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Norwich to Tilbury

Volume 6: Environmental Statement

Document: 6.1 Environmental Statement Chapter 1 - Introduction

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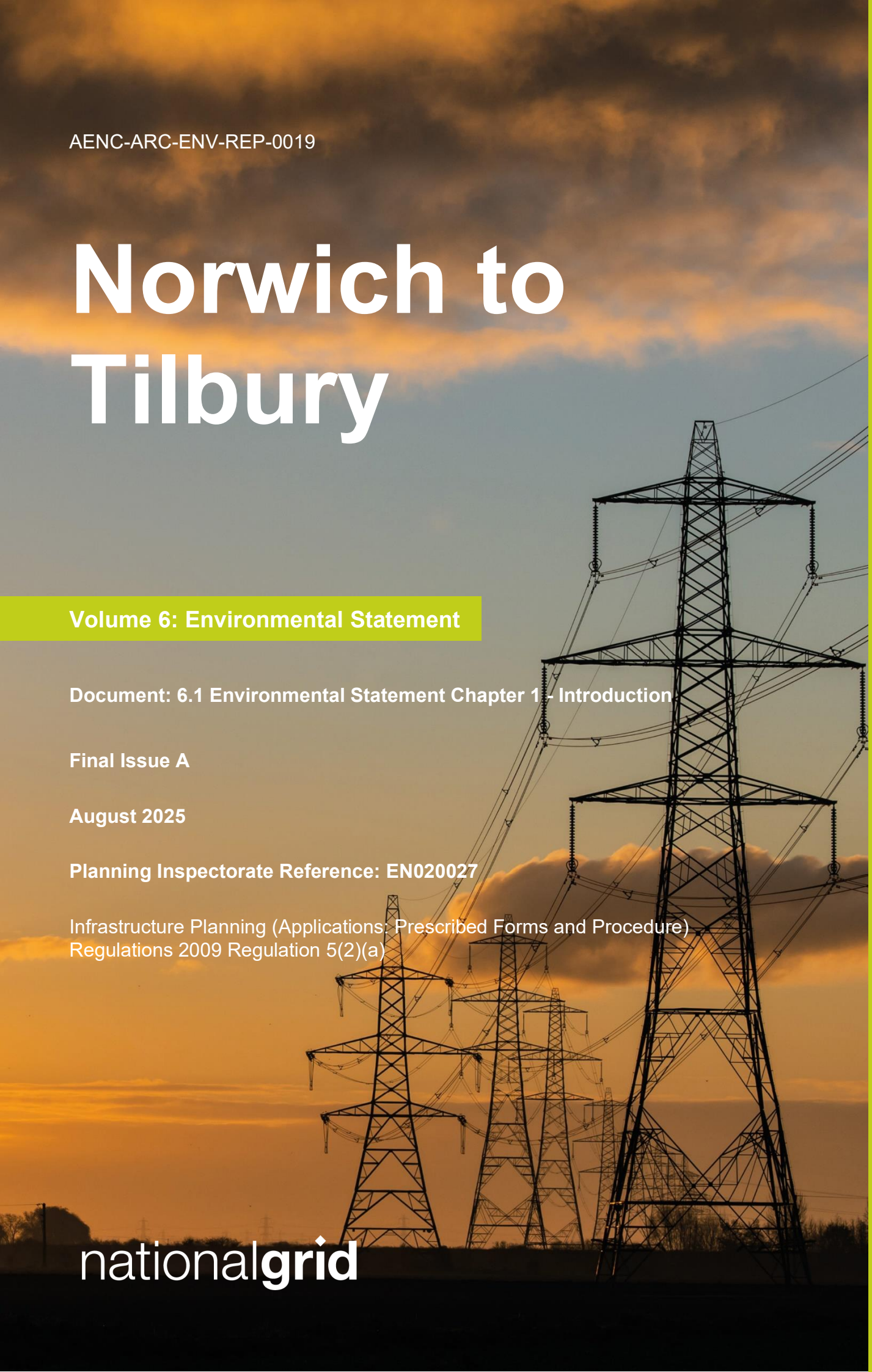

nationalgrid

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1. Introduction

1.1 Overview of the Project

1.1.1 This Environmental Statement (ES) (Volume 6 of the Development Consent Order (DCO) application) has been prepared to accompany the DCO application for Norwich to Tilbury (the 'Project', previously known as the East Anglia Green Energy Enablement (GREEN) Project).

1.1.2 National Grid Electricity Transmission plc ('National Grid') owns and maintains the national high voltage electricity transmission network throughout England and Wales.

1.1.3 The transmission network connects the power from where it is generated to the regional Distribution Network Operators (DNO) who then supply businesses and homes.

1.1.4 National Grid holds the Transmission Licence for England and Wales, and its statutory duty is to develop and maintain an efficient, coordinated 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.

1.1.5 The Project would support the UK's net zero target through the connection of new low carbon energy generation in East Anglia and by reinforcing the transmission network.

1.1.6 The Project comprises reinforcement of the transmission network between the existing Norwich Main Substation in Norfolk and Tilbury Substation in Essex, via Bramford Substation, the new East Anglia Connection Node (EACN) Substation and the new Tilbury North Substation.

1.1.7 The reinforcement is needed because the existing transmission network, even with current upgrading, will not have sufficient capacity for the new renewable energy (a substantial proportion of which would be generated by offshore wind) that is expected to connect to the network over the next 10 years and beyond. Completion of the Project, together with other new reinforcements across the country, will meet this future energy transmission demand both in East Anglia and across the UK.

1.1.8 The Project comprises:

- A new 400 kilovolt (kV) electricity transmission connection of approximately 180 km overall length from Norwich Main Substation to Tilbury Substation via Bramford Substation, a new EACN Substation and a new Tilbury North Substation, including:
  - Approximately 159 km of new overhead line supported on approximately 509 pylons, either standard steel lattice pylons (approximately 50 m in height) or low height steel lattice pylons (approximately 40 m in height) and some of which would be gantries (typically up to 15 m in height) within proposed Cable Sealing End (CSE) compounds or existing or proposed substations

  - Approximately 21 km of 400 kV underground cabling, some of which would be located through the Dedham Vale National Landscape (an Area of Outstanding Natural Beauty (AONB[1])

- Up to seven new CSE compounds (with permanent access) to connect the overhead lines to the underground cables
- Modification works to connect into the existing Norwich Main Substation and a substation extension at the existing Bramford Substation
- A new 400 kV substation on the Tendring Peninsula, referred to as the EACN Substation (with a new permanent access). This is proposed to be an Air Insulated Switchgear (AIS) substation
- A new 400 kV substation to the south of Orsett Golf Course in Essex, referred to as the Tilbury North Substation (with a new permanent access). This is proposed to be a Gas Insulated Switchgear (GIS) substation
- Modifications to the existing National Grid Electricity Transmission overhead lines to facilitate the connection of the existing network into the new Tilbury North Substation to provide connection to the Tilbury Substation
- Ancillary and/or temporary works associated with the construction of the Project.

1.1.9 In addition, third party utilities diversions and/or modifications would be required to facilitate the construction of the Project. There would also be land required for environmental mitigation and Biodiversity Net Gain (BNG).

1.1.10 As well as the permanent infrastructure, land would also be required temporarily for construction activities including, for example, working areas for construction equipment and machinery, site offices, welfare, storage and temporary construction access.

1.1.11 Further details of the Project are included within Chapter 4: Project Description (document reference 6.4) and shown on Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2).

1.1.12 The Project is defined as a Nationally Significant Infrastructure Project (NSIP), under s14(1)(b) and s16 of the Planning Act 2008, and as amended by the Planning Act 2008 (Nationally Significant Infrastructure Projects) (Electric Lines) Order 2013, as it involves the installation of a new electric line above ground of more than 2 km, which would operate at 400 kV in England.

1.1.13 National Grid has submitted an application for development consent to the Planning Inspectorate. The Examining Authority (consisting of one or more examining inspectors), after a period of public examination, would make their recommendation to the Secretary of State for Energy Security and Net Zero, who in turn would decide on whether development consent should be granted for the Project.

[1] National Landscape is the rebranded name of an Area of Outstanding Natural Beauty (AONB) from 22 November 2023

1.1.14 The Project constitutes Environmental Impact Assessment (EIA) development as defined in the Infrastructure Planning EIA Regulations 2017 (the 'EIA Regulations'). The Project falls within Schedule 1 paragraph 20 of the EIA Regulations, '*Construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km*'. Therefore, an assessment of the likely significant effects of the Project on the environment is required.

