The Great Grid Upgrade

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Bramford to Twinstead Reinforcement

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Executive Summary

This Planning Statement accompanies National Grid Electricity Transmission plc's (here on referred to as National Grid) application for development consent to reinforce the transmission network between Bramford Substation in Suffolk, and Twinstead Tee in Essex. The Bramford to Twinstead Reinforcement ('the project') would be achieved by the construction and operation of a new electricity transmission line over a distance of approximately 29km comprising of overhead lines, underground cable and grid supply point (GSP) substation. It also includes the removal of 25km of the existing distribution network and various ancillary works. The project meets the threshold as a Nationally Significant Infrastructure Project, as defined under Part 3 of the Planning Act 2008, hence National Grid requires a Development Consent Order (DCO).

The project falls within the administrative boundaries of Mid Suffolk District Council, Babergh District Council, Braintree District Council, Suffolk County Council and Essex County Council.

The UK has the largest offshore wind electricity generating capacity in the world. Increasing the amount of energy generated from offshore wind is a key part of the UK achieving net zero carbon emissions. The British Energy Security Strategy (BEIS, 2022) sets a further and equally, ambitious target to deliver up to 50 gigawatts (GW) of offshore wind connected to the electricity network by 2030.

Where more capacity is required beyond what can be provided by upgrades to existing infrastructure, National Grid needs to construct completely new parts of the network; this includes the proposed reinforcement between Bramford (Suffolk) and Twinstead (Essex) which is the subject of this application for development consent.

This Planning Statement demonstrates that the project is in accordance with National Policy Statements (NPS) EN-1 and EN-5 and, in particular, the matters set out in the 'assessment principles' and 'generic impacts' sections of those documents.

Proposed revised energy NPSs including EN-1 and EN-5 were the subject of consultation in September 2021 and March 2023, and the proposed revised NPSs were published in November 2023, before being laid before Parliament. They are expected to be designated and come into force in early 2024. Whilst the application will still be determined in accordance with the extant 2011 NPS suite, the November 2023 updates are important and relevant considerations in the decision-making process. Where the proposed revised NPSs (November 2023) take a different approach to the current designated NPSs (2011), this is highlighted.

The Planning Statement has also assessed the project against the National Planning Policy Framework (NPPF) policies which are considered to be both important and relevant to the project. The Planning Statement has also considered the project against Local Plan policies; recognising that such policies may be important and relevant in the context of an application for development consent. Although there are no explicit policies which reference the project, the Bramford to Twinstead Reinforcement is broadly consistent with the objectives of those plans with regard to reducing adverse effects arising from construction and operational activities and transitioning to a low carbon economy.

The Planning Act 2008 requires that an application for development consent should be decided in accordance with the NPS. It is the conclusion of this Planning Statement that the project is in

accordance with the NPS and provide significant benefits in supporting the security of the UK's energy supply. There are no adverse effects which would outweigh the benefits of the project. Overall, the planning balance lies strongly in favour of the grant of development consent for the project.

The application for development consent was accepted for Examination on the 23 May 2023.

A full description of the project can be found in Environmental Statement (ES) Chapter 4: Project Description (**application document 6.2.4**)

1. Introduction

1.1 Overview

1.1.1 This Planning Statement has been prepared to accompany an application by National Grid Electricity Transmission plc's (here on referred to as National Grid) for development consent to reinforce the transmission network between the existing Bramford Substation in Suffolk, and Twinstead Tee in Essex. This would be achieved by the construction and operation of a new 400 kilovolt (kV) electricity transmission line over a distance of approximately 29km. The project meets the threshold as a National Significant Infrastructure Project (NSIP), as defined under Part 3 of the Planning Act 2008, hence National Grid requires Development Consent Order (DCO).

1.1.2 The reinforcement would comprise approximately 18km of overhead line (consisting of approximately 50 new pylons, and conductors) and 11km of underground cable system (with associated joint bays and above ground link pillars).

1.1.3 Four cable sealing end (CSE) compounds would be required to facilitate the transition between the overhead line and underground cable. The CSE would be within a fenced compound, and contain electrical equipment, support structures, a small control building and a permanent access route.

1.1.4 It is proposed that approximately 27km of existing overhead line and associated pylons would be removed as part of the proposals (25km of existing 132kV overhead line between Burstall Bridge and Twinstead Tee, and 2km of the existing 400kV overhead line to the south of Twinstead Tee). To facilitate the overhead line removal, a new GSP substation is required at Butler's Wood, east of Wickham St Paul, in Essex. The GSP substation would include associated works, including replacement pylons, a single circuit sealing end compound and underground cable to tie the substation into the existing 400kV and 132kV networks.

1.1.5 Some aspects of the project, such as the underground sections and the GSP substation, constitute 'associated development' under the Planning Act 2008.

1.1.6 Other ancillary activities would be required to facilitate construction and operation of the project, including (but not limited to):

- Modifications to, and realignment of sections of existing overhead lines, including pylons;
- Temporary land to facilitate construction activities including temporary amendments to the public highway, public rights of way, working areas for construction equipment and machinery, site offices, welfare, storage and access;
- Temporary infrastructure to facilitate construction activities such as amendments to the highway, pylons and overhead line diversions, scaffolding to safeguard existing crossings and watercourse crossings;
- Diversion of third-party assets and land drainage from the construction and operational footprint; and

- Land required for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process, and National Grid's commitments to Biodiversity Net Gain (BNG).

1.1.7 This Planning Statement has been prepared in compliance with the requirements of Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations (the APFP Regulations) and in accordance with the Department for Communities and Local Government (DCLG) guidance Planning Act 2008: Application Form Guidance (DCLG, 2013) and Planning Inspectorate Advice Note Six Preparation and Submission of Application Documents (Planning Inspectorate, 2022).

1.1.8 The APFP Regulations do not specifically require a Planning Statement to accompany an application for development consent. However, National Grid considers that a Planning Statement would assist the Examining Authority in their consideration of the application, and the Secretary of State (SoS) with the determination of the application, by bringing together relevant policies and their requirements in one statement.

1.1.9 The Planning Statement seeks to assist the Examining Authority and the SoS in applying provisions of the Planning Act 2008 that require an application for development consent to be decided in accordance with the relevant NPS (Section 104(3)) except to the extent that the adverse impact of the project would outweigh its benefits (Section 104(7)).

1.2 Purpose and Structure

1.2.1 The purpose of this Planning Statement is to consider the compliance of the project as a whole with the requirements of relevant planning policy.

1.2.2 This Planning Statement describes the planning policy context for the project and reviews the planning issues in light of the *Overarching National Policy Statement for Energy (EN-1)* (Department of Energy and Climate Change (DECC), 2011), the *National Policy Statement for Electricity Networks Infrastructure (EN-5)* (DECC, 2011[2]) and other important and relevant planning policy.

1.2.3 Draft replacement energy NPS documents including EN-1 and EN-5 (BEIS, 2023) were the subject of consultation between March and June 2023. In November 2023, the Government published proposed revised versions of the energy NPS documents. However, the 2011 versions of the NPS remain in force until the proposed revised NPS are designated in early 2024. Due to the transitional provisions, the application will still be determined in accordance with the extant 2011 NPS suite, however the November 2023 updates are important and relevant considerations in the decision-making process. Therefore, National Grid has carried out an assessment of the project against the proposed revised NPSs (November 2023) in the Accordance Tables at Appendix F (EN-1) and Appendix G (EN-5) of this Planning Statement. Where the proposed revised EN-1 and proposed revised EN-5 are materially different to the current designated NPSs (2011), this is referenced in the relevant sections of this Planning Statement.

1.2.4 This Planning Statement draws upon the conclusions of many of the documents supporting the application and interprets them against relevant planning policy considerations. This Planning Statement should, therefore, be read alongside these documents, namely the Environmental Statement (ES) (**application document 6.2**) and draft DCO (**application document 3.1**).

1.2.5 This Planning Statement is structured as follows:

- Chapter 2: Background

- Chapter 3: Need for the Project
- Chapter 4: The Project
- Chapter 5: Policy Influences on Design
- Chapter 6: National Planning Policy Context
- Chapter 7: National Planning Policy Assessment
- Chapter 8: Local Planning Policy Assessment
- Chapter 9: Open Space
- Chapter 10: Conclusion
    - Appendix A: Signposting for Compliance with EN-1 (2011)
    - Appendix B: Signposting for Compliance with EN-5 (2011)
    - Appendix C: Committed Developments Overlapping with Order Limits
    - Appendix D: Local Planning Policy Assessment
    - Appendix E: Local Planning Policy Context
    - Appendix F: Signposting for Compliance with proposed revised EN-1 (November 2023)
    - Appendix G: Signposting for Compliance with proposed revised EN-5 (November 2023)

2. Background

2.1 Role of National Grid

2.1.1 National Grid Electricity Transmission sits within the wider National Grid Group; within the Group there are distinctly separate legal entities, each with their individual responsibilities and roles. National Grid companies sit at the heart of Great Britain's energy system, connecting millions of people and businesses to the energy they use every day. The Bramford to Twinstead project is being promoted by National Grid Electricity Transmission.

2.1.2 Note that in this Planning Statement, except when referring specifically to other National Grid Group entities below, the term National Grid is used to refer to National Grid Electricity Transmission.

National Grid Electricity Transmission (National Grid)

2.1.3 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 (the Electricity Act). National Grid is regulated by Ofgem, which sets price controls and monitors how the company develops and operates the network on behalf of consumers.

2.1.4 National Grid owns and manages the national high-voltage electricity transmission system throughout England and Wales. National Grid owns, builds and maintains the infrastructure; overhead lines, buried cables and substations as a few examples, to allow power to move around the country. The key role of this transmission system is to connect the electricity generators' power stations with regional Distribution Network Operators (DNO) who then supply businesses and homes. In return for the connection, users of the transmission network pay a tariff to National Grid. This revenue is then used to maintain, improve and invest in the transmission network.

2.1.5 As a licence holder National Grid has specific duties to uphold in relation to the desirability of preserving amenity of certain aspects of the environment and to mitigate the effects of its activities on the environment under Section 38 and Schedule 9 of the Electricity Act 1985.

2.1.6 National Grid is also required, under Section 38 of the Electricity Act, to comply with the provisions of Schedule 9 of the Act. Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity, to preserve amenity by:

- Schedule 9(1)(a) '…*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
- Schedule 9(1)(b) '…*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'*.

National Grid Electricity System Operator (National Grid ESO)

2.1.7 National Grid Electricity System Operator (National Grid ESO) controls the movement of electricity around Great Britain, transporting power from generators (such as wind farms) to local DNO, ensuring that supply meets demand.

2.1.8 National Grid ESO is licensed by the Government as electricity transmission companies and are regulated by Ofgem, which sets price controls and monitors how the companies develop and operate their networks on behalf of consumers.

National Grid Ventures

2.1.9 National Grid Ventures sits outside the core regulated businesses, investing in technologies and partnerships that help accelerate the move to a clean energy future. This includes interconnectors - connecting the UK with countries across the North Sea, allowing trade between energy markets and efficient use of renewable energy resources.

2.2 Planning Act 2008

2.2.1 The project is defined as an NSIP, under Section 14(1)(b) and Section 16 of the Planning Act 2008 and the Planning Act 2008 (Electric Lines) Order 2013, as it involves the installation of an electric line above ground of more than 2km, which will operate at 400kV in England.

2.2.2 Schedule 1 of the Draft DCO contains a list of numbered works comprising the project. The project includes works of a description in section 14(1)(b) of the Act (the installation of an electric line above ground), associated development and other matters that are included as ancillary to the project.

2.2.3 As an NSIP, the project requires the grant of development consent by the making of a DCO under the Planning Act 2008. A DCO may include a range of consents and powers.

2.2.4 The definitions in the Planning Act 2008 are such that only the proposed new above ground electricity line is an NSIP. Other developments, however, may be granted development consent as ‘associated development’ within the meaning of Section 115 of the Planning Act 2008. For the project, ‘associated development’ includes:

- approximately 11km of 400kV underground cable;
- approximately 1km of 132kV underground cable;
- four CSE compounds associated with the 400kV cable;
- removal of approximately 2km 400kV overhead line;
- removal of approximately 25km 132kV overhead line;
- two super grid transformer GSP substation including a 400kV single circuit CSE compound;
- modifications to existing 400kV and 132kV overhead lines;
- temporary pylons and overhead line spans during construction;
- temporary bridges for construction;
- various construction activities;

- temporary amendments to the highway; and
- mitigation, compensation and enhancement of the environment.

2.2.5 The documentation submitted pursuant to this application for development consent meets the requirements of the APFP Regulations. A summary and reference for all of the documents submitted is provided in the Navigation Document (**application document 1.4**).

2.3 Draft DCO

2.3.1 The draft DCO (**application document 3.1**) submitted with the application would, if approved, grant development consent for the powers and provisions required to construct, operate and maintain the project. The Explanatory Memorandum (**application document 3.2**) that accompanies the application explains the purpose of the draft DCO and the powers sought.

2.4 Plans and Drawings

2.4.1 There are a number of different types of plans, each showing a different element of the project. In terms of understanding the project plans, refer to the Guide to the Plans (**application document 2.1**) for more information.

2.5 Details of Other Consents and Licences

2.5.1 The following consents, licences, and permits are expected to be required for the project:

- Licences from Natural England in relation to affected European Protected Species pursuant to regulation 53 of the Conservation of Habitats and Species Regulations 2010;
- Licences from National England to affect protected species under section 16 of the Wildlife and Countryside Act 1981;
- Registration(s) by the Environment Agency under regulation 21 of the Hazardous Waste (England and Wales) Regulations 2005;
- Permits from the Environment Agency pursuant to the Environmental Permitting (England and Wales) Regulations 2016;
- Consents from the Environment Agency for structures in, under or over a main river pursuant to section 109 of the Water Resources Act 1991;
- Consent(s) from the relevant drainage board to alter ordinary watercourses pursuant to Section 23 of the Land Drainage Act 1991; and
- Consents from the relevant local authority pursuant to section 61 of the Control of Pollution Act 1974.

2.5.2 In the case of licences in relation to European Protected Species, National Grid has shared draft licences with Natural England. Such matters have also been discussed in the Statements of Common Ground (SoCG) prepared with Natural England (**application document 7.3.2**).

2.5.3 In all other cases, National Grid continues to seek to agree with each affected body the principles against which applications for the consents, licences, and permits should be considered.

2.6 Statements of Common Ground

2.6.1 In accordance with guidance published by DCLG, now the Department for Levelling Up, Housing and Communities (DLUHC), National Grid has been developing SoCG with a number of statutory consultees, statutory undertakers and interested parties during the preparation of the DCO. The SoCG seek to identify matters on which parties agree and to track progress towards the resolution of any matters where agreement has not yet been reached.

2.6.2 More information on the SoCG being prepared by the project and submitted with the application can be found in Status of Statements of Common Ground (**application document 7.3**).

2.7 Local Planning Authorities

2.7.1 The project is located in Suffolk and Essex. In Suffolk most of the land within the Order Limits is within the administrative area of Babergh District Council with a small area at the far east in the administrative area of Mid Suffolk District Council. These two Local Planning Authorities (LPA) are legally separate entities, but have common offices, and staff (the councils' share their administrative functions and management team). In Essex the project is entirely within Braintree District Council.

2.7.2 National Grid has worked closely with the LPA, following the period of project pause and has held regular meetings with the relevant officers since December 2020. The parties have entered into a Planning Performance Agreement to assist with the management of the application. At the suggestion of the LPA National Grid prepared an 'Engagement Plan', which is regularly updated, and which included a list of draft application documents which would be shared with the LPA before the submission of the application for development consent. National Grid consulted the LPA in accordance with the Engagement Plan and shared draft versions of DCO documentation, including the draft DCO, Management Plans and Flood Risk Assessment (FRA) ahead of the submission. National Grid had regard to responses received on those draft documents in finalising this application.

3. Need for the Project

3.1 Introduction

3.1.1 This Chapter addresses the need for the project, focusing on the policy drivers, and should be read alongside the latest Need Case (April 2023) (**application document 7.2.1**) and the Strategic Options Report (June 2011) (**application document 7.2.2**).

3.1.2 The Need Case (April 2023) (**application document 7.2.1**) provides an overview of the need for the project setting out the drivers for change, including the increase in electricity generation and how this affects the National Electricity Transmission System. The Strategic Options Report (June 2011) (**application document 7.2.2**) covers National Grid's duty to supply, its obligations around connection agreements, wider reinforcement requirements in East Anglia and the South East, and then examines the strategic options; recommending the option from Bramford to Twinstead.

3.1.3 This Chapter does not seek to cover need in the technical sense but addresses how the identified need is expressed in terms of national policy and considers the weight to be attached to that in making the decision on this application. In doing so, this Chapter considers the work on National Grid ESO, Government Policy and the relevant NPS.

3.2 The Transmission Network

3.2.1 The existing transmission system was developed to transport electricity in bulk from power stations to demand centres. Much of National Grid's transmission system was originally constructed in the 1960s. Incremental changes to the transmission system have subsequently been made to meet increasing customer demand and to connect new power stations and interconnectors with other transmission systems.

3.2.2 National Grid's transmission system consists of approximately 7,200km of overhead lines and a further 700km of underground cabling, operating at 400kV and 275kV. In general, 400kV circuits have a higher power carrying capability than 275kV circuits. These overhead line and underground cable circuits connect approximately 340 substations forming a highly interconnected transmission system. Further details of the transmission system including geographic and schematic representations are published by National Grid ESO annually as part of its Electricity Ten Year Statement (ETYS) (National Grid ESO, 2022[4]).

3.2.3 Circuits are those parts of the system used to connect substations on the transmission system. The system is mostly composed of double-circuits (in the case of overhead lines carried on two sides of a single pylon) and single- circuits. Substations provide points of connection to the transmission system for power stations, distribution networks, transmission connected demand customers (e.g. large industrial customers) and interconnectors.

3.2.4 The ESO has annual processes to publish the ETYS, which sets out the development of all transmission in Great Britain over the next 10 years.

3.2.5 It also has annual processes to publish the Future Energy Scenarios (FES) which takes a number of energy industry views as part of a consultation process and develops a set of possible energy growth scenarios.

3.2.6 Similarly, National Grid ESO has an annual process to evaluate the Network Options Assessment (NOA). This document takes into account the ETYS and FES to establish via a Cost Benefit Analysis process when it is right to take forward options proposed by transmission owners to increase network capacity. This considers the capital cost of the proposal, delivery timescales and constraint costs avoided by delivering the proposal. This establishes when a proposed reinforcement becomes the most economic, efficient and coordinated way to deliver value to Great Britain energy consumers.

3.2.7 National Grid ESO manages shortfalls in boundary capacity by reducing power flows and constraining generation. This is achieved by paying generators to reduce their outputs, known as 'constraint costs'. Ultimately, constraint costs are passed on to consumers and businesses through electricity bills.

3.2.8 National Grid ESO has also launched the Offshore Transmission Network Review (OTNR). National Grid ESO Offshore Coordination Project forms part of the Department of Business, Energy and Industrial Strategy (BEIS) Offshore Transmission Network Review (OTNR) (BEIS, 2020[2]), having published a Holistic Network Design (HND) report in summer 2022 (National Grid ESO, 2022[2]).

3.2.9 The OTNR considers how the transmission network is designed and delivered, to ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way considering the increased ambition for offshore wind to achieve net zero. It considers environmental, social and economic costs. The HND sets out a single integrated transmission network design that supports the large-scale delivery of electricity generated from offshore wind.

3.3 International Climate Policy Context

3.3.1 The Government's energy policy is driven by a global need, and international commitments, to move towards net zero emissions, and achieving this through developing new sources of renewable energy and transmitting it from where it is generated to where it is needed.

3.3.2 Although there had been previous international agreements, most recent policy derives from the Paris Agreement which was adopted under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) in 2015. This had as an objective, the holding of the increase in global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change.

3.3.3 The Conference of Parties (COP26) held in Glasgow in 2021 agreed on accelerated action on climate change this decade and reaffirmed the long-term goal to limit global warming to 1.5°C above pre-industrial levels and resolved to pursue efforts to achieve this, recognising that limiting global warming to 1.5°C '*requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global CO2 emissions by 45% by 2030 relative to the 2010 level and to net zero around mid-century'*.

3.3.4 The Conference of Parties (COP27) held in Sharm el-Sheikh in 2022 again reaffirmed the commitment to limiting global warming to 1.5°C and agreement to provide 'loss and damage' funding to vulnerable countries hit hard by climate disasters.

3.3.5 Subsequently, COP28 held in Dubai closed on 13 December 2023 with an agreement that signals the 'beginning of the end' of fossil fuels by outlining a 'just and equitable transition', underpinned by deep emissions cuts and financial commitments.

3.4 National Climate and Energy Policy Context

3.4.1 The Climate Change Act 2008 forms the basis for the UK's approach to tackling and responding to climate change. It requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are adapted to. The Act also establishes the framework to deliver on these requirements.

3.4.2 Through the Climate Change Act, the UK Government set a target to significantly reduce UK greenhouse gas emissions by 2050 and a path to get there. The Act also established the Committee on Climate Change (CCC) to ensure that emissions targets are evidence-based and independently assessed. In addition, the Act requires the Government to assess the risks and opportunities from climate change for the UK, and to adapt to them. The CCC's Adaptation Committee advises on these climate change risks and assesses progress towards tackling them.

3.4.3 The Climate Change Act originally committed the UK to reducing its greenhouse gas emissions by 80% by 2050, compared to 1990 levels. However, in 2019 this was changed to a target to reduce greenhouse gas emissions by 100% by 2050, compared to 1990 levels; this is commonly known as 'net zero'.

3.4.4 In November 2020 the then Prime Minister published The Ten Point Plan for a Green Industrial Revolution (BEIS, 2020[3]). Grounded in a recovery from Covid-19 it set out a plan for a green recovery to move towards achieving net zero in 2050. The first of the ten points was '*advancing offshore wind*' and set a target of producing 40GW of offshore wind energy by 2030. The document stated that '*to integrate clean technologies like offshore wind, we must transform our energy system, building more network infrastructure and utilising smart technologies like energy storage*.'

3.4.5 In December 2020 the Energy White Paper (BEIS, 2020) was published. This reaffirmed the target of producing 40GW of offshore wind by 2030 and focused on competition in the context of transmission. It also stated: '*the transformation of our energy system will require growing investment in physical infrastructure, to extend or reinforce the networks of pipes and wires which connect energy assets to the system and maintain essential resilience and reliability*'. The UK Net Zero Strategy (BEIS, 2021) was quashed following legal challenge and has not yet been reissued.

3.4.6 In April 2022 the British Energy Security Strategy (BEIS, 2022) policy paper was published. Partly influenced by the invasion of Ukraine and growing energy prices it set an ambition to deliver up to 50GW of offshore wind by 2030. The proposed revised Energy NPS were also mentioned in this context.

3.4.7 The Growth Plan (HM Treasury, 2022[2]) from September 2022 stresses the importance of home-grown energy generation to keep prices low.

3.4.8 In March 2023 Powering Up Britain was published; setting out how the Government will enhance the country's energy security, seize the economic opportunities of the transition, and deliver on the UK's net zero commitments. Powering Up Britain reaffirms the target to develop up to 50GW of offshore wind by 2030 and the Government's commitment to a programme of new nuclear projects. Powering Up Britain states that: '*We need to expand the grid at an unprecedented scale and pace to deliver more clean power and increase our energy security'* (page 23). The accompanying, Powering Up Britain- Energy Security

Plan sets out plans to accelerate the delivery of strategic transmission upgrades by at least three years, with an ambition to cut delivery times in half.

3.4.9 A Green Future: Our 25 Year Plan (Department for Environment Food and Rural Affairs (DEFRA), 2023), provides the Government's plan to improve the environment. The Plan is relatively high level, is not planning policy, was not written for the energy sector and is five years old. The proposed revised Overarching NPS EN-1 (November 2023) states in paragraph 5.4.39 that '*The government's 25 Year Environment Plan and the Environment Act 2021 mark a step change in ambition for wildlife and the natural environment. The Secretary of State should have regard to the aims and goals of the government's Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.'*

3.4.10 The Applicant considers that the project is compliant with the Plan insofar as it is relevant to the project. The Plan sets out ten goals which include the achievement of: clean air; clean and plentiful water; thriving plants and wildlife; reduced risk of harm from environmental hazards like flooding and drought; the more sustainable and efficient use of resources from nature; enhanced beauty, heritage and engagement with the natural environment; mitigation and adaption to climate change; minimisation of waste; management of exposure to chemicals; and enhanced biosecurity. Where relevant to the project, all these topics are covered in full in the ES. Policy on these topics is provided in the designated and proposed revised NPSs, which provide policy directly relevant to the development of NSIP.

3.4.11 All these international and national drivers stress the importance of transforming the energy generation of the UK to renewables so that the country can meet its legal target of net zero greenhouse gas emissions by 2050.

3.5 Reform 2023

3.5.1 In November 2023 the Government made a series of other announcements related to transmission infrastructure as part of the Autumn statement, including:

- The Transmission Acceleration Action Plan (Department for Energy Security and Net Zero (DESNZ), 2023), which is the Government's response to the report from Electricity Networks Commissioner Nick Winser CBE published in August 2023 (UK's Electricity Networks Commissioner, 2023) (the 'Winser Report'), which responds to the 43 recommendations of the Winser Report. The Action Plan sets out a holistic approach looking at every part of the design and delivery of electricity transmission infrastructure and the Government endorses the package of recommendations contained within the Winser Report in the Action Plan;
- The Connection Actions Plan (DESNZ & Ofgem, 2023) which sets expectations for the scale and pace of connections reform, including six key areas of action for Government, Ofgem, the ESO, and the network companies to drive further action and significantly reduce connection timescales which are seen as a barrier to achieving net zero; and
- Community Benefits for Electricity Transmission Network Infrastructure: Government Response (DESNZ[2], 2023) which details feedback received, the government response and the outcomes of the consultation which aimed to ensure communities can directly benefit from hosting electricity transmission network infrastructure.

3.6 Identified Need

3.6.1 The most recent FES document was published in July 2023 (National Grid ESO, 2023[3]). The ESO call for investment in infrastructure across the UK to 'onboard booming renewable generation'. The document shows that far more electricity generation will be required by 2050 and that requires a transformed transmission network. For a number of years, the NOA has identified the Bramford to Twinstead Reinforcement (referred to in the documentation as 'BTNO') as essential in all scenarios (National Grid ESO, 2023).

3.6.2 The existing electricity transmission network in East Anglia doesn't have the capability needed to reliably and securely transport all the energy that will be connected in the future, while working to the required standards.

3.6.3 With new offshore wind generation, a new nuclear power station at Sizewell C and greater interconnection with countries across the North Sea being proposed, there will be a large increase in the amount of renewable and low carbon electricity generation connecting along the East coast.

3.6.4 This increased generation will play a key role in delivering the UK Government's net zero ambitions and delivering up to 50GW of offshore wind connected by 2030. To facilitate these ambitions, electricity network infrastructure is needed to ensure that energy can be transported from where it is generated to where it is used.

3.6.5 Whilst the transmission system in East Anglia has been sufficient until today, it will soon exceed its current capability. This includes its thermal boundary capability (the physical capacity of the circuits to carry power) and transient stability (the ability to accommodate faults without damaging generators or the network).

3.6.6 Increased transmission capability is, therefore, required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its licence obligations, and to allow new sources of electricity generation to connect. This is vital to facilitate the ambitious targets set by the Government, for secure, clean and affordable energy for the long term.

3.6.7 Further detail of the need that the Bramford to Twinstead reinforcement is addressing is set out in the Need Case (April 2023) (**application document 7.2.1**).

3.7 National Policy Statements and Need

3.7.1 Section 104(3) of the Planning Act 2008 requires that the SoS must decide an application for development consent in accordance with any relevant NPS, except to the extent that the SoS is satisfied that, in summary:

(i) doing so would lead to the United Kingdom being in breach of its international obligations;

(ii) doing so would lead to the SoS being in breach of any duty imposed on him under any enactment;

(iii) doing so would be unlawful under any enactment;

(iv) the adverse impact of the proposed development would outweigh its benefits; or

(v) that any prescribed condition for deciding the application otherwise than in accordance with the NPS would be met.

3.7.2 Section 104(2) of the Planning Act 2008 sets out the matters to which the SoS must have regard in deciding an application submitted in accordance with the Planning Act 2008. In summary, the matters set out in section 104(2) include any relevant NPS, any local impact report (LIR); and any other matters the SoS thinks are both important and relevant to the decision.

3.7.3 The relevant NPS for the project is, therefore, of primary importance to the decision maker in considering the need for the project and its acceptability in terms of the policy guidance in the relevant NPS.

3.7.4 As set out in more detail in Chapter 6 of this Planning Statement, there are two relevant NPS, EN-1 (Overarching Energy) and EN-5 (Electricity Networks Infrastructure). EN-1 provides the overarching policy framework for making decisions on development consent applications for energy infrastructure in England, and EN-5 is specifically related to electricity networks infrastructure, and does not directly address need.

3.7.5 The need for new nationally significant energy infrastructure projects is set out in Part 3 of EN-1. Paragraph 3.1.3 on EN-1 states, '*the IPC should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPS on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described for each of them in this Part*.' Paragraph 3.3.1 also makes clear that there is an urgent need for new electricity NSIP.

3.7.6 The following paragraph, 3.1.4 goes on to state '*the IPC should give substantial weight to the contribution which projects would make towards satisfying this need when considering applications for development consent under the Planning Act 2008*'

3.7.7 In a section on the need for electricity transmission apparatus, paragraph 3.7.10 of EN-1 states: '*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. The IPC should consider that the need for any given proposed new connection or reinforcement has been demonstrated if it represents an efficient and economical means of connecting a new generating station to the transmission or distribution network, or reinforcing the network to ensure that it is sufficiently resilient and has sufficient capacity*.'

3.7.8 Finally, EN-1 states at paragraph 4.2.1, '*given the level and urgency of need for infrastructure of the types covered by the energy NPS set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIPs*'.

3.7.9 Given the Planning Act 2008 requirements set out in section 104, the clear statements in the NPS weigh strongly in favour of granting development consent for all energy projects in general, and highlights the urgent need for new electricity transmission projects, and that need has been established. The policy presumption in favour of granting development consent is, therefore, relevant to the project.

3.8 The Emerging National Policy Statements and Need

3.8.1 On 6 September 2021 the Government launched a review of the energy NPS. Draft replacement EN-1 to EN-5 were published for consultation. The consultation closed on 29 November 2021.

3.8.2 The BEIS Committee carried out an inquiry into the revised NPS and published a report on 25 February 2022 (BEIS, 2022). This report welcomed the review and made a number

of recommendations. These included the following: *'We recommend that revised (draft) EN-1 provides clearer direction in favour of the presumption of the delivery of new energy infrastructure required to deliver net zero. We recommend that revised (draft) EN-1 explicitly sets out that the NPS takes precedent over any other conflicting local or statutory bodies' planning policies'.*

3.8.3 On 23 February 2023 the Government subsequently published the NSIP Action Reform Plan to streamline the planning process for NSIP. This follows from a consultation published in August 2021, which asked respondents to identify the main issues affecting each principal stage of the process. The Action Plan further committed to an action of finalising the draft replacement EN-1 and EN-5 with a view designating these by 'Q2 2023' (DLUHC, 2023)

3.8.4 On 30 March 2023 the Government launched another review of the energy NPS. Draft replacement EN-1 to EN-5 were published for consultation. The consultation closed on 23 June 2023.

3.8.5 In November 2023, the Government published proposed revised versions of these NPS, which were laid before Parliament and are expected to be designated in early 2024.

3.8.6 National Grid has carried out an assessment of the project against the proposed revised NPSs (November 2023) in the Accordance Tables at Appendix F (EN-1) and Appendix G (EN-5) of this Planning Statement.

3.8.7 The SoS has decided that for any application accepted for examination before the designation of the revised NPS, the original suite (2011) should have effect. The transitional arrangements in paragraph 1.6.2 state that *'The Secretary of State has decided that for any application accepted for examination before designation of the 2023 amendments, the 2011 suite of NPSs should have effect in accordance with the terms of those NPS.'* Therefore the 2011 NPSs remain the primary policy for determination of the Bramford to Twinstead Reinforcement. In practice, the proposed revised NPSs (November 2023) will be important and relevant considerations for the determination of applications, particularly when considering 'need'; given how policy has significantly changed since 2011.

3.8.8 The proposed revised EN-1 sets out that achieving net zero by 2050, decarbonising the power sector, and security of energy suppliers are all key drivers of Government policy on energy and energy infrastructure development. The strategy is to transform the energy system, tackling emissions, while continuing to ensure secure and reliable supply and affordable bills for households and businesses.

3.8.9 The objectives for the energy system are to ensure our supply of energy always remains secure, reliable, affordable and consistent with net zero emissions by 2050 for a wide range of future scenarios, including through delivery of our carbon budgets and Nationally Determined Contributions (required by the Paris Agreement). Proposed revised EN-1 (November 2023) recognises that this will require a significant amount of energy infrastructure, both large and small scale and reference is made to a doubling in demand for electricity. It also explicitly states that new coal or large-scale oil-fired electricity generation are not consistent with the Government's approach and are, therefore, not included in the draft.

3.8.10 Noting the exclusion of new coal or large-scale oil-fired electricity generation paragraph 3.2.6 of the proposed revised EN-1 states, *'the Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part'*.

3.8.11 The following paragraph 3.2.7 goes on to state, *'in addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008'*.

3.8.12 These two paragraphs are broadly equivalent to paragraphs 3.1.3 and 3.1.4 of the currently designated EN-1.

3.8.13 The section on the need for electricity transmission apparatus cover paragraphs 3.3.65 - 3.3.83. Paragraph 3.3.68 advises that the need for onshore reinforcement works is substantial and specifically refers to the need to substantially reinforcement in East Anglia.

3.8.14 Paragraph 3.3.78 of proposed revised EN-1 states: '*further to the needs case above, it is recognised that the case for a new connection or network reinforcement is demonstrated if the proposed development represents an efficient and economical means of; connecting a new generating station to the network; reinforcing the network to accommodate such connections; or reinforcing the network to ensure that it is sufficiently resilient and capacious (per any performance standards set by Ofgem) to reliably supply present and/or anticipated future levels of demand'.*

3.8.15 As set out in the Need Case (April 2023) (**application document 7.2.1**) increased transmission capability is, therefore, required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its licence obligations, and to allow new sources of electricity generation to connect. This is vital to facilitate the ambitious targets set by the Government, for secure, clean and affordable energy for the long term, therefore, paragraph 3.3.55 is engaged.

3.8.16 Proposed revised EN-1 states that there is a '*Critical National Priority'* for the provision of nationally significant low carbon infrastructure, with this category including all power lines in scope of EN-5. The project is, therefore, considered Critical National Priority under this policy. Paragraph 3.3.63 of proposed revised EN-1 states: *'Subject to any legal requirements, the urgent need for CNP Infrastructure to achieving our energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible.'*

3.8.17 This statement emphasises that the project is urgent and critical, with the need for the project in general likely to outweigh any other residual impacts.

3.9 Conclusions on the Need for the Project

3.9.1 Driven by international and national commitments to move to net zero and high targets for the generation of offshore wind by 2030, there is a need for new electricity transmission infrastructure.

3.9.2 Increased transmission capability is, therefore, required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its licence obligations, and to allow new sources of electricity generation to connect. This is vital to facilitate the ambitious targets set by the Government, for secure, clean and affordable energy for the long term.

3.9.3 The planning policy support for the project is very strong. The Planning Act 2008 requires that the application is determined in accordance with the relevant NPS unless certain exceptions apply. Both the designated NPS and proposed revised NPS establish the

urgency of the need for electricity infrastructure. These will be examined elsewhere in this Planning Statement and discussed in the planning balance contained at Chapter 10 of this Planning Statement. The Need Case (April 2023) (**application document 7.2.1**) and the Strategic Options Report (June 2011) (**application document 7.2.2**) further set out the technical justification for the project.

4. The Project

4.1 Overview

4.1.1 This Chapter provides a section-by-section overview of the project, whilst identifying the key planning constraints in each section which are then further considered in Chapters 7 and 8.

4.2 Administrative Boundaries and Physical Context

4.2.1 The project is located in the East of England. The project crosses a county administrative boundary defined by the River Stour, with Suffolk County to the east of the river and Essex County to the west. The project lies within three LPA areas; the eastern part of the project lies in Mid Suffolk District (Suffolk); the central parts of the project lie in Babergh District (Suffolk); and the proposed GSP substation and the western part of the project lie in Braintree District (Essex). The project's administrative context is shown in Figure 1 (LPA Boundaries) of this Planning Statement.

4.2.2 There is an existing 400kV overhead line operated by National Grid between Bramford and Twinstead Tee, at which it diverges into two lines, one continuing towards Pelham, and the other heading south towards Braintree and Rayleigh. There is also an existing 132kV overhead line that is operated by the DNO, UK Power Networks (UKPN). UK Power Networks distributes electricity at lower voltages to industrial, commercial and domestic users.

4.3 Project Route Description

4.3.1 This Section of the Planning Statement provides a high-level section-by-section overview of the project in respect to its physical context and a more detailed description of the proposed route alignment, whilst identifying the key planning constraints in each section which are then further assessed in Chapters 7 and 8.

4.3.2 For ease of reference sections have been identified along the route of the project. The route sections are illustrated in Figure 1 (LPA Boundaries) of this Planning Statement and comprise:

- Section AB: Bramford/Hintlesham;
- Section C: Brett Valley;
- Section D: Polstead;
- Section E: Dedham Vale Area of Outstanding Natural Beauty (AONB);
- Section F: Leavenheath/Assington;
- Section G: Stour Valley; and
- Section H: GSP substation.

4.3.3 For the purposes of the local planning policy assessment, Section A (Bramford Substation) and Section B (Hintlesham) are addressed separately, although, these are combined into a single Section AB (Bramford/Hintlesham) elsewhere in the application. This recognises that Section A (Bramford Substation) falls within Mid Suffolk District, whereas Section B (Hintlesham) falls within Babergh District.

4.4 Section A: Bramford Substation

4.4.1 The eastern end of the project is at the existing National Grid substation at Bramford. Bramford Substation is contained within the administrative boundary of Mid Suffolk District Council, and this is the only section of the project that falls within Mid Suffolk District Council.

4.4.2 Bramford Substation itself is an electricity substation comprising several buildings and a variety of switchgear and electricity infrastructure enabling electricity to be transmitted at different voltages, safely and effectively. Bramford Substation contains equipment that helps keep the electricity transmission and distribution systems running.

4.4.3 The proposed network reinforcement would start within the perimeter fencing at the existing National Grid substation at Bramford. There are proposed works at Bramford Substation, which include the installation of switch gear, new shunt reactors to maintain the electrical operating parameters of the 400kV network and gantry structures to connect the overhead line into the substation.

4.4.4 The proposed new 400kV overhead line would tie into the existing substation on the western boundary. This would require realignment of the existing 400kV overhead line, including a new tension (angle) pylon, near Hill Farm to connect into Bramford Substation. The existing 400kV overhead line to the north-east of Hill Farm would be removed (comprising three pylons and the intervening spans of conductors).

Key Planning Considerations in Section A

4.4.5 Key planning considerations in Section A which are considered further throughout this Planning Statement include:

- In the immediate area around Bramford Substation, planning permission has been granted for three battery storage facilities. See Appendix C of this Planning Statement and Assessment References: AB/4, AB/16 and AB/20 for further details. The location of these applications can also be seen in Environmental Statement Figures part 10 – Figure 15.2 Proposed Developments (**application document 6.4**).
- There are a number of planning applications currently at various stages of proposed development for solar energy farms within the immediate area around Bramford Substation. See Appendix C of this Planning Statement and Assessment References: AB/6, AB/7, AB/13 and AB/14 for further details. The location of these applications can also be seen Environmental Statement Figures part 10 – Figure 15.2 Proposed Developments [(**application document 6.4**).
- There are two granted DCO within the vicinity of Bramford Substation for East Anglia ONE and East Anglia THREE, both of which are under construction. See the SoCG prepared with TC East Anglia ONE OFTO Limited and East Anglia Three Limited (**application document 7.3.7**) which considers the project's relationship with these DCO. The location of these DCO can also be seen in Environmental Statement

Figures part 10 –Figure 15.1: Nationally Significant Infrastructure Projects (**application document 6.4**).

- As a result of the existing and proposed developments around Bramford Substation, cumulative effects are a particular consideration in this section of the project. The consideration of which is detailed in ES Chapter 15: Cumulative Effects Assessment (CEA) (**application document 6.2.15**).

4.5 Section B: Hintlesham

4.5.1 The proposed 400kV overhead line would run south-west from Bramford Substation to a tension (angle) pylon near Church Road. It would then change to a slightly more westerly orientation, to run parallel to the existing 400kV overhead line to the north of Hintlesham Park and Hintlesham Hall.

4.5.2 The new 400kV overhead line would use the maintained swathe and existing pylons of the 400kV overhead line through Hintlesham Woods, and the existing 400kV overhead line would be realigned to the north and west of Hintlesham Woods on newly constructed pylons. The works around Hintlesham Woods require a transposition (moving of the overhead line) which would mean that some construction work would need to rely on planned outages.

4.5.3 Once to the south of Hadleigh Bee Farm, the proposed 400kV overhead line would follow the same alignment, which runs to the north of Tom's Wood and in a generally westerly direction to Hadleigh Railway Walk. Hadleigh Railway Walk forms the boundary with Section C: Brett Valley.

4.5.4 The existing 132kV overhead line running to the south of Hintlesham would be removed in its entirety through this Section.

Key Planning Considerations in Section B

4.5.5 Key planning considerations in Section B which are considered further throughout this Planning Statement include:

- Hintlesham Woods is designated as a Site of Special Scientific Interest (SSSI). The designation includes Wolves Wood, Keeble Grove, Ramsey Wood and Hintlesham Great Wood which are also designated as ancient semi-natural woodland habitat.
- Hintlesham Woods is a Royal Society for the Protection of Birds (RSPB) reserve.
- Hintlesham Hall is a Grade I listed property with Grade II* ancillary buildings within its curtilage and is currently used as a hotel and restaurant. Hintlesham Park is the parkland associated with Hintlesham Hall, which is now largely a golf course.
- Hintlesham Park is identified as 'Sports Club Space' in the Babergh and Mid Suffolk Open Space Assessment (May 2019) due to its use as a golf course. The impact of the project on this designation is contained in Chapter 9 of this Planning Statement.
- Hadleigh Railway Walk is identified as 'Accessible Natural Green Space' in the Babergh and Mid Suffolk Open Space Assessment (May 2019). The impact of the project on this designation is contained in Chapter 9 of this Planning Statement.
- The Order Limits crosses belts of Flood Zone 3 in Section B. These areas of Flood Zone 3 include the associated flood plains of Belstead Brook.

- A large proportion of the land within the Order Limits in Section B falls within the Gipping Valley Special Landscape Area (SLA) defined by Babergh District Council and a small part of the Brett Valley SLA, also defined by Babergh District Council, extends into the eastern part of Section B as shown in Figure 6.1: Landscape and Visual Impact Assessment Study Area and Landscape Designations (**application document 6.4**).
- In Section B, the Order Limits crosses an area of land which is also crossed by the proposed route of the Anglian Water Services Bury To Colchester Pipeline. See Appendix C of this Planning Statement and Assessment Reference: AB/23 for further details.

4.6 Section C: Brett Valley (Overhead Line)

4.6.1 The proposed 400kV overhead line runs to the south of, and broadly parallel to the existing 400kV overhead line between Hadleigh Railway Walk to the east and Overbury Hall to the west. The proposed 400kV overhead line approximately follows the alignment of the existing 132kV overhead line, which would be removed in its entirety in this Section.

Key Planning Considerations in Section C

4.6.2 Key planning considerations in Section C which are considered further throughout this Planning Statement include:

- A temporary bridge would be required over the River Brett as part of the temporary access route and the new overhead line is proposed to cross the River Brett in Section C.
- The entire Section C falls within the Brett Valley SLA as shown in Figure 6.1: Landscape and Visual Impact Assessment Study Area and Landscape Designations (**application document 6.4**).
- The Order Limits cross a belt of Flood Zone 3 in Section C which is largely the flood plain associated with the River Brett.

4.7 Section D: Polstead (Overhead Line and Underground Cable)

4.7.1 The proposed 400kV overhead line would run to the south of and broadly parallel to the existing 400kV overhead line. The proposed 400kV overhead line generally follows the route of the existing 132kV overhead line, which would be removed in its entirety in this Section. The proposed 400kV overhead line would also cross Layham Quarry (not currently operational), which is crossed by both the existing 400kV and the existing 132kV overhead lines.

4.7.2 This section of the proposed 400kV overhead line would terminate at the proposed Dedham Vale East CSE compound, beyond which the alignment continues underground. The CSE compound would be located immediately west of Millwood Road, between two areas of woodland. A permanent access route would connect the CSE compound to Millwood Road. The CSE compound would provide the interface point between the 400kV overhead line and the underground cable. An area of land within Section D has been identified for landscape planting around the Dedham Vale East CSE compound.

Key Planning Considerations in Section D

4.7.3 Key planning considerations in Section D which are considered further throughout this Planning Statement include:

- The eastern section of Section D falls within the Brett Valley SLA, as shown in Figure 6.1: Landscape and Visual Impact Assessment Study Area and Landscape Designations (**application document 6.4**).
- The boundary of Dedham Vale AONB delineates the boundary between Section D and Section E.
- Layham Quarry is located within Section D and is an existing safeguarded quarry site and is also allocated for an extension to extract minerals in the Suffolk Minerals and Waste Local Plan (although, planning permission has yet to be granted for this extension). See Appendix C of this Planning Statement and Assessment Reference: D/3 which considers the project's relationship with this site.

4.8 Section E: Dedham Vale AONB (Underground Cable)

4.8.1 Underground cable is proposed throughout this section and the existing 132kV overhead line would be removed entirely. This would result in one fewer line being present within Section E than existing.

4.8.2 The underground cable would run in a south-west direction from Holt Road to Heath Road before diverting in a north-west direction underneath the existing 400kV overhead line and to the north of Dollops Wood. From here the cables divert in a south-westerly direction and would pass back underneath the existing 400kV overhead line to the north of Bushy Park Wood. The underground cables would then cross below the River Box using a trenchless crossing technique, before passing around the southern edge of Alder Carr and through a gap in the apple orchards at Boxford Fruit Farm. The section ends to the north of the B1068 (Stoke Road), where the cables would cross the road into the Dedham Vale West CSE compound in the field to the north-west of Stewards Farm. A permanent access route would be constructed from Stoke Road.

4.9 Key Planning Considerations in Section E

4.9.1 Key planning considerations in Section E which are considered further throughout this Planning Statement include:

- The vast majority of Section E falls within Dedham Vale AONB, which is designated as an exceptional example of a lowland river valley, as shown in Figure 6.1: Landscape and Visual Impact Assessment Study Area and Landscape Designations (**application document 6.4**).
- The Order Limits cross a belt of Flood Zone 3 in Section E which is largely the flood plain associated with the River Box which the alignment passes under.
- Other notable local designations within the Order Limits in Section E includes Dollops Wood, which is a belt of woodland protected by a Tree Preservation Order (TPO).

4.10 Section F: Leavenheath/Assington (Overhead Line)

4.10.1 The proposed 400kV overhead line would extend from the CSE compound in a south-west direction, crossing the A134 where the overhead line changes to a more westerly direction to the east of High Road. From here it continues on this alignment to the south of Assington and on to Upper Road, which forms the western end of the section.

Key Planning Considerations in Section F

4.10.2 Key planning considerations in Section F which are considered further throughout this Planning Statement include:

- The vast majority of the land within the Order Limits in Section F falls within the Assington Neighbourhood Plan Area. Assington has an adopted Neighbourhood Plan, therefore, this Section of the route engages neighbourhood planning policy which is distinct to this Section of the project. The relevant policies of the Assington Neighbourhood Plan are detailed and assessed in Appendix D of this Planning Statement.
- A small section of the Order Limits in Section F falls within the Leavenheath Neighbourhood Plan Area. Leavenheath has an adopted Neighbourhood Plan, therefore, this Section of the route engages neighbourhood planning policy which is distinct to this Section of the project. The relevant policies of the Leavenheath Neighbourhood Plan are detailed and assessed in Appendix D of this Planning Statement.
- A small area of the land within the Order Limits in Section F lies within the Stour Valley Project Area (SVPA), which, while not a designated landscape in itself, has been described as having similar picturesque landscape qualities to Dedham Vale, as shown in Figure 6.1: Landscape and Visual Impact Assessment Study Area and Landscape Designations (**application document 6.4**).
- The Order Limits crosses a belt of Flood Zone 3 in Section F which is largely the flood plain associated with the River Stour.

4.11 Section G: Stour Valley (Overhead Line and Underground Cable)

4.11.1 The proposed 400kV overhead line would continue west from Upper Road to the proposed Stour Valley East CSE compound south of Workhouse Green. The CSE compound would have a permanent access route from the B1508 (St Edmund's Hill) near Dunstead Farm. An area of land within Section G has been identified for landscape planting around Stour Valley East CSE compound.

4.11.2 From the Stour Valley East CSE compound, the underground cable would be laid in a westerly alignment towards the B1508 (St Edmund's Hill) and the River Stour. The River Stour would be crossed using trenchless methods. It is also assumed that the Sudbury Branch Railway Line would also be crossed by a trenchless crossing, subject to further consultation with Network Rail.

4.11.3 After the Sudbury Branch Railway Line, the cable would be routed across Henny Road and continue to the south-west, across St Edmunds Way Public Right of Way (PRoW) to Moat Lane. After crossing Moat Lane, the cable would continue in a south-westerly direction to the trenchless crossing to the south of Ansell's Grove. The underground cable

would then change to a southerly direction after crossing the route of the existing 400kV overhead line (which would later be removed) before crossing Henny Back Road to connect to the Stour Valley West CSE compound to the south. An area of land within Section G has been identified for landscape planting around the Stour Valley West CSE compound.

4.11.4 Five pylons and five spans of the existing 400kV overhead line would be removed from the section between Twinstead Tee and the Stour Valley West CSE compound. The existing 132kV overhead line would be removed up to the point at which it crosses beneath the existing 400kV overhead line at Twinstead Tee.

Key Planning Considerations In Section G

4.11.5 Key planning considerations in Section G which are considered further throughout this Planning Statement include:

- Section G is contained within the administrative boundaries of both Braintree District Council (western extent) and Babergh District Council (eastern extent) and the River Stour delineates the boundary between the two jurisdictions.
- A small section of the land within the Order Limits in Section G also falls within the Little Cornard Neighbourhood Plan Area. Little Cornard have an adopted Neighbourhood Plan, therefore, this Section of the route engages neighbourhood planning policy which is distinct to this Section of the project. The relevant policies of the Little Cornard Neighbourhood Plan are detailed and assessed in Appendix D of this Planning Statement.
- The whole of Section G lies within the SVPA, as shown in Figure 6.1: Landscape and Visual Impact Assessment Study Area and Landscape Designations (**application document 6.4**).
- The Order Limits crosses a belt of Flood Zone 3 in Section G which is largely the flood plain associated with the River Stour.
- Other notable features within Section G include a belt of woodland (Ansell's Grove) and a number of trees subject to a TPO on Church Road, opposite St Johns Church.

4.12 Section H: GSP substation

4.12.1 National Grid is proposing to remove the existing 132kV overhead line between Burstall Bridge and Twinstead Tee, a distance of approximately 25km. This requires alternative arrangements to be put in place to secure the supply of the local electricity distribution network. This would be achieved by establishing a new GSP substation, between Butler's Wood and Waldegrave Wood, to the east of Wickham St Paul.

4.12.2 The proposed GSP substation would include a fenced compound located between Butlers Wood and Waldegrave Wood. The proposed GSP substation would include two super grid transformers with noise enclosures, to convert the voltage from 400kV to 132kV, as well as other switchgear, modular buildings and equipment. An area of land within Section H has been identified for landscape planting, connecting Butler's Wood and Waldegrave Wood.

4.12.3 National Grid obtained planning permission for the GSP substation under the Town and Country Planning Act (TCPA) in October 2022 (Application Reference: 22/01147/FUL) in advance of the application for development consent. However, as a consenting fall-back

position, the GSP substation is also included in the application for development consent and the likely significant effects are assessed within ES Chapters 6 to 15 (**application document 6.2**) to allow a comprehensive assessment of the project in full.

4.12.4 The description of the consented development is, *'a new 400/132 kilovolt (kV) Grid Supply Point (GSP) substation including two supergrid transformers, associated buildings, equipment and switchgear, a single circuit cable sealing end compound, a new permanent vehicular access to the public highway, associated landscaping (including boundary fencing, an area for Biodiversity Net Gain, and landscape mounding) and drainage.'*

Key Planning Considerations in Section H

- Both Butler's Wood and Waldegrave Wood are ancient woodlands and are identified by Braintree District Council as Local Wildlife Sites (LWS).

4.13 Committed Developments Within the Order Limits

4.13.1 National Grid has also been reviewing all development proposals within or adjacent to the Order Limits and has, on occasion, made representations to the LPA to advise applicants of the project's interaction with the planning application(s). An assessment of planning permissions and DCOs which intersect the Order Limits for the project is contained at Appendix C of this Planning Statement. The location of these applications can also be seen in Environmental Statement Figures part 10 – Figure 15.2 Proposed Developments (**application document 6.4**).

4.14 Description of Project Components

4.14.1 This Section provides a high-level description of the key project components required to implement the project. Further details can be found in ES Chapter 4: Project Description (**application document 6.2.4**).

Pylons

4.14.2 Standard lattice pylons are proposed for the project and they are typically 54m in height with a typical pylon base footprint of 10m x 10m, although, some pylons will have a maximum height of 62.23m. The lattice pylon design is the same style as the existing 400kV overhead line.

4.14.3 Generally, there are three types of standard lattice pylon proposed for the project:

- suspension (line) pylons: these are used when the route travels in a straight line;
- tension (angle) pylons: these are used to turn corners or maintain tension on the conductors when there are long straight runs; and
- terminal pylons: these terminate the overhead line when the line is connected into substations.

4.14.4 A 132kV CSE platform pylon is also proposed as part of the GSP works. This is a pylon that incorporates cable sealing ends to allow underground the cable to connect into the overhead line.

4.14.5 The proposed colour tone for the pylons would be the standard National Grid pylon colour, '*BS4800 00 A5 05 Goose Grey'*, which is used on other National Grid lattice pylons across the country. A light grey colour, for the external surface of the pylon, generally achieves the best balance between reducing visibility and visual effects when seen against the sky.

Underground Cable

4.14.6 There would be approximately 11km of underground cable system with associated joint bays and above ground link pillars.

4.14.7 The Order Limits are generally 100m wide (with a construction working area of 80m within the 100m Limits of Deviation (LoD)) within the underground cable sections where ducting is proposed and there are limited site constraints. Within this, the working area would be approximately 80m wide with 20m to provide flexibility for site constraints during detailed design and construction.

4.14.8 Three trenchless crossings are proposed on the project, where the underground cable would be installed using a drilling or boring method to avoid sensitive features.

CSE Compounds

4.14.9 There are four CSE compounds required to facilitate the transition between the overhead line and underground cable. Each CSE compound would contain cable terminations, electrical equipment, support structures and a small control building. Full tension line gantries are proposed at all four of the CSE compounds. This removes the need for four terminal pylons across the project and associated impacts, particularly in relation to landscape and visual.

4.14.10 Each CSE compound would be set within a relatively flat area, typically 85m x 50m, surrounded by security fencing. There would be a single-track permanent access route with passing places to connect the CSE compound to the local road network, to provide access for operation and maintenance. Standard vegetation planting would be provided around each CSE compound to help screen the site.

4.14.11 The CSE compounds would be served with a low voltage power supply. They will not have permanently installed lighting and if access is required and lighting is required it will be portable task lighting brought onto site. The CSE compounds would have porous surfacing to allow surface water to naturally infiltrate without the need for formal drainage. No permanent discharges are anticipated.

GSP Substation

4.14.12 One GSP substation is required on the project. The project involves removing the existing 132kV overhead line between Burstall Bridge and Twinstead and generally using this alignment for the new 400kV overhead line. The 132KV overhead line is owned by UKPN, the DNO in this area. The GSP substation is needed to provide power into the 132kV network following the removal of the 132kV overhead line between Burstall Bridge and Twinstead Tee as part of the project.

4.14.13 The GSP substation would consist of a National Grid 400kV substation and a UKPN 132kV substation contained within a compound. There would be an internal fence to separate the National Grid and UKPN operational areas. An access route would be constructed to the nearest public highway. The 400kV substation would be connected to the existing 400kV overhead line and would contain two supergrid transformers and

associated switchgear to reduce the operating voltage from 400kV to 132kV for onward transmission to UKPN.

4.15 Order Limits

4.15.1 The Work Plans (**application document 2.5**) delineates the Order Limits, which is the anticipated maximum extent of land in which the project would take place. If approved, the DCO would provide consent for the project to take place within the Order Limits (subject to DCO Requirements) including all the temporary construction works such as access routes and temporary construction bridges (etc), as well as land for environmental mitigation and enhancement. Therefore, in effect, the Order Limits form the site boundary for the works.

4.16 Limits of Deviation

4.16.1 Limits of Deviation are a common feature of NSIP. The LoD are shown on the Work Plans (**application document 2.5**). They allow for adjustment to the final positioning of the permanent infrastructure; for example, to avoid localised constraints or unknown or unforeseeable issues that may arise. This could include previously unidentified poor ground conditions which may require a pylon to be moved slightly for geotechnical reasons, such as ground stability.

4.16.2 The horizontal LoD define the parameters within which the position on the ground of proposed permanent infrastructure may deviate from the position shown on the plans. This applies to both linear (for example overhead line and underground cables) and non-linear (for example the GSP substation and CSE compounds) proposed infrastructure. Horizontal LoD are shown on the Works Plans **(application document 2.5**). In some areas the LoD and draft Order Limits are contiguous.

4.16.3 Vertical LoD (which limit the maximum vertical height, or the depth below ground, of any new infrastructure) are specified in the draft DCO (**application document 3.1**).

4.16.4 The assessment presented within the ES is based on the 'Proposed Alignment', which is shown in ES Figure 4.1: The Project (**application document 6.4**). However, it should be noted that the permanent aspects of the project, including pylon locations are not fixed and could be located anywhere within the LoD as defined on the Works Plans (**application document 2.5**). The location and orientation of the CSE compounds and GSP substation may also change within the LoD.

4.17 Measures within Project Design

4.17.1 The development of measures to avoid, reduce or compensate for any significant adverse effects of a project is an intrinsic part of the Environmental Impact Assessment (EIA) process and, from the outset, the route selection process described in ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sought to take into account environmental constraints and to avoid them as far as possible. Generally, there are three types of design measures implemented on the project; embedded, good practice and mitigation.

- Embedded measures: Embedded measures are those that are intrinsic to and built into the design of the project. Table 4.2 of ES Chapter 4: Project Description

(**application document 6.2.4**) outlines the key embedded measures that have been incorporated into the design to date.

- Good practice measures: National Grid has identified a number of good practice measures, which generally comprise measures imposed through legislative requirements or represent standard sector good practices. These include measures to reduce nuisance from construction activities. The good practice measures are set out in the Construction Environmental Management Plan (CEMP) Appendix A: Code of Construction Practice (CoCP) (**application document 7.5.1**).
- Mitigation measures: The ES has identified locations where additional mitigation is proposed to avoid or reduce likely significant effects following the assessment undertaken in each of the topic chapters.

4.17.2 Finally, ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives (**application document 6.2.3**), which explains the different options that were considered during the project development, and also ES Chapter 4: Project Description (**application document 6.2.4**), which describes the design submitted within the application such as embedded design measures.

4.18 Requirements of the Draft DCO

4.18.1 Schedule 3 of the draft DCO (**application document 3.1**) contains the draft Requirements proposed for incorporation if the DCO were granted. A number of draft Requirements include elements which would require the submission of, and approval by, the relevant LPA prior to the commencement of the project as well as those that National Grid must comply with post construction. The draft Requirements will be subject to examination and may, as a result, be amended. Requirements identified in the draft DCO and explained in detailed in the Explanatory Memorandum (**application document 3.2**), at a high-level, include:

- Requirement 1 (Interpretation)
- Requirement 2 (Time limits)
- Requirement 3 (Stages of authorised development)
- Requirement 4 (Management plans)
- Requirement 5 (Approval and implementation of Drainage Management Plan)
- Requirement 6 (Archaeology)
- Requirement 7 (Construction hours)
- Requirement 8 (Retention and removal of trees, woodlands and hedgerows)
- Requirement 9 (Reinstatement planting scheme)
- Requirement 10 (Implementation and maintenance of reinstatement planting scheme)
- Requirement 11 (Highway works)
- Requirement 12 (Decommissioning)

- Requirement 13 (Biodiversity Net Gain)

4.19 Obligations

4.19.1 It is not currently envisaged that the draft DCO will be accompanied by a planning obligation (a Section 106 Agreement) with any LPA. The assessments have not identified any need for a Section 106 Agreement and no suggestions have been put forward by the LPA that meet the relevant tests for planning obligations. Paragraph 4.1.8 of EN-1 identifies those tests as being:

- relevant to planning;
- necessary to make the proposed development acceptable in planning terms;
- directly related to the proposed development;
- fairly and reasonably related in scale and kind to the proposed development, and
- reasonable in all other respects.

5. Policy Influences on Design

5.1 Overview

5.1.1 This Chapter sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process, demonstrating how such policy and legislative objectives have been embedded into the design of the project. National Policy Statement policy is set out in greater detail in Chapter 6 of this Planning Statement.

5.1.2 This Chapter should be read alongside ES Chapter 3: Alternatives Considered (**application document 6.2.3**) which documents the key environmental factors that were considered in the optioneering and design evolution process.

5.1.3 This Chapter does not seek to duplicate the assessments presented in the ES Chapter 3: Alternatives Considered (**application document 6.2.3**) but instead seeks to demonstrate, at a high-level, the influence of the policy context to the optioneering and design evolution process. The Evolution of the Project (**application document 7.2.6**) sets out when key design decisions have been made, the options appraisal and subsequent process of ongoing back check and review that those decisions were based on. This demonstrates, in a narrative sense, how the project has evolved from its initial inception in 2009. It acts as a signposting document that identifies how various other submission documents feed into the consideration of key decisions. This document does not go into any detail as to the reasoning behind key decisions, other than their substantive outcome.

5.2 Planning Policy Context

5.2.1 Chapter 4 of this Planning Statement provides a section-by-section overview of the project in respect to its physical context and a more detailed description of the proposed route alignment, whilst identifying the key planning constraints in each section.

5.2.2 Chapter 7 of this Planning Statement demonstrates that the project is in accordance with the ‘assessment principles’ and ‘generic impacts’ required by EN-1 and EN-5. This Chapter is supplemented by the NPS compliance tables included in Appendices A (EN-1) and B (EN-5).

5.2.3 Chapter 8 of this Planning Statement also assesses the project against the NPPF policies and local plan policies which are considered to be both important and relevant to the project.

5.2.4 The following Sections of this Chapter detail how the relevant planning policies of EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have been embedded into the design of the project, having regard to the identified planning constraints relative to each section, as outlined in Chapter 4.

5.3 National Policy Statements

5.3.1 Section 4.4 of EN-1 sets out policy requirements relating to 'alternatives'. Paragraph 4.4.1 of EN-1 details that the NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option. However, paragraph 4.4.2 of EN-1 considers that applicants are obliged to include in their ES information about the main alternatives they have studied and, in some instances, there are specific legislative requirements to consider alternatives.

5.3.2 In the case of the project, the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations') require applicants to document alternative development options considered as part of the application for development consent. Part 1 of Schedule 4 of the EIA Regulations requires that the ES includes *'An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects'.* ES Chapter 3: Alternatives Considered (**application document 6.2.3**) documents the main alternatives considered by National Grid, the assessment of these alternatives, and how consultation has shaped the project as proposed.

5.3.3 In this context, paragraph 4.4.3 of EN-1 advises that, given the level and urgency of need for new energy infrastructure (subject to any relevant legal requirements which may indicate otherwise) the determining authority should consider alternatives in a 'proportionate' manner and should not *'reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site.'*

5.3.4 Paragraph 2.2.2 of EN-5 recognises that, '*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.'* The need for the project is summarised in Chapter 3 of this Planning Statement and set out in detail in the Need Case (April 2023) (**application document 7.2.1**).

5.4 The Electricity Act

5.4.1 National Grid is regulated by Ofgem, the electricity and gas markets regulator, to ensure value for money for consumers and is required under the Electricity Act to '*develop and maintain an efficient, coordinated and economical electricity transmission system, and to facilitate competition in supply and generation of electricity.*'

5.4.2 These duties and obligations mean that National Grid has a responsibility to deliver new electricity transmission infrastructure but also to be responsible for the cost of projects as costs will ultimately be borne by electricity users.

5.4.3 Under Schedule 9 of the Electricity Act, in formulating any relevant proposal, National Grid shall also have regard to '*the desirability of preserving natural beauty, 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 to do what it reasonably can to mitigate any effect which the proposals would have on the above features or the natural beauty of the countryside.

5.5 Design Principles

5.5.1 National Grid has sought to develop a well-designed project which responds positively to policy drivers, environmental constraints and comments from stakeholders and the public, providing mitigation where necessary in order to overcome adverse impacts which can be associated with overhead lines.

5.5.2 The scale and amount of any National Grid proposal is largely determined by the need for the new infrastructure (functional and operational requirements) and adherence to National Grid's duties under the Electricity Act. The need for the project is summarised in Chapter 3 of this Planning Statement and set out in detail in the Need Case (April 2023) (**application document 7.2.1**).

5.5.3 Section 85 of the Countryside and Rights of Way Act 2000 requires that: *'In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.'* (National Grid is a relevant authority for the purposes of this Act.)

5.5.4 It is these key responsibilities and objectives which underpin National Grid's design principles on which the project is based.

5.5.5 In respect to design, paragraph 4.5.3 of EN-1 accepts that the nature of much energy infrastructure development will often be limited to the extent to which it is able to contribute to the enhancement of the quality of the area. Paragraph 4.5.3 of EN-1 also considers that '*whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation.'*

5.5.6 Also of relevance in terms of design, paragraph 2.8.5 of EN-5 states that the Holford Rules '*should be used by developers when designing their proposals'*. The Holford Rules were first set out in 1959, and subsequently reviewed by National Grid in 1992. They have become accepted within the electricity transmission industry as the basis for overhead transmission line routeing. National Grid employs the Holford Rules to inform the design and routeing of all new overhead line projects, including the project.

5.5.7 Whilst referred to throughout this Chapter, Section 5.8 sets out, in turn, the policy wording of the Holford Rules and how the Holford Rules have been applied by National Grid and have formed an important part of developing the preferred route and design of the project.

5.5.8 In addition, National Grid devised the Horlock Rules (National Grid, 2009). The Horlock Rules provide guidelines for the siting and design of new substations, or substation extensions, to avoid or reduce the environmental effects of such developments. They also concern the siting of CSE compounds and line entries. In summary, like the Holford Rules, they facilitate the consideration of environmental factors and amenity within the design and siting of new substation infrastructure.

5.5.9 The Horlock Rules, therefore, were considered during the identification of potential locations for a proposed GSP substation and the siting of CSE compounds. Whilst not currently referred to in EN-5, paragraph 2.9.18 of the 2023 proposed revised EN-5, states, '*The Horlock Rules – guidelines for the design and siting of substations – were established by National Grid in 2009 in pursuance of its duties under Schedule 9 to the Electricity Act 1989. These principles should be embodied in applicants' proposals for the infrastructure associated with new overhead lines.'*

5.5.10 Whilst referred to throughout this Chapter, Section 5.9 sets out, in turn, the policy wording of the Horlock Rules and how the Horlock Rules have been applied by National Grid and have formed an important part of developing the preferred route and design of the project.

5.5.11 In demonstrating these responsibilities and in order to provide transparency over the design process, National Grid has continued to publish documents outlining the latest approach to options appraisal/consenting.

5.6 The Strategic Proposal

5.6.1 Proposals for a reinforcement between Bramford and Twinstead were initially developed by National Grid to support the connection of new generation projects in East Anglia, primarily new nuclear and wind. The need for the project is summarised in Chapter 3 of this Planning Statement and set out in detail in the updated and most recent Need Case (April 2023) (2023) (**application document 7.2.1**).

5.6.2 Once the need for the project had been established, National Grid considered the different ways in which this need could be met, to generate a preferred strategic proposal. The alternatives considered at this stage comprised different technologies, different geographical connection points, or a combination of the two.

5.6.3 The Strategic Options Report (June 2011) (**application document 7.2.2**) considered a short list of four options drawn from a long list of 18 strategic options. The four options, with various sub-options reflecting the potential use of alternative technologies, were each assessed in terms of technical, economic, environmental and socio-economic factors. A summary of the short list of options and the key environmental factors considered within the appraisal is presented in Table 3.2 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**).

5.6.4 The four options are summarised at Table 5.1 alongside a short explanation as the policy reason/driver for the option being discounted or progressed to the options appraisal stage.

Table 5.1: List of Potential Strategic Options and Policy Drivers

Shortlisted Potential Strategic Option	Reason/Policy Driver for Decision
PS1 Sizewell – Bradwell subsea. This would be achieved by the installation of a new 90km subsea cable circuit and 38km between Sizewell and Bradwell.	The significant cost of PS1, together with connection routes through the Outer Thames Estuary Special Protection Area (SPA) and Dengie Flats SSSI would bring risk of potential significant adverse effects on these international and national designations, resulting in high capital costs and potential high environmental effects. This would be in breach of National Grid's duty to ensure value for money for consumers. In addition, this would likely be contrary to Schedule 9 of the Electricity Act, which requires National Grid, in formulating any relevant proposal, to have regard to '*the desirability of preserving natural beauty, conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest'.* Also, having regard to paragraph 2.8.5 of EN-5 which endorses the Holford Rules, Holford Rule 2 considers that overhead lines should '*avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers [pylons] i.e. the bigger structures which are used when lines change direction.'*

PS2: Bramford – Twinstead Tee (c. 28km). This would be achieved by the installation of a new circuit between Bramford and the Twinstead Tee. Overhead line and underground cables were considered as sub-options.	This option meets the need and the identified technical constraints. It has a lower cost compared to other options and the shorter length is likely to result in lower environmental effects. This option, therefore, adheres to National Grid's duty to *'develop and maintain an efficient, coordinated and economical electricity transmission system, and to facilitate competition in supply and generation of electricity.'*
PS3: Bramford – Braintree. This would be achieved by the installation of a new circuit between Bramford and Braintree. This would achieve the same transmission system circuit configuration as PS2 but would involve the installation of approximately 34km of new circuit and would allow removal of approximately 8km of existing 400kV overhead line.	PS2 has less interaction with the Dedham Vale AONB and its setting than PS3. Similarly, PS2 would result in lower magnitude of change within the Stour Valley compared to PS3, by allowing the use of the route of the existing 132kV overhead line. Overall, it was considered that PS2 performs better than PS3 in the appraisal of environmental effects and PS2 is, therefore, preferred.
PS4: Bramford – Rayleigh. This would be achieved by the installation of a new circuit between Bramford and Rayleigh. This would achieve the same transmission system circuit configuration as PS2 but would require the installation of approximately 90km of new circuit and would allow removal of approximately 22km of existing 400kV overhead line.	This option was discounted as the connection would be approximately 90km in length. This would be in breach of National Grid's duty to ensure value for money for consumers. In addition, paragraph 2.8.5 of EN-5 emphasises that the Holford Rules should be followed by applicants when designing their proposals. Holford Rule 3 (see Section 5.8) states that *'other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers [pylons].'* The shortest route between two points is generally preferred where other things are equal, because this is straight, avoiding the need for angles where larger pylons are needed on an overhead line, and a direct route would generally reduce the overall number of pylons required and would reduce environmental effects and costs. This would result in high capital costs and potential high environmental effects. As such, and in view of the longer connection length compared to other potential strategic options, would be expected to lead to greater environmental and socio-economic effects without material benefit to network capability or resilience; in breach of National Grid duty to ensure value for money for consumers and Holford Rule 3.

5.6.5 The conclusion of the Strategic Options Report (June 2011) (**application document 7.2.2**) is that the option of constructing a new 400kV overhead transmission line between Bramford and Twinstead Tee would achieve a balance between National Grid's technical, economic and environmental obligations and should remain the preferred strategic option. This is taking account of National Grid's statutory obligations, its licence requirements and all other relevant considerations. However, National Grid recognises due to amenity issues in some areas that sections of the proposed connection may need to be placed underground and that these and other mitigation measures will be investigated in the next stage of the project; such that they are not unacceptable in policy terms. This is discussed further throughout this Chapter.

5.7 The Options Identification and Selection

Route Corridors

5.7.1 Four broad route corridors were identified, all of which would be technically feasible, and all would have connection points at Bramford Substation and the existing Tee at Twinstead. These corridors are referred to as Corridors 1 to 4 and are described below.

One of the corridors (Corridor 2) included two alternative sub-corridors at the eastern end of the project (referred to as Corridors 2A & 2B, discussed at Paragraphs 5.7.35 – 5.7.37).

5.7.2 The four route corridors, two sub-corridors and the key environmental factors that were considered in the appraisal are summarised at Table 3.3 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**). The route corridors can be seen in Figure 3.1: Route Corridor (**application document 6.4**). In addition, the route corridors options are considered in this Chapter alongside a short explanation as to the policy reason/driver for the option being discounted or progressed to the next stage of the options appraisal process.

Corridor 1

5.7.3 Corridor 1 was identified as an 'opportunity corridor' as it used the existing overhead line routes which already passes through Dedham Vale AONB. As informed by the supplementary note to Holford Rule 6, which is in turn endorsed by paragraph 2.8.5 of EN-5, *'arrange wherever practicable, parallel or closely related routes with tower [pylons] types, spans and conductors forming a coherent appearance.'* The route corridor allows paralleling with the existing 400kV overhead line, which will reduce the magnitude of landscape and visual effects and the concentration of line and wirescapes in the landscape.

5.7.4 Paragraph 5.9.8 of EN-1 states, '*landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change.'* In the context of Corridor 1, the existing 400kV and 132kV overhead lines between Bramford and Twinstead tee would remain in situ, resulting in three overhead lines close to each other, 3km of which would be within Dedham Vale AONB. This scale of change and magnitude of landscape and visual effects was considered to be unacceptable in planning policy terms, having regard to the quality of the landscape as per paragraph 5.9.8 of EN-1.

5.7.5 Therefore, having regard to paragraph 2.8.5 of EN-5 which endorses the Holford Rules (Holford Rule 1 being of particular relevance) and the fact the AONB is offered the highest status of protection in respect to landscape and scenic beauty as per paragraph 5.9.9 of EN-1, Corridor 1 was discounted as it involves the construction of an additional overhead line and would, therefore, have the greatest impact on Dedham Vale AONB of all the corridors assessed.

Corridor 2

5.7.6 Corridor 2 was also identified as an 'opportunity corridor' as it used the existing overhead line routes which already passes through Dedham Vale AONB. As informed by the supplementary note to Holford Rule 6, which is in turn endorsed by paragraph 2.8.5 of EN-5, 'arrange *wherever practicable, parallel or closely related routes with tower [pylon] types, spans and conductors forming a coherent appearance.'*

5.7.7 The route corridor allows paralleling with the existing 400kV overhead line. However, in contrast to Corridor 1, Corridor 2 also allows part of the existing 132kV overhead line to be removed, thus reducing the magnitude of landscape and visual effects and the concentration of line and wirescapes. In this context, paragraph 2.8.3 of EN-1 recognises that, '*sometimes positive landscape and visual benefits can arise through the reconfiguration or rationalisation of existing electricity network infrastructure.'*

5.7.8 The removal of the existing 132kV overhead line presents an opportunity to minimise the scale of change in the wider landscape that a new overhead line would bring. Essentially,

Corridor 2 would not increase the number of pylons or overhead lines passing through the AONB.

5.7.9 Whilst this would result in a change of scale that would be perceptible, mitigation measures could be employed, for example, the use of undergrounding as a means of mitigating the harm to the landscape and scenic beauty of Dedham Vale AONB could be considered. This opportunity is discussed further throughout this Chapter.

Corridor 3

5.7.10 Corridor 3 (to the north of Hadleigh) avoids the AONB, and the potential for effects on views from within the AONB were considered to be limited. Corridor 3 offers a relatively direct route between Bramford and Twinstead Tee to the north of Hadleigh and it seeks to avoid the area of significant environmental constraints, including the AONB. However it passes close to the settlements of Boxford, Groton and Sherbourne Street and it runs approximately 2km to 3km distant from the existing overhead lines giving rise to some intervisibility between overhead lines. This Corridor was less preferred in terms of its effect on the landscape and in views, compared to Corridor 4.

Corridor 4

5.7.11 Corridor 4 largely avoids areas subject to national and local level planning policy protection for their landscape value. It would, however, introduce a new overhead line into an area where there is no existing infrastructure and into a landscape that, following initial technical consultation, is regarded locally as being of high quality, albeit undesignated. Paragraph 5.9.8 of EN-1 states, *'landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change.'* As such, having regard to paragraph 5.9.8, the scale of change in Corridor 4 would likely be considered unacceptable in planning policy terms, when compared to the other corridor options as it would result in a greater scale of change to the existing character of the landscape.

Preferred Corridor Option

5.7.12 In terms of local policy considerations, all corridors affect areas locally designated as SLA, to a greater or lesser degree. Corridors 1, 2 and 3 would pass through between approximately 13km and 15km of designated area, while Corridor 4 could, dependent on detailed connection design, affect between 6.5km and 11.5km. Corridors 3 and 4 pass through locally designated areas where there are currently no overhead lines.

5.7.13 Corridor 2 is the preferred route corridor as it would result in the least scale of change to the existing environment (amongst other considerations). Holford Rule 3 states that '*other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers [pylons].'* Corridor 2 was also the most direct route of the corridors considered.

5.7.14 It was recognised that neither national nor local planning policies nor National Grid's own policies (the Holford Rules) preclude consideration of routes through an AONB and suitable mitigation measures, including the use of undergrounding, would be considered. Finally, in respect to the planning policy tests engaged when developing within the AONB, as set out in paragraph 5.9.10 of EN-1; it has been assessed in Chapter 7, that '*exceptional circumstances'* apply and the project complies with the policy requirements for developing within the AONB.

5.7.15 It was further recognised that Corridor 2 would involve the removal of a section of the existing 132kV overhead line, which was seen as a benefit, and that a new 400kV/132kV substation may be required west of Twinstead Tee to maintain security of supply to the 132kV distribution network.

5.7.16 A decision was made to progress with Corridor 2 and for further work to be undertaken to determine the treatment of the Section AB: Bramford Substation/Hintlesham portion of the route corridor.

Alignments Considered

5.7.17 National Grid considered various alignments within the preferred corridor. This included considering both overhead line and underground cable solutions for each section. Indicative alignments were developed starting with a direct line between Bramford and Twinstead Tee, and then taking into account the Holford Rules, to avoid sensitive sites and residential areas as far as possible. A summary of all of the alignments considered in each section and the key environmental factors considered within the appraisal is presented in Table 3.6 of ES Chapter 3: Alternatives Considered (**application document 6.2.3).**

5.7.18 As informed by the supplementary note to Holford Rule 6, which is in turn endorsed by paragraph 2.8.5 of EN-5, policy advises to '*arrange wherever practicable, parallel or closely related routes with tower [pylons] types, spans and conductors forming a coherent appearance'*. When developing the overhead line indicative alignments, the visual preference was for the existing 400kV overhead line and any proposed 400kV overhead line to run in parallel and close together, to avoid placing overhead lines in areas where there are currently no overhead lines.

5.7.19 The proposed overhead line could, therefore, lie to the north (northern alignment) of the existing 400kV overhead line or lie to the south (southern alignment) of the existing 400kV overhead line. In addition, underground cable routes was also considered for each section. Matters concerning undergrounding are set out in detail at paragraphs 5.7.22 – 5.7.36 of this Chapter.

5.7.20 The overall appraisal of the alignments concluded that in general, a new overhead line should be constructed to the south of the existing 400kV overhead line. This was because, the greater amount of close paralleling associated with a southern alignment in Corridor 2B would have less magnitude of effect on views overall compared to a northern alignment in Corridor 2B.

5.7.21 Having regard to paragraph 2.8.2 of EN-5, it is acknowledged, *'new above ground electricity lines, whether supported by lattice steel towers/pylons or wooden poles, can give rise to adverse landscape and visual impacts, dependent upon their scale, siting, degree of screening and the nature of the landscape and local environment through which they are routed. For the most part these impacts can be mitigated…*' In the case of the project and taking into consideration mitigation measures, overall and in the long term, the overhead line options would all lead to moderate negative effects on visual amenity. Environmental Statement Chapter 6: Landscape and Visual (**application document 6.2.6**) details the likely significant effects of the project on landscape and visual receptors and has been prepared in accordance EN-1 and EN-5.

Undergrounding

5.7.22 Within the preferred corridor, overhead and underground indicative alignments were identified and appraised. Underground cable routes was considered for each section. A summary of the alignments considered in each section and the key environmental factors considered within the appraisal is presented in Table 3.6 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**).

5.7.23 National Policy Statement EN-5 acknowledges that overhead lines are appropriate in many instances. However, there may be specific locations where underground cables are appropriate depending on the sensitivity of the baseline environment. In line with the principles of EN-5, National Grid has considered the benefits of undergrounding in the context of the landscape in which the reinforcement would be set, together with the additional cost and the subsequent environmental consequences of undergrounding.

5.7.24 Given the urgent need for new major energy infrastructure and not wanting to restrict such developments and investment in them, EN-5 does not adopt a presumption that electricity lines should be put underground, but considers overhead lines appropriate in most circumstances and favours a flexible policy framework using case-by-case evaluation, as per paragraph 1.7.5 of EN-5. National Grid, therefore, considers the relative merits of using underground cables on a case-by-case basis.

5.7.25 Paragraph 2.8.4 of EN-5 states, *'… wherever the nature or proposed route of an overhead line proposal makes it likely that its visual impact will be particularly significant, the applicant should have given appropriate consideration to the potential costs and benefits of other feasible means of connection or reinforcement, including underground and sub-sea cables where appropriate.'*

5.7.26 Paragraph 2.8.8 of EN-5 states, *'where there are serious concerns about the potential adverse landscape and visual effects of a proposed overhead line, the IPC will have to balance these against other relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding)'.*

5.7.27 Also of relevance is proposed revised EN-5. Paragraph 2.9.21 – 2.9.21 of proposed revised EN-5 addresses undergrounding in protected landscapes and makes explicit reference to AONBs and National Parks in the context of undergrounding. The text states that *'In these areas, and where harm to the landscape, visual amenity and natural beauty of these areas cannot feasibly be avoided by rerouting overhead lines, the strong starting presumption will be that the applicant should underground the relevant section of the line. However, undergrounding will not be required where it is infeasible in engineering terms, or where the harm that it causes (see section 2.11.4) is not outweighed by its corresponding landscape, visual amenity and natural beauty benefits. Regardless of the option, the scheme through its design, delivery, and operation, should seek to further the statutory purposes of the designated landscape. These enhancements may go beyond the mitigation measures needed to minimise the adverse effects of the scheme.'*

5.7.28 Paragraph 2.9.21 of proposed revised EN-5 addresses the proposed use of undergrounding outside protected landscapes. This paragraph notes that the Government has not laid down any further rule on the circumstances requiring undergrounding, other than those detailed in paragraph 2.9.24, and the SoS '*must weigh the feasibility, cost, and any harm of the undergrounding option the adverse implications of the overhead line proposal against: the cost and feasibility of re-routing overhead lines or mitigation proposals for the relevant line section; and the cost and feasibility of the reconfiguration, rationalisation, and/or use of underground or subsea cabling of proximate*

existing or proposed electricity networks infrastructure'. Overhead lines are normally less disruptive to construct than underground cables, for example they can pass over the top of sensitive features such as rivers, hedgerows and tree belts with relatively little disturbance to habitats. They are also cheaper to install and easier to maintain, whilst allowing the land to be reinstated more quickly than underground cables. Overhead lines require a much smaller footprint (limited to pylon bases, and any temporary construction land such as access routes and construction areas). Therefore, they are typically of lower impact on below ground features such as archaeology and groundwater flows. Overhead lines are easy to inspect, repair and maintain, as works can be undertaken to the above ground components with little disturbance to land use. However, overhead lines can have a visual impact, particularly in areas of high landscape value.

5.7.29 Underground cables by comparison, have higher construction compared to overhead lines. In addition, the cost of loss of service and that of repairs is greater for cables because the faulted section of cable needs to be excavated to allow for repairs.

5.7.30 Constraints which might warrant the use of underground cables include, for example, locations with physical difficulties in constructing an overhead line or the presence of highly valued landscapes, such as National Parks and AONB. The potential use of underground cables in, or close to, exceptionally constrained areas such as National Parks and AONB would require the demonstration that this is the most cost-effective means of avoiding serious adverse landscape and visual effects as per paragraph 2.8.8 of EN-5.

5.7.31 The project would pass through Dedham Vale AONB, the majority of which lies to the south of the Order Limits. Undergrounding was, therefore, considered appropriate in the AONB as it is considered to have a high landscape value. It was also considered that undergrounding was appropriate in the most sensitive parts of the Stour Valley, because of the particular qualities of the landscape and its cultural associations; thus adopting the case-by-case approach to undergrounding as endorsed by EN-5 which does not adopt a presumption that electricity lines should be put underground as per paragraph 1.7.5 of EN-5.

5.7.32 Elsewhere along the alignment, the higher cost of underground cables to bill-paying consumers, and the environmental implications of installing underground cables and maintaining them, are not considered to be justifiable in the context of national policy or National Grid's statutory duties, which include the need to be economic and efficient.

5.7.33 In this context and as per paragraph 2.8.9 of EN-5, the IPC should, *'only refuse consent for overhead line proposals in favour of an underground or sub-sea line if it is satisfied that the benefits from the non-overhead line alternative will clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable'*. In the case of elsewhere along the alignment, it is recognised that the fully underground options would deliver landscape and visual benefits. However, avoiding the moderate adverse effects of an overhead line on a landscape which carries no national designation, and on local views, could only be achieved at a significant additional cost. Even taking account of the wider benefits which would accrue to the heritage interests, including on the setting of the Grade I Listed Hintlesham Hall, the considerable additional cost of a fully underground option, which would ultimately be met by electricity consumers, could not be justified nor would it be economic and efficient.

Corridor 2A and 2B

5.7.34 As stated previously, two sub-corridors were also developed at the eastern end of the proposed reinforcement around the village of Hintlesham. The route corridors can be seen in Figure 3.1: Route Corridor (**application document 6.4**). Corridor 2A follows the corridor of the vacated 132kV line to the south of Hintlesham and Corridor 2B parallels the existing 400kV line to the north of Hintlesham. Corridor 2B encompasses the area around Hintlesham Woods SSSI to allow an option either around the northern and western edge of Ramsey Wood or on a new swathe through the woodland. It is noted that Corridor 2A avoids effects on Hintlesham Woods SSSI.

5.7.35 An option to underground Corridor 2A was also considered and this would also avoid impacts to Hintlesham Woods SSSI. However, this option would require an additional CSE compound located near Benton End Farm and Hadleigh Railway Walk, which could potentially be seen by a high number of visual receptors including users of the Railway Walk. In addition, underground cables are significantly more expensive to construct when compared to overhead lines, and there is a lack of policy support for underground cables where the landscape quality would not warrant them, as discussed at paragraphs 5.7.22 – 5.7.36 of this Chapter. As a result, unjustified undergrounding of overhead lines may result in National Grid being in breach of their duty to '*develop and maintain an efficient, coordinated and economical electricity transmission system.*'

5.7.36 Assessment work in respect to Corridor 2A and 2B concluded that Corridor 2B was the preferred choice because an alignment in Corridor 2A would involve constructing new 400kV overhead line in an area where there is currently no existing line (between Bramford Substation and Burstall). Corridor 2A would also pass close to the village of Hintlesham affecting more visual receptors. There are also technical constraints in this corridor associated with an existing 132kV underground cable. However, it is noted that Corridor 2B would require working in or around Hintlesham Woods SSSI, which could result in disturbance to breeding birds (interest features). Although, given that detailed connection design studies would seek to avoid or minimise this effect, Corridor 2B was considered the preferred choice of sub-corridor.

Approach to Section AB: Bramford Substation/Hintlesham

5.7.37 Hintlesham Woods SSSI is designated for its ancient woodland habitat and breeding bird assemblage and is managed by the RSPB as one of their reserves. Given the sensitivity of the interaction with Hintlesham Woods in Section AB: Bramford/Hintlesham, various options for routeing a new 400kV line in the vicinity of the Hintlesham Woods SSSI were considered.

5.7.38 Hintlesham Woods SSSI benefits from policy protection against '*adverse effects'*… *either individually or in combination with other developments'*, as per paragraph 5.3.11 of EN-1. Where an adverse effect after mitigation is likely, an exception should only be made where the benefits (including need) of the development at the site, *'clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs.'*

5.7.39 Additionally, having regard to paragraph 2.8.5 of EN-5 which endorses the Holford Rules, Holford Rule 2 considers that overhead lines should *'avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers [pylons] i.e. the bigger structures which are used when lines change direction.'*

5.7.40 National Grid considered seven options, comprising routes through and around the woodland, in order to identify the least environmentally constrained option at Hintlesham Woods. These options are summarised in Table 3.7 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**), including the key environmental factors considered within the appraisal. These seven options can also be seen in Figure 3.3: Considered Options: Route Corridor (**application document 6.4**).

5.7.41 Two primary options emerged, over and above the other options which were discounted. These two options were (Hintlesham Woods Options 2 was originally discounted but later reconsidered):

- Hintlesham Woods Option 1 (formerly known as OP2-NL): North and west of Ramsey Wood. The existing 400kV overhead line would be diverted on new pylons to the north and west of the woodland. The proposed 400kV overhead line would use the existing pylons through the woodland.
- Hintlesham Woods Option 2 (formerly known as OP1-SL): A parallel overhead line south of the existing 400kV. The existing 400kV overhead line would remain in situ. The proposed 400kV overhead line would be constructed parallel to the existing overhead line to the south on new pylons located outside of the woodland.

5.7.42 The first of these primary options is re-routing the existing 400kV overhead line to the north and west of the woods on newly constructed pylons, while using the existing pylons through the woods for the new line. This is referred to as Hintlesham Woods Option 1 (referred to as OP2-NL in earlier documents). This option had previously been identified as the 'least environmentally constrained' option in Corridor 2B.

5.7.43 The second primary option is running the new line parallel and to the south of the existing 400kV overhead line through the woods. This is referred to as Hintlesham Woods Option 2 (referred to as OP1-SL in earlier documents).

5.7.44 Of principal policy importance for discounting the other options at Hintlesham Woods, five of the seven options (all options apart from Option 1 and Option 7) would require a temporary swathe of approximately 40m through the ancient woodland and SSSI to construct the overhead line. This would likely have an adverse effect on the SSSI due to the loss of ancient woodland habitat, as well as temporary disturbance to protected species and habitats. These options, therefore, were considered to likely fail to meet the conservation objectives of the SSSI contrary to paragraph 5.3.11 of EN-1 which states '*where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect, after mitigation, on the site's notified special interest features is likely, an exception should only be made where the benefits (including need) of the development at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs..'*

5.7.45 The footnote to paragraph 5.3.11 also states, *'…the benefits of the development 'at this site' should be interpreted as including any benefits which are not dependent on a particular location.'*

5.7.46 Further, in respect to the impact to ancient woodland, paragraph 5.3.14 of EN-1 states, *'ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat…'*

5.7.47 Additionally, having regard to paragraph 2.8.5 of EN-5 which endorses the Holford Rules; Holford Rules 2 and 3 considers that overhead lines should avoid the need for too many angle pylons; the bigger structures which are used when lines change direction. Instead, the Holford Rules endorses the most direct route where appropriate. These rules were considered important in the context of discounting Option 7 (an option to the south of Hintlesham Woods north of Duke Street) as this option would require a series of angle pylons to route the overhead line to the north of the properties on Duke Street and follow the boundary of the woodland.

5.7.48 Hintlesham Woods Option 1 would avoid impacts on the ancient woodland (irreplaceable habitat) and on the conservation objectives of the SSSI (national designation). However, it was also noted that this option would:

- Require a transposition of the lines and, therefore, would require some works to be completed during outages and during the bird breeding season. This has the potential to cause disturbance to the breeding bird assemblage (SSSI interest feature); and
- Result in greater landscape effects than options through the woods, due to the proposed 400kV overhead line diverting away from the existing overhead line (not parallel) and introducing a new overhead line where there is currently none.

5.7.49 Consequently, whilst Option 1 would result in a temporary adverse effect during construction in respect to disturbance to breeding birds (interest features) and due to a temporary swathe through the SSSI (along the route of the existing overhead line); this option is not anticipated to result in significant effects on the ancient woodland and SSSI. The adverse effects resulting from Option 2 would be greater than Option 1 in terms of the need for a new swathe through the SSSI. This was considered more difficult to justify in planning policy terms.

5.7.50 Subsequently, having regard to the policy test set out in paragraph 5.3.11 of EN-1, whilst the impact of Option 1 on the SSSI would not be permanent, in any event it is considered that the benefits (including need) of the development at this site, clearly outweigh the adverse effects. There is significant urgency and need for the project and weight should be afforded to its importance in achieving net zero.

5.7.51 Overall Option 1 was considered the least environmentally constrained overhead line route in Corridor 2B. This overhead alignment option runs around the northern edge of Ramsey Wood, continuing southward to re-join a paralleled alignment with the existing 400kV overhead line to the south of Bushey Cooper's Farm. As such, this option also accords with Holford Rule 2 which endorses avoiding smaller areas of scientific interest by 'line deviation'.

5.7.52 The impact of the preferred overhead alignment on the setting of the Grade I Listed Hintlesham Hall was also acknowledged. National Grid agreed with consultees that an overhead line on the preferred overhead alignment would affect the setting of Hintlesham Hall, the national importance of which is reflected in its designation. Paragraph 5.8.15 EN-1 states that *'any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh loss or harm.'*

5.7.53 Whilst it is acknowledged that an overhead line would affect the setting of the Grade I Listed Hintlesham Hall, the considerable additional cost of a fully underground option

(which would ultimately be met by electricity consumers) could not be justified nor would it be economic and efficient. In addition, changes to the setting of listed buildings throughout the project have been identified, including the Grade I Listed Hintlesham Hall; however, in all cases, the impact is not significant and would result in less than substantial harm to the assets in question. Further still, it is considered that the benefits (including need) of the development at this site, clearly outweigh the adverse effects. There is significant urgency and need for the project and significant weight should be afforded to its importance in achieving net zero as set out in Chapter 3 of this Planning Statement.

5.7.54 Overall, Option 1 was considered the least environmentally constrained option. Subsequently, National Grid decided to not take forward Hintlesham Woods Option 2 in the application for development consent. The decision to remove Option 2 was based on several important considerations including but not limited to: consultation feedback and engagement with stakeholders and landowners; the findings of environmental surveys; environmental designations including ancient woodland and SSSI; the Holford Rules; Schedule 9 of the Electricity Act; EN-1 and EN-5; landscape impact; and further design and engineering studies.

Distribution Network Options

5.7.55 The project involves removing the existing 132kV overhead line in order to accommodate the 400kV overhead line. Following the removal of the 132kV overhead line, additional work would be required to maintain the local connection and the current security of supply to local homes and businesses.

5.7.56 In consultation with UKPN, the preferred strategic option for replacing the capacity lost following the removal of the existing 132kV overhead line was identified as a new GSP substation west of Twinstead Tee.

5.7.57 This preferred option was identified from eight strategic options. A summary of the options and the key environmental factors that were considered in the appraisal is presented in Table 3.11 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**).

5.7.58 The preferred strategic option has the benefit of being the only technically feasible strategic option not requiring the development of new 132kV double circuits, either overhead or underground. All other strategic options would require long lengths of new line and would potentially result in environmental and socio-economic effects over a wider area, which may impact upon areas of national or local environmental importance and be expected to lead to greater environmental effects without material benefit to network capability or resilience, as well as greater costs. The considerably higher cost would, in such circumstances, not meet National Grid's statutory duties to develop the network in an economic and efficient manner.

5.7.59 In this context, paragraph 2.8.3 of EN-1 recognises that*, 'sometimes positive landscape and visual benefits can arise through the reconfiguration or rationalisation of existing electricity network infrastructure.'* It is, therefore, considered that the removal of the existing 132kV overhead line in favour of a GSP substation, results in positive landscape and visual benefits overall by virtue of rationalising and reducing the magnitude of effects and the concentration of line and wirescapes in the landscape.

Substation Siting

5.7.60 Having identified a new GSP substation west of Twinstead Tee as the preferred strategic option, a specific site for the GSP was identified between Butler's Wood and Waldegrave

Wood, off the A131 near Wickham St Paul, Essex. Paragraph 2.2.5 of EN-5 states, *'there will usually be some flexibility around the location of the associated substations and applicants will give consideration to how they are placed in the local landscape taking account of such things as local topography and the possibility of screening.'* As such, potential sites extending from Twinstead Tee to Thaxted, focused along the 400kV overhead line, were considered. Following an initial desk-based study, eight potential study areas were identified. After assessing the eight study areas, three were shortlisted for further investigation.

5.7.61 A summary of the options for the siting of the GSP substation and the key environmental factors that were considered in the appraisal is presented in Table 3.12 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**) and these are shown in Figure 3.4: GSP Substation Study Areas (**application document 6.4**).

5.7.62 Of particular policy importance to the siting of new substations, National Grid endorses the Horlock Rules. The Horlock Rules provide guidelines for the siting and design of new substations, or substation extensions. The application of the Horlock Rules to the potential sites for a substation is detailed at length in Section 5.9.

5.7.63 Also important to the siting of the GSP substation is paragraph 4.5.3 of EN-1 which considers that *'…whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation*.' The location of the GSP substation has been selected, in part, to take advantage of the existing landform and existing mature landscape features as well as being designed with embedded landscape planting around to help screen it in accordance with Horlock Rule 4 and paragraph 4.5.3 of EN-1.

5.7.64 Overall, it was concluded that a substation between Butler's Wood and Waldegrave Wood (referred to as Study Area C) was preferred. The reasons Study Area C was considered to be the most suitable is set out in Section 5.9 where the Planning Statement considers the application of the Horlock Rules.

5.7.65 As previously mentioned, National Grid has obtained planning permission from Braintree District Council for the GSP substation under the TCPA in October 2022 (Application Reference: 22/01147/FUL) in advance of the application for development consent.

CSE Compounds

5.7.66 Each of the underground sections would require a CSE compound at each end to connect it to the adjacent overhead line. The CSE location options are summarised in Table 3.13 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**) alongside the key environmental factors that were considered.

5.7.67 It is noted in paragraph 2.8.2 of EN-5, '*new substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts.'*

5.7.68 Also of relevance to the siting of the CSE compounds; Horlock Rule 4 states, '*the siting of substations, extensions and associated proposals should take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum.*'

5.7.69 Generally, the Horlock Rules also apply to the design and siting of CSE compounds which is detailed further at Section 5.9.

5.7.70 Also important is paragraph 4.5.3 of EN-1 which considers that *'…whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation.*' The locations of the four CSE compounds have been selected, in part, to take advantage of the existing landform and existing mature landscape features as well as being designed with embedded landscape planting around each CSE compound in accordance with Horlock Rule 4 and paragraph 4.5.3 of EN-1.

Dedham Vale East

5.7.71 A key principle in the siting of the Dedham Vale East CSE compound was that the CSE compound should be located outside of Dedham Vale AONB to avoid conflict with national policy. Also of relevance to the setting of the AONB, paragraph 5.9.12 of EN-1, deals with development that is outside an AONB but which might affect them. It states, *'the duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them..'.* Paragraph 5.9.13 of EN-1 adds*, 'the fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.'*

5.7.72 In addition, Dollops Wood was identified as an important habitat and is greatly valued by local residents and should be avoided, having regard to Holford Rule 2 which states that: '*avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers [pylons] i.e. the bigger structures which are used when lines change direction.'*

5.7.73 Therefore, the option selected at Millfield Wood is located away from Dedham Vale AONB boundary, its setting and the setting of Polstead Conservation Area. It is also located further away from Dollops Wood than alternative locations considered, avoiding effects on the woodland habitats and species and also makes use of the screening at Millfield Wood. It is also less expensive than options located further to the east, such as at Layham Quarry, and would require a smaller working footprint overall due to the reduced underground cable length.

Dedham Vale West

5.7.74 A key principle in the options appraisal for this location was that the Dedham Vale West CSE compound should be located outside of Dedham Vale AONB to avoid conflict with national policy, similarly in respect to the location of the Dedham Vale East CSE compound, described above. The option selected between Broom Hill Wood and Bushy Park Wood was selected based on the existing landform and planting, which will help screen the site and is outside of Dedham Vale AONB.

Stour Valley East

5.7.75 The option selected in respect to the Stour Valley East CSE compound south of Workhouse Green makes use of existing woodland to partly screen the compound site to help screen the CSE compound. It was also cheaper than some of the alternatives due to the shorter cable length required.

Stour Valley West

5.7.76 The location of the Stour Valley West CSE compound south of Henny Back Road has partly been determined through the route alignment through the Stour Valley. The

selected location is near existing pylon 4YLA005 as this site benefits from a depression in the existing landform and vegetation to help screen the site and would allow for additional pylons (and the intervening overhead line) to be removed from the Stour Valley.

5.8 Holford Rules

5.8.1 Whilst referred to throughout this Planning Statement, the following sections of this Chapter further sets out, in turn, how the Holford Rules are applied by National Grid and have formed an important part of developing the preferred route and design of the project.

5.8.2 In cases where a predominantly overhead route has been selected, as is the case for the project, National Grid will continue to apply the Holford Rules, as a starting point, and identify any sections where it would be more appropriate to place the infrastructure underground. However, it is worth noting that other factors may also influence the final design, including consultation feedback.

5.8.3 Holford Rules 1, 2, 3 and 7 have been particularly relevant in the selection of strategic options, route corridor and the route design for the project. Holford Rules 4, 5 and 6 have been relevant in the consideration of possible landscape and visual effects that may arise from the project.

Holford Rule 1

5.8.4 Holford Rule 1 states, ‘avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence. Areas of highest value include AONBs, National Parks, Heritage Coasts, World Heritage Sites and Registered Parks and Gardens.’

5.8.5 Holford Rule 1 was considered particularly during the development of the route corridors. Four route corridors for delivering the project were identified; Corridors 1 and 2 would pass through Dedham Vale AONB, the majority of which lies to the south of the Order Limits. Corridors 3 and 4 were identified as corridors that avoided the AONB completely.

5.8.6 Corridors 1 and 2 are considered as ‘opportunity corridors’ as they use the existing overhead line routes which already pass-through Dedham Vale AONB. Corridor 1 was considered to have the greatest effect on the AONB, as it would introduce an additional structure into the AONB. Corridor 2 would replace the existing 132kV overhead line with a new 400kV overhead line. Corridor 2 would give rise to a lower scale of effect on landscape and views than Corridor 1.

5.8.7 Corridor 3 avoided the AONB and the potential for effects on views from within the AONB were considered to be limited. Corridor 4 also avoids the AONB and was considered to have the least effects on the AONB due to distance. However, both Corridor 3 and 4 would introduce an overhead line into an area regarded locally as high-quality landscape, albeit undesignated, where there is presently no existing electricity transmission infrastructure. The Suffolk planning authorities, English Heritage and Natural England all recommended that Corridor 3 and 4 be ruled out, the main reasons being the impact on unspoilt and historic character of the countryside, where there is presently no existing electricity transmission infrastructure.

5.8.8 Corridor 2 was, therefore, identified as the preferred route corridor, as it would result in the least scale of change to the existing environment and would benefit from the removal of a section of the existing 132kV overhead line.

5.8.9 Consequently, within Dedham Vale AONB, an underground cable was proposed given its nationally designated status. Undergrounding was, therefore, considered consistent with national policy, the Holford Rules, particularly Rule 1 and the views of statutory bodies. It was also considered that undergrounding was appropriate in the most sensitive parts of the Stour Valley, because of the particular qualities of the landscape and its cultural associations.

5.8.10 The appraisal of strategic options and route corridors demonstrates that Holford Rule 1 has informed the design and routeing of the project.

Holford Rule 2

5.8.11 Holford Rule 2 states*, 'avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers [pylons] i.e. the bigger structures which are used when lines change direction.*'

5.8.12 A summary of all of the alignments considered in each Section and the key environmental factors considered within the appraisal, including impacts to SSSI and areas of amenity, is presented in Table 3.6 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**). This assessment also considered the options in terms of the number of angle pylons required by each.

5.8.13 Hintlesham Woods SSSI is located within the Order Limits and is designated for its ancient woodland habitat and breeding bird assemblage and is managed by the RSPB as one of their reserves. A number of alternative routes through and around the woodlands were considered. The route which avoided passing through Hintlesham Woods (Option 1) was selected as the least environmentally constrained overhead line, as it would avoid impacts on the ancient woodland and on the conservation objectives of the SSSI and was, therefore, taken forward to the next stage of assessment. However, this option was also ranked as having the greatest effect on landscape character and also on visual amenity as it would be the greatest departure from the route of the existing 400kV overhead line route.

5.8.14 The main alternative against which Option 1 was considered was Option 2. It was determined that Option 2 was likely to have a greater adverse effect on both the designated ancient woodland and SSSI interest features. Whilst Hintlesham Wood Option 1 would result in a temporary adverse effect during construction; the assessment concluded that this option would not result in a significant effect on the SSSI and its interest features which, on the contrary, was likely as a result from Hintlesham Wood Option 2. National Grid decided to not take forward Hintlesham Woods Option 2 in the application for development consent.

5.8.15 Corridor 2 is the preferred corridor, as it allows paralleling with the existing 400kV overhead line, which will reduce the magnitude of landscape and visual effects. It also retains its status as an opportunity corridor, allowing the 132kV overhead line to be removed. It is noted that Corridor 2A avoids effects on Hintlesham Woods SSSI altogether. However, given the existing and proposed constraints to the south of Bramford Substation and that Corridor 2B can be designed to avoid loss of ancient woodland and SSSI features, Corridor 2B remains the preferred choice of corridor in Section AB: Bramford/Hintlesham.

5.8.16 The appraisal of strategic options and route corridors demonstrates that Holford Rule 2 has informed the design and routeing of the project, particularly in regard to the treatment of Hintlesham Woods SSSI.

Holford Rule 3

5.8.17 Holford Rule 3 states, '*other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers [pylons].'*

5.8.18 The shortest route between two points is generally preferred where other things are equal, because this is straight, avoiding the need for angles where larger pylons are needed on an overhead line, and a direct route would generally reduce the overall number of pylons required and would reduce environmental effects and costs.

5.8.19 Corridor 3 avoids the AONB and the potential for effects on views from within the AONB were considered to be limited. Corridor 4 also avoids the AONB and was considered to have the least effects on the AONB due to distance. However, both Corridors 3 and 4, amongst other considerations, would provide the least direct route when compared with Corridors 1 and 2. Furthermore, Corridor 2 was also the most direct route of the corridors considered.

5.8.20 Holford Rule 3 was also important in the context of discounting Hintlesham Woods Option 7 (an option to the south of Hintlesham Woods north of Duke Street) as this option would require a series of angle pylons to route the overhead line to the north of the properties on Duke Street and to follow the boundary of the woodland.

5.8.21 The appraisal of strategic options and route corridors demonstrates that Holford Rule 3 has informed the design and routeing of the project and Corridor 2 was ultimately progressed as the most direct route, which also resulted in fewer angle pylons.

Holford Rule 4

5.8.22 Holford Rule 4 states, '*choose tree and hill backgrounds in preference to sky backgrounds wherever possible. When a line has to cross a ridge, secure this opaque background as long as possible, cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.'*

5.8.23 In consideration of Rule 4, National Grid has taken opportunities to work with the characteristics of the landscape and backgrounding when planning the route of the overhead line and selecting the type of pylon to be used in the landscape.

5.8.24 Standard steel lattice pylons benefit from backgrounding because the thin steel members in an open structure make background features visible beyond, helping them to visually recede. An assessment of pylon design considered different designs of pylons that could be used on the project and the potential effects of each. The assessment concluded that the standard steel lattice pylon would be the preferred pylon design.

5.8.25 In general, pylons are more prominent where there is no backgrounding and they are viewed against sky backgrounds. The landscape baseline includes the existing 400kV overhead line and the existing 132kV overhead line. The selected route corridor allows paralleling with the existing 400kV overhead line, which will reduce the magnitude of landscape and visual effects. It also allows part of the existing 132kV overhead line to be removed, thus further reducing the magnitude of landscape and visual effects.

5.8.26 The appraisal of strategic and pylon design options demonstrates that Holford Rule 4 has informed the design and routeing of the project.

Holford Rule 5

5.8.27 Holford Rule 5 states, *'prefer moderately open valleys with woods where the apparent height of towers [pylons] will be reduced, and views of the line will be broken by trees'.*

5.8.28 Generally, locations for above ground infrastructure were influenced by the existing landform and vegetation, including belts of woodland, which will help screen them.

5.8.29 The consideration of landform and site context demonstrates that Holford Rule 5 has informed the design and routeing of the project.

Holford Rule 6

5.8.30 Holford Rule 6 states, '*where country is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration of lines or wirescapes'.*

5.8.31 The supplementary note to Rule 6 refers to planning, wherever practicable, parallel or closely related routes with pylon types, spans and conductors forming a coherent appearance.

5.8.32 The selected route corridor allows paralleling with the existing 400kV overhead line, which will reduce the magnitude of landscape and visual effects and the concentration of line and wirescapes. It also allows part of the existing 132kV overhead line to be removed, thus further reducing the magnitude of landscape and visual effects and the concentration of line and wirescapes.

5.8.33 Introducing a different pylon structure near an existing steel lattice pylon may produce an incoherent appearance; this would be a greater change than introducing a series of similar structures. As such, a good design measure incorporated into the design and in consideration of Holford Rule 6, includes the proposed use of standard lattice pylons which is the same style as the existing 400kV overhead line.

5.8.34 The appraisal of strategic options and the consideration of pylon design demonstrates that Holford Rule 6 has informed the design and routeing of the project.

Holford Rule 7

5.8.35 Holford Rule 7 states, '*approach urban area through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, go carefully into the comparative costs of the undergrounding, for lines other than those of the highest voltage.'*

5.8.36 Whilst the new 400kV overhead line would be of the highest voltage, it was concluded that Corridor 2 was the preferred route corridor based on both previous assessment work and on the consultation responses. Corridor 2 would largely occupy a rural area, with no urban areas or industrial zones. The largest settlement is Sudbury located to the north-west of Corridor 2, although this was avoided by the route. Smaller settlements including Hadleigh and a number of villages are distributed throughout the corridor area. However, urbanised areas, including Hadleigh and other villages are largely avoided all together with the exception of some rural industrial sites. With respect to the route being located near to those industrial sites, this is due to the fact the route parallels the existing 400kV overhead line which is already a feature of the setting of those sites.

5.8.37 In considering alternative strategic options, potential effects on urban areas and residential and recreational receptors were considered. From a socio-economic perspective, the strategic option taken forward would not affect any major areas of economic activity or tourism assets of national importance.

5.8.38 It has been considered whether the use of underground cable technology would be appropriate for the project, including a careful assessment of undergrounding costs in

comparison to overhead lines. The relevant NPS does not preclude the use of overhead line connections in most circumstances and that the use of entirely underground cables at considerably higher cost would, in such circumstances, not meet National Grid's statutory duties to develop the network in an economic and efficient manner.

5.8.39 The appraisal of strategic options demonstrates that Holford Rule 7 has informed the design and routeing of the project; ultimately the project does not approach urban areas and undergrounding the approach to the substations at either end of the route has been considered in the appraisal.

Holford Rules Supplementary Notes

5.8.40 In addition to the above, three supplementary notes have been added to the Holford Rules.

5.8.41 Holford Rule Supplementary Note 1 states, *'avoid routeing close to residential areas as far as possible on grounds of general amenity.'*

5.8.42 Corridor 2 would largely occupy a rural area. The largest settlement is Sudbury located to the north-west of Corridor 2, although this was avoided by the route. Smaller settlements including Hadleigh and a number of villages are distributed throughout the corridor area. However, urbanised areas are largely avoided all together with the exception of some rural residential properties. With respect to the route being located near to those residential properties, this is due to the fact the route parallels the existing 400kV overhead line which is already a feature of the setting of those sites.

5.8.43 Holford Rule Supplementary Note 2 states, '*where possible choose routes which minimise the effect on special landscape areas, areas of great landscape value and other similar designations of county, district or local importance.'*

5.8.44 It was concluded that Corridor 2 was the preferred route corridor as it would result in the least scale of change to the existing environment (amongst other considerations). Corridor 2 was also identified as an 'opportunity corridor' as it used the existing overhead line routes which already passes through Dedham Vale AONB.

5.8.45 Although Dedham Vale AONB is covered by a national designation, the Stour Valley is not designated and could, therefore, be considered to not warrant undergrounding, based on cost and the potential adverse effects on the environment. However, ultimately it was considered that undergrounding was appropriate in parts of the Stour Valley, because of the particular qualities of the landscape and its cultural associations.

5.8.46 Holford Rule Supplementary Note 3 states *'in addition to adopting appropriate routeing, evaluate where appropriate the use of alternative tower [pylon] designs are available where these would be advantageous visually and where the extra cost can be justified.'*

5.8.47 An assessment of pylon design was undertaken which considered different designs of pylons that could be used on the project and the potential effects of each. The assessment concluded that the standard steel lattice pylon would be the preferred pylon design and this remained the preferred pylon design throughout the project. In this connection, ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process.

5.9 Horlock Rules

5.9.1 The Horlock Rules provide guidelines for the siting and design of new substations, or substation extensions and these rules have been an important consideration in the design and siting of the GSP substation and CSE compounds. The Horlock Rules are also relevant in respect to the connection proposed at Bramford Substation.

5.9.2 Whilst not currently referred to in EN-5, paragraph 2.9.18 of the 2023 proposed revised EN-5, states, '*The Horlock Rules – guidelines for the design and siting of substations – were established by National Grid in 2009 in pursuance of its duties under Schedule 9 to the Electricity Act 1989. These principles should be embodied in applicants' proposals for the infrastructure associated with new overhead lines.'*

5.9.3 Potential sites for a substation were considered, extending from Twinstead Tee to Thaxted, and were focused along the 400kV overhead line. Following an initial desk-based study, eight study areas were identified. After assessing the eight study areas, three were shortlisted for further investigation. A summary of the shortlisted study areas considered and the key environmental factors that were considered in the appraisal is presented in Table 3.12 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**).

5.9.4 As previously mentioned, National Grid has obtained planning permission from Braintree District Council for the GSP substation under the TCPA in October 2022 (Application Reference: 22/01147/FUL) in advance of the application for development consent. Although, a summary of how the Horlock Rules have influenced the optioneering and design evolution process for the GSP substation is detailed in the following sections.

Overall System Options and Site Selection

5.9.5 Horlock Rule 1 states, '*in the development of system options including new substations, consideration must be given to environmental issues from the earliest stage to balance the technical benefits and capital cost requirements for new developments against the consequential environmental effects in order to keep adverse effects to a reasonably practicable minimum.'*

5.9.6 In consultation with UKPN, the preferred strategic option for replacing the capacity lost following the removal of the existing 132kV overhead line was identified as a new GSP substation west of Twinstead Tee. This preferred option was identified from eight strategic options. Having identified a new GSP substation west of Twinstead Tee as the preferred strategic option, potential sites extending from Twinstead Tee to Thaxted, focused along the 400kV overhead line were considered for the siting of the GSP substation.

5.9.7 Environmental issues were a key driver in the options appraisal and site selection process for the GSP substation location, as well as the locations for the four CSE compounds and fundamental to decisions to take sites forward for more detailed analysis. In respect to the environment, the assessments considered: landscape visual amenity; historic environment; ecology; water resources and noise and vibration. Given the functional design nature of substations, landscape and visual amenity was considered to be of principal importance.

5.9.8 The selected GSP location (Location C2) was assessed as having the least impact overall on the landscape character of the area, visual amenity, ecology and the historic environment of the options assessed. Additionally, the environmental drivers behind the location for the four CSE compounds is summarised in Table 3.13 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**).

Amenity, Cultural Or Scientific Value Of Sites

5.9.9 Horlock Rule 2 states, *'the siting of new National Grid Company substations, sealing end compounds and line entries should as far as reasonably practicable seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections.'*

5.9.10 None of the study areas identified for the GSP substation and CSE compounds are located within designated landscapes. One of the locations originally considered (West of West Wood)for the GSP substation may have required tree removal at West Wood SSSI to provide clearances for equipment, although this option was not taken forward.

5.9.11 Horlock Rule 3 states, *'areas of local amenity value, important existing habitats and landscape features including ancient woodland, historic hedgerows, surface and ground water sources and nature conservation areas should be protected as far as reasonably practicable.'*

5.9.12 Local environmental designations were also a key driver in the selection process for the GSP substation location and fundamental to decisions to take sites forward for more detailed analysis. Work was undertaken to identify sites of local importance. For example Butler's Wood and Waldegrave Wood are LWS and are designated for their ancient woodland habitat and the verges along Delvyn's Lane are designated by Essex County Council as Special Roadside Verges.

5.9.13 The location between Butler's Wood and Waldegrave Wood was selected for the siting of the GSP substation (Location C2). Whilst Butler's Wood and Waldegrave Wood are LWS are designated for their ancient woodland habitats, no vegetation clearance or modification of Butler's Wood or Waldegrave Wood is required during construction or operation, beyond the current wayleave for the existing 400kV overhead line in this location.

5.9.14 The environmental drivers behind the location for the four CSE compounds is summarised in Table 3.13 of ES Chapter 3: Alternatives Considered (**application document 6.2.3**).

Local Context, Land Use and Site Planning

5.9.15 Horlock Rule 4 states, *'the siting of substations, extensions and associated proposals should take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum.'*

5.9.16 The majority of the areas considered for the location of the GSP substation would take advantage of screening provided by existing tree belts and woodland areas. However, a potential site considered at Castle Hedingham would require careful screening as it is close to the entrance of a recognised local tourist attraction. All the considered GSP substation locations would have a negative effect on visual amenity. It was considered that, with mitigation, a GSP substation at either east of Ramacre Wood or between Butlers' Wood and Waldegrave Wood (Location C2) would have only a minor negative effect on visual amenity. However, there was a preference for location C2 as this location would benefit from a greater degree of screening by existing mature woodland.

5.9.17 Overall, a determining factor in opting for the selected location for the GSP substation (location C2), as well as the four CSE compounds was the advantageous baseline situations in respect to existing vegetation which would provide screening in the wider landscape.

5.9.18 Horlock Rule 5 states, '*the proposals should keep the visual, noise and other environmental effects to a reasonably practicable minimum.'*

5.9.19 Environmental effects were a key driver in the selection process for the proposed GSP substation location and fundamental to decisions to take sites forward for more detailed analysis. In this respect the assessments considered impacts to amenity including visual and noise.

5.9.20 Noise would not be a differentiating factor between the study areas. Any GSP substation would be designed to avoid any perceptible increase in background noise levels at residential properties. This would include enclosure of the transformers and the use of low noise cooler fans.

5.9.21 The majority of the study areas consider would take advantage of screening which is provided by existing tree belts and woodland areas. There is also adequate space to carry out supplementary planting at all locations in the study area. Supplementary planting could consist of woodland planting and use of low mounds (approximately 2m high) around the peripheries of the substation locations, which are not already screened by mature vegetation. The screening offered by existing field boundaries would be strengthened with supplementary planting where this would help to reduce negative effects on landscape character. A combination of woodland planting and hedgerow planting would also be planted either side of the GSP substation access route so that it would appear similar to a lane or farm track.

5.9.22 Overall, the selected GSP location (Location C2) would include landscape planting around the GSP substation which is considered to be an embedded measure within the design to help soften and filter views from the surrounding areas. The GSP substation also includes noise enclosures which would be used around the two SGT to reduce operational noise outside of the site.

5.9.23 Horlock Rule 6 states, **'***the land use effects of the proposal should be considered when planning the siting of substations or extensions.'*

5.9.24 It was noted that all study areas considered are likely to have some impact on local footpaths as well as the agricultural nature of the land.

5.9.25 The selected location (Location C2), however, is currently privately owned land and is not publicly accessible. The location also contains existing National Grid infrastructure in the form of an existing 400kV overhead line and pylon. The selected location does not result in any severance to publicly accessible land or public rights of way.

Design

5.9.26 Horlock Rule 7 states, '*in the design of new substations or line entries, early consideration should be given to the options available for terminal towers [pylons], equipment, buildings and ancillary development appropriate to individual locations, seeking to keep effects to a reasonably practicable minimum.'*

5.9.27 In terms of which location would be the most suitable to accommodate a substation, an air insulated switchgear substation layout was assumed in the assessment of each study area. In terms of the likely environmental effects, a gas insulated switchgear substation would be likely to have a greater impact on views and landscape character due to the height and scale of the building surrounding the equipment.

5.9.28 In assessing the study areas from an engineering perspective, consideration was given to; individual site characteristics, environmental constraints and existing infrastructure to

determine the appropriate location and orientation of the GSP substation; the most appropriate form of connection to the 400kV network; the most appropriate route of the 132kV cable connection taking account of environmental constraints; the most appropriate route for a permanent access route and the need for temporary works including overhead line diversions.

5.9.29 The size of some of the equipment for the GSP substation means that when it is imported by road to the site it would be categorised as an Abnormal Indivisible Loads (AIL) by virtue of its size. Consideration of AIL, therefore, concluded that the most suitable site in terms of access is Location C2, given its location adjacent to the A131.

5.9.30 In respect to the selected location, the GSP substation has been designed so that it benefits from the advantageous tree screening baseline, equipment such as the CSE compound and buildings are away from the road and the relocating of the site access away from the existing site access limits the visibility of the proposed GSP substation from the A131. In addition, the existing 400kV line runs through the site which results in a co-located type of infrastructure development.

5.9.31 Horlock Rule 8 states, '*space should be used effectively to limit the area required for development consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation.'*

5.9.32 For each of the study areas, land would need to be acquired that includes space to carry out some additional woodland and hedgerow planting. Opportunities for mitigation are restricted in some areas where a permanent clear easement is required, such as under the existing overhead lines and downleads and over the underground cables swathes.

5.9.33 In respect to the selected location (Location C2), the GSP substation is physically and environmentally constrained on all four boundaries; ancient woodland to the north and south, the A131 to the east and the open countryside to the west. Meanwhile, the location is not particularly large for this type of development. This has meant that the GSP substation has had to be thoughtfully designed, having regard to these constraints. Therefore, it proposes the minimum amount of development to make the GSP substation operational as any more development would not be practicable at this site. It is also not envisaged that an extension to the proposed GSP substation would be required at a later date.

5.9.34 Horlock Rule 9 states, '*the design of access roads, perimeter fencing, earthshaping, planting and ancillary development should form an integral part of the site layout and design to fit in with the surroundings.'*

5.9.35 Horlock Rule 9 relates more so to the detailed design stage of the GSP substation which would be undertaken at a later stage of the optioneering process. However, material generated from excavation areas will be reused on site to provide landscape mounding to the west of the proposed GSP substation and between the proposed GSP substation and A131; planting is also proposed in these locations.

Line Entries

5.9.36 Horlock Rule 10 states, '*in open landscape especially, high voltage line entries should be kept, as far as possible, visually separate from low voltage lines and other overhead lines so as to avoid a confusing appearance.'*

5.9.37 The selected GSP substation location (Location C2) is not considered to be within the open landscape due to the existing tree screening, A131 and the existing 400kV line

running through the site from east to west. Alternative GSP locations were considered to the west of Butlers Wood and Waldegrave Wood and the land here has a more open character compared to Location C2. These options were, therefore, discounted.

5.9.38 Horlock Rule 11 states, '*the inter-relationship between towers [pylons] and substation structures and background and foreground features should be studied to reduce the prominence of structures from main viewpoints. Where practicable the exposure of terminal towers [pylons] on prominent ridges should be minimised by siting towers [pylons] against a background of trees rather than open skylines.'*

5.9.39 The GSP substation design does not result in a net increase in permanent pylons at the site and is not located on any prominent ridges and benefits from the enclosed nature of the site, due to the two parcels of woodland screening the development. Also refer to Horlock Rule 7.

5.9.40 Full line tension gantries are proposed at all four CSE compounds. This removes the need for an additional terminal pylon and potential associated impacts at each, particularly in relation to landscape and visual.

5.10 Summary

5.10.1 The final design for the project is set out in detail in ES Chapter 4: Project Description (**application document 6.2.4**), which describes the design submitted within the application. This should be read alongside ES Chapter 3: Alternatives Considered (**application document 6.2.3**), which documents the key environmental factors that were considered in the optioneering and design evolution process.

5.10.2 The design considerations reflect National Grid's duty to be economic and efficient, as well as within the rigorous health and safety processes that National Grid has in place which governs how National Grid designs and constructs their projects safely. Environmental Statement Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project.

6. National Planning Policy Context

6.1 Overview

6.1.1 In deciding an application for development consent, Section 104 of the Planning Act 2008 requires the SoS to have regard to any NPS which applies to the application, except in a limited number of specified circumstances.

6.1.2 EN-1 was designated in July 2011. EN-1 sets out national policy for energy infrastructure and is relevant to the project. Paragraph 1.1.1 of EN-1 states that: *'It [EN-1] has effect, in combination with the relevant technology-specific NPS, on the decisions by the Infrastructure Planning Commission (IPC) on application for energy developments that fall within the scope of the NPS. For such applications this NPS, when combined with the relevant technology-specific energy NPS, provides the primary basis for decision by the IPC.'*

6.1.3 The EN-5 was designated in July 2011. EN-5 is the technology specific NPS for electricity networks and overhead lines.

6.1.4 EN-1 and EN-5, taken together, provide the primary basis for decisions taken by the SoS on applications it receives for electricity networks infrastructure, and in turn the project.

6.1.5 The NPPF (2023) sets out the Government's planning policies for England and how these are expected to be applied. The weight of the NPPF relating to NSIP is clarified in paragraph 5 of the NPPF, which states:

'The Framework does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework). 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.'

6.1.6 The NPPF is, therefore, capable of being an important and relevant consideration in decision making for NSIP but the prime document to be considered and given appropriate weight are the relevant NPS. The NPPF was most recently updated in September 2023.

6.1.7 The Government introduced Planning Practice Guidance (PPG) to supplement the NPPF in March 2014. The PPG provides information that may be considered 'important' and 'relevant' to the project.

6.1.8 Section 38(6) of the Planning and Compulsory Purchase Act (2004) provides the principal basis in law for the determination of planning applications, namely that they must be determined in accordance with the development plan unless material considerations indicate otherwise. This provision does not apply to applications for development consent under the Planning Act 2008. Local plan policies may, however, be an important and relevant consideration in the determination of applications for development consent and the SoS must have regard to any 'local impact report' submitted by an LPA. Relevant local plan policies are considered in Chapter 8 and Appendix D of this Planning Statement.

6.1.9 Appendix A of this Planning Statement provides a table demonstrating how the DCO submission is compliant with the requirements of EN-1. Appendix B of this Planning Statement provides a table demonstrating how the DCO submission is compliant with requirements of EN-5.

6.2 National Policy Statement for Energy (EN-1)

6.2.1 Paragraph 2.2.20 of EN-1 states that *'it is critical that the UK continues to have secure and reliable supplies of electricity as it makes the transition to a low carbon economy.'* Paragraph 2.2.20 advises that to manage the risks to achieve security of supply this means ensuring that:

- there is sufficient capacity (including a greater proportion of low carbon generation) to meet demand at all times, including a safety margin of spare capacity to accommodate unforeseen fluctuations in supply or demand;
- there are reliable associated supply chains to meet demand as it arises;
- there is a diverse mix of technologies and fuels (including primary fuels imported from a wide range of countries); and
- there are effective price signals, so that market participants have sufficient incentives to react in a timely way to minimise imbalances between supply and demand.

6.2.2 UK Government objectives for energy and climate change will require further diversification of the UK's energy sources and much greater use of renewable and other low carbon forms of generation.

6.2.3 Paragraph 3.7.2 of the NPS states that: '*existing transmission and distribution networks will have to evolve and adapt in various ways to handle increases in demand'*, and paragraph 3.7.1 notes that '*much of the new electricity infrastructure that is need will be located in places where there is no existing network'*, recognising that generation is now occurring in a variety of locations.

6.2.4 Part 4 of EN-1 sets out general policies in accordance with which applications relating to energy infrastructure are to be decided. These policies do not relate to the need for new energy infrastructure (covered in Part 3 of EN-1) or to particular physical impacts of construction or operation (covered in Part 5 of EN-1 and technology-specific NPS). The following assessment principles in Part 4 are relevant to the project:

- environmental statement;
- habitats and species regulations;
- alternatives;
- criteria for 'good design' for energy infrastructure;
- climate change adaptation;
- pollution control and other environmental regulatory regimes;
- safety;
- common law, nuisance and statutory nuisance;
- health; and
- security considerations.

6.2.5 Chapter 7 of this Planning Statement sets out how the application is in accordance with the applicable 'assessment principles', set out above.

6.2.6 Part 5 of EN-1 identifies 'generic impacts' of any of the types of energy infrastructure projects covered by the energy NPS, which must be considered in an ES accompanying an application for development consent. The following generic impacts are relevant to the project, either in part or in full:

- air quality and emissions;
- biodiversity and geological conservation;
- civil and military aviation and defence interests;
- dust, odour, artificial light, smoke, steam and insect infestation;
- flood risk;
- historic environment;
- landscape and visual;
- land use including open space and green infrastructure;
- noise and vibration;
- socio-economic;
- traffic and transport;
- waste management; and
- water quality and resources.

6.2.7 Chapter 7 of this Planning Statement sets out how the application has considered 'generic impacts' and is in accordance with the requirements of Part 5 of EN-1.

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

6.3.1 EN-5 advises in paragraph 2.1.2 that the Examining Authority should start its assessment of applications for application for development consent pursuant to EN-5 on the basis that need has already been demonstrated.

6.3.2 Paragraph 1.1.1 of EN-5 recognises that the '*new electricity generating infrastructure that the UK needs to move to a low carbon economy while maintaining security of supply will be heavily dependent on the availability of a fit for purpose and robust electricity network'*. The network will need to be able to support a more complex system of supply and demand than present, and cope with generation occurring in more diverse locations.

6.3.3 EN-5 does not seek to direct applicants towards particular sites or routes for electricity networks infrastructure (paragraph 2.2.1). Paragraph 2.2.2 recognises that *'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.'* On other occasions the requirement may be associated with the need for more strategic reinforcement of the network. However, EN-5 notes that in neither circumstance is it necessarily the case that the connection should be via the most direct route owing to factors including environmental aspects and engineering considerations (paragraph 2.2.2).

6.3.4 Part 2 of EN-5 sets out the basis for assessing applications for development consent and technology-specific topic areas that should be addressed. The following assessment principles in Part 2 relevant to the project are:

- factors influencing site selection by applicants;
- general assessment principles for electricity networks;
- climate change adaptation;
- consideration of good design;
- impacts of electricity networks; and
- Electric and Magnetic Fields (EMF).

6.3.5 These topic areas are considered in Chapter 7 of this Planning Statement.

6.3.6 Part 2 of EN-5 also provides additional technology-specific advice on the impacts of electricity networks for the following 'generic impacts':

- biodiversity and geological conservation;
- landscape and visual; and
- noise and vibration.

6.3.7 Chapter 7 of this Planning Statement sets out how the application has considered the technology-specific advice provided in EN-5 for 'generic impacts'.

6.4 Proposed Revised NPS for Energy (EN-1)

6.4.1 On 6 September 2021 the Government began a consultation on the draft replacement NPS. The consultation closed on 29 November 2021. The Department for Business, Energy and Industrial Strategy (BEIS) (now the Department for Energy Security and Net Zero (DESNZ)) committee published its report following Hearings on 25 February 2022. The Growth Plan was published on 22 September 2022 (HM Treasury, 2022[2]) and states at paragraph 3.37 that the delivery of the draft replacement NPS for energy will be prioritised. Furthermore, the Autumn Statement 2022 (HM Treasury, 2022) published on 17 November 2022, stated that the NPS would be updated during 2023.

6.4.2 On 23 February 2023 the Government subsequently published an Action Plan to streamline the planning process for NSIP. This follows from a consultation published in August 2021, which asked respondents to identify the main issues affecting each principal stage of the process. The Action Plan further committed to an action of finalising the draft replacement EN-1 and EN-5 with a view of designating these by 'Q2 2023'.

6.4.3 On 30 March 2023 the Government re-consulted on a new draft replacement of the energy NPS. The consultation closed on 23 June 2023. This consultation was more focused on offshore wind, strengthening the electricity networks NPS and civil and military aviation and defence interests. In November 2023, the Government published proposed revised versions of these NPSs. However, the 2011 versions of the NPS remain in force until the proposed revised NPS are designated in early 2024. National Grid has carried out an assessment of the project against the proposed revised NPSs (November 2023) in the Accordance Tables at Appendix F (EN-1) and Appendix G (EN-5) of this Planning Statement.

6.4.4 Proposed revised EN-1 sets out the transitional arrangements for the new NPSs. It explains at section 1.6 that the current suite of NPS remain relevant government policy and have effect for the purposes of the Planning Act 2008. It goes on to say, *'the 2023 amendments will therefore have effect only in relation to those applications for development consent accepted for examination, after the designation of those amendments. However, any emerging draft NPSs (or those designated but not yet having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the relevant Secretary of State to consider within the framework of the Planning Act 2008 and with regard to the specific circumstances of each development consent order application'.*

6.4.5 National Grid submits that the proposed revised NPSs are capable of being important and relevant considerations; in this case in the context of Section 104 of the Planning Act 2008. National Grid draw out the following high-level points in respect of the proposed revised EN-1:

- The commitment to net zero emissions by 2050 is introduced;
- The need for onshore reinforcement works is recognised as substantial and specific mention is made of the need for substantial reinforcement in East Anglia;
- Recognition that it can take longer to construct onshore reinforcements than the completion of the offshore wind farms for which they are being built; and
- Recognition of the urgent need for new electricity infrastructure.

6.4.6 In addition, proposed revised EN-1 states that onshore transmission projects, like the Bramford to Twinstead Reinforcement, is of '*Critical National Priority*'. This is also reflected in proposed revised EN-5. The project is, therefore, considered Critical National Priority under this policy.

6.5 Proposed Revised NPS for Electricity Networks Infrastructure (EN-5)

6.5.1 The status of proposed revised EN-5 is the same as the proposed revised EN-1 as set out above. National Grid draw out the following high-level points in respect of the proposed revised EN-5:

- Emphasis on macro-level location being not substantially within the applicant's control, but that applicants do retain control over the routing within the identified location;
- New references to environmental and BNG;
- Clearer guidance that within nationally designated landscapes even residual impacts will make an overhead line unacceptable in planning terms;
- Clear statement that overhead lines should be the strong starting presumption for electricity networks in general; and
- In the context of climate change, proposed revised EN-5 indicates that applicants should avoid the use of Sulphur Hexafluoride (SF6) in new developments.

6.6 National Planning Policy Framework

6.6.1 Paragraph 7 of the NPPF states that '*the purpose of the planning system is to contribute to the achievement of sustainable development'.* Paragraph 152 recognises that *'the planning system should support the transition to a low carbon future in a changing climate… It should help to…support renewable and low carbon energy and associated infrastructure.'*

6.6.2 Where applicable, relevant paragraphs of the NPPF have been considered relating to the 'assessment principles' in Chapter 7 of this Planning Statement. The Government introduced PPG to supplement the NPPF. The PPG has also been considered.

6.7 Powering Up Britain (March 2023)

6.7.1 Powering Up Britain provides confirmation that the Government remains committed to the delivery of 50GW of offshore wind and new nuclear; both are technologies supported by the project. It also recognises the urgent need for upgrades to the transmission network.

6.7.2 Powering Up Britain (March 2023) is up to date Government policy, consistent with other documents (see Section 3.4**)** and provides a national plan for the energy sector. However, the document does not comprise planning policy and was not written to guide decision making on Nationally Significant Infrastructure Project (NSIP) applications. As current Government policy, Powering Up Britain should attract full weight and is capable of being important and relevant for decision making.

6.8 A Green Future: Our 25 Year Plan to Improve the Environment

6.8.1 A Green Future: Our 25 Year Plan highlights the Government's support for the reduction in the United Kingdom (UK)'s carbon footprint. The project is critical to the rapid decarbonisation of the National Grid and the principle of the project is therefore supported by the Plan.

6.8.2 The Plan provides the Government's plan to improve the environment. The Plan is relatively high level, is not planning policy, was not written for the energy sector and is five years old.

6.8.3 The proposed revised Overarching NPS for Energy (EN-1) (November 2023) states in paragraph 5.4.39 that '*The government's 25 Year Environment Plan and the Environment Act 2021 mark a step change in ambition for wildlife and the natural environment. The Secretary of State should have regard to the aims and goals of the government's Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.'*

6.8.4 The Applicant considers that the project is compliant with the Plan insofar as it is relevant to the project. The Plan sets out ten goals which include the achievement of: clean air; clean and plentiful water; thriving plants and wildlife; reduced risk of harm from environmental hazards like flooding and drought; the more sustainable and efficient use of resources from nature; enhanced beauty, heritage and engagement with the natural environment; mitigation and adaption to climate change; minimisation of waste; management of exposure to chemicals; and enhanced biosecurity. Where relevant to the project, all these topics are covered in full in the ES. Policy on these topics is provided in the designated and proposed revised NPSs, which provide policy directly relevant to the development of NSIP. Under Section 104 of the Planning Act 2008, the SoS) must have

regard to the designated NPSs. The proposed revised NPSs are also relevant and important matters, comprising documents that have been subject to consultation and are very recent (November, 2023).

6.9 Other Documents

6.9.1 Other published documents that are considered to be both important and relevant include:

- The Autumn Statement 2022 (November 2022) (HM Treasury, 2022);
- The Growth Plan (September 2022) (HM Treasury, 2022[2]);
- National Infrastructure Strategy (November 2020) (HM Treasury, 2022[3]);
- Energy White Paper - Powering our Net Zero Future (December 2020) (BEIS, 2020);
- Network Options Assessment 2023 (January 2022) (National Grid ESO, 2022).
- British Energy Security Strategy (April 2022) (BEIS, 2022); and
- The Pathway to 2030 Holistic Network Design (July 2022) (National Grid ESO, 2022[2]).

7. National Planning Policy Assessment

7.1 Overview

7.1.1 The following Chapter of this Planning Statement sets out how the application is in accordance with national policy including EN-1, EN-5 and the NPPF. This Chapter is supplemented by the NPS compliance tables included in Appendices A (EN-1) and B (EN-5). Reference is also occasionally made to the proposed revised NPSs that update the extant, designated NPS, and which are an important and relevant consideration.

7.1.2 Section 7.2 of this Chapter is structured around the 'assessment principles' from EN-1 and EN-5 identified as relevant to the project and sets out how these have been addressed in the application.

7.1.3 Section 7.3 of this Chapter is structured around the 'generic impacts' from EN-1 and EN-5 identified as relevant to the project and sets out how these have been addressed in the submission.

7.1.4 Section 7.4 of this Chapter includes relevant considerations of the NPPF and sets out how these have been addressed in the application.

7.2 Assessment Principles

7.2.1 This Section sets out how the application for development consent addresses each of the relevant assessment principles as set out in EN-1 and the technology-specific assessment principles as set out in EN-5. Where the proposed revised EN-1 and EN-5 introduces proposed policy that is substantively different to that contained in the extant, designated NPS, this is also set out.

Environmental Statement

7.2.2 Section 4.2 of EN-1 sets out the policy requirements for the ES. Paragraph 4.2.1 of EN-1 states, as confirmed in the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, that *'all proposals for projects that are subject to the European Environmental Impact Assessment Directive (2011/92/EU) must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project.'*

7.2.3 The application for development consent is accompanied by an ES which meets the requirements of EN-1. The following topics are covered within the ES:

- ES Chapter 6: Landscape and Visual (**application document 6.2.6**)
- ES Chapter 7: Biodiversity (**application document 6.2.7**);
- ES Chapter 8: Historic Environment (**application document 6.2.8**);
- ES Chapter 9: Water Environment (**application document 6.2.9**);
- ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**);

- ES Chapter 11: Agriculture and Soils (**application document 6.2.11**)
- ES Chapter 12: Traffic and Transport (**application document 6.2.12**);
- ES Chapter 13: Air Quality (**application document 6.2.13**);
- ES Chapter 14: Noise and Vibration (**application document 6.2.14**); and
- ES Chapter 15: Cumulative Effects Assessment (**application document 6.2.15**).

7.2.4 In response to paragraph 4.2.2 which requires applicants '*to set out information on the likely significant social and economic effects of the development*', many of the contributory factors affecting social and economic effects such as employment, community services and health and well-being were scoped out of the assessment in the Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) and this was endorsed in the Scoping Opinion (**application document 6.6**). Therefore, no separate reporting is required on these topics and a standalone socio-economics chapter has not been included within the ES. Instead, the Socio Economics and Tourism Report (**application document 5.9**) sets out the reasons why significant social and economic effects are not anticipated. This document sits outside the ES and concludes that the project is still unlikely to generate significant effects on these issues.

7.2.5 In accordance with paragraph 4.2.3 of EN-1, the ES (**application document 6.2**) provides an assessment of likely significant environmental effects arising during construction, operation and decommissioning of the project.

7.2.6 The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 in respect to the preparation of the ES.

Habitats and Species Regulations

7.2.7 Section 4.3 of EN-1 sets out habitats and species regulations policy requirements relating to the project. Paragraph 4.3.1 of EN-1 states that prior to granting development consent, the Examining Authority must, under the Habitats and Species Regulations, consider whether the project may have significant effects on a European protected site, or on any site to which the same protection is applied as a matter of policy.

7.2.8 In relation to NSIP, the relevant SoS is the Competent Authority for the purposes of the Habitat Regulations. The Competent Authority must consider whether a development will have a likely significant effect on a European site, either alone or in combination with other plans or projects.

7.2.9 The project involves constructing, operating and decommissioning electricity infrastructure (a GSP substation, pylons, overhead lines and underground cables) which require consultation with Natural England due to it falling within the Impact Risk Zones for the component SSSI that make up the Stour and Orwell Estuaries SPA and Ramsar sites.

7.2.10 The Habitats Regulation Assessment (HRA) Report (**application document 5.3**) has been undertaken and one aspect was taken forward to Appropriate Assessment following advice from Natural England, in accordance with paragraph 4.3.1 of EN-1.

7.2.11 The HRA Report (**application document 5.3**) presents the HRA undertaken for the project, which comprises Stage 1: Screening and Stage 2: Appropriate Assessment. It builds on the Draft HRA Screening Report published at the EIA scoping stage (**application document 6.5.2**) and also in the Preliminary Environmental Information Report (National Grid, 2022). It has also been provided to Natural England to provide

assurance that potential likely significant effects on European sites have been addressed appropriately and in sufficient detail.

7.2.12 The Stage 1 Screening concluded no likely significant effects were identified on the Stour and Orwell Estuaries SPA and Ramsar from the project in relation to habitat loss; habitat or species fragmentation; or disturbance to species (i.e. displacement). However, due to potential impacts upon surface water quality through pollution and sedimentation incidents on watercourses as a result of construction, habitat degradation and subsequent reduction in species density as a result, surface water quality change was taken for Stage 2: Appropriate Assessment.

7.2.13 Stage 2 Appropriate Assessment found that no adverse effect on the integrity of the SPA and Ramsar would occur once good practice measures in the CEMP Appendix A: CoCP (**application document 7.5.1**) and embedded measures are employed. These measures are secured through Schedule 3, Requirement 5 of the draft DCO (**application document 3.1**). No in-combination effects (both intra- and inter-project) were identified.

7.2.14 The HRA Report concludes that it does not need to progress onto Stage 3 of the HRA process (to consider if proposals that would have an adverse effect on integrity of a European site qualify for an exemption) and the project is compliant with the NPS in relation to HRA. It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to habitats and species regulations.

Site Selection and Alternatives

7.2.15 Section 4.4 of EN-1 sets out policy requirements relating to 'alternatives'. Paragraph 4.4.1 of EN-1 details that the NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option. However, paragraph 4.4.2 of EN-1 considers that applicants are obliged to include in their ES information about the main alternatives they have studied and, in some instances, there are specific legislative requirements to consider alternatives.

7.2.16 This Section also considers the technology-specific topic of 'factors influencing site selection by applicants', as set out in Section 2.2 of EN-5; as the topics of site selection and alternatives are both an integral part of the options appraisal process.

7.2.17 National Grid applies its process of options appraisal to each new project. Chapter 5 of this Planning Statement sets out how planning policy, namely EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have influenced the options appraisal process; demonstrating how such policy objectives have been embedded into the design of the project.

7.2.18 Paragraph 2.8.4 of EN-5 states that '… *wherever the nature or proposed route of an overhead line proposal makes it likely that its visual impact will be particularly significant, the applicant should have given appropriate consideration to the potential costs and benefits of other feasible means of connection or reinforcement, including underground and sub-sea cables where appropriate.'*

7.2.19 Paragraph 2.8.8 of EN-5 states that '*where there are serious concerns about the potential adverse landscape and visual effects of a proposed overhead line, the IPC will have to balance these against other relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding)'*

7.2.20 The consideration of alternative means of connection and reinforcement from a planning policy perspective is considered in Chapter 5 of this Planning Statement. In summary, underground cables are significantly more expensive to construct when compared to overhead lines and the potential for serious adverse landscape and visual effects would need to be balanced against other factors, including cost. As a result, unjustified undergrounding of overhead lines may result in National Grid being in breach of its duty to '*develop and maintain an efficient, coordinated and economical electricity transmission system'*, as the higher cost of underground cables will impact bill-paying consumers. Hence, National Grid has struck a balance in respect to providing a predominantly overhead line double circuit connection from Bramford substation to the Pelham to Braintree line, with sections of underground cables in the most sensitive landscape areas.

7.2.21 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations') require applicants to document alternative development options considered as part of the application for development consent. Part 1 of Schedule 4 of the EIA Regulations requires that the ES includes '*an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects'.* The ES Chapter 3: Alternatives Considered (**application document 6.2.3**), documents the key environmental factors in consideration of the main alternatives. In addition, Chapter 5 of this Planning Statement seeks to demonstrate, at a high-level, the influence of the policy context to the main alternatives considered. Finally, the Evolution of the Project (**application document 7.2.6**) describes the factual process that has been undertaken to reach the final design presented in the application for development consent.

7.2.22 Alternatives are also a requirement of the HRA Regulations, however, only if adverse effects on the integrity of European sites are identified at the Appropriate Assessment stage (Stage 2). As stated, the HRA Report (**application document 5.3**) confirms that Stage 2 Appropriate Assessment found that no adverse effects on the integrity of the SPA and Ramsar would occur once good practice measures and embedded measures are employed. Hence, the project is not required to consider alternatives under the Habitats Directive, as per paragraph 4.4.2 of EN-1.

7.2.23 It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 and EN-5 in respect to site selection and alternatives.

Criteria For 'Good Design' For Energy Infrastructure

7.2.24 Section 4.5 of EN-1 provides NPS good design criteria policy relating to NSIP. This section also considers the technology-specific topic areas of 'factors influencing site selection by applicants' and 'consideration of good design' as set out in EN-5.

7.2.25 Paragraph 4.5.1 of EN-1 notes that applying good design criteria to energy infrastructure should produce '*sustainable infrastructure sensitive to place, efficient in use of natural resources and energy used in their construction and operations, matched by an appearance that demonstrates good aesthetic as far as possible.'*

7.2.26 Paragraph 4.5.2 of EN-1 notes that through good design, many of the other policy objectives in the NPS can be met through embedded mitigation.

7.2.27 Paragraph 4.5.3 of EN-1 accepts that the nature of much energy infrastructure development will often be limited to the extent to which it is able to contribute to the enhancement of the quality of the area. Paragraph 4.5.3 of EN-1 also considers that '*whilst the applicant may not have any or very limited choice in the physical appearance*

of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation.'

7.2.28 The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives (**application document 6.2.3**), which documents the key environmental factors in consideration of the main alternatives, and Chapter 5 of this Planning Statement, which explains how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process. The latter demonstrating how such policy and legislative objectives have been embedded into the design of the project.

7.2.29 As stated, regard has been had to the Horlock and Holford rules in respect to the siting of new transmission infrastructure and substations and as described in detail in Chapter 5 of this Planning Statement. Both sets of rules have been deployed by National Grid and have formed an important part of developing the preferred route and design of the project. For example; the route seeks to avoid siting infrastructure in areas with significant amenity value; the most direct route is preferred to avoid the need for additional angle pylons; siting infrastructure in areas benefiting from existing advantageous vegetation screening is preferred; and densely populated urban/residential areas are avoided, where possible. Essentially the project's route alignment has been selected because it performed more strongly overall than any other options, having regard to these factors (amongst others) and national planning policy.

7.2.30 Finally, National Grid has also considered alternative design suggestions made in written representations during consultation feedback from external stakeholders. It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 and EN-5 in respect to 'good design'.

Climate Change

7.2.31 Section 4.8 of EN-1 sets out climate change policy relating to NSIP. National Policy Statement EN-1 sets out how applicants and the Examining Authority should consider the effects of climate change when developing and consenting energy infrastructure.

7.2.32 Paragraph 4.8.5 of EN-1 notes that *'new energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure.'*

Contribution to Climate Change

7.2.33 The project, if granted development consent, would make an important contribution to reducing greenhouse gases and helping the UK reaching the Government's target of net zero by 2050, by supporting the distribution of greener energy.

7.2.34 ES Appendix 4.2: Assessment of Greenhouse Gas and Carbon (**application document 6.3.4.2**) presents a summary of the carbon dioxide equivalent emissions that would be released during the construction and operation of the project. The assessment concludes

that the total carbon dioxide equivalent numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets.

7.2.35 In the context of climate change, draft replacement EN-5 indicates that applicants should avoid the use of SF6 in new developments. The project, as currently designed, would require SF6 in the switchgear at the GSP substation and Bramford Substation. National Grid is working with a range of suppliers and manufacturers to develop alternatives to SF6. However, there a no suitable or viable alternatives available at the appropriate voltage at present. Further details on why SF6 is necessary on the project, alternatives considered and monitoring proposed can be found in ES Appendix 4.1: Good Design (**application document 6.3.4.1**).

Climate Change Adaptation

7.2.36 This Section considers the technology specific topic area of 'climate change adaptation', as set out in EN-5. Paragraph 2.4.1 of EN-5 requires applicants to *'set out to what extent the proposed development is expected to be vulnerable and, as appropriate, how it would be resilient to flooding…effects of wind and storms on overhead lines, higher average temperatures leading to increased transmission losses and earth movement of subsidence caused by flooding or drought (for underground cables).'*

7.2.37 The impact of climate change, including the risk of flooding, have been considered during the optioneering and design evolution process. Environmental Statement Chapter 3: Main Alternatives Considered (**application document 6.2.3**) sets out how the project has been designed to avoid areas of significant flood risk. The GSP substation and CSE compounds would be located in Flood Zone 1, see the FRA (**application document 5.5**) for further details. The remaining structures, including above ground structures such as pylons and below ground structures such as the underground cables are designed to National Grid technical standards to be resilient to flooding, wind, storms, extreme temperature and earth movement. The permanent drainage design at the GSP substation and the CSE compounds would be designed to provide the storage necessary to achieve discharges at greenfield run-off rates, not significantly altering the groundwater recharge patterns by transferring a significant recharge quantity from one catchment to another (see commitment 'W12' in the CEMP Appendix A: CoCP (**application document 7.5.1**)).

7.2.38 In addition, extreme climatic events, such as flooding; extreme temperatures (high and low temperatures); ground subsidence; high winds/storm and tree fall are considered within ES Appendix 5.3: Major Accidents and Disasters (**application document 6.3.5.3**). The assessment has shown that the existing design measures, legal requirements, codes and standards adequately control the potential risk for major accidents and/or disasters.

7.2.39 The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 and EN-5 in respect to climate change adaptation.

Pollution Control and Other Environmental Regulatory Regimes

7.2.40 Section 4.10 of EN-1 sets out pollution control and other environmental regulatory regime policy relating to the project. Paragraph 4.10.7 of EN-1 details that the Examining Authority should be satisfied that a DCO can be granted taking full account of environmental impacts. Relating to any potentially polluting development, the Examining Authority should be satisfied that:

- The relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and

- The effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the project is added would make that development unacceptable, particularly relating to statutory environmental quality limits.

7.2.41 The CEMP (**application document 7.5**) and CEMP Appendix A: CoCP (**application document 7.5.1**) sets out the actions and measures that would be implemented to control the risk of a pollution incident. The CEMP includes measures that would be implemented to reduce the risk of a pollution event occurring, as well as pro-active actions so that any pollution event that does occur is controlled and managed effectively to avoid and reduce any adverse impacts on the environment.

7.2.42 It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to pollution control and other environmental regulatory regimes.

Safety

7.2.43 Section 4.11 of EN-1 sets out safety policy relating to NSIP. This Section also considers the technology specific topic area of Electric and Magnetic Fields (EMF) as required by Part two of EN-5.

Electric and Magnetic Fields

7.2.44 Paragraph 2.10.15 of EN-5 requires applicants to demonstrate compliance with current guidance on EMF.

7.2.45 Paragraph 2.10.10 of EN-5 states that '*there is no direct statutory provision in the planning system relating to protection from EMFs [Electric Magnetic Fields] and the construction of new overhead power lines near residential or other occupied buildings. However, the Electricity Safety, Quality and Continuity Regulations 2002 set out the minimum height, position, insulation and protection specifications at which conductors can be strung between towers to ensure safe clearance of objects. The effect of these requirements should be that power lines at or below 132kV will comply with the ICNIRP 1998 basic restrictions, although the IPC should be satisfied that this is the case on the basis of the evidence produced as specified in the Code of Practice.'*

7.2.46 The overhead lines and all other assets associated with the project are demonstrated in the Electric and Magnetic Field (EMF) Compliance Report (**application document 5.2**) to comply with the Government adopted International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998 guidelines.

7.2.47 The project components would be fully compliant with the UK Government policies on EMF. Specifically, all the EMF produced would be below the relevant exposure limits, and the proposed overhead lines would comply with the policy on optimum phasing. If these requirements are met EN-5 states that *'EMF effects are minimal'* and therefore, there would be no significant EMF effects resulting from the project.

Health & Safety

7.2.48 Paragraph 4.11.1 of EN-1 makes clear that the Health and Safety Executive (HSE) is responsible for matters relating to safety and the enforcement of a range of occupational health and safety legislation, some of which is relevant to the construction, operation and decommissioning of energy infrastructure.

7.2.49 The HSE has been consulted throughout the consultation activities on the project, in accordance with paragraph 4.11 of EN-1. In their response to statutory consultation, the HSE considered matters within its remit and identified that the consultation Order Limits were in the 'consultation area' for two major accident hazard pipelines. However, as the project does not seek to increase the populations in proximity to the pipelines, HSE did not raise any concerns with the project in this respect. The HSE also confirmed that it does not have any concerns in relation to Hazardous Substance Consent, explosives sites or electrical safety (from a planning perspective).

7.2.50 National Grid takes its responsibilities relating to health and safety for the construction and operation of its infrastructure very seriously. Overhead lines are required to be designed, constructed and operated to meet the requirements set out in the Electricity Safety, Quality and Continuity Regulations 2002. Overhead lines must also meet the Electricity Supply Industry's own standards which govern the minimum clearances to be provided between the conductors, roads, trees and other features.

7.2.51 Each transmission pylon has property signs, individual number plates and a safety warning. In order to discourage access by unauthorised persons, steel lattice transmission pylons are also provided with anti-climbing devices. Once a line is constructed, National Grid writes annually to all whose land is crossed by overhead lines, to inform them of line maintenance inspections, and referring to the latest HSE guidance which includes advice on avoiding danger from overhead lines.

7.2.52 Legislation in the UK does not prescribe any minimum distance between overhead lines and homes. However, National Grid has to ensure that all overhead lines are designed and built to comply with all relevant health and safety legislation, including legislation and guidance on EMF as detailed in the EMF Compliance Report (**application document 5.2**).

7.2.53 In addition, the project complies with design safety standards including National Electricity Transmission System (NETS) Security and Quality of Supply Standard (SQSS), which sets out the criteria and methodology for planning and operating the network. This informs a suite of National Grid policy and process guidance which contains details on design standards which must be met when designing, constructing and operating assets such as the components that make up the project. National Grid's *Safety Rules and Guidance* (National Grid UK Electricity Transmission Plc, 2018) also sets out generic risk mitigation measures that apply to all work undertaken by National Grid.

7.2.54 It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 and EN-5 in respect to safety.

Health

7.2.55 Section 4.13 of EN-1 sets out NPS health policy relating to NSIP.

7.2.56 Paragraph 4.13.2 of EN-1 details that where the project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts and identifying measures to avoid, reduce or compensate these impacts as appropriate. Paragraph 5.11.9 of EN-1 details that consent should not be granted unless it can be demonstrated that the project would avoid or can mitigate significant adverse impacts on health and quality of life from noise.

7.2.57 National Grid has carried out an assessment of those aspects of the project which may have the potential for adverse impacts on health. The project does not result in any significant adverse effects to health during construction. Once operational it is not

considered that the project would have any adverse impacts upon health. In particular, health effects and their assessment are included within the following sections of the ES:

- ES Chapter 9: Water Environment (**application document 6.2.9**) assesses the potential effects of the project on the water environment and in particular drinking water quality and its impact to human health;
- ES Chapter 12: Traffic and Transport (**application document 6.2.12**) assesses the potential effects of the project on local communities, pedestrians, motorists and users of public rights of way, and in particular, impacts to health in respect to temporary PRoW diversions, road restrictions, diversions, closures of the public highway and an increase in traffic;
- ES Chapter 13: Air Quality (**application document 6.2.13**) assesses the potential effects of the project on local air quality, including dust from earthworks which could impact human health; and
- ES Chapter 14: Noise and Vibration (**application document 6.2.14**) assesses the potential effects on background noise levels and as a result of any vibrations during construction which could impact human health.

7.2.58 The Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) has concluded that there are no likely significant effects to human (health) receptors from the project arising from the operation or construction of the project. Nevertheless, having regard to the cumulative impacts to health as identified in paragraph 4.13.2 of EN-1, local residents may be affected by temporary PRoW diversions, road restrictions, diversions and closures of the public highway, an increase in traffic, and dust, noise and light spill close to construction working areas (intra-project effects). The combined effects of these could impact on health and amenity of local residents and communities.

7.2.59 However, no particular vulnerabilities have been identified within the health of the local population, see baseline review in ES Appendix 15.1: Cumulative Effects Baseline (**application document 6.3.15.1**). In addition, a number of good practice measures are outlined within the CEMP (**application document 7.5**) and CEMP Appendix A: CoCP (**application document 7.5.1**). Therefore, it is not anticipated that there would be adverse effects on the health of local residents.

7.2.60 The assessment undertaken by National Grid is therefore in accordance with the requirements of EN-1 and EN-5 in respect to health.

Common Law Nuisance and Statutory Nuisance

7.2.61 Paragraph 4.14 of EN-1 sets out NPS common law nuisance and statutory nuisance policy relating to NSIP. Paragraph 4.14.2 of EN-1 advises that an application for development consent should consider how possible sources of statutory nuisance under Section 79(1) of the Environmental Protection Act (EPA) 1990 may be mitigated or limited.

7.2.62 The Statement of Statutory Nuisance (**application document 5.4**) identifies the matters set out in Section 79(1) of the EPA 1990 in respect of statutory nuisance and considers whether the project has the potential to cause nuisance.

7.2.63 The CEMP **(application document 7.5**) includes good practice measures to avoid or reduce the effects of dust, lighting, noise and vibration. These measures would reduce impacts that could otherwise result in nuisance during construction. The development authorised by the DCO must be undertaken in accordance with the CEMP, pursuant to

the requirements of the DCO (**application document 3.1**). National Grid and its contractor will carry out all work in accordance with the CEMP during the construction of the project unless otherwise agreed with the LPA.

7.2.64 With the good practice measures in place, no breach of Section 79(1) of the EPA 1990 is expected to occur as a result of the construction and operation of the project. The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 in respect to common law nuisance and statutory nuisance.

Security Considerations

7.2.65 Paragraph 4.15 of EN-1 sets out NPS security policy relating to NSIP. National Policy Statement EN-1 notes that the DECC (now Department for Energy Security and Net Zero (DESNZ)) has the overall responsibility for the security of the energy sector. Paragraph 4.15.2 states that the Government's policy is to: *'ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.'*

7.2.66 Overall responsibility for security of the energy sector lies with the Department for Energy Security and Net Zero who work closely with Government security agencies including the Centre for the Protection of National Infrastructure (CPNI) to reduce the vulnerability of the most 'critical' infrastructure assets in the sector to terrorism and other national security threats. National Grid is a provider of critical infrastructure across the UK. In this role, National Grid maintains regular dialogue with a range of organisations with responsibility for both local and national crime prevention and security. As such, all sites and infrastructure will be designed and operated to the relevant security standards.

7.2.67 In addition, and as detailed in ES Appendix 5.3: Major Accidents and Disasters Scoping (**application document 6.3.5.3**), the project is designed to avoid the risk of damage through sabotage and arson (including terrorism), and the risk of electrocution is also a further deterrent. The materials are resistant to damage and are not at risk of catching fire. During construction, the working area would have security fencing around the site and only authorised personnel would be admitted to the site. Outside of working hours, the site would have a security guard to check for trespassers that could result in sabotage or arson. During operation, the GSP substation, the CSE compounds and pylons would be surrounded by security fencing to prevent trespass. Wilful sabotage of overhead lines is also very rare due to the perceived risk of electrocution that could result from this.

7.2.68 The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 in respect to security.

7.3 Generic Impacts

7.3.1 This section sets out how the application addresses each of the relevant generic impacts as set out in EN-1 and where relevant, the technology-specific assessment principles as set out in EN-5 that relate to the same topics.

Air Quality and Emissions

7.3.2 Section 5.2 of EN-1 sets out NPS air quality and emissions policy relating to NSIP. Paragraph 5.26 states that where the project is *'likely to have adverse effect on air quality*

the applicant should undertake an assessment of the impacts of the proposed project as part of the ES.' ES Chapter 13: Air Quality (**application document 6.2.13**) details the likely significant effects of the project on air quality. Environmental Statement Appendix 5.1: Scope of the Assessment (**application document 6.3.5.1**) outlines the scope of the assessment for air quality. This has been informed by the Scoping Opinion (**application document 6.6**).

7.3.3 Relating to air quality, EN-1 advises that the ES should describe:

- any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project;
- the predicted absolute emission levels of the project, after mitigation methods have been applied;
- existing air quality levels and the relative change in air quality from existing levels; and
- any potential eutrophication impacts.

7.3.4 Paragraph 5.2.11 of EN-1 advises that the Examining Authority should consider whether mitigation measures are needed for operational and construction emissions over and above any which may form part of the project.

7.3.5 The only emissions expected during operation are from maintenance vehicles which are likely to be negligible and sporadic with no quantifiable effect on local air quality. Therefore, air quality effects during operation were scoped out in the Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**).

7.3.6 The air quality assessment has concluded that there are no likely significant residual effects in relation to air quality during construction and operation. As such, the requirements of EN-1 in respect to air quality are met.

Biodiversity and Geological Conservation

7.3.7 Section 5.3 of EN-1 sets out NPS biodiversity and geological conservation policy relating to NSIP. Biodiversity and geological conservation is one of the generic effects identified in Part two of EN-5 with additional guidance provided which should inform the applicant's assessment.

7.3.8 Paragraph 5.3.3 of EN-1 states, '*Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity…'*

Biodiversity Conservation

7.3.9 In accordance with Section 5.3 of EN-1, internationally, nationally and locally designated sites of ecological conservation importance which are in proximity or crossed by the project are identified in ES Appendix 7.1: Habitats Baseline Report (**application document 6.3.7.1**). The impacts of the project on the identified sites are then assessed in ES Chapter 7: Biodiversity (**application document 6.2.7**).

7.3.10 The project could affect biodiversity during construction through direct effects, such as the loss or fragmentation of habitats within the construction footprint, or indirectly through

changes to groundwater or pollution of watercourses. The project could also generate effects in species both in terms of direct injury or mortality and indirectly through disturbance. Operation effects are those associated with inspections and periodic maintenance activities and are, therefore, limited in terms of their biodiversity impacts.

Sites of Special Scientific Interest

7.3.11 Hintlesham Woods SSSI is within the Order Limits for the project and benefits from policy protection against '*adverse effects'… either individually or in combination with other developments'*, as per paragraph 5.3.11 of EN-1. Where an adverse effect after mitigation is likely, an exception should only be made where the benefits (including need) of the development at the site, *'clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs.'*

7.3.12 Commitments specifically put in place to reduce potential effects at Hintlesham Woods are described in Table 3.1 of Annex B of ES Appendix 7.1: Hintlesham Woods SSSI Assessment (**application document 6.3.7.1.2**). These measures are contained within the Register of Environmental Actions and Commitments (REAC) which is Appendix B of the Construction Environmental Management Plan (CEMP) (**application document 7.5.2**).

7.3.13 ES Chapter 7: Biodiversity (**application document 6.2.7**) concludes that there is no significant effect on any SSSI as a result of the project. As such, it is not considered that an adverse effect, when considering the embedded measures, would occur to Hintlesham Woods SSSI.

Opportunities to Conserve and Enhance

7.3.14 Paragraph 5.3.15 of EN-1 states that '*development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, the IPC should maximise such opportunities in and around developments, using requirements or planning obligations where appropriate.'* In this context, National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**).

7.3.15 The CEMP (**application document 7.5**) and CEMP Appendix A: CoCP (**application document 7.5.1**) provides details of how good practice measures will be undertaken during construction and the Landscape and Ecological Management Plan (LEMP) (**application document 7.8**) details the habitat restoration and new habitat creation proposals. The mitigation measures are also set out in ES Chapter 16: Environmental Management and Mitigation (**application document 6.2.16**) which outlines the securing mechanism for each measure.

7.3.16 ES Chapter 3: Alternatives (**application document 6.2.3**) explains how opportunities to conserve biodiversity interests have been embedded into the design and optioneering process.

Protected Species

7.3.17 The project has the potential to affect legally protected species; badger, bats and hazel dormouse. National Grid has included draft species licences within the application for development consent and will continue to work with Natural England to review the scope of these should development consent be granted.

National and International Protected Sites

7.3.18 Environmental Statement Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment of impacts of the project on national and international protected sites. Additionally, as stated, the HRA Report (**application document 5.3**) confirms that Stage 2 Appropriate Assessment found no adverse effect on the integrity of the SPA and Ramsar would occur once good practice CoCP measures and embedded measures are employed, as supported by the Water Framework Directive (WFD) Assessment (**application document 5.6**).

Local and Region Protected Sites

7.3.19 Paragraph 5.3.13 of EN-1 gives value to biodiversity and geological sites of local or regional importance. Potential impacts on sites of regional and local biodiversity interest have been assessed in ES Chapter 7: Biodiversity (**application document 6.2.7**). Through design and embedded measures, impacts to these receptors have been reduced. Where impacts are unavoidable, habitat reinstatement would take place post-construction. No likely significant residual effects in relation to biodiversity receptors during construction or operation are anticipated as a result of the project.

Ancient Woodland Veteran Trees

7.3.20 Paragraph 5.3.14 of EN-1 states that *'Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated… The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat.'*

7.3.21 There are two Ancient Woodland Inventory (AWI) sites within the Order Limits at Hintlesham Little Wood and Waldegrave Wood (Section AB: Bramford Substation/Hintlesham). Environmental Statement Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment of impacts of the project on ancient woodland and veteran trees.

7.3.22 The existing 400kV overhead line crosses Hintlesham Little Wood AWI. The project would involve a transposition of the existing overhead line onto new pylons around the north and west of the woods. The existing pylons would then be used to hold the conductors of the new 400kV overhead line. This reconductoring would take place within the existing operational maintained swathe for electrical safety clearances through the woods. The existing vegetation along this approximately 190m long swathe would comprise coppicing vegetation to ground level (no removal of roots) for a width of 20m. The trees would also be cut to a graduated height for an additional 12.5m on either side of the 20m coppiced swathe to lift the conductors onto the arms of the pylons. This is further described in ES Chapter 4: Project Description (**application document 6.2.4**) and shown on Illustration 4.2 in the same Chapter. Once transposition of the overhead line is complete, the coppiced vegetation would be allowed to regrow and to the present canopy height.

7.3.23 Commitments specifically put in place to reduce potential effects at Hintlesham Woods are described in Table 3.1 of Annex B of ES Appendix 7.1: Hintlesham Woods SSSI Assessment (**application document 6.3.7.1.2**). These measures are contained within the Register of Environmental Actions and Commitments (REAC) which is Appendix B of the CEMP (**application document 7.5.2**).

7.3.24 Overall, the commitments to reduce impacts upon the high valued ancient woodland habitat would result in a neutral impact to this habitat once the coppiced vegetation had

re-established. As such, as a result of the project, it is not considered that the loss or deterioration of the AWI would occur.

7.3.25 Paragraph 5.3.14 of EN-1 also states that *'aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided.'* The project has undertaken an Arboricultural Impact Assessment (**application document 5.10**) in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction. This has identified trees that offer significant amenity value, such as veteran trees, which the project has sought to avoid through commitments where practicable. The Arboricultural Impact Assessment has also informed the reinstatement proposals and protective measures which are set out within the LEMP (**application document 7.8**).

Large Birds

7.3.26 National Policy Statement EN-1 is supported by EN-5 in which paragraphs 2.7.1 and 2.7.2 relate to the need to consider the potential for large birds, such as swans and geese, colliding with overhead lines or being electrocuted by overhead lines and associated power infrastructure. ES Chapter 7: Biodiversity (**application document 6.2.7**) concludes that there will be negligible impacts on birds at the operational stage of the project. There is unlikely to be any additional risk of collision as the project actually results in the spatial extent of features in the landscape being reduced, largely as a result of the removal of the existing 132kV overhead line and the undergrounding of some sections.

7.3.27 It is considered, therefore, that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 and EN-5 in respect to biodiversity conservation. The assessment presented in ES Chapter 7: Biodiversity (**application document 6.2.7**) has concluded that there are no likely significant residual effects in relation to biodiversity during construction or operation. It is also noted that paragraph 5.3.6 of EN-1 states that '*the benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests.'*

Geological Conservation

7.3.28 In accordance with Section 5.3 of EN-1, internationally, nationally and locally designated sites of geological conservation importance which are in proximity or crossed by the project are identified in ES Appendix 10.1: Geology Baseline and Preliminary Contamination Risk Assessment (**application document 6.3.10.1**). ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) concludes there are no likely significant effects on geological conservation interests.

7.3.29 Parts of the Order Limits are within either a Mineral Safeguarding Area (MSA) or a Mineral Conservation Area (MCA) for sand and gravel. Paragraph 5.10.9 of EN-1 states that *'applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place'*.

7.3.30 In accordance with paragraph 5.10.9 a Minerals Resource Assessment (MRA) has been undertaken and included at ES Appendix 10.3: MRA (**application document 6.3.10.3**). The MRA determines that the actual areas where built operational development would effectively sterilise any valuable mineral are insignificant (<0.2% of the total MSA/MCA). Therefore, the quantity of mineral sterilised by the project is considered to be insignificant

in the context of the extensive occurrence of sand and gravel within both counties and the national need and significance of the project.

7.3.31 The project includes the removal and modification/realignment of existing overhead lines which reduces the total area that would potentially sterilise any minerals of economic value and importance.

7.3.32 Consideration has also been given to prior extraction of minerals as part of the project construction programme. This has shown that the increase in cost associated with the extraction would increase the overall cost of the entire project and would conflict with National Grid's duty to be economic and efficient. In addition, the additional time that would need to be added to the construction schedule would mean that National Grid would miss the project's intended delivery date of 2028, which would also risk achieving the Government's target of delivering 50GW of offshore wind connected by 2030.

7.3.33 In this context, the Order Limits include parts of Layham Quarry. Layham Quarry benefits from an allocation in the Suffolk Minerals and Waste Local Plan for an extension to the existing sand and gravel operations at Rands Hall Pit in Layham.

7.3.34 The existing 400kV overhead line and the existing 132kV overhead line parallel each other, set apart by about 160m, through the northern extent of the Layham Quarry site. In this location, it is proposed to retain the existing 400kV overhead line and replace the 132kV overhead line with a new 400kV overhead line. The new overhead line would not result in sterilisation of minerals, as minerals could be extracted from beneath the overhead line, as evidenced at Layham Quarry, which is crossed by both the existing 400kV overhead line and the existing 132kV overhead line. As such the project would not result in sterilisation of minerals at Layham Quarry.

7.3.35 Discussions have taken place with Suffolk County Council and the Quarry owners (Brett Aggregates) regarding Layham Quarry, to obtain an understanding of the history of mineral extraction at the site along with any future plans. Discussions with the Quarry owners have confirmed that at present the site is inactive (since 2013) and that planning permission was granted in 2019 to extend the lifetime of the existing permission.

7.3.36 It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to geological conservation.

Civil and Military Aviation and Defence Interests

7.3.37 Section 5.4 of EN-1 sets out NPS civil and military aviation and defence interests policy relating to the project. EN-1 identifies the importance of UK airspace for both civilian and military aviation interests. Paragraph 5.4.2 advises that it is essential that the safety of UK aerodromes, aircraft and airspace are not adversely affected by new energy infrastructure and identifies the potential economic and social benefits, particularly at the regional and local level of aerodromes.

7.3.38 NATS (En Route) Public Limited Company ('NERL'), who are the UK's leading provider of air traffic control services have been consulted on the proposals during consultation activities on the project; NERL confirm that from a technical safeguarding aspect, the project does not conflict with their safeguarding criteria, accordingly, NERL has no safeguarding objection to the proposal. It has, therefore, been identified that the project will not adversely affect aviation sites, including aerodromes.

7.3.39 In addition, the project does not impact on any military/defence sites or assets. This has been confirmed by the land referencing process.

Dust, Odour, Artificial Light, Smoke and Insect Infestation

7.3.40 Section 5.6 of EN-1 sets out policy in relation to dust, odour, artificial light, smoke and insect infestation relating to the project. National Policy Statement EN-1 identifies the potential for the release of a range of emissions such as odour, dust, steam, smoke, artificial light and infestation of insects during the construction, operation and decommissioning of energy infrastructure. Paragraph 5.6.4 considers that, where relevant, the applicant should assess the potential for these emissions to have a detrimental impact on amenity as part of the ES.

7.3.41 Statutory nuisances are matters listed in the EPA 1990 that are 'prejudicial to health' or a 'nuisance'. The Statement of Statutory Nuisance (**application document 5.4**) identifies the matters set out in Section 79(1) of the EPA 1990 in respect of statutory nuisance and considers whether the project has the potential to cause nuisance. The Statement of Statutory Nuisance concludes that with the good practice measures in place, that there are no likely nuisances, including dust, odour, artificial light, smoke or insect infestation, anticipated on the project.

7.3.42 In accordance with paragraph 5.6.6 of EN-1, in relation to the scope of assessment for insect infestation and emissions of odour, dust, steam, smoke and artificial light; National Grid published the Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) in 2021 which set out the proposed scope of the assessment including on air quality (dust) and landscape (artificial light). Further details on the responses received on the Scoping Report can be found in ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**).

Flood Risk

7.3.43 Section 5.7 of EN-1 sets out NPS flood risk policy. Paragraph 5.7.4 of EN-1 states that *'applications for energy projects of 1 hectare or greater in Flood Zone 1 in England…and all proposals for energy projects located in Flood Zones 2 and 3 in England…should be accompanied by a flood risk assessment (FRA).'*

7.3.44 An FRA has been submitted as part of the application for development consent (**application document 5.5**) focussing on flood risk from fluvial, surface water and groundwater sources.

7.3.45 The FRA has been prepared in accordance with the minimum requirements required by Paragraph 5.7.4 of EN-1 and has screened all potential sources of flooding in and around the Order Limits and considered flood risks associated with the construction, operation and decommissioning of the project.

7.3.46 In accordance with Paragraph 5.7.7 of EN-1, National Grid has held several meetings with relevant organisations, including the Environment Agency and Essex County Council and Suffolk County Council in their roles as Lead Local Flood Authorities (LLFA). Discussions have informed the development of the FRA. National Grid also circulated a draft version of the FRA to the Environment Agency and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the FRA submitted with the application for development consent. Details on the consultation undertaken can be found in section 1.3 of the FRA (**application document 5.5**).

7.3.47 Flood risk and land drainage effects during operation have been avoided through design, locating vulnerable components, such as the GSP substation and the CSE compounds, in Flood Zone 1. Section 4 of the FRA describes the embedded and good practice

measures included to make the project resilient to climate change. Surface water runoff from the GSP substation would be drained using appropriate SuDS techniques to meet the discharge requirements of the Essex LLFA.

7.3.48 The FRA concludes that the project, with the embedded and good practice measures described in place, would pass the sequential and exception tests, would not be subject to an unacceptable level of flood risk, nor would it increase flood risk elsewhere. It is, therefore, considered that the project design and assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to flood risk.

Historic Environment

7.3.49 Section 5.8 of EN-1 sets out NPS policy relating to the Historic Environment; and noting that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment. Adverse impacts to the historic environment are addressed in ES Chapter 8: Historic Environment (**application document 6.2.8**) and ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**).

7.3.50 Paragraph 5.8.2 of EN-1 defines the historic environment as, *'all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.'*

7.3.51 EN-1 paragraph 5.8.8 requires the applicant to '*provide a description of the significance of the heritage assets affected by the proposed development and the contribution of the asset's setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset.'*

7.3.52 The heritage assets within the study area are described in ES Chapter 8: Historic Environment (**application document 6.2.8**), which in turn is supported by a gazetteer of heritage assets from archaeological remains, historic landscape features and historic buildings, in Appendix 8.1 and the supporting Annex A Historic Environment Baseline (**application document 6.3.8.1**). Asset significance has been arrived at per asset through consideration of statutory and non-statutory designation, context, survival and importance within a local, regional and national context. With regard to all heritage assets, setting is also a factor that may contribute to an asset's significance.

7.3.53 Publicly available historic environment data has been acquired from open sources (for designation data) and the county historic environment records (HER) for Essex and Suffolk (primarily for non-designated heritage assets).

7.3.54 Paragraph 5.8.14 of EN-1 states, '*There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be…'*

Archaeological Remains

7.3.55 Effects on known archaeological remains are assessed in ES Chapter 8: Historic Environment (**application document 6.2.8**), including statutorily designated remains such as scheduled monuments and non-designated assets identified from the HER.

7.3.56 The Archaeological Framework Strategy (AFS) (**application document 7.9**) sets out the proposed programme of archaeological investigation, that would help identify any

currently unknown/unidentified archaeology within the Order Limits. It also outlines the methodology for recording, reporting and archiving. The Outline Written Scheme of Investigation (OWSI) (**application document 7.10**) details the proposed mitigation that would be undertaken prior to construction.

7.3.57 The AFS (**application document 7.9**) and OWSI (**application document 7.10**) stipulate the need for preservation by record i.e., archaeological hand excavation and recording, of archaeological remains not deemed significant enough to be preserved in place. There will be ongoing archaeological investigation which is likely to further identify unknown archaeological remains. Where this is the case, the mitigation measures would be added to the OWSI (**application document 7.10**).

Built Heritage

7.3.58 Built heritage assets are assessed in ES Chapter 8: Historic Environment (**application document 6.2.8**) in the form of listed buildings, conservation areas and non-designated historic structures sometimes present within the county HER datasets.

7.3.59 ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how designated heritage sites, such as scheduled monuments and listed buildings, were considered during the routing studies.

7.3.60 Direct physical impacts to listed buildings was scoped out as no listed buildings would be directly damaged or removed as a result of the project. The changes to the setting of listed buildings has been identified but, in all cases, these are not significant and would result in less than substantial harm to the assets in question.

Historic Landscapes

7.3.61 Effects on the historic landscape including elements such as historic hedgerows, which are regarded as landscape sub-elements, and Protected Lanes in Essex, are assessed in ES Chapter 8: Historic Environment (**application document 6.2.8**).

Protected Lanes in Braintree (Essex)

7.3.62 There are 25 Protected Lanes within the 3km study area, with nine lying within or immediately adjacent to the Order Limits. Protected Lanes benefit from a specific planning policy in the Braintree Local Plan (LPP 69: Protected Lanes), which considers that the Council will seek to protect and influence others to protect the features of a Protected Lane including their verges. Material increases in traffic using a Protected Lane due to development proposals will not be permitted.

7.3.63 Environmental Statement Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on Protected Lanes. The project has sought to avoid works at Protected Lanes, where practicable. However, during construction, two Protected Lanes would be crossed by the underground cable using open cut/ducting methods. Other roads will have temporary bellmouths installed or potentially existing accesses widened to allow access for construction vehicles. Other Protected Lanes may experience temporary increases in traffic flow.

7.3.64 To alleviate temporary increases in traffic flow on some Protected Lanes and the local road network more generally, the project includes a 3.5km temporary haul road from Sudbury Road (A131) to the Stour Valley west CSE compound. The project seeks to implement the haul road to take some construction traffic off the local road network,

following concerns about the suitability of the local road network for large construction vehicles.

7.3.65 Impacts to Protected Lanes during the operational stage have been discounted from consideration, given that National Grid has committed to restoring any landscape feature requiring removal during construction. For instance, historic hedgerows will be restored, as will historic earthworks contributing to the Protected Lane. There will also be no material increase in traffic using the Protected Lanes during the operational stage.

7.3.66 Historic lanes in Suffolk share many of the characteristics of the Protected Lanes in Essex but are not presently protected by local planning policy. As historic landscape features, the effects of construction on these have also been considered in ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**).

7.3.67 Overall, any impacts on Protected Lanes would be limited to the construction of the project and would be temporary in nature. Whilst there would be some impacts during construction, such as the loss of historic earthworks and hedgerows and severance of some linear features, National Grid is committed to reinstating and restoring the historic character of these assets. The project would therefore protect the features of the Protected Lanes, in accordance with relevant NPS policy.

Historic Environment Summary

7.3.68 Potential construction impacts include excavation-related issues such as the removal of soil horizons, noise and vibration associated with plant activity and increased local traffic levels. Operational impacts generally comprise the additional visual intrusion on the skyline from the proposed 400kV overhead line.

7.3.69 No direct physical impacts to listed buildings have been identified on the project. The impacts of additional visual intrusion from the proposed 400kV overhead line have been considered in the context of the presence of the existing 132kV overhead line and its visual relationship with designated assets. The impacts of the removal of the 132kV overhead line and replacement (along a partly different alignment) by the more visually intrusive 400kV overhead line is considered and a range of adverse and beneficial impacts identified.

7.3.70 Impacts to designated landscape features such as Protected Lanes in Essex have been identified and environmental commitments have been included to restore the changes resulting from construction.

7.3.71 Overall, the assessment presented in ES Chapter 8: Historic Environment (**application document 6.2.8**) has concluded that with the proposed mitigation in place (as outlined in the AFS and the OWSI), there are no residual significant adverse effects to the historic environment.

7.3.72 In accordance with paragraph 5.8.14 of EN-1, no substantial harm, including in relation to setting, has been identified to any designated assets including Grade I and II* listed buildings. As such, it is considered that the project accords with EN1 and EN-5 in respect to the historic environment.

Landscape and Visual

7.3.73 Section 5.9 of EN-1 sets out NPS landscape and visual policy relating to NSIP. Paragraph 5.9.5 of EN-1 advises that the applicant should carry out a landscape and visual assessment and report it in the ES. The applicant's assessment should include the effects

during construction of the project and the operational effects of the project relating to landscape components and landscape character. Landscape and visual is also one of the generic effects identified in Part two of EN-5 with additional guidance provided which should inform the applicant's assessment.

7.3.74 Paragraph 5.9.8 of EN-1 considers that the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change are all factors that need to be considered in judging the impact of a project on landscape. The project has been carefully designed, taking into account the potential impact on the landscape in accordance with EN-1 paragraph 5.9.8.

7.3.75 Paragraph 5.9.22 of EN-1 states *'…adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project…'*

7.3.76 Proposed revised EN-1 and EN-5 reference the potential of landscape management plans.

7.3.77 Proposed revised EN-5 states at paragraph 2.9.20 that although it is the Government's position that overhead lines should be the strong starting presumption for electricity networks developments in general, this presumption is reversed when proposed developments will cross part of a nationally designated landscape (i.e. National Park, Broads, or AONB). In these areas, and where harm to the landscape cannot feasibly be avoided by mitigation or re-routing, the strong starting presumption will be that the developer should underground the relevant section of the line.

7.3.78 ES Chapter 6: Landscape and Visual (**application document 6.2.6**) details the likely significant effects of the project on landscape and visual receptors and has been prepared in accordance with paragraphs 5.9.5 to 5.9.8 of EN-1 and Section 2.8 of EN-5.

7.3.79 ES Chapter 6: Landscape and Visual (**application document 6.2.6**) details the likely significant effects of the project on landscape and visual receptors. Landscape receptors include landscape designations and the landscape character of the area. Visual receptors include people who could experience different views and level of amenity, through the removal and/or introduction of man-made and natural features.

7.3.80 The project is of a linear nature and the landscape and visual effects are presented in separate chapters to distinguish between these effects. ES Chapter 6: Landscape and Visual (**application document 6.2.6),** therefore, is supported by the following appendices and figures:

- Appendix 6.1: Landscape and Visual Assessment Methodology (**application document 6.3.6.1**);
- Appendix 6.2: Assessment of Effects on Designated Landscapes (**application document 6.3.6.2**);
- Appendix 6.3: Assessment of Effects on Landscape Character (**application document 6.3.6.3**);
- Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1 to 6.3.6.4.7**); and
- Appendix 6.5: Assessment of Visual Effects on Communities (**application document 6.3.6.5**).

7.3.81 Paragraph 2.8.5 of EN-5 emphasises that the Holford Rules should be followed by applicants when designing their proposals. Chapter 5 of this Planning Statement clearly demonstrates how the Holford Rules have influenced the design of the project.

Dedham Vale AONB

7.3.82 Before the landscape effects of the project are assessed, consideration should be given to the acceptability of the project in respect to AONB policy and the resultant decisions to underground some sections of the route alignment.

7.3.83 Paragraph 3.7.10 of EN-1 sets out the need for new electricity lines of 132kV and above, including overhead lines.

7.3.84 Paragraph 5.9.9 of EN-1 details that National Parks, the Broads and AONB have been confirmed as having the highest status of protection relating to landscape and scenic beauty. The project crosses the national designation of Dedham Vale AONB, as such, Paragraph 5.9.9 of EN-1 is engaged.

7.3.85 In respect to AONB, paragraph 5.9.10 confirms that development consent could be granted in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and exceptional on the basis of:

a) *'the need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy;*

b) *the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and*

c) *any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.'*

7.3.86 It is considered that exceptional circumstances apply, the project is demonstrably in the public interest as detailed in Chapter 3 of this Planning Statement and that the tests in the NPS (outlined above) are met, as set out below:

a) The national need for the project is described in Chapter 3 of this Planning Statement. The existing electricity transmission network in East Anglia doesn't have the capability needed to reliably and securely transport all the energy that will be connected in the future, while working to the required standards.

With new offshore wind generation, a new nuclear power station at Sizewell C and greater interconnection with countries across the North Sea being proposed, there will be a large increase in the amount of renewable and low carbon electricity generation connecting along the East coast.

This increased generation will play a key role in delivering the UK Government's net zero ambitions and delivering up to 50GW of offshore wind connected by 2030. To facilitate these ambitions, electricity network infrastructure is needed to ensure that energy can be transported from where it is generated to where it is used.

Whilst the transmission system in East Anglia has been sufficient until today, it will soon exceed its current capability. This includes its thermal boundary capability (the physical capacity of the circuits to carry power) and transient stability (the ability to accommodate faults without damaging generators or the network).

Increased transmission capability is therefore required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its

licence obligations, and to allow new sources of electricity generation to connect. This is vital to facilitate the ambitious targets set by the Government, for secure, clean and affordable energy for the long term.

Further detail of the need that the Bramford to Twinstead reinforcement is addressing is set out in the Need Case (April 2023) (**application document 7.2.1**).

b) The cost of, and scope for, developing outside the AONB or meeting the need in some other way has been considered as part of the evolution of the project. Four route corridors were identified in the options appraisal process, all of which would be technically feasible, and all would have connection points at Bramford Substation and the existing tee at Twinstead. The assessment work considered the merits of the four route corridors taking into account National Grid's statutory duties (including cost comparison), compliance with planning policy, consultation representations, environmental impacts (including visual, historic environment, biodiversity, socio-economic and flood risk and climate change resilience) and engineering deliverability.

Corridors 1 and 2 were identified as 'opportunity corridors' as they use the existing overhead line routes which already pass-through Dedham Vale AONB. Corridor 1 was considered to have the greatest effect on the AONB and was not supported by several of the statutory consultees. Corridor 2 would replace the existing 132kV overhead line with a new 400kV overhead line and would, therefore, give rise to a lower scale of effect on landscape and views than Corridor 1.

Corridors 3 and 4 were considered in response to seeking to avoid impacts on the AONB. However, both would introduce a new overhead line into an area regarded locally as high-quality landscape, where there is presently no existing electricity infrastructure, and both would involve a longer overhead line than Corridor 2. It was concluded that although the route corridors avoid the AONB, Corridors 3 and 4 were not unconstrained in terms of planning policy and environmental sensitivities and this resulted in several of the statutory consultees recommending that Corridor 3 and 4 be ruled out.

Overall, although Corridor 2 passes through parts of Dedham Vale AONB, it also presented an opportunity to remove the existing 132kV overhead line and it would result in the least scale of change to the existing environment.

Essentially, a route corridor passing through the AONB, and which would involve the replacement of one of the two overhead lines which traverse the area with a larger scale overhead line, would involve a lower scale of change than an overhead line passing through an area outside the AONB, where no overhead lines are present.

c) The main approach to moderating tall vertical infrastructure such as pylons, is through careful design and routing. This also includes undergrounding within sensitive landscapes.

7.3.87 Paragraph 2.8.8 of EN-5 refers to AONB when considering the undergrounding of electricity lines. It states, '*Where there are serious concerns about the potential adverse landscape and visual effects of a proposed overhead line, the IPC will have to balance these against other relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding)'.* Natural England and English Heritage both recommended that undergrounding be considered in the AONB. The Suffolk planning authorities also considered that Corridor 2 could lead to the least environmental impact particularly if undergrounding were employed. Other local bodies and the general public strongly

supported the selection of Corridor 2, many adding the caveat that undergrounding should be considered. Hence, Corridor 2 was taken forward alongside a case for undergrounding certain sections of the project in Section E: Dedham Vale and parts of Section G: Stour Valley to moderate the project's impact on the landscape.

7.3.88 It is also acknowledged that paragraph 2.8.9 of EN-5 considers when making the decision to implement underground cables instead of overhead lines, the benefits from the non-overhead line alternative must clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable. In this context, consideration should be given to the landscape in which the proposed line will be located, the additional cost of undergrounding and the resultant environmental and archaeological impacts.

7.3.89 Also of relevance is paragraph 5.9.12 which considers development that is outside an AONB but which might affect them. It states, *'The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them..'.* Paragraph 5.9.13 adds*, 'The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.'*

7.3.90 Environmental Statement Appendix 6.2: Annex A Dedham Vale AONB Approach and Identification of Setting Study (**application document 6.3.6.2.1**) considers the setting of the AONB in the context of the project. The impact on the setting of the AONB is considered in ES Chapter 6: Landscape and Visual (**application document 6.2.6**).

7.3.91 Also of relevance, Section 245 'Protected landscapes', of the Levelling-Up and Regeneration Act (2023) states:

'(A1) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a relevant authority other than a devolved Welsh authority must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.

(A2) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a devolved Welsh authority must have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.'

7.3.92 The clause expands the duty on certain public authorities, including Statutory Undertakers (including the Applicant), when carrying out functions in relation to these landscapes to seek to further the statutory purpose and confers a power to make provision as to how they should do this. The legislation has been expanded from 'having regard' to 'furthering the purpose' of protected landscapes such as AONB. The expanded duty will not come into force until 2 months from the date on which the Levelling-Up and Regeneration Act (2023) was enacted. Therefore, it may be that further provisions are made to prescribe the redefined statutory duties more closely.

7.3.93 In any event, the Applicant considers the project is compliant with the new 2023 Act obligation as set out above, as the project:

a) proposes to underground the proposed 400kV overhead line within the AONB and beyond its boundary; and

b) proposes the removal of the existing 132kV overhead line within the AONB, resulting in a net loss of electricity transmission overhead line infrastructure in this designated landscape.

7.3.94 Environmental Statement Appendix 6.2: Annex A Dedham Vale AONB Approach and Identification of Setting Study (**application document 6.3.6.2.1**) considers the setting of the AONB in the context of the project. The impact on the setting of the AONB is considered in ES Chapter 6: Landscape and Visual (**application document 6.2.6**)

7.3.95 The Glover Review of Designated Landscapes in 2019 (Glover, 2019) recommended AONBs should be renamed to National Landscapes. Then, in 2022, the government responded to the Glover Landscapes Review and agreed that the national significance of AONBs should be 'reflected in their name' (DEFRA[2] 2023). The rebranding was subsequently launched on 22 November 2023. In addition, through the Levelling Up and Regeneration Act (2023), the Government mandated the preparation of Management Plans for Protected Landscapes, to contribute to national environmental targets.

7.3.96 Protected Landscapes will also have a key role in the development and delivery of Local Nature Recovery Strategies (LNRSs). The Government also published guidance on LNRSs in 2023 (DEFRA[3] 2023) and brought forward amendments to the Levelling Up and Regeneration Act (2023) to provide more clarity for plan-makers on how they should take account of LNRSs.

The project falls within the administrative boundaries of Mid Suffolk District Council, Babergh District Council, Braintree District Council, Suffolk County Council and Essex County Council. Partners in Essex have formed The Essex Local Nature Partnership (LNP). The LNP are working closely with Essex County Council and partners to produce the LNRS for Essex. The LNP formed a working group who will work towards creating the LNRS. Meanwhile, Suffolk County Council has been designated as the responsible authority for developing Suffolk's LNRS. At present, there are no adopted LNRS in place.**Designated Landscapes**

7.3.97 The project is located near to and crosses a number of designated landscapes. These are:

- Dedham Vale AONB (national designation);
- Gipping Valley SLA (local designation);
- Brett Valley SLA (local designation);
- Stour Valley SLA (local designation); and
- Box Valley SLA (local designation).

7.3.98 National Grid has committed to using an underground technology within the Dedham Vale AONB (embedded measure). This along with the removal of the 132kV overhead line through the AONB, and once reinstated vegetation matures, means that no significant adverse effects have been identified for landscape designations during operation. There would be significant beneficial effects on Dedham Vale AONB from the removal of the 132kV overhead line within the Box Valley. These effects would be more pronounced in close proximity to the project, within 1km. No likely significant effects have been identified for any of the SLA during operation. No mitigation is proposed for landscape character areas as no likely significant effects have been identified during operation. Further details can be found in ES Chapter 6: Landscape and Visual (**application document 6.2.6**).

Views

7.3.99 In terms of construction, activities would take place in a predominantly farmed landscape where mechanical operations are frequently associated with agricultural activities. Some short to medium-term significant adverse landscape and visual effects have been

identified during construction. However, effects relating to construction activities would be short term and temporary, and effects relating to loss of vegetation would largely be of medium duration whilst reinstatement planting becomes established, reducing over time to non-significant effects at year 15.

7.3.100 There would be residual effects on the landscape and views resulting from the project. In the main these would not be significant although there are areas where effects remain significant. However, for a project of this nature, paragraph 5.9.18 recognises that all proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites and states that the Examining Authority must: *'…judge whether the visual effects on sensitive receptors such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.'* The planning balance in this respect is considered in Chapter 10 of this Planning Statement and overall, the benefits of the project significantly and demonstrably outweigh any harm to landscape and visual receptors identified.

Landscape Character

7.3.101 For landscape character, significant effects have been identified within a number of landscape character areas (LCA) prior to mitigation and the reestablishment of vegetation. The majority of these effects are from the large-scale construction works associated with the 400kV underground cable, effects of construction of the CSE compounds and construction of the GSP substation.

7.3.102 The residual effects are anticipated to reduce to not significant in the medium term once construction is complete and vegetation is reinstated. The only long term significant adverse effect for landscape character has been identified in LCA 2b Hintlesham. Within this LCA, the new 400kV overhead line does not follow the existing 132kV overhead line and, therefore, there would be an increase in overhead line infrastructure within the landscape.

7.3.103 There would be significant beneficial effects on a number of LCA following the removal of the 132kv overhead line within the Box and Stour Valleys and removal of a section of 400kV overhead line. These effects would be more pronounced in close proximity to the project, within 1km.

Visual Effects on Communities

7.3.104 Significant visual effects occur during operation where community and recreational receptors are moving within and around areas very close to the overhead line elements of the project. Changes to views as a result of the project are likely to diminish (and become not significant) with increased distance from the project, and where there is screening from intervening vegetation and/or landform.

7.3.105 For community areas, the only long term significant adverse effects would be within Burstall and Hintlesham. These are areas where the new 400kV overhead line does not follow the existing 132kV overhead line and, therefore, there would be an increase in the number of pylons in views. Chattisham, Lamarsh and Polstead would have long term significant beneficial effects from the removal of pylons within views from these communities.

7.3.106 However, for a project of this nature and as stated above, paragraph 5.9.18 recognises that all proposed energy infrastructure is likely to have visual effects for many receptors. The planning balance in this respect is considered in Chapter 10 of this Planning

Statement and overall, the benefits of the project significantly and demonstrably outweigh any harm to landscape and visual receptors identified.

Stour Valley Project Area

7.3.107 Although not designated, the SVPA has similar picturesque landscape qualities to Dedham Vale AONB, being valued for its gently undulating river valley topography, medieval settlement pattern and rural characteristics. The SVPA is also considered to be part of the setting of the AONB. Whilst the SVPA does not have the same level of protection as the AONB, the LPA manage it alongside the AONB. The SVPA covers the entirety of Section G: Stour Valley. The SVPA is not assessed as a receptor in its own right as part of the LVIA because as it is not a designated landscape. It is, however, referred to under the relevant landscape character areas in Appendix 6.3 Assessment of Effects on Landscape Character (**application document 6.3.6.3**).

Landscape and Visual Summary

7.3.108 Having regard to the findings of the landscape and visual assessments and paragraph 5.9.22 of EN-1, a number of embedded and good practice measures have been accounted for in the assessments.

7.3.109 Embedded measures, as described in ES Chapter 4: Project Description (**application document 6.2.4**) relevant to the assessment of landscape and visual effects include:

- An underground cable is proposed through Section E: Dedham Vale AONB and parts of Section G: Stour Valley;
- Removal of the existing 132kV overhead line would reduce the overhead lines in Section E: Dedham Vale AONB and parts of Section G: Stour Valley;
- Trenchless crossing to the south of Ansell's Grove to avoid vegetation loss;
- Using the route of the existing 132kV overhead line, where practicable, for the proposed 400kV overhead line to reduce the scale of change in the landscape and views;
- Use of full tension gantries at the CSE compounds, which are smaller structures than standard terminal pylons;
- Embedded landscape planting around each of the four CSE compounds and the GSP substation to help screen the sites from surrounding receptors; and
- The Order Limits include adequate room for planting and mounding for additional screening where required.

7.3.110 In addition, the CEMP Appendix A: CoCP (**application document 7.5.1**) contains a list of relevant good practice measures relating to landscape and visual effects, including retaining vegetation where practicable, providing replacement planting, working in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction, and providing five years of aftercare for all reinstatement and mitigation planting.

7.3.111 Good practice measures are also of relevance to landscape and visual effects, as it indicates that, hedgerows, fences and walls will be reinstated to a similar style and quality and where sensitive features are to be retained within the Order Limits, they would be protected appropriately through fencing and signage.

7.3.112 Finally, the LEMP (**application document 7.8**) expands on the good practice measures set out within CEMP Appendix A: CoCP (**application document 7.5.1**) by providing additional information on how vegetation would be retained where practicable and how it would be reinstated at the end of construction.

7.3.113 The assessment undertaken by National Grid is considered to in accordance with the requirements of EN-1 and EN-5 in respect to landscape and visual impact, including the impact on the AONB and the implementation of undergrounding.

Land Use Including Open Space, Green Infrastructure and Green Belt (Including BMV Land)

7.3.114 Section 5.10 of EN-1 sets out land use policy including open space, mineral resources, green infrastructure and Green Belt policy relating to the project. EN-1 provides general guidance on how the ES should assess the effects of the project on existing and proposed land uses including any effects that may preclude a new development or a use proposed in the development plan. This section also identifies that applicants' should seek to 'minimise' the impacts on the Best and Most Versatile (BMV) agricultural land.

Open Space

7.3.115 Paragraph 5.10.14 of EN-1 states …'*The IPC should not grant consent for development on existing open space, sports and recreational buildings and land unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements or the IPC determines that the benefits of the project (including need), outweigh the potential loss of such facilities, taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities.'*

7.3.116 An Open Space Assessment is provided at Chapter 9 of this Planning Statement. In the case of the project and as detailed at Chapter 9, it is necessary for the overhead line to pass through (over-sail or underground) open space to avoid settlements and conflicts with other developments. Whilst there might be some short-term disturbance while the affected sections of the route are being constructed, there will be no material impact or loss of open spaces in the long term and once constructed, the land will be restored to its former condition.

7.3.117 Chapter 9 of this Planning Statement concludes that there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, the policies relating to impact on open space provision are not engaged. Subsequently, there is no need to consider whether the open space in question is surplus to requirements or provide compensatory land as per the policy requirements of Section 5.10.6 of EN-1.

Mineral Resources

7.3.118 Paragraph 5.10.9 of EN-1 highlights the need to consider minerals safeguarding issues, stating that '*applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place'.*

7.3.119 In accordance with paragraph 5.10.9, an MRA has been undertaken and included in ES Appendix 10.3: MRA (**application document 6.3.10.3**). This concludes that parts of the Order Limits are located within either an MSA or an MCA for sand and gravel. Even if the full extent of the Order Limits within an MSA/MCA were to sterilise mineral of sufficient

quality and extent to be economically valuable, the extent of the sterilised area is very small in comparison to the extent of the MSA/MCA. The actual areas where built operational development would effectively sterilise any valuable mineral are significantly smaller still (<0.2% of the total MSA/MCA). Therefore, the quantity of mineral sterilised by the project is considered to be insignificant in the context of the extensive occurrence of sand and gravel within both counties and the national need and significance of the project.

7.3.120 Consideration has also been given to prior extraction of minerals as part of the project construction programme. It is considered that in the context of the additional cost and time required, prior/incidental extraction in these areas is not viable. In addition, the environmental impact associated with extracting the minerals is considered to be disproportionate to the value gained from extracting the minerals.

Green Belt

7.3.121 There is no Green Belt land allocated within the vicinity of the project. Accordingly, the Green Belt policy requirements of EN-1 are not considered any further in the application for development consent.

Development Land and Allocations

7.3.122 An assessment of committed planning applications within the Order Limits is presented in Appendix C of this Planning Statement and an assessment of any local planning allocations is presented in Chapter 8 of this Planning Statement.

Best Most Versatile Land

7.3.123 Paragraph 5.10.8 of EN-1 considers that applicants should seek to limit impacts on BMV agricultural land. Paragraph 5.10.15 of EN-1 details that schemes should not be sited on BMV agricultural land without justification and that the decision maker should give little weight to the loss of non-BMV agricultural land.

7.3.124 Environmental Statement Chapter 11: Agriculture and Soils (**application document 6.2.11**) details the likely significant effects of the project on agriculture and soils. Agriculture and soil receptors include BMV land (as defined by the Agricultural Land Classification (ALC) system) and land holdings in agricultural use. In addition, ES Appendix 11.1: ALC Report (**application document 6.3.11.1**) sets out the results of, the ALC surveys conducted on the project and the assessment regarding BMV land.

7.3.125 During construction, the project could impact the quality of the soils across an area of 643.6 ha and, therefore, impact soil functions and the ecosystem services these drive. This includes the soils which support BMV land classifications.

7.3.126 During construction there would be an impact on BMV land mainly associated with the CSE compounds, the underground cable and the GSP substation. A large proportion of this land is assumed to be reinstated by the end of the construction phase with no discernible loss or reduction of soil functions.

7.3.127 The assessment has shown that with the proposed mitigation in place, no residual significant adverse effects have been identified for agriculture and soils with the exception of the permanent loss of BMV land as a result of the construction of the CSE compounds and the GSP substation. The measures set out in the Materials and Waste Management Plan (MWMP) (**application document 7.7**) in relation to soils and agricultural operations will reduce the potential for impacts to occur, and the sustainable re-use of soils

generated from within the footprint of the permanent infrastructure elements of the project will ensure these soils can continue to provide a range of functions in their new location.

7.3.128 The assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to land use, including the impact on the open space, BMV and Green Belt.

7.3.129 In this context, proposed revised EN-1 at paragraph 5.11.14 also advises that *'Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination..* The MWMP **(application document 7.7**) sets out how the project will manage the handling of soils across the project.

Noise and Vibration

7.3.130 Section 5.11 of EN-1 sets out NPS noise and vibration policy relating to the project. Noise and vibration is one of the generic effects identified in Part 2 of EN-5, with additional guidance provided, which has informed National Grid's assessment of the project as contained in ES Chapter 14: Noise and Vibration (**application document 6.2.14**).

7.3.131 Paragraph 5.11.4 – 5.11.7 of EN-1 advise that where noise effects are likely to arise, the applicant should include a description of the noise generating aspects of the development; identification of receptors; the baseline; prediction of how the noise environment will change with the project; an assessment of effects; and proposed mitigation.

7.3.132 Operational noise is scoped out of the ES as significant adverse effects would be avoided by design, for example, through the use of a low noise conductor system (Triple Araucaria), and transformer noise enclosures around the super grid transformers within the GSP substation. Additional information regarding operational noise impacts is provided in ES Appendix 14.3: Overhead Line Noise and Assessment (**application document 6.3.14.3**) and ES Appendix 14.4: GSP substation Noise Assessment (**application document 6.3.14.4**).

7.3.133 In respect to construction noise and vibration, impacts will be reduced with the use of best practicable means (BPM) as secured through the CEMP (**application document 7.5**).

7.3.134 As outlined in ES Chapter 14: Noise and Vibration (**application document 6.2.14**), temporary noise impacts resulting from the increase in traffic associated with the construction phase are not considered to be significant. Vibration associated with construction vehicles passing along local roads is also not considered to be significant.

7.3.135 Certain construction activities and equipment used during construction will produce noise and vibration. This includes works associated with the trenchless crossings, cutting associated with the removal of pylons, excavators associated with the soil stripping and trench formation, and piling associated with pylon foundations.

7.3.136 ES Chapter 14: Noise and Vibration (**application document 6.2.14**) identifies thresholds for significant observed adverse effect levels (SOAEL), as required by the Government's Noise Policy Statement for England (DEFRA, 2010). Significant adverse effects during construction would occur where the SOAEL is exceeded at a receptor for a duration of more than ten days in any 15 consecutive days, or more than 40 days in any consecutive six months.

7.3.137 The assessment has concluded that, using a reasonable worst case and assuming no site-specific BPM, the potential for significant adverse effects for a limited number of noise sensitive receptors have been identified during construction. With the implementation of

the additional mitigation measures, which would include site specific BPM, it is anticipated that noise and vibration levels would be reduced such that significant adverse effects are avoided at all noise sensitive receptors. As such, the requirements of the NPS EN-1 are expected to be met. It is, therefore, considered that the project design and assessment undertaken by National Grid is in accordance with the requirements of EN-1 and EN-5 in respect to noise and vibration.

Socio-Economic

7.3.138 Section 5.12 of EN-1 sets out NPS socio-economic policy relating to the project. EN-1 advises on the assessment of socio-economic impacts at local and regional levels including reference to job creation and opportunities for provision of local services, effects on tourism, effects of the influx of workers and cumulative and in-combination effects.

7.3.139 Paragraph 5.12.7 of EN-1 states that the SoS *'may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS)'.*

7.3.140 The Socio-Economics and Tourism Report (**application document 5.9**) has been produced to support the application for development consent. It documents the decision to scope out these aspects from the ES as detailed in Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**), including reference to the Scoping Opinion (**application document 6.6**). It concludes that the designs at application are still unlikely to generate significant effects on socio-economics and tourism.

7.3.141 The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 in respect to socio-economic policy.

Traffic and Transport

7.3.142 Section 5.13 of EN-1 sets out NPS traffic and transport policy relating to NSIP. Paragraph 5.13.1 of EN-1 recognises that the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts including economic, social and environmental effects.

7.3.143 Paragraph 5.14.21 of proposed revised EN-1 indicates that, '*The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.'*

7.3.144 Environmental Statement Chapter 12: Traffic and Transport (**application document 6.2.12**) details the likely significant effects of traffic and transport and more specifically in respect to walkers, cyclists and horse riders (WCH); effects on WCH journey length, due to temporary closures and diversions of PRoW, effects on WCH severance, due to changes in traffic flow on the road network; and effects on WCH amenity, fear and intimidation, due to changes in traffic flow on the road network.

7.3.145 Environmental Statement Chapter 12: Traffic and Transport (**application document 6.2.12**) should be read alongside the Transport Assessment (TA) (**application document 5.7**), which contains further evidence as to why certain aspects are scoped out of the ES.

7.3.146 The assessment presented in ES Chapter 12: Traffic and Transport (**application document 6.2.12**) has concluded that there are no likely significant residual effects in

relation to traffic and transport receptors during construction except for an increased risk of pedestrian amenity, fear and intimidation on Church Road, Twinstead and a change in WCH journey length on the PRoW from A131, through Nether House Farm to Church Road, Halstead. A diversion route has been provided for this PRoW which would require closing for a short period of time.

7.3.147 The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 in respect to traffic and transport considerations.

Waste Management

7.3.148 Section 5.14 of EN-1 sets out NPS waste policy relating to NSIP. Paragraph 5.14.6 advises that the applicant should set out the arrangements proposed for managing any waste produced and prepare a Site Waste Management Plan.

7.3.149 The MWMP (**application document 7.7**) sets out how the project will seek to reduce the consumption of primary and raw materials and to encourage the use of secondary or recycled sources. It also sets out how the project intends to follow the waste hierarchy by reducing waste produced in the first place before considering alternatives such as reuse, recycling and repurposing. Construction phase measures relevant to materials and waste are secured within the MWMP (**application document 7.7**).

7.3.150 National Grid will put in place robust procedures to inform and supervise all those working on the project including its contractor, to make sure the control measures set out in the MWMP are adopted when undertaking the construction of the project.

7.3.151 The assessment undertaken by National Grid is, therefore, in accordance with the requirements of EN-1 in respect to waste management.

Water Quality and Resources

7.3.152 Environmental Statement Chapter 9: Water Environment (**application document 6.2.9**) details the existing baseline and the likely significant effects of the project on the water environment with respect to surface water including surface water quality and features (e.g. main rivers and ordinary watercourses) and functional floodplain. Environmental Statement Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) describes the existing baseline and the likely significant effects of the project on groundwater receptors.

7.3.153 Paragraph 5.15.1 of EN-1 considers that infrastructure development can have adverse effects on water environments, whilst also recognising that during the construction, operation and decommissioning phases, infrastructure development can lead to increased demand for water, involve discharges to water and cause adverse ecological effects.

7.3.154 Paragraph 5.15.2 of EN-1 states that '*the applicant should undertake an assessment of the existing status of, and impacts of the proposed project, water quality, water resources and physical characteristics of the water environment.'*

7.3.155 The assessment presented in ES Chapter 9: Water Environment (**application document 6.2.9**) has concluded that there are no likely significant residual effects in relation to surface water receptors during construction or operation of the project. Therefore, no mitigation measures have been identified beyond the good practice measures set out in the CEMP Appendix A: CoCP (**application document 7.5.1**) and the embedded

measures summarised in ES Chapter 9: Water Environment (**application document 6.2.9**).

7.3.156 In accordance with paragraph 5.15.3 of EN-1, Source Protection Zones (SPZ) around potable groundwater abstractions have also been considered and no significant effects are anticipated.

7.3.157 The assessment presented in ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) has also concluded that there are no likely significant residual effects in relation to groundwater receptors, including private water supplies, during construction or operation of the project. Therefore, no mitigation measures have been identified beyond the good practice measures set out in the CEMP Appendix A: CoCP (**application document 7.5.1**) and the embedded measures summarised in ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**).

7.3.158 Paragraph 5.15.3 of EN-1 requires an assessment to identify any areas protected under the WFD which may be impacted by the project. The WFD Assessment (**application document 5.6**) submitted as part of the application for development consent concludes that the project is compliant with the objectives of the WFD.

7.3.159 It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to water quality and resources.

7.4 National Planning Policy Framework

7.4.1 The following section of this document identifies how the project accords with the relevant principles and policies of the NPPF (2023). Whilst the NPPF does not contain policies relating to electricity networks infrastructure, it does contain policy for conserving and enhancing the natural and historic environment which has been considered in developing the project.

7.4.2 The NPPF was updated on 5 September 2023, with the final version replacing the previous NPPF on 19 December 2023. This revised Framework replaces the previous NPPF published in March 2012, revised in July 2018, updated in February 2019 and revised in July 2021. Consideration has been given to the proposed changes to the NPPF, although, updates are limited to planning for onshore wind development in England and, therefore, has limited relevance to the project.

Core Planning Principles

7.4.3 Paragraph 8 of the NPPF identifies three overarching objectives for the planning system those being:

'a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.'

7.4.4 The three overarching objectives to achieving sustainable development are considered in Chapter 10 of this Planning Statement.

Promoting Sustainable Transport

7.4.5 Paragraph 110 of the NPPF advises that in applications for development, it should be ensured that:

'a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.'

7.4.6 Paragraph 113 advises that developments that will generate significant amounts of movement should provide a travel plan and applications supported by a transport statement or assessment.

7.4.7 The TA (**application document 6.2.12**) sets out the baseline existing transport conditions and the future baseline transport conditions relating to the project, highlighting the impacts the project would have on transport modes. The TA provides an assessment to determine whether there would be severe transport impacts resulting from the project and demonstrates that there would be no substantial adverse impacts upon the transport network and therefore mitigation is not required.

7.4.8 The project would only require a very small number of workers during the operational phase (of a similar level to inspections on the existing network). Therefore, no operational travel plan and measures to improve public transport are considered necessary. Commitments regarding travel planning during construction are set out in the Construction Traffic Management Plan (CTMP) (**application document 7.6**).

7.4.9 National Grid has identified 126 temporary access points, 74 of which make use of existing access points on the local road network. Some of these may need to be widened to create a bellmouth to safely accommodate construction vehicles. Others involve creating new temporary entrances where a current access point does not exist. The proposed access points are shown on the Access, Rights of Way and Public Rights of Navigation Plans (**application document 2.7**) and a generic bellmouth design is shown on the Design and Layout Plans: Temporary Bellmouth for Access (**application document 2.11.12**).

7.4.10 As such, in accordance with paragraph 110 – 113 of the NPPF, National Grid has sought to develop a project which meets the NPPF transport objectives.

Achieving Well-Designed Places

7.4.11 Paragraph 130 of the NPPF advises that planning decisions should ensure that developments:

'a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.'

7.4.12 The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. In addition, the Holford Rules have become accepted within the electricity transmission industry as the basis for overhead transmission line routeing. National Grid employs the Holford Rules to inform the design and routeing of all new overhead line projects, including the project. An assessment as to how the project has taken into consideration and complied with the Holford Rules is contained at Section 5.8.

7.4.13 The Horlock Rules also provide guidelