Ordnance Datum (aOD), and approximately three to four tunnel widths below the river bed.

2.1.4 Twelve new XLPE cables will be installed in the new tunnel, once bored, to match the required 3325 megavolt amperes (MVA) maximum rating.

2.1.5 Due to advances in cable technology, XLPE is now being used in preference to the use of fluid filled cable (like those installed in the existing tunnel). In these modern cables, the central conductor is insulated by means of a cross linked polyethylene material, which is extruded around the conductor. The absence of fluid in the cable insulation enables a more mechanically robust overall cable construction. XLPE cables require less maintenance, with no ancillary fluid equipment to monitor and maintain¹. For example, sulphur hexafluoride (SF₆)², typically used in electricity transmission and distribution to insulate live electrical parts and to switch the flow of electrical current on and off, is **not required** to be used in this project.

2.1.6 Each cable needs to be well-spaced from others for adequate heat dissipation which will be achieved by forced air ventilation.

Table 2-1: New Bored Cable Tunnel - Summary of Key Characteristics

New Bored Cable Tunnel - Summary of Key Characteristics	
Length of tunnel	Approximately 2.2km (headhouse to headhouse)
Width of tunnel (diameter)	4m (internal) 4.5m (external)
Depth of tunnel	Approximately -34mAoD to - 32mAoD
Design life	120 years

¹ National Grid (2015). Undergrounding high voltage electricity transmission lines. Available at: https://www.nationalgrid.com/sites/default/files/documents/391111-Undergrounding_high_voltage_electricity_transmission_lines_The_technical_issues_INT.pdf.

² National Grid (2022). What is SF₆? Sulphur hexafluoride explained. Available at: <https://www.nationalgrid.com/stories/energy-explained/what-is-sf6-sulphur-hexafluoride-explained#:~:text=What%20is%20SF6%20used%20for,in%20electricity%20transmission%20and%20distribution.&text=Medium%2D%20and%20high%2Dvoltage%20electrical,electrical%20current%20on%20and%20off.>

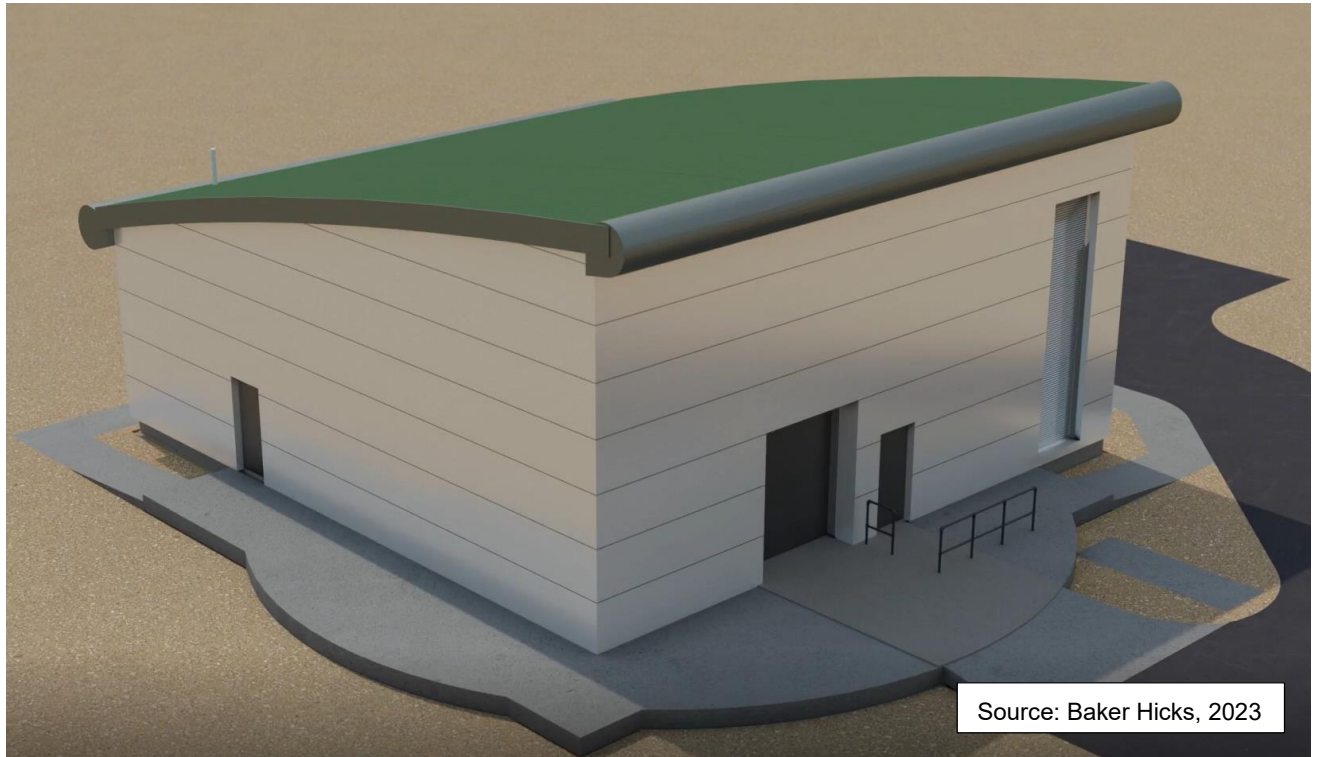
Gravesend Sealing End Compound

- 2.1.7 The proposed Gravesend SEC will be located within a vegetated area which is part of the Canal and Grazing Marsh, Higham Local Wildlife Site (LWS), designated for its grassland habitats and on land owned by National Grid at approximately TQ 67455 74158. To the north of the Proposed SEC is the existing SEC serving the existing tunnel. The land immediately east is owned by the Royal Society for the Protection of Birds (RSPB) and is partially leased and used as a Police Training Centre for rifle shooting. The land immediately west comprises of the Thameside Campus (National Maritime Training Centre), Metropolitan Police Specialist Training Centre and Thames and the Medway Canal Association.
- 2.1.8 The Gravesend SEC will occupy an area of approximately 6,328m² / 0.6328ha, however a larger area of approximately 37,000 m² / 3.7 ha will be required during installation to accommodate construction equipment and storage areas.
- 2.1.9 Subject to final detailed design, the two new overhead line gantry structures within the Gravesend SEC will have a maximum height of approximately 13m.
- 2.1.10 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 3.4 m.
- 2.1.11 Nine new carparking spaces will be provided, six to the west of the new headhouse, and three to the north, just outside of the SEC.
- 2.1.12 The roads within the SEC will be tarmacked, however all other surfacing will comprise of gravel or other free draining stone material with a Type 3 sub-base.

Gravesend Tunnel Headhouse

- 2.1.13 The Gravesend headhouse will be situated within the Gravesend SEC. The purpose of the Gravesend headhouse is to:
- allow controlled safe and secure access into the tunnel shafts;
 - to locate mechanical and electrical equipment; and
 - to house control equipment for the cable circuits.
- 2.1.14 The Gravesend headhouse will occupy an area of approximately 230m² / 0.023ha (based on an indicative footprint of 15 m x 16 m) and have an approximate maximum building height of 8 m above ground level. This will be confirmed during the detailed design stage.
- 2.1.15 The new headhouse at Gravesend will accommodate:
- Tunnel dampers room with access hatch for shaft hoist;
 - Electric room; containing Low Voltage (LV) switch gear, communication panels, Motor Control Centre (MCC) panels;
 - Tally Room;
 - 110V Battery / Uninterruptible Power Supply Room;
 - Shaft access via a staircase;
 - Changing and shower room; and
 - Water Closet (WC).
- 2.1.16 Externally, the new headhouse will have:
- a biodiverse roof;
 - a temporary generator (hardwired to the electrical room); and
 - a pedestrian access path.
- 2.1.17 An indicative visualisation of the proposed headhouse at Gravesend is shown in Plate 2-1.

Plate 2-1: Indicative visualisation of the proposed Gravesend headhouse Source: Baker Hicks, 2023



2.1.18 The exteriors and internal layout of the headhouse are shown on the Planning Drawings, referenced below:

- PDD-100116-LAY-053 Gravesend SEC - Site Plan;
- PDD-100116-LAY-054 Gravesend Headhouse - Outline Ground Floor Plan;
- PDD-100116-LAY-056 Gravesend Headhouse - Outline Roof Floor Plan;
- PDD-100116-LAY-184 Gravesend Headhouse - Proposed Site Sections;
- PDD-100116-ELE-005 Gravesend Headhouse - Outline Elevations; and
- PDD-100116-LAY-057 Gravesend Headhouse - Outline Sections.

Gravesend Utility Provision

Incoming Water Supply

2.1.19 A mains water supply will be required for each headhouse to facilitate amenity features such as sinks, basins, showers and toilets. Installation of below ground mains water shall be in accordance with Southern Water guidance.

2.1.20 At Gravesend, an existing clean water pipeline running parallel to the road that is assumed to connect to Eastcourt Marshes Sealing End Compound Site was identified - a connection from the existing water main is proposed that will deliver potable water to the new headhouse.

Foul Water Drainage Design

2.1.21 The Gravesend SEC will not be permanently manned and as such the preference will be to discharge foul water to the existing sewer. However, the Ground Penetrating Radar (GPR) survey results suggest there are no public foul sewers available for either site, therefore a 9,000 litre underground cess pit will be installed at the proposed Gravesend SEC. More information can be found in the Drainage Management Plan (Document Reference 30003364-BHK-XX-XX-RP-C-02060).

Operational Access to the Gravesend SEC

2.1.22 The proposed Gravesend SEC will be accessible from an existing private road belonging to National Grid. This connects to another private road, the Thames and Medway Canal Road owned by Network Rail, which runs alongside the Thames and Medway Canal. The Thames and Medway Canal Road connects to Mark Lane, then Norfolk Road, which then connects to Prospect Grove, then the A226 Milton Road and the wider Strategic Road Network (SRN).

2.1.23 No new permanent access roads will be required for operational access into the proposed Gravesend SEC.

2.1.24 Temporary access changes are required to facilitate the construction of the cable tunnel and Gravesend SEC.

2.1.25 A summary of the key characteristics of the Gravesend SEC is outlined in Table 2-2.

Table 2-2: Tunnel Headhouses and SECs – Summary of Key Characteristics

Factor	Tunnel Headhouses	Sealing End Compound
Permanent footprint	230m ² / 0.023ha	6,328m ² / 0.6328ha
Temporary working area	37,000m ² / 3.71 ha	
Max. heights	Approximately 8m	Approximately 13m (overhead line gantries)
Technology	<ul style="list-style-type: none"> Ventilation dampers; and Tunnel shaft including stairwell and access hatches, electrical room with equipment, mechanical and electrical supplies, welfare room and domestic supplies. 	<ul style="list-style-type: none"> 12 new XLPE cables; 12 new cable terminations (polymeric); 12 new cable support steel structures with buried concrete foundations; Concrete surface troughs for new cables; 6 Surge Arrester for protection of underground cables; 6 Earth switch; and 1 water tank for fire fighting purposes
Exterior lighting	External lighting will be within the compound area for ease of access and maintenance at night. The lighting system will include sensors based on motion and day light availability and will be LED with a downward spill. Given the very low frequency of maintenance visits (6-12 visits per year), the use of external lighting is considered minimal.	
Access	The proposed Gravesend SEC is accessible from an existing private road belonging to National Grid, which connects to a private road, the Thames and Medway Canal Road owned by Network Rail, which runs alongside the Thames and Medway Canal. The Thames and Medway Canal Road connects first to Mark Lane, then Norfolk Road, which then connects to Prospect Grove, then the A226 Milton Road and the wider SRN.	
Fencing	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 3.4 m.	
Headhouse Roof	Biodiverse roof	

3 The Site and Surroundings

3.1 Land Use

3.1.1 The proposed Gravesend SEC will be located within a vegetated area which is part of the Canal and Grazing Marsh, Higham LWS, designated for its grassland habitats and on land owned by National Grid at approximately TQ 67455 74158. To the north of the Proposed SEC is the existing SEC serving the existing tunnel. The land immediately east is owned by the RSPB and is partially leased and used as a Police Training Centre for rifle shooting. The land immediately west comprises of the Thameside Campus (National Maritime Training Centre), Metropolitan Police Specialist Training Centre and Thames and the Medway Canal Association.

3.2 Physical Environment

3.2.1 The Gravesend site is situated just south of the Thames estuary at an approximate elevation of around 3 to 7maOD. To the west is Milton Rifle Range which is partially leased and used as a Police Training Centre for rifle shooting. The land immediately west comprises of the Thameside Campus (National Maritime Training Centre), Metropolitan Police Specialist Training Centre MPSTC and Thames and the Medway Canal Association. To the south is the Thames and Medway Canal.

3.2.2 The Thames Estuary is situated approximately 170m north of the Proposed Development. It is the only Water Framework Directive (WFD) designated surface water body within the site boundary and study area. It is a large heavily modified water body with a surface area of 44.2km². The Gravesend Site has a freshwater ditch which flows around its perimeter and enters the Thames via a sluice gate at TQ 67492 74271. The ditch starts from TQ 68953 73890 to the east of the site and runs parallel to the Thames and Medway Canal until TQ 67469 74089 where the ditch the splits north and west. Connected at TQ 67553 74043 is another ditch located the east of the site at the rifle range, it has several tributaries. The Thames and Medway Canal was used until 1934 but is now disused and only an isolated open reach approximately 3 km still exists. It is separated from the Proposed Development by Wharf Road. Refer to Figure 21.1 (ES Volume IV Chapter 21: Water Environment) for the locations of the above ditches and the canal.

3.2.3 The Environment Agency Flood Map for Planning (Ref 3) shows that the Gravesend site is located within Flood Zone 3. Flood Zone 3 is defined as land which in any year has a 1% or more chance of flooding from rivers, or a 0.5% or more chance of flooding from the sea when flood defences are not considered.

3.2.4 The Environment Agency's Reduction in Risk of Flooding from Rivers and the Sea due to Defences (Ref 4) shows that the majority of the Gravesend site is in an area where there is a reduction in risk of flooding from rivers and the sea due to defences present along the banks of the Thames estuary. The design standard of protection of the defences for both sites is up to the 0.1% Annual Exceedance Probability (AEP) event. The main source of flooding for the site is due to the Thames estuary.

3.2.5 There are two unnamed ordinary watercourses within proximity to the Gravesend site. See Figure 21.1 in ES Volume IV Chapter 21: Water Environment of the ES.

3.2.6 There are no historic or authorised landfill, permitted waste sites or waste site applications in the vicinity of the Gravesham site.

3.3 Biodiversity and Designated Areas

3.3.1 The Planning Application – Red Line Boundary is approximately 30m south of the Thames Estuary and Marshes Ramsar and South Thames Estuary and Marshes Site of Special Scientific Interest (SSSI) at its nearest point. The site comprises a complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat. The habitats support internationally important numbers of wintering waterfowl, and the saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.

3.3.2 The Proposed Development is within Canal and Grazing Marsh, Higham LWS. Coastal and floodplain grazing marsh is found on low-lying coasts and along slow-flowing rivers and estuaries.

Some 500 plants have been recorded from the most diverse grazing marshes, but these comprise just 5% of grazing marshes - most have been agriculturally 'improved' and are of limited botanical interest. Perennial rye-grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*) and rushes tend to dominate the sward, enlivened by damper patches of floating sweet-grass (*Glyceria fluitans*), creeping bent (*Agrostis stolonifera*) and silverweed (*Argentina anserina*).

3.3.3 Land adjacent to the eastern boundary of the Site is part of the Shorne Marshes RSPB reserve. This is a reserve not accessible to the public but managed for its nature conservation importance, including value to a range of bird species.

3.3.4 Refer to ES Volume IV Chapter 15: Biodiversity – Gravesend and Figure 15.1.

3.4 Landscape

3.4.1 The Proposed Development lies within the National Character Area (NCA) 81 (Ref 5) Greater Thames Estuary. The key characteristics of this NCA include:

- *Predominantly flat, low-lying coastal landscape;*
- *Extensive open spaces...dominated by the sky;*
- *The pervasive presence of water;*
- *Open grazing pastures patterned by a network of ancient and modern reed-fringed drainage ditches; and*
- *Highly urbanised areas...on marsh edges subject to chaotic activity of various major developments.*

3.4.2 These are shown on Figure 16.3 in ES Volume IV Chapter 16: Landscape and Visual – Gravesend.

County Landscape Character

3.4.3 At the county level, the Gravesend site incorporates the Eastern Thames Marshes Landscape Character Assessment (LCA) and Hoo Peninsula LCA defined in The Landscape Assessment of Kent landscape character assessment (2004) (Ref 6). These are shown on Figure 16.4.

3.4.4 Eastern Thames Marshes LCA is characterised by:

- *Remote, wild, remote and quiet. Influence of sea and sky;*
- *Creeks, dykes, marsh and patches of scrub, extensive areas of cultivated marsh, a simple landscape;*
- *Overhead power lines; and*
- *Wild birds and grazing animals.*

3.4.5 Hoo Peninsula LCA is characterised by:

- *Prominent hills and low-lying alluvial marshes; and*
- *Flat/undulating farmland.*

Local Character Types and Local Character Areas

3.4.6 At the local level, the Gravesend site and study area incorporates the Shorne and Higham Marshes LCA and the Higham Arable Farmland LCA defined in the Gravesham Landscape Character Assessment (Ref 7) and illustrated on Figure 16-4.

3.4.7 Shorne and Higham Marshes LCA is characterised by:

- *Flat grazing marsh with a lack of vegetation; and*
- *Network of ditches and meandering waterways divide the marshes in an irregular pattern leaving parcels of land of a medium scale.*

3.4.8 Higham Arable Farmland LCA is characterised by:

- *Very gently undulating topography;*

- *Open arable farmland; and*
- *Views out to the marshes and the River Thames in the north.*

- 3.4.9 There are no statutory landscape designations associated with the site. The nearest Area of Outstanding National Beauty (AONB) is the Kent Downs located 3.2km south of the Gravesend site. Whilst there are no landscape designations, there are a number of ecological and cultural heritage designations within the study area and these can inform landscape value and are of importance in terms of visitor destinations and visual amenity for the area. These include the Scheduled Monument of Tilbury Fort which can be viewed from the Kent coastline, and listed buildings within the Gravesend study area. In addition to these cultural heritage designations, there are ecological designations including the South Thames Estuary and Marshes SSSI, Ramsar site, and SPA approximately 200m south, and 700m to the west of the Gravesend site.
- 3.4.10 The Gravesend Site sit within the London Area Green Belt (LAGB) within the Gravesham District B LAGB. This indicates landscape value as a result of openness, rather than intrinsic quality.
- 3.4.11 Chapter 16: Landscape and Visual in ES Volume IV sets out further detail of the landscape character of the site.

3.5 Historic Environment

Designated Sites

- 3.5.1 There are no World Heritage Sites, scheduled monuments, registered parks and gardens or registered battlefields located within 1km of the Proposed Development.
- 3.5.2 Seven grade II listed buildings are located within the 1km of the Proposed Development to the south-west. These comprise:
- The Readers;
 - 54-58 Vicarage Lane;
 - 44 Chalk Road and a cottage at 1 Chalk Road ;
 - Granary at Little Filborough Farm;
 - Barn to North West of Filbrough Farm; and
 - Filborough Farmhouse .
- 3.5.3 The significance of designated heritage assets is discussed in Section 6 of the Desk Based Assessment (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 in Figure 17-1: Designated Heritage Assets (see ES Volume IV Chapter 17: Historic Environment – Gravesend)

Non-Designated Sites

- 3.5.4 A single non-designated archaeological asset, Milton Rifle Range (**TQ 67 SE 1185**) has been recorded within the limits of the Proposed Development. A further 53 non-designated archaeological assets have been recorded within 1km of the Proposed Development.
- 3.5.5 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). The location of all non-designated heritage assets in relation to the Proposed Development is shown on Figure 17-2: Non-designated Heritage Assets (see ES Volume IV Chapter 17: Historic Environment) .
- 3.5.6 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 Proposed Development site and the wider study area, and to assess the potential for Palaeolithic, Mesolithic and later prehistoric alluvial gravels and peat deposits to be located within the Proposed Development.

- 3.5.7 At the Proposed Development, the Shepperton Gravels have been recorded at a depth of between -11m and -14m 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.
- 3.5.8 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.
- 3.5.9 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.
- 3.5.10 The Quest deposit model also highlighted that very thin deposits of Middle Peat, which date to between 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 and may have been missed due to the nature of the geotechnical drilling and recovery.
- 3.5.11 Based upon the deposit model evidence there is a **high** potential to encounter peat and alluvial deposits that date to the Palaeolithic period
- 3.5.12 ES Chapter 17: Historic Environment - Gravesend in ES Volume IV sets out further detail.

4 Planning Context

Requirement for EIA

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017

4.1.1 EIA Development is defined in The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (Ref 8) as either:

- a. Schedule 1 development for which EIA is mandatory; or
- b. Schedule 2 development for which EIA may be required taking account factors such as the Proposed Development's nature, size or location.

4.1.2 The Proposed Development does not fall within the definition of Schedule 1 development.

4.1.3 Schedule 2 development is defined by the EIA Regulations as:

“Development of a description mentioned in Column 1 of the table in Schedule 2³ where:

- a. any part of that development is to be carried out in a sensitive area⁴; or*
- b. any applicable threshold or criterion in the corresponding part of Column 2 of that table is respectively exceeded or met.”*

4.1.4 The closest description for the Proposed Development within Schedule 2 is Category 10(b) 'urban development', which the relevant corresponding threshold reads are as follows:

“In the case of Urban Development Projects,

- i. the development includes more than 1 hectare of development which is not dwelling house development; or*
- ii. the development includes more than 150 dwellinghouses; or*
- iii. the area of the development exceeds 5 hectares.”*

4.1.5 The Proposed Development would exceed the threshold set at 10(b)(i) because it would consist of more than 1 hectare of development (at approximately 1.1 hectares (ha)) which is not dwellinghouse development. Therefore, an EIA Screening Opinion was sought from Thurrock Council and Gravesham Borough Council to determine whether the development is likely to give rise to likely significant environmental effects on its own or cumulatively with other developments.

4.1.6 On 7 July 2023 Thurrock Council confirmed through their screening opinion that the Proposed Development would not be considered EIA development.

4.1.7 On 3 August 2023 Gravesham Borough Council confirmed through their screening opinion that the Proposed Development would be considered EIA development.

The Marine Works (Environmental Impact Assessment) Regulations 2007

4.1.8 Of interest to the Marine Management Organisation (MMO) is the proposed boring of new tunnel. The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (Ref 9) set out the procedure that must be followed before approval is granted for a range of plans and projects. These require an EIA to be carried out in support of an application for consent for categories of project listed in Schedule A1 and Schedule A2 of the Regulations.

4.1.9 The boring of a new tunnel does not fall under Schedule A1 or Schedule A2 of the EIA Regulations. However National Grid requested an EIA Screening Opinion to confirm if the MMO consider a statutory EIA is required. On 1 August 2023, the MMO requested National Grid withdraw their EIA screening application, advising that an EIA screening request is only for projects which fall under

³ <https://www.legislation.gov.uk/ukxi/2017/571/schedule/2/made>

⁴ A Sensitive Area is defined as land designated as a National Park, Site of Special Scientific Interest (SSSI), Area of Outstanding Natural Beauty (AONB), UNESCO World Heritage Site (WHS), Scheduled Monument or European Protected Site.
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either Schedule A1 or A2 of the Marine Works (Environmental Impact Assessment) Regulations 2007, which the MMO did not believe the Proposed Development fell under.

Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017

4.1.10 Development requiring EIA is defined in Schedule 1 of The Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017 (Ref 10) as:

- “1. Development to provide any of the following—*
(a) a nuclear generating station;
(b) a thermal generating station with a heat output of 300 megawatts or more;
(c) an electric line installed above ground with—
(i) a voltage of 220 kilovolts or more; and
(ii) a length of more than 15 kilometres.

4.1.11 The Proposed Development falls within the definition of Schedule 1 (c)(i), as it would be at a voltage of 400kV but does not meet the length threshold of 15 km Schedule 1 (c) (ii). Therefore, the Proposed Development does not meet the criteria in Schedule 1. The Proposed Development falls within the criteria within Schedule 2 (2)(a), as it would be an electric line installed above ground with a voltage of 132 kilovolts or more but does not meet the criteria for Schedule 2 (2)(b) (above ground in a sensitive area) and therefore did not require EIA screening. The modifications to the existing overhead lines are consented via Section 37 of the Electricity Act 1989 and, although described in the Environmental Statement accompanying the planning application, do not form part of the Town and Country Planning Act planning application. A Section 37 consent application will be sought from the Department of Energy Security and Net Zero..

Planning Permission

4.1.12 National Grid is seeking to secure full planning permission for specific elements of the Proposed Development by way of a planning application under the Town and Country Planning Act 1990 (Ref 11) to Gravesham Borough Council. This is for the proposed new Sealing End Compound (SEC) and headhouse. The Planning Application will also allow for the temporary working areas and construction compounds associated with these works.

4.1.13 For the equivalent works north of the River Thames (Gravesend) National Grid is seeking to secure full planning permission for specific elements of the Proposed Development by way of a planning application under the Town and Country Planning Act 1990 to Thurrock Council for proposed new SEC and tunnel headhouse.

4.1.14 Table 4-1 provides a summary of the different consenting regimes relevant to the Proposed Development.

Table 4-1: Summary of Primary Consenting Regimes

Project Compound	Primary Consent	Determining Authority
Permanent Work at Tilbury		
New Cable Tunnel, Sealing End Compound and Tunnel Headhouse	Full Planning Permission, Town and Country Planning Act 1990 (TCPA) (as amended) (Ref 11)	Thurrock Council
Permanent Work at Gravesend		
New Cable Tunnel, Sealing End Compound and Tunnel Headhouse	Full Planning Permission, Town and Country Planning Act 1990 (TCPA) (as amended) (Ref 11)	Gravesham Borough Council
New Bored Tunnel		
New Bored Tunnel (from Mean High Water Spring)	No consent required (Section 35 of The Marine Licensing (Exempted Activities) Order 2011 (Ref 12))	Marine Management Organisation (MMO)
Overhead Line Works and reconfiguration (at Tilbury and Gravesend)		

Project Compound	Primary Consent	Determining Authority
Overhead Line Works and reconfiguration	Section 37 Consent under the Electricity Act 1989 (Ref 13)	Department of Energy Security and Net Zero (DESNZ)

5 Planning Policy Summary

5.1 Introduction

- 5.1.1 This Planning Application to be determined by the Authority in accordance with Section 38(6) of the Planning and Compulsory Purchase Act 2004 (Ref 14). Gravesham Borough Council is required to determine the planning application in accordance their Development Plan and other material considerations, including national planning policy.
- 5.1.2 This section sets out a summary of the planning policy context relevant to the Proposed Development, including the Development Plan, plus relevant policies of the emerging Development Plan and other national and local policies that are likely to be material considerations in the planning decision.

5.2 Gravesham Development Plan

- 5.2.1 The Development Plan for Gravesham currently consists of:
- Gravesham Local Plan Core Strategy and Local Plan Policies Map (2014) (Ref 15);
 - Gravesham Local Plan First Review (1994) – saved Policies (Ref 16); and
 - Kent County Council Minerals and Waste Local Plan 2013-30 (2020) (Ref 17).
- 5.2.2 The Local Plan Core Strategy (Ref 15) is the main document in the Gravesham Local Plan. It was adopted in September 2014.
- 5.2.3 The Local Plan Core Strategy comprises 18 strategic objectives, with seven spatial policies and 14 thematic policies to help shape the future of the Borough up to 2028 so as to build a successful and sustainable future in which land and sites are made available for health, education, open space, industry and housing, together with improved accessibility to these facilities by all sections of the community.
- 5.2.4 Objectives SO7, SO11, SO13, SO14 and SO16 are considered most relevant to the consideration of the Proposed Development and are reflected throughout the policies.
- 5.2.5 The relevant spatial policies comprise:
- **CS01: Sustainable Development** sets out the Council's strategy for the consideration of projects which work in favour of sustainable development contained in the NPPF and the Core Strategy;
- 5.2.6 The relevant thematic policies comprise:
- **Policy CS12: Green Infrastructure**
 - **Policy CS18: Climate Change** sets out the Council's approach to climate change, including adaption and mitigation;
 - **Policy CS19: Development and Design Principles** sets out the Council's approach for new development to be fit for purpose; and
 - **Policy CS20: Heritage and the Historic Environment**
- Kent County Council Minerals and Waste Local Plan 2013-30 (2020) (Ref 17)**
- 5.2.7 Kent County Council are the minerals and waste planning authority for Kent, and plan for waste management capacity and mineral supply through their Minerals and Waste Local Plan. The plan includes strategic policies for minerals and waste development as well as development management policies used to determine planning applications.

New Local Plan

5.2.8 Gravesham Borough Council is the process of reviewing the Gravesham Local Plan Core Strategy which was adopted in 2014. The new plan (the Local Development Scheme) will set out the planning framework for the borough until 2037. Gravesham Borough Council have consulted at Regulation 18 stages 1 and 2 on their Site Allocations and Development Management Policies Document. The next step will be Regulation 19 which will take the Local Plan Partial Review to examination and adoption. No draft was available at the time of writing this Planning Statement.

5.3 National Planning Policy and Guidance

5.3.1 The National Planning Policy Framework (NPPF) (Ref 18) was revised on 5 September 2023 and sets out the government's planning policies for England and how these are expected to be applied. The NPPF was first published in March 2012, revised in 2018, 2019 and finally 2023.

5.3.2 The NPPF sets out national policies that guide plan-making and decision taking at a local level. At its heart is a *"presumption in favour of sustainable development"* (Paragraph 10) that is necessary to allow sustainable development to be pursued in a positive way. Paragraph 11 explains that...:

"...For decision-taking this means:

c) approving development proposals that accord with an up-to-date development plan without delay; or

d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:

i. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or

ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."

5.3.3 In addition, Paragraph 12 sets out that planning authorities also may take decisions that depart from an up-to-date Development Plan if material considerations indicate that the plan should not be followed. Paragraph 38 expands on this, stating that that *"planning authorities should approach decisions on proposed development in a positive and creative way"* and *"should seek to approve applications for sustainable development where possible"*. Paragraph 6 sets out that statements of government policy represent material considerations in planning decisions:

"Other statements of government policy may be material when preparing plans or deciding applications, such as relevant Written Ministerial Statement and endorsed recommendations of the National Infrastructure Commission."

5.3.4 Paragraph 20(b) explains that strategic policies of Development Plans should set out an overall strategy that makes sufficient provision for infrastructure, including energy infrastructure.

5.3.5 Sections 5 to 17 of the NPPF set out how planning policies and decisions should contribute to achieving particular thematic objectives.

5.3.6 Section 6 describes how planning policies and decisions should help to build a strong, competitive economy. At Paragraph 81 it states that:

"Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future."

5.3.7 Section 11 address the theme 'making effective use of land. It states that:

"Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions" (Paragraph 119).

- 5.3.8 Section 12 addresses the theme of ‘achieving well designed places’. It states that:
“Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.” (Paragraph 126).
- 5.3.9 Paragraph 130 sets out that planning decisions should ensure that developments (inter alia):
- function well over the long term;
 - make use of good architecture, layout and effective landscaping in order to be
 - visually attractive; and
 - are sympathetic to local character, landscape and history, whilst not preventing or discouraging appropriate innovation or change.
- 5.3.10 ‘Meeting the challenge of climate change, flooding and coastal change’ is the theme of Section 14. This sets out that “the planning system should support the transition to a low carbon future in a changing climate”, and “support renewable and low carbon energy and associated infrastructure” (Paragraph 152).
- 5.3.11 Paragraph 158 states that:
“When determining planning applications for renewable and low carbon development, local planning authorities should:
- a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and*
- b) approve the application if its impacts are (or can be made) acceptable...”*
- 5.3.12 Regarding flood risk, Paragraph 159 sets out that inappropriate development in areas at risk of flooding should be avoided. It also states that any development in development in flood risk areas should not increase flood risk elsewhere and should be safe for its lifetime.
- 5.3.13 In determining planning applications for development in areas at risk of flooding, Paragraph 167 sets out that the sequential and exception tests should be applied, and that:
- within the site, the most vulnerable development to flooding is located in the areas of lowest flood risk;
 - the development is appropriately flood resistant and resilient;
 - sustainable drainage systems are incorporated;
 - any residual risk can be safely managed; and
 - safe access and escape routes are available and included in an emergency plan.
- 5.3.14 The Sequential Test is described and provides that “development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding” (Paragraph 162).
- 5.3.15 Paragraph 164 explains the exception test, stating that:
“To pass the exception test it should be demonstrated that:
- a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and*
- b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.”*
- 5.3.16 Section 15 considers the theme of ‘conserving and enhancing the natural environment. This sets out at Paragraph 174 that planning decisions should:
- protect and enhance valued landscapes, sites of biodiversity value and soils in a manner commensurate with their statutory status;

- recognise the value of the countryside, including best and most versatile agricultural land, trees and woodland;
- maintain the character of undeveloped coast;
- minimise impacts on biodiversity and provide net gains, including by establishing ecological networks;
- prevent new development from contributing to unacceptable levels of soil, air, water or noise pollution; and
- remediate and mitigate despoiled, degraded, contaminated and unstable land, where appropriate.

5.3.17 Paragraph 175 explains that planning should distinguish between the hierarchy of international, national and locally designated sites, and Paragraphs 179 to 182 address 'habitats and biodiversity'. Paragraph 179 sets out that planning authorities should apply the below principles when determining planning applications:

- Planning permission should be refused if significant harm to biodiversity cannot be avoided, adequately mitigated, or (as a last resort) compensated for;
- Development that would have an adverse effect on a Site of Special Scientific Interest (SSSI) should only normally be permitted if the benefits of the development in the location outweigh its impact on the features of the site that make it of special scientific interest; and
- Only approve development that would result in the loss or deterioration of irreplaceable habitats such as ancient woodland or veteran trees if there are wholly exceptional reasons and a suitable compensation strategy.

5.3.18 Paragraph 181 sets out that projects that would be likely to have a significant effect on habitats sites (Special Protection Areas (SPA), Special Areas of Conservation (SAC), and Ramsar sites) should be subject to appropriate assessment. Paragraph 182 explains that the presumption in favour of sustainable development would not apply unless that assessment has concluded that the project would not adversely affect the integrity of the habitats site.

5.3.19 Paragraphs 183-188 address 'ground conditions and pollution'. It describes how policies and decisions should ensure that appropriate assessment of ground conditions is undertaken, taking into account historical use, requirement for remediation, and future proposed use. Paragraph 184 identifies that *"Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner"*.

5.3.20 In considering the effects of pollution resulting from the proposed development, paragraph 185 states that:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."

5.3.21 Section 16 of the NPPF addresses the theme of 'conserving and enhancing the historic environment'. It sets out that heritage assets should be conserved in a manner appropriate to their significance. Paragraph 202 states that where a development would lead to less than substantial harm to the significance of a designated heritage asset, the harm should be weighed against the public benefits of the development.

5.3.22 Section 17 of the NPPF addresses the theme of 'facilitating the sustainable use of minerals' and identifies that "it is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs" (Paragraph 209) and therefore "Local planning authorities should not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working" (Paragraph 212).

5.3.23 The NPPF includes three Annexes; with Annex 1 and 3 being considered relevant to the Proposed Development:

- Annex 1 (Implementation) sets out how the policies within the NPPF are to be applied in both decision and plan making. In both cases, policies within the NPPF material considerations which should be taken into account in dealing with applications from the day of its publication. Annex 1 also describes that due weight should be given to them Local Plan policies, according to their degree of consistency with this NPPF.
- Annex 3 (Flood Risk Vulnerability Classification) sets out 5 different 'risk' classifications. As noted, the entirety of the Site is within Flood Zone 1. Notwithstanding, the nature of the Proposed Development is considered to fall under the following classification:
“Essential Infrastructure - Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including infrastructure for electricity supply including generation, storage and distribution systems; and water treatment works that need to remain operational in times of flood.”

Planning Practice Guidance

5.3.24 The Planning Practice Guidance⁵ (PPG) (Ref 19) was first published in the 2014 and with together with the NPPF it set out what the Government expects of local authorities. The PPG is separated into 42 pieces of guidance covering all aspects of the planning process. The relevant sections are:

- Air quality – 1 November 2019;
- Climate change – 15 March 2019;
- Design: process and tools – 1 October 2019;
- Determining a planning application – 24 June 2021;
- Effective use of land – 22 July 2019;
- Flood risk and coastal change – 25 August 2022;
- Healthy and safe communities – 7 August 2022;
- Historic environment – 23 July 2019;
- Light pollution – 1 November 2019;
- Minerals – 17 October 2014;
- Natural environment – 21 July 2019;
- Noise – 22 July 2019;
- Open space, sports and recreation facilities, public rights of way and local green space - 6 March 2014;
- Renewable and low carbon energy – 14 August 2023; and
- Tree Preservation Orders and trees in conservation areas – 6 March 2014.

⁵ <https://www.gov.uk/government/collections/planning-practice-guidance>
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National Character Area profiles

- 5.3.25 The Proposed Development lies within The Greater Thames Estuary NCA (Ref 5) which is defined as forming “*the eastern edge of the London Basin, and its extensive underlying geology of London Clay provides links with the Northern Thames Basin NCA and, further west, the Inner London NCA*”.
- 5.3.26 The NCA is characterised as lying between the North Sea and the rising ground of the adjacent North Kent Plain and Northern Thames Basin NCAs which provide a backdrop to the extensive flat open spaces of the estuary. Uninterrupted, far-reaching views out across the Thames to the opposite banks are possible from this higher ground, and industrial and historic military landmarks are highly visible in this predominantly low-lying marshy coastal landscape.
- 5.3.27 The NCA has identified four ‘Statement of Environmental Opportunity’ (SEO) which identify ways that could help to achieve sustainable growth and a more secure environmental future:
- **SEO1:** Maintain and enhance the expansive, remote coastal landscape – with its drowned estuaries, low islands, mudflats, and broad tracts of tidal salt marsh and reclaimed grazing marsh – maintaining internationally important habitats and their wildlife, and underlying geodiversity, while addressing the impacts of coastal squeeze and climate change and considering dynamic coastal processes;
 - **SEO2:** Work with landowners and managers to incorporate measures to improve biodiversity, geodiversity, pollination, water quality, soil quality and climate adaptation and to prevent soil erosion in this important food providing landscape, while maintaining its historic character;
 - **SEO3:** Ensure that the tranquil and remote character of the estuary is maintained by conserving and enhancing important coastal habitats and distinctive historic and geological features, while providing increased opportunities for recreation and enjoyment of the landscape;
 - **SEO4:** Encourage a strategic approach to development that is informed by and makes a positive contribution to local character, incorporates green infrastructure which provides ecosystem services where they are needed most, and promotes recreation and addresses climate change, while maintaining important open mosaic and coastal habitats, and historic and geological features.

Government Papers

The Energy White Paper – Powering our Net Zero Future (2020)

- 5.3.28 The Energy White Paper – Powering our Net Zero Future (EWP) (Ref 20) was presented to Parliament in December 2020 and builds on the Prime Minister’s Ten Point Plan. At the core of the EWP is the commitment to achieve net zero and tackle climate change. The EWP seeks to put in place a strategy for the wider energy system that transforms energy, supports a green recovery, and creates a fair deal for consumers (page 4).
- 5.3.29 Chapter 2 of the EWP deals with ‘Power’ with the stated goal being to use electricity to enable the transition away from fossil fuels and decarbonise the economy cost-effectively by 2050. Figure 3.2 of the plan, ‘Electricity demand, Net Zero scenarios’ (page 42) highlights how electricity demand could double by 2050 as electricity replaces the use of petrol and diesel in transport and to some extent, gas for heating. This would require a four-fold increase in clean electricity generation with the decarbonisation of electricity being required to underpin the delivery of the net zero target. On page 76 of the EWP it is recognised that in order to maintain a resilient and reliable electricity network that can accommodate this increase in generation further investment is needed in physical infrastructure, and that this investment is supported by the government.
- 5.3.30 The EWP commits to complete a review of the existing energy National Policy Statements (NPS), with the aim of designating updated NPS by the end of 2021.

Net Zero Strategy: Build Back Greener October 2021

5.3.31 The Net Zero Strategy Policy Paper (Ref 21) sits alongside the EWP and sets out the government's vision of using the necessary action to tackle climate change as an economic opportunity to create prosperity. It builds on the Ten Point Plan for a Green Industrial Revolution (Ref 23), setting out four key principles to achieve net zero:

- “We will work with the grain of consumer choice: no one will be required to rip out their existing boiler or scrap their current car;
- We will ensure the biggest polluters pay the most for the transition through fair carbon pricing;
- We will ensure that the most vulnerable are protected through Government support in the form of energy bill discounts, energy efficiency upgrades, and more;
- We will work with businesses to continue delivering deep cost reductions in low carbon tech through support for the latest state of the art kit to bring down costs for consumers and deliver benefits for businesses.”

5.3.32 Part 3i (Power) makes a number of key commitments to deliver a decarbonised power system by 2035, including:

- Subject to supply, all electricity will come from low carbon sources by 2035;
- Deliver 40GW of offshore wind by 2030;
- Investing in supply chains, infrastructure and early-coordination of offshore transmission networks for the offshore wind sector;
- Ensure the planning system can support the deployment of low carbon energy infrastructure.

British Energy Security Strategy April 2022

5.3.33 The British Energy Security Strategy (Ref 21) sets out the government's energy security strategy for Britain. It refers to the Ten Point Plan (Ref 9) and delivery so far in terms of green job generation and private investment. The strategy sets out eight points to achieve energy security comprising:

- **Immediate support on energy bills** including help for families including financial packages of support, reductions in energy bills and funds including Warm Home Discount, Household Support Funds and support for cost of living, as well as help for industry by increasing aid intensity;
- **Energy efficiency** – by improving the efficiency of British homes through various strategies including the Heat and Buildings Strategy with accompanying financial support as well as Home Upgrade Grant, the Social Housing Decarbonisation Fund, upgrading public sector buildings, and expanding the Energy Company Obligation;
- **Oil and gas** – by sending clear signals on the role of gas in the transition to net zero, by fully utilising the North Sea reserve through new licensing, establishing Gas and Oil New Project Regulatory Accelerators, reducing the emissions of offshore oil and gas further, as well as delivering the four Carbon Capture, Usage and Storage (CCUS) clusters by 2030;
- **Renewables** – accelerating the transition from fossil fuels through investment in offshore and offshore wind projects, and solar and other technologies;
- **Nuclear** – through investment in the nuclear sector by launching the Future Nuclear Enabling Fund, the setup of the Great British Nuclear Vehicle and backing Great British Nuclear with funding;
- **Hydrogen** – through doubling ambition up to 10GW of low carbon hydrogen production capacity by 2030, aiming to run annual allocation rounds for electrolytic hydrogen, designing new business models for hydrogen transport and storage infrastructure and setting up a hydrogen certification scheme by 2025;

- **Networks, storage and flexibility** – accelerating the domestic supply of clean and affordable electricity also requires accelerating the connecting network infrastructure to support it. Total costs will be lowered by various mechanisms including establishing the Future System Operator as soon as practicable, publishing a strategic framework with Ofgem, appointing an Electricity Networks Commissioner, updating National Policy Statements, setting out blueprints for the whole system in the Holistic Network Design and Centralised Strategic Network Plan and more; and
- **International Delivery** – working with international partners to maintain stable energy markets and prices, reducing global reliance on Russian fossil fuels and supporting other countries to make the same transition to clean, affordable and secure energy.

5.4 Emerging National Planning Policy

Energy National Policy Statements (NPS)

Overarching National Policy Statement for Energy (EN-1) (2011)

- 5.4.1 The 'Overarching National Policy Statement for Energy (EN-1)' (NPS EN-1) (Ref 24) sets out national policy for energy infrastructure developments that meet the Planning Act 2008 definition of 'Nationally Significant Infrastructure Projects' (NSIPs). Applications for NSIP developments are determined by the Secretary of State in accordance with the Planning Act 2008. The Proposed Development does not meet the definition of a NSIP under Part 3, Sections 15-21, and the regime does not cover tunnelled cables under rivers. The Proposed Development therefore remains subject to the need for Planning Permission under the Town and Country Planning Act 1990, with the Application determined by the Local Planning Authority. However, Paragraph 5 of the NPPF states that "National policy statements form part of the overall framework of national planning policy and may be a material consideration in preparing plans and making decisions on planning applications."
- 5.4.2 In NPS EN-1, the Government sets out that energy is essential to our wellbeing, stating that "it is difficult to overestimate the extent to which our quality of life is dependent on adequate energy supplies" (Paragraph 3.2.1). It also explains that the way in which we use energy is being transformed as we seek to become less dependent on fossil fuels, including by embracing new and innovative low carbon technologies. Whilst becoming less reliant on some forms of energy, it says we will also "become more dependent on others – for example, demand for electricity will increase if we electrify large parts of transport, heating and industry".
- 5.4.3 In Paragraph 3.2.3 the Government sets out that "without significant amounts of new large-scale energy infrastructure, the objectives of its energy and climate change policy cannot be fulfilled". It therefore considers that "the need for such infrastructure will often be urgent" and acknowledges that "it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts".
- 5.4.4 Section 3.7 focuses on the need for new electricity network infrastructure, building in better distribution to where energy is needed adding network resilience to meet growth and demand. Paragraph 3.7.3 sets out this position, advising that "new electricity network infrastructure projects, which will add to the reliability of the national energy supply, provide crucial national benefits, which are shared by all users of the system".
- 5.4.5 The Electricity Networks Strategy Group (ENSG) was tasked with:
- *"developing electricity generation and demand scenarios consistent with the EU target for 15% of the UK's energy to be produced from renewable sources by 2020; and*
 - *identifying and evaluating a range of possible electricity transmission networks solutions that would be required to accommodate these scenarios."* (paragraph 3.7.4)
- 5.4.6 The report looked at a range of scenarios to overcome the issues identified. Paragraph 3.7.5 highlights that "in particular, the scenarios examined the potential new transmission infrastructure needed to connect the large volumes of onshore and offshore wind generation required to meet the 2020 renewables target".

- 5.4.7 ENSGs report identifies a number of scenarios to change the direction of net electricity flows, including from Scotland but that in order to do so significant investment would be need in transmission infrastructure as the “kinds of flows of power cannot be accommodated by the existing network” (paragraph 3.7.7).
- 5.4.8 Paragraph 3.7.8 states that “the Government believes that the ENSG work represents the best available overview of where the electricity networks will need to be reinforced and augmented in order to achieve the UK’s renewable energy and security of supply targets and will therefore be relevant to the IPC’s consideration of electricity network proposals”. Whilst other solutions may present themselves, such as new generating stations, these come with barriers. As such, and as noted in paragraph 3.7.10, “there is an urgent need for new electricity transmission and distribution infrastructure (and in particular for new lines of 132 kV and above) to be provided”,
- 5.4.9 Section 4 of the NPS sets out a suite of assessment principles for which applications relating to energy will be tested against however the overarching position is a presumption in favour of granting consent. Section 5 sets out the generic impacts by which relevant development will need to consider and respond to accordingly.

National Policy Statement for Electricity Networks Infrastructure (EN-5) (2011)

- 5.4.10 The ‘National Policy Statement for Electricity Networks Infrastructure (EN-5)’ (NPS EN-5) (Ref 25) “provides the primary basis for decisions taken by the Infrastructure Planning Commission (IPC) on applications it receives for electricity networks infrastructure” (Paragraph 1.2.1). Section 1.8 sets out the types of electricity network infrastructure covered by the NPS EN-5, and includes transmission and distribution systems, and associated infrastructure including convertor stations to convert DC power to AC power (and vice versa).
- 5.4.11 NPS EN-5 is considered helpful when considering energy infrastructure under the Town and Country Planning Act 1990, with Part 2 focusing on ‘Assessment and Technology-Specific Information’. Section 2.2 discuss site selection, with paragraph 2.2.2 stating:
- “The general location of electricity network projects is often determined by the location, or anticipated location, of a particular generating station and the existing network infrastructure taking electricity to centres of energy use. This gives a locationally specific beginning and end to a line. On other occasions the requirement for a line may not be directly associated with a specific power station but rather the result of the need for more strategic reinforcement of the network. In neither circumstance is it necessarily the case that the connection between the beginning and end points should be via the most direct route (indeed this may be practically impossible), as the applicant will need to take a number of factors, including engineering and environmental aspects, into account.”*
- 5.4.12 Whilst NPS EN-5 sets out its own policies, it makes regular reference to the generic policies in EN-1 so it should be read in conjunction.

Update: Energy National Policy Statements

- 5.4.13 The EWP (Ref 20) sets out how the UK will clean up its energy system and reach net zero emissions by 2050. The EWP announced that the government would review the current Energy NPS’ to reflect the policies and broader strategic approach set out in the white paper and ensure that we continue to have a planning policy framework which can support the infrastructure required for the transition to net zero.
- 5.4.14 Consultation ran from 6 September 2021 to 29 November 2021; with the consultation responses being reviewed by the Department for Energy Security and NetZero (DESNZ), known at the time as the Department for Business, Energy & Industrial Strategy (BEIS).
- 5.4.15 A government response to the public consultation was published in September 2021, concentrating on the key themes from the consultation. In March 2023, updated NPSs EN-1 to EN-5 were released for consultation, closing in June 2023.

Overarching National Policy Statement for Energy (EN-1) (2023)

- 5.4.16 The forthcoming National Policy Statements (2023) will be coming into force in early 2024. In the revised overarching policy statement (EN-1) (Ref 26), the government acknowledged that much of

its plans to decarbonise the UK's economy involves electrification, such as in the areas of transport, heat and industry, and that this in itself would likely result in more than half of the UK's energy demand being met by electricity by 2050, up from just 17% in 2019.

- 5.4.17 The revised EN-1 policy (2023) also states the need to ensure that there is security of energy supply in the UK and that the cost of energy is affordable for end-users. It states the need for new energy infrastructure in this regard is "urgent" and has proposed that the UK's energy infrastructure be made up of a mix of energy sources, including renewables, nuclear, low carbon hydrogen, residual use of unabated natural gas and crude oil fuels for heat, electricity, transport, and industrial applications.
- 5.4.18 The revised EN-1 also acknowledges that different types of electricity infrastructure will be needed and includes an explanation of the need for new generation, network, storage and interconnection infrastructure, alongside energy efficiency and demand-side response measures.

National Policy Statement for Electricity Networks Infrastructure (EN-5) (2023)

- 5.4.19 The revised NPS EN-5 has been updated (Ref 27) to reflect the importance of building electricity network infrastructure that not only connects new generation with centres of demand, but also guarantees system robustness and security of supply even as the energy system grows increasingly complex. It has also been revised to reflect the current policy and regulatory landscape.
- 5.4.20 A new section has been added specifically dealing with the question of rights and interests in land, which encourages developers to pursue permanent land rights wherever possible, rather than relying on wayleaves, to provide a more stable and secure footing, as well as ensuring better value for electricity billpayers in the long run. Guidance has also been clarified around developers pursuing the compulsory acquisition of rights in land for the purposes not only of the construction itself, but also for any necessary mitigation and/or biodiversity net gain schemes.
- 5.4.21 Bringing the document in line with updates to relevant environmental regulations, requirements have been added on developers to safeguard the soil quality of the land they use, and to take measures to reduce or eliminate the fugitive emission of sulphur hexafluoride (SF6) from network assets into the atmosphere. The document also contains guidance on the types of biodiversity net gain scheme best suited to the linear nature of electricity networks infrastructure, such as reconnecting habitats via green corridors.

5.5 Other Policy and Legislation

Environment Act 2021

- 5.5.1 The Environment Act 2021 (Ref 28) will set clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030. The 2021 Act has been shrouded into law and will come into force in January 2024 for TCPAs.

Climate Change Act 2008

- 5.5.2 The Climate Change Act 2008 (Ref 29) establishes a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% in 2050 from 1990 levels. To drive progress and set the UK on a pathway towards this target, the Act introduced a system of carbon budgets including a target that the annual equivalent of the carbon budget for the period including 2020 is at least 34% lower than 1990. The Climate Change Act 2008 also requires the government to:
- assess regularly the risks to the UK of the current and predicted impact of climate change;
 - set out its climate change adaptation objectives; and
 - set out its proposals and policies for meeting these objectives.

Planning and Compulsory Purchase Act 2004

- 5.5.3 Section 19(1A) of the Planning and Compulsory Purchase Act 2004 requires local planning authorities to include in their Local Plans "policies designed to secure that the development and use

of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change". This will be a consideration when a Local Plan is examined.

6 Planning Appraisal

6.1 Introduction

6.1.1 This section of the Planning Statement contains an appraisal of the Proposed Development against the planning policy framework as set out in Section 0, focusing on the strategic and core land use policies to consider the acceptability of the 'principle' of the Proposed Development.

6.1.2 Following the review of the Gravesham Development Plan and other main planning policy material considerations, the following main policy themes have been identified:

- **Theme 1:** The urgent need for electricity network reinforcement;
- **Theme 2:** Flood Risk;
- **Theme 3:** Biodiversity and Nature Conservation;
- **Theme 4:** Archaeology; and
- **Theme 5:** Waste and Minerals.

6.1.3 This section presents an appraisal of the Proposed Development in accordance with the above policy themes.

6.2 Theme 1: The urgent need for electricity network reinforcement

6.2.1 The purpose of the Proposed Development is in direct accordance with national and local planning policy and other national policy and legislation which sets out a clear need for new electricity transmission infrastructure in order to support delivery of objectives and commitments for the energy system and climate change.

6.2.2 In particular, the Proposed Development will directly address the specific need for the uprating of the TKRE 400 kV circuits in the existing tunnel under the River Thames, which will be significantly overloaded in their current capacity as a result of the large amount of renewable and low carbon energy generation connecting in to the transmission network in the east coast of England, together with the three interconnectors from the continent as set out by paragraphs 3.3.46, 3.3.66 and 3.3.67 of draft NPS EN-1.

6.2.3 The NPSs and draft NPSs can be material considerations in the determination of Planning Applications. Therefore, the contribution the Proposed Development would make to meeting this need, which paragraph 3.3.63 of NPS EN-1 sets out to be urgent, is considered to be a material consideration that weighs heavily in favour of planning permission being granted for the Proposed Development.

6.2.4 Other national and local planning policy is aligned with the urgent need for new electricity transmission infrastructure that is set out by the NPS EN-1 and draft NPS EN-1. This includes paragraph 152 of the NPPF which states that the planning system should support the transition to a low carbon future, including by supporting the development of infrastructure that supports low carbon energy. By being an essential element of NETS that is needed to transport renewable energy from where it is generated to where it is needed, the Cable Tunnel Replacement Project is an important part of the infrastructure that paragraph 152 of the NPPF supports in principle.

6.2.5 At a local level, the Gravesham Borough Council's Local Plan expresses support for developments that will help to address the causes of climate change, as set out below.

- **Policy CS18: Climate Change** sets out that Gravesham Borough Council will seek to reduce the overall carbon footprint of the Borough, in particular, the council will (in the context of national policy on the transition to zero carbon development) support renewable or low carbon energy development. The Proposed Development will make an important contribution to enabling the objectives and commitments for the energy system and climate change to be achieved.

6.3 Theme 2: Flood Risk

- 6.3.1 The Flood Risk Assessment (FRA) submitted with the planning application (document reference 30003364-BHK-XX-XX-RP-C-02060) reviews the risks associated with the Proposed Development, assessing the sources of flood risk to the Proposed Development as well as the impact of the Proposed Development on flood risk elsewhere.
- 6.3.2 In line with local and national policy and guidance a Sequential Test has been undertaken and is described in the Flood Risk Assessment. The purpose of a sequential test is to seek to steer development to areas with the lowest risk of flooding. A number of alternative solutions were identified for the upgrade of the cable crossing. The selection of the strategic option and site of the Proposed Development is explained and justified in Volume II Chapter 2: Alternatives, of the ES. No other suitable sites are reasonably available for provide practical or viable options for construction of a shaft or cable tunnel which meet the requirements for the Proposed Development.
- 6.3.3 Given the nature of the Proposed Development it is considered to align closely with the vulnerability classification of 'Essential Infrastructure' land use (based on Table 2 of the PPG Technical Guidance).
- 6.3.4 Essential Infrastructure includes:
- “Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including infrastructure for electricity supply including generation, storage and distribution systems...”*
- 6.3.5 In accordance with Paragraph 159 of the NPPF, Table 3: Flood Risk Vulnerability and Flood Zone Compatibility in PPG, states that the Proposed Development is appropriate in Flood Zone 1 and 2, and subject to the Exception Test in Flood Zone 3a and 3b.
- 6.3.6 The Proposed Development in Gravesend is in Flood Zone 3 and for the Exception Test to be passed it must be demonstrated that;
- The development would provide wider sustainability benefits to the community that outweigh flood risk and;
 - The development will be safe for its lifetime, taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible will reduce flood risk overall.
- 6.3.7 The need for the Proposed Development is set out in Section 1.5 and in Theme 1 of this Planning Statement. It concludes that the Proposed Development is important energy infrastructure that is urgently needed in order for the government's objectives and commitments for the energy system, including net zero, to be met. Paragraph 152 of the NPPF and the Gravesham Borough Council Local Plan express support for development that will help to address the causes of climate change. The sustainability benefits of the Proposed Development, as per the first bullet point above, are therefore considered to be substantial and outweigh the flood risk associated with the Proposed Development (which is discussed below).
- 6.3.8 The FRA identifies there is potential flood risk to the Proposed Development from tidal and pluvial sources. The Gravesham SEC is located in a Thames Estuary 2100 Policy 3 (P3) area for the North Kent Marshes Policy Unit. This area will benefit from flood defences with climate change and sea level rise and the risk of tidal flood is expected to not change for the lifetime of the project.
- 6.3.9 The location of the Proposed Development necessitates construction work to take place in Flood Zone 3, and it is not possible to avoid working in Flood Zone 3. All temporary works of the construction project should be limited to the following:
- Water compatible facilities;
 - Flood-resilient facilities;
 - Flood repairable facilities; and
 - Site roads and underground utilities.
- 6.3.10 The Contractor would be responsible for preparing a site-specific flood risk assessment to demonstrate that the site set up and temporary works comply with the requirements of the NPPF.

- 6.3.11 The Contractor would establish emergency response measures for construction activities in flood risk areas. The two key emergency response measures are:
- Readiness for the possibility of flooding; and
 - Development of a flood response plan (based on the Flood Warning and Evacuation Plan included in the Planning Application).
- 6.3.12 The Drainage Management Plan (included in the Planning Application, document reference 30003364-BHK-XX-XX-RP-C-02060) will be further developed during detailed design and include the following:
- Construction flood risk for each of the Gravesend and Tilbury Sites;
 - Temporary drainage design;
 - Construction water management;
 - Dewater management plan;
 - Protection of watercourses during works;
 - Infiltration ponds and drains during construction;
 - Silt retention ponds during construction;
 - Compensatory flood storage areas; and
 - Avoiding impacts on ground water resources.
- 6.3.13 The Proposed Development is therefore considered to meet the requirements of the Exception Test as set out by Paragraph 164 of the NPPF (reiterated in Section 6.3.6).
- 6.3.14 With the incorporation of embedded design mitigation and operational specific mitigation for flood risk, as the Proposed Development would have only a minor to negligible impact on surface water, which is not significant. It would not represent inappropriate development in its flood zone, would pass the Sequential and Exception tests, would be safe from flooding for its lifetime and would not increase the risk of flooding elsewhere. As such, the Proposed Development is considered to accord with Gravesham Borough Council's Policy CS18, and paragraphs 159, 162, 164 and 167 of the NPPF.

6.4 Theme 3: Biodiversity and Nature Conservation

- 6.4.1 Chapter 15: Biodiversity - Gravesend in ES Volume IV undertakes an assessment of the impacts of the Proposed Development on biodiversity, taking account of statutory and non-statutory designations, habitats and species.

Statutory and Non-Statutory Designations

- 6.4.2 The likely significant effects of the Proposed Development on statutory and non-statutory designations have been assessed. The impacts of the Proposed Development are not likely to result in any significant effect on the structure and function of:
- Thames Estuary and Marshes SPA/Ramsar site;
 - South Thames Estuary and Marshes SSSI;
 - Medway Estuary and Marshes SPA;
 - Canal and Grazing Marsh, Higham LWS;
 - A226 Gravesend Road, Chalk Road Nature Reserve (RNR); and
 - Nr Queens Farm RNR.

Habitats

- 6.4.3 There will be permanent and temporary habitat loss of approximately 9600m² and 45800m² respectively to provide the permanent development as well as for temporary construction

compounds and to enable the overhead line diversion works. The temporary habitat loss will be reinstated on completion of the works. Overall, following the implementation of proposed mitigation it is expected that the Proposed Development will during construction result in a temporary (approximately 4 years) adverse effect on the habitats at the Site level that is Not Significant. Following reinstatement and establishment this effect will be reversible and within 12 months of completion of construction.

Species

- 6.4.4 The ES outlines that no significant effects on species have been identified by the Ecological Impact Assessment (EclA). Appropriate precautionary mitigation to ensure legislative compliance will be employed prior to the commencement of site establishment and clearance works including where required a precautionary method of working (PMoW) under an Ecological Clerk of Works (ECOW). Measures to specifically address potential effects of temporary disturbance to habitats and protected species they support are also proposed.

Biodiversity Net Gain

- 6.4.5 A biodiversity net gain (BNG) assessment has been undertaken for the Proposed Development in accordance with the published Natural England Biodiversity Metric 4.0, with a target of 10% net gain in biodiversity (striving for 15%) to be delivered to meet emerging planning policy, and to meet National Grid's corporate BNG commitment to the delivery of 10% BNG on all construction projects.
- 6.4.6 The ES provides a summary of the habitat reinstatement and enhancement measures that are committed to and are embedded into the BNG metric assessment. Options to deliver the minimum 10% net gain are outlined in the BNG Assessment and Strategy Report.

Summary

- 6.4.7 On the basis that the impacts of the Proposed Development on biodiversity are not significant and that the Applicant is seeking to deliver a minimum of 10% BNG, the Proposed Development in Gravesham Borough Council's jurisdiction accords with Policy CSTP19 and Paragraphs 174, 175 and 181 of the NPPF.

6.5 Theme 4: Archaeology

- 6.5.1 Chapter 17: Historic Environment of ES Volume IV, presents an assessment of the impact of the Proposed Development in Gravesend on designated and non-designated heritage assets. It concludes that the construction and operation of the Proposed Development will not affect the setting of the seven grade II listed buildings. The Proposed Development in Gravesham Borough Council is therefore in accordance with Policy CS20 and Paragraph 202 of the NPPF in relation to designated heritage assets.
- 6.5.2 Regarding buried archaeology, Chapter 17 of the ES sets out that mitigation measures have been embedded into the Proposed Development in order to minimise potential impacts on archaeology, which could be significant with the proposed mitigation. These mitigation measures include the development of a detailed archaeological mitigation strategy prior to construction. With the application of this mitigation the ES Chapter concludes with minor adverse (not significant) effects on buried archaeological remains, however the harm to archaeological remains is offset through the mitigation. The Proposed Development within Gravesham Borough Council is therefore in accordance with Policy CS20 and Paragraph 202 of the NPPF in relation to designated heritage assets.

6.6 Theme 5: Mineral Safeguarding Areas

- 6.6.1 Gravesham Borough Council's current local development plan in relation to minerals comprises the Kent County Council Minerals and Waste Local Plan 2013-30 (September 2020).
- 6.6.2 The Kent County Council Minerals and Waste Local Plan Proposals Map shows the Gravesham SEC as being within a Minerals Safeguarding Area (MSA) for Sub Alluvial River Terrace Deposits. Policy CSM 5 (land won mineral safeguarding) of the adopted Kent County Council Minerals and Waste Local Plan (2016, updated in 2020) therefore applies. From a review of the Kent County

Council website, the Gravesham SEC does not appear to lie within close proximity to any safeguarded mineral infrastructure (including wharves and rail depot as identified by Policy CSM 6 or other mineral plant infrastructure as identified in Policy CSM 7). The site also does not lie in close proximity to any areas identified for future sand and gravel extraction in the Kent County Council Minerals Sites Plan (2020).

- 6.6.3 Policy CSM 5 seeks to safeguard known resources of brickearth, sharp sand and gravel, soft sand (including silica sand), ragstone and building stone from permanent development that would unnecessarily sterilise them or hinder their future extraction.
- 6.6.4 Policy DM7 (safeguarding mineral resources) sets out the criteria by which development proposals that may sterilise or hinder future extraction of safeguarded minerals resources will be assessed against. It requires development in an area of known mineral resource to demonstrate that:
1. the mineral is not of economic value or does not exist; or
 2. that extraction of the mineral would not be viable or practicable; or
 3. the mineral can be extracted satisfactorily, having regard to Policy DM9, prior to the non-minerals development taking place without adversely affecting the viability or deliverability of the non-minerals development; or
 4. the incompatible development is of a temporary nature that can be completed and the site returned to a condition that does not prevent mineral extraction within the timescale that the mineral is likely to be needed; or
 5. material considerations indicate that the need for the development overrides the presumption for mineral safeguarding such that sterilisation of the mineral can be permitted following the exploration of opportunities for prior extraction; or
 6. it constitutes development that is exempt from mineral safeguarding policy, namely householder applications, infill development of a minor nature in existing built-up areas, advertisement applications, reserved matters applications, minor extensions and changes of use of buildings, minor works, non-material amendments to current planning permissions; or
 7. it constitutes development on a site allocated in the adopted development plan where consideration of the above factors (1-6) concluded that mineral resources will not be needlessly sterilised.
- 6.6.1 Prior extraction of any safeguarded mineral in the area of the Proposed Development would not be commercially practicable, given the size and scale of the Proposed Development. Prior extraction would generate adverse impacts upon the environment, particularly given the sensitivities of the environs within the vicinity.
- 6.6.2 There is an overriding national need for the Proposed Development to be undertaken in order for the essential energy network upgrades to happen in Kent and Essex, helping the UK reach net zero by 2050.
- 6.6.3 The operational life of the Proposed Development is approximately 120 years. It is therefore also the case the any safeguarded mineral would not be sterilised permanently but that its availability for extraction would be delayed.

7 Conclusion and Planning Balance

- 7.1.1 The Proposed Development will comprise an essential part of the major reinforcement to the National Electricity Transmission System (NETS). The Proposed Development will directly address the specific need for the uprating of the TKRE 400kV circuits in the existing tunnel under the River Thames, which will be significantly overloaded in their current capacity as a result of the large amount of renewable and low carbon energy generation connecting in to the transmission network in the east coast of England, together with the three interconnectors from the continent as set out by paragraph 3.3.33., of NPS EN-1 (2023) (Ref 26).
- 7.1.2 As such, the Proposed Development represents enhanced electricity infrastructure that national planning policy sets out is urgently needed in order for the government's objectives and commitments for a secure and low carbon energy system to be achieved. The requirement to meet this urgent national need weighs heavily in favour of planning permission being granted. Local planning policy also supports the delivery of electricity infrastructure.
- 7.1.3 This Planning Statement and the supporting ES describe the approach taken by the Applicant that has mitigated many of the identified impacts of the Proposed Development. The ES identifies that no significant environmental effects are anticipated as a result of the construction, operation and decommissioning of the Proposed Development.
- 7.1.4 The policy appraisal in Section 6 demonstrates broad compliance with Gravesham Borough Council Local Plan. The overarching need and benefits of the Proposed Development are clear and should be afforded significant weight in the determination of the planning application. In light of the national need and compliance with the Development Plan, it is considered that the evidence weighs heavily in favour of planning permission being granted.

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9 Abbreviations

Abbreviation	Meaning
AEP	Annual Exceedance Probability
aOD	above Ordnance Datum
ASTI	Accelerated Strategic Transmission Investment
BEIS	Department for Business, Energy & Industrial Strategy
BNG	Biodiversity Net Gain
CCUS	Carbon Capture, Usage and Storage
DBA	Desk Based Assessment
DESNZ	Department of Energy Security and Net Zero
EcIA	Ecological Impact Assessment
EIA	Environmental Impact Assessment
ENSG	Electricity Networks Strategy Group
ES	Environmental Statement
ETYS	Electricity Ten Year Station
EWP	Energy White Paper
FES	Future Energy Scenarios
FRA	Flood Risk Assessment
GPR	Ground Penetrating Radar
HDD	Horizontal Directional Drilling
kV	Kilovolt
LAGB	London Area Green Belt
LCA	Landscape Character Assessment
LV	Low Voltage
LWS	Local Wildlife Site
MCC	Motor Control Centre
MMO	Marine Management Organisation
MSA	Minerals Safeguarding Area
MVA	megavolt amperes
NCA	National Character Area
NETS	National Electricity Transmission System
NOA	Network Options Assessment
NPPF	National Planning Policy Framework
NPS	National Policy Statements
NSIP	Nationally Significant Infrastructure Projects
OHL	Overhead line

Abbreviation	Meaning
PMoW	Precautionary Method of Working
PPG	Planning Practice Guidance
RSPB	Royal Society for the Protection of Birds
SAC	Special Areas of Conservation
SEC	Sealing End Compound
SF ₆	sulphur hexafluoride
SPA	Special Protection Areas
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
TCPA	Town and Country Planning Act 1990
TKRE	Tilbury to Grain and Tilbury to Kingsnorth
WC	Water closet
WFD	Water Framework Directive
XLPE	Cross linked polyethylene