1.1.15 This chapter is supported by the following figures and appendices:

- Figure 1.1: Site Location Plan and Project Sections (document reference 6.1.F1)
- Appendix 1.1: Competent Experts Evidence (document reference 6.1.A1).

1.2 Overview of The Need for the Project

1.2.1 Consistent with the Government's Net Zero target, there has been, and continues to be, growth in the volume of renewable and zero carbon generation that is seeking to connect to the electricity transmission system in the East Anglia and South East regions. UK Government policy clearly sets out the critical requirement for significant reinforcement of the transmission system to facilitate the connection of renewable energy sources and to transport electricity to where it is used. In particular, the British Energy Security Strategy (HM Government, 2022) sets targets for the connection of up to 50 GW of offshore wind by the 2030s as a key part of a strategy for secure, clean and affordable British energy for the long term.

1.2.2 East Anglia's 400 kV electricity transmission network was built in the 1960s. It was built to supply regional demand, centred on Norwich and Ipswich. For many years, the only significant power stations generating in the East Anglia region were the Sizewell A and the Sizewell B nuclear power stations, Spalding North and Sutton Bridge gas fired power stations, and some further smaller 132 kV connected gas fired power stations.

1.2.3 This generation capacity has recently been added to by several offshore windfarms with the existing generation totalling 6,552.4 MW of installed capacity. This is expected to grow substantially in coming years. In the East Anglia region, connection agreements have been signed for 26,919.9 MW of new generation (total generation of 33,472.3 MW minus existing generation of 6,552.4 MW). These future connection agreements comprise a large volume of offshore wind generation (including East Anglia Offshore Wind), gas-fired generation, energy storage projects, and a nuclear power station (at Sizewell C).

1.2.4 Without reinforcement, the capacity of the East Anglia and South East existing network is insufficient to accommodate the connection of the proposed new power sources. The 'Thermal Boundary Export Limit' – the physical maximum energy capacity the system can accommodate during planned system faults – would be exceeded, preventing export of power to demand centres beyond East Anglia. In these circumstances, generators connecting in the area would be required to reduce their output and would be compensated via a 'constraint' payment. These costs would be passed on to end consumers. National Grid ESO (now NESO) analysis shows that, in this case, predicted constraint costs are likely to significantly exceed those of reinforcement.

1.2.5 The National Grid Electricity System Operator (ESO)[2] concluded that the existing high voltage electricity network in East Anglia does not have the capacity needed to reliably and securely transport all the energy that will be connected into the network while meeting the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS). This is documented within Section 3 of the 2024 Strategic Options Backcheck and Review (SOBR) (National Grid, 2024a). The current network arrangements (as shown on Image 1.1) are not sufficient to meet this standard for the projected levels of power flow.

Image 1.1 Baseline network configuration (not to scale)

1.2.6 An optioneering process for the Project was undertaken and completed in 2022. The optioneering process identified a preferred Strategic Proposal which was outlined in a Strategic Options Report (part of the CPRSS). The preferred Strategic Proposal comprised:

'*A new 400 kV double-circuit of ~60 km between Norwich Main and Bramford Substations and a new 400 kV double circuit of ~120 km between Bramford and Tilbury Substations via a new EACN Substation proposed in the Tendring District.*'

[2] From 1 October 2024, the National Grid ESO became the National Energy System Operator, a new public body independent from National Grid.

1.2.7 Following the selection of the Strategic Proposal, the routeing and siting stage was undertaken, which resulted in a preferred corridor as reported in the CPRSS (National Grid, 2022) being identified.

1.2.8 The preferred corridor in the CPRSS (referred to within the EIA Scoping Report (document reference 6.19) as the 'Scoping Report Corridor') was consulted on at the 2022 non-statutory consultation.

1.2.9 A further round of non-statutory consultation was held in 2023 on a preferred route alignment which included proposed pylon locations, CSE compound locations, locations of underground cables and the proposed location for the new EACN Substation. Prior to non-statutory consultation, a backcheck and review was undertaken of the strategic options to determine if the preferred Strategic Proposal was still valid (the backcheck and review confirmed that it was).

1.2.10 Statutory consultation was held in 2024, between 10 April and 26 July 2024. As part of the statutory consultation material, a Preliminary Environmental Information Report (PEIR) was prepared (National Grid 2024b). Prior to statutory consultation, a backcheck and review was undertaken of the strategic options to determine if the preferred Strategic Proposal was still valid (the backcheck and review confirmed it was).

1.2.11 Following both rounds of non-statutory consultation, and statutory consultation, comments received were considered and changes made to the Project to reflect received feedback where appropriate.

1.2.12 Where deemed necessary, these changes were subject to additional targeted consultations. Further details of the Project's evolution are included within Chapter 3: Alternatives (document reference 6.3), Design Development Report (document reference 5.15) and Consultation Report (document reference 5.1).

Transmission of Energy Legislative Controls

1.2.13 National Grid holds the Transmission Licence for England and Wales, and its statutory duty is to develop and maintain an efficient, coordinated 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.

1.2.14 Section 9(2) of the Electricity Act 1989 places general duties on National Grid as a licence holder '*to develop and maintain an efficient, co-ordinated and economical system of electricity transmission*…'. In addition, s38 and Schedule 9 of the Electricity Act 1989 require National Grid, when formulating proposals for new lines and other works, to:

'…have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and shall do what [it] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects'.

1.2.15 The National Energy System Operator (NESO) is obliged under condition E12 (Requirement to offer terms) of its electricity system operator licence to offer to provide connections to the NETS. Where the NESO receives such an application in respect of a connection in England and Wales then NGET is required under condition D4A (Obligation in relation to offers for connection etc.) of its licence to offer to enter

into an agreement with the NESO and such offer shall make detailed provision regarding:

- The carrying out of works required to connect to the NETS
- The carrying out of works (if any) in connection with the extension or reinforcement of the NETS
- The date by when any works required to permit access to the NETS (including any works to reinforce or extend the NETS) shall be completed.

1.3 Geographical Context

1.3.1 Figure 1.1: Site Location Plan and Project Sections (document reference 6.1.F1) presents the location of the Project, together with the Order Limits. The northernmost extent of the Project would comprise modifications to connect the Project to the existing Norwich Main Substation in South Norfolk. The Project would extend south through the districts of South Norfolk, Breckland, Mid Suffolk, Babergh, Colchester and through to Tendring where the new EACN Substation would be constructed. From the new EACN Substation, the Project would continue south through Colchester, Braintree, Chelmsford, Brentwood, Basildon and into Thurrock, connecting into the new Tilbury North Substation. The existing YYJ/ZB routes would then be modified to connect the new Tilbury North Substation to the existing Tilbury Substation.

1.3.2 The topography of the wider geographical area is predominantly flat and low-lying, comprising large-scale arable fields with clusters of urban and rural settlements. Part of the proposed alignment (approximately 4%) is located within the Dedham Vale National Landscape, which is noted for its unspoilt rural character that has remained largely free from the intrusion of modern development. It is proposed that underground cabling would be used within the National Landscape and part of its setting.

1.3.3 The Project would cross several areas of flood risk (Flood Zones 2 and 3).

1.3.4 Ecological features within proximity to the Project include Flordon Common Site of Special Scientific Interest (SSSI), Wortham Ling SSSI, Middle Wood Offton SSSI, Marks Tey Brickpit SSSI, River Ter SSSI, and Langdon Ridge SSSI. There are six areas of designated ancient woodland within or partially intersecting the Order Limits: Millers Wood and Round Wood near Bramford Substation, Rivenhall Thicks north-east of Rivenhall, Writtle-Writtlepark Wood north-west of Margaretting, Little Bladen's Wood[3] near Little Burstead, and Ashen Shaw & Rainbow Wood near Tilbury[4].

1.3.5 Heritage assets crossed or in proximity to the Project include the Bressingham Steam Museum and Gardens, a number of conservation areas and Langleys historic park and garden, as well as many other discrete heritage assets such as scheduled monuments and listed buildings.

[3] Woodland is not mapped as ancient woodland on the national Ancient Woodland Inventory (Woodland Trust, 2025), however is considered an ancient woodland for the purpose of the ES, as a worst case as the Local Wildlife Site site descriptions indicates it contains ancient woodland or ancient woodland features

[4] Rainbow Wood and Ashen Wood are not mapped as ancient woodland on the national Ancient Woodland Inventory (Woodland Trust, 2025); however, surveys undertaken for the Lower Thames Crossing (LTC) project determined that these woodlands were ancient woodland

1.3.6 Most of the Project would be located on land that is categorised on provisional Agricultural Land Classification mapping as Grade 3 agricultural land or higher quality.

1.3.7 Further detail on receptors is detailed within the relevant environmental topic chapters (Chapter 6 – 16 (document reference 6.6 – 6.16)).

1.3.8 The Project has been sub-divided into eight geographical sections (referenced throughout this ES (Volume 6 of the DCO application)) for reader accessibility, based largely on Local Planning Authority boundaries. These are shown on Figure 1.1: Site Location Plan and Project Sections (document reference 6.1.F1) and comprise:

- Section A – South Norfolk Council
- Section B – Mid-Suffolk District Council
- Section C – Babergh District Council, Colchester City Council and Tendring District Council
- Section D – Colchester City Council
- Section E – Braintree District Council
- Section F – Chelmsford City Council and Brentwood Borough Council
- Section G – Basildon Borough Council and Brentwood Borough Council (and part of Chelmsford City Council)
- Section H – Thurrock Council.

1.4 Purpose and Structure of the Environmental Statement

The Need for an Environmental Impact Assessment and Environmental Statement

1.4.1 EIA is the process of compiling, evaluating and presenting information about the likely significant effects, both adverse and beneficial, of a project. The assessment provides decision makers and statutory consultees with the environmental information they require to determine proposals. The early identification of potential significant adverse environmental effects enables appropriate mitigation measures (i.e. following the mitigation hierarchy – avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment[5]) to be incorporated into the design of a project, or commitments to be made to environmentally sensitive construction methods and practices where considered appropriate. The approach is iterative and involves close working between those undertaking the EIA and the engineering design.

1.4.2 An application for development consent for energy projects must be submitted to the Secretary of State for Energy Security and Net Zero. In accordance with Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, where a development is EIA development, the application for development consent must be supported by an ES reporting on the findings of the EIA process; as required by the Planning Act 2008.

[5] The Infrastructure Planning (EIA) Regulations 2017

1.4.3 As part of the EIA process, an EIA Scoping Report (and PEIR[6]) are typically prepared. These are discussed further below.

Scoping

1.4.4 National Grid identified that the Project had the potential for likely significant effects under the EIA Regulations. The Planning Inspectorate was notified on 17 October 2022 that National Grid intended to provide an ES in accordance with Regulations 6(1), 6(2)(a) and 8(1)(b) of the EIA Regulations.

1.4.5 An EIA Scoping Report (document reference 6.19) for the Project was submitted to the Planning Inspectorate on 4 November 2022. This set out the parameters of the Project, the proposed methodology for undertaking the environmental assessment and the proposed scope of the EIA. It also identified potentially significant environmental effects (as identified at that time) that would be assessed in more detail (i.e. scoped in), as well as those that were unlikely to be significant and could therefore be scoped out of the assessment.

1.4.6 The Planning Inspectorate provided an EIA Scoping Opinion on behalf of the Secretary of State on 10 December 2022 (document reference 6.20). This included a number of items that National Grid should consider when producing the ES (Volume 6 of the DCO application). This ES (Volume 6 of the DCO application) is based on the EIA Scoping Opinion (document reference 6.20). A summary of all of the matters raised in the EIA Scoping Opinion, together with National Grid's response to each matter raised, is provided in Appendix 5.1: National Grid's response to the EIA Scoping Opinion (document reference 6.5.A1). Further details on EIA scoping and the scope of the ES (Volume 6 of the DCO application) are included within Chapter 5: EIA Approach and Method (document reference 6.5) and Appendix 5.2: Scope of the Assessment (document reference 6.5.A2).

Preliminary Environmental Information Report

1.4.7 National Grid prepared a PEIR (National Grid, 2024b) as part of the statutory consultation process required under s42 and s47 of the Planning Act 2008. The PEIR was published on 10 April 2024, to enable consultees and interested parties to develop an informed view of the environmental effects of the Project and provide comments on that basis. The PEIR followed a similar structure to an ES, but detailed significance criteria and methodologies were not used in each of the environmental topic chapters. Instead, a proportionate approach was taken and effects were determined to be either positive, negative, or neutral, then professional judgement was applied to determine if effects were likely to be significant. Responses to representations received during the statutory consultation in summer 2024 and subsequent consultations in 2025 are provided in Appendix K and Appendix M of the Consultation Report (document reference 5.1).

Environmental Statement

1.4.8 This ES (Volume 6 of the DCO application) provides an assessment of the likely significant residual effects in accordance with the EIA Regulations. Further details on

[6] Required by the Planning Act 2008

the EIA process and methodology can be found in Chapter 5: EIA Approach and Method (document reference 6.5).

1.4.9 Schedule 4 of the EIA Regulations sets out the information to be included in the ES (Volume 6 of the DCO application). Table 2.1 in Chapter 2: Key Legislation and Planning Policy Context (document reference 6.2) identifies where the information defined by Schedule 4 can be found within this ES (Volume 6 of the DCO application).

1.4.10 Regulation 14(4) of the EIA Regulations requires that an ES be prepared by 'competent experts' and that the ES be accompanied by a statement outlining the relevant expertise or qualifications of such experts.

1.4.11 The EIA has been undertaken by competent experts with the relevant and appropriate experience in their respective environmental topics. The EIA technical leads responsible for the environmental topic chapters are provided in Appendix 1.1: Competent Experts Evidence (document reference 6.1.A1).

1.4.12 The ES (Volume 6 of the DCO application) forms part of the DCO application for the Project under the Planning Act 2008 and has been prepared in accordance with the EIA Regulations.

1.4.13 The structure of the ES (Volume 6 of the DCO application), along with the associated documents in Volume 6, is shown in Table 1.1.

Table 1.1 Structure and contents of the ES

ES Volume	Document Reference	ES Chapter Number	Document Name	Description of Contents
1	6.1	1	Introduction	An introduction to the Project and the purpose and structure of the ES.
1	6.2	2	Key Legislation and Planning Policy Context	A review of the key legislation and policy relevant to the Project.
1	6.3	3	Alternatives	A summary of the main reasonable alternatives that have been considered on the Project including the strategic options and route corridors.
1	6.4	4	Project Description	A description of the Project including permanent features and associated temporary works. It describes the general characteristics of the Project and outlines areas of flexibility in relation to design parameters.

ES Volume	Document Reference	ES Chapter Number	Document Name	Description of Contents
1	6.5	5	EIA Approach and Method	A description of the overall EIA methodology that has been used, including temporal durations and approach to mitigation.
2	6.6	6	Agriculture and Soils	Each of the 11 environmental topic chapters is structured as follows: 1.Introduction 2.Regulatory and Planning Policy Context 3.Scope of the Assessment 4.EIA Approach and Methods 5.Baseline Conditions 6.Proposed Mitigation 7.Residual Effects 8.Monitoring 9.Sensitivity Testing
2	6.7	7	Air Quality	
2	6.8	8	Ecology and Biodiversity	
2	6.9	9	Contaminated Land, Geology and Hydrogeology	
2	6.10	10	Health and Wellbeing	
2	6.11	11	Historic Environment	
2	6.12	12	Hydrology, Land Drainage and Flood Risk	
2	6.13	13	Landscape and Visual	
2	6.14	14	Noise and Vibration	
2	6.15	15	Socio-Economics, Recreation and Tourism	
2	6.16	16	Traffic and Transport	
2	6.17	17	Cumulative Effects	A description of the approach to the cumulative effects assessment, including the potential for significant environmental effects from different environmental topics on the same receptor/group of receptors and potential cumulative effects with the Project and other developments.

ES Volume	Document Reference	ES Chapter Number	Document Name	Description of Contents
2	6.18	18	Summary	Provides a summary of all predicted likely significant effects during construction and operation (and maintenance) of the Project and proposed mitigation measures.
3	6.X.F1	N/A	ES Figures	Each figure is given a number which is based on the applicable ES chapter that the figure supports and then the next number in sequence. *For example, Figure 4.1 is the first figure supporting Chapter 4.*
3	6.X.A1	N/A	ES Appendices	Each appendix is given a number which is based on the applicable ES chapter that the appendix supports and then the next number in sequence. *For example, Appendix 4.1 is the first appendix supporting Chapter 4.*
3	6.19	N/A	EIA Scoping Report	The EIA Scoping Report submitted by National Grid to the Planning Inspectorate.
3	6.20	N/A	EIA Scoping Opinion	The EIA Scoping Opinion produced by the Planning Inspectorate on behalf of the Secretary of State.
3	6.21	N/A	Non-Technical Summary	Summarises in non-technical language the contents of the ES including the key features of the baseline, proposed mitigation and residual significant effects.

1.4.14 In addition to the EIA, the Project is subject to other regulatory regimes, including for example, the Conservation of Habitats and Species Regulations 2017 ('the Habitats Regulations'). The following documents have been prepared in parallel to the ES and where relevant are referenced within the ES (Volume 6 of the DCO application):

- Habitats Regulations Assessment Report (document reference 5.3)
- Statement of Statutory Nuisance (document reference 5.4)
- Flood Risk Assessment (document reference 7.9)
- Water Framework Directive Assessment (document reference 7.10)
- Transport Assessment (document reference 7.11).

1.5 Transboundary Effects

1.5.1 There is a requirement under Regulation 32(1) of the EIA Regulations to consider transboundary effects; that is, those effects that could affect receptors in other countries. A screening exercise was undertaken using Advice Note Twelve: Transboundary Impacts and Process, Annex I (Planning Inspectorate, 2020)[7]. Advice Note Twelve was replaced in September 2024 by the Planning Inspectorate's Advice Page on Transboundary Impacts and Process (Planning Inspectorate, most recently updated in March 2025). That updated advice has been considered. No transboundary effects were predicted in relation to the Project, as there is no pathway for effects to occur outside the UK – this was confirmed at the scoping stage and reported in the EIA Scoping Opinion (document reference 6.20). No further consideration is provided within the ES (Volume 6 of the DCO application).

1.6 Biodiversity Net Gain

1.6.1 Although not a statutory requirement for DCO projects submitted to the Planning Inspectorate prior to May 2026, National Grid has committed to deliver 10% BNG with wider environmental and societal benefits on all construction projects requiring formal planning or consent, including Norwich to Tilbury.

1.6.2 This commitment is underpinned by the delivery of quantifiable enhancements for biodiversity measured from a baseline using the Department for Environment, Food and Rural Affairs Statutory Biodiversity Metric (February 2024), with actions formalised and secured by long-term management arrangements with external organisations and partners.

1.6.3 These commitments ensure that National Grid can deliver long-term environmental improvements as part of its works. The commitments align with, and would make a positive contribution to, regional and national strategies and facilitate collaboration and partnerships with National Grid's communities and stakeholders.

1.6.4 Further information is included within the BNG Report (document reference 7.1) which has been prepared to support the DCO application for the Project, which demonstrates a minimum of 10% BNG can be achieved.

[7] The Planning Inspectorate's Advice Page on Transboundary Impacts and Process (Planning Inspectorate 2025) replaces Advice Note Twelve: Transboundary Impacts and Process, Annex I (Planning Inspectorate 2020). However, no additional screening is needed following a review of the updated advice.

Abbreviations

Abbreviation	Full Reference
AIS	Air Insulated Switchgear
AONB	Area of Outstanding Natural Beauty
BNG	Biodiversity Net Gain
CPRSS	Corridor and Preliminary Routeing and Siting Study Report
CSE	Cable Sealing End
DCO	Development Consent Order
DNO	Distribution Network Operators
EACN	East Anglia Connection Node
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESO	Electricity System Operator
GIS	Gas Insulated Switchgear
GW	Gigawatts
kV	Kilovolt
NSIP	Nationally Significant Infrastructure Project
NETS	National Electricity Transmission System
NETS SQSS	National Electricity Transmission System Security and Quality of Supply Standard
NESO	National Energy System Operator
NGET	National Grid Electricity Transmission
PEIR	Preliminary Environmental Information Report
SOBR	Strategic Options Backcheck and Review
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Glossary

Term	Description
Alignment	The proposed overhead line and underground cable route.
Ancient woodland	Land that has been continually wooded since at least 1600 in England. Regarded as 'irreplaceable habitat' in national planning policy and guidance. Ancient woodland greater than 2 ha is recorded on the Natural England Ancient Woodland Inventory.
Biodiversity	The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.
Biodiversity Net Gain	An approach for developments to ensure habitats for wildlife are left in a measurably better state than they were before the development.
Cable	An insulated conductor designed for underground installation.
Cable Sealing End compound	Electrical infrastructure used as the transition point between overhead lines and underground cables. A compound on the ground acts as the principal transition point.
Conservation Area	An area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance as defined in s69(1)(a) in the Planning (Listed Building and Conservation Areas) Act 1990.
Development Consent Order	A statutory instrument which grants consents and other rights to build a Nationally Significant Infrastructure Project, as defined by the Planning Act 2008.
Distribution Network Operator	Companies that own and operate the power lines and infrastructure that connect the National Grid network to individual properties.
Environmental Impact Assessment (EIA)	An assessment of the likely effects of a development project on the environment, which is reported in an Environmental Statement that is publicised and consulted on and taken into account in the decision on whether a project should proceed.
Environmental Statement (ES)	The main output from the EIA process, an ES is the report required to accompany an application for development consent (under the Infrastructure Planning (EIA) Regulations 2017) to inform public and stakeholder consultation and the decision on whether a project should be allowed to proceed. The EIA Regulations set out specific requirements for the contents of an ES for Nationally Significant Infrastructure Projects.
Environmental topic	A subject area covered within the EIA, for example landscape and visual or biodiversity.

Term	Description
Gantry	An overhead bridge-like structure supporting electrical equipment. A transition point from overhead line equipment to equipment in a compound.
Lattice pylon	Pylon type widely used on the national electricity transmission networks. Both standard lattice pylons (approximately 50 m in height) and low height lattice pylons (approximately 40 m in height) are proposed on the Project.
Light Goods Vehicles	Goods vehicle weighing 3,500 kg or less.
Listed building	A measure of a building's special architectural and historic interest. There are three categories of listed buildings, Grade I, II* and II, depending on the level of interest.
Mitigation	The action of reducing the severity and magnitude of change (impact) to the environment. Measures to avoid, reduce, remedy or compensate for significant adverse effects. Embedded, standard and additional mitigation is referred to for the Project.
National Electricity Transmission System Security and Quality of Supply Standard	The NETS SQSS sets out a coordinated set of criteria and methodologies that the Transmission Licensees shall use in the planning and operation of the National Electricity Transmission System.
National Landscape (an Area of Outstanding Natural Beauty)	Formally designated under the National Parks and Access to the Countryside Act of 1949 to protect areas of the countryside of high scenic quality that cannot be selected for National Park status due to their lack of opportunities for outdoor recreation (an essential objective of National Parks). As of November 2023, all AONBs became 'National Landscapes'. This reflects ambitions for the areas to play a key part in the international '30 by 30′ commitment (to protect and conserve a minimum of 30% of land and sea for biodiversity by 2030).
Nationally Significant Infrastructure Project	Typically a large scale development of national importance that requires development consent from the Secretary of State, under the Planning Act 2008.
Order Limits	The maximum extent of land within which the authorised development may take place.
Overhead line	Conductor (wire) carrying electric current, strung from pylon to pylon.
Preliminary Environmental Information Report	Report submitted as part of the statutory consultation engagement for a DCO project that allows consultation bodies to understand the likely significant environmental effects of a project.
Project Section	Geographical 'sections' have been identified that break the Project down into smaller units for ease of description within the documentation.
Pylon	Structures that support the overhead line (conductors).

Term	Description
Scoping	Scoping is the process of determining the content and extent of matters that should be covered in the Environmental Impact Assessment.
Scoping Report	Report determining the content and extent of matters that should be covered in the Environmental Impact Assessment.
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses.
Transboundary effects	Those effects from a project that could affect receptors in other countries, the assessment of which is required under the EIA Regulations.
Underground cable	An insulated conductor carrying electric current designed for underground installation. Underground cables link together two Cable Sealing End compounds.

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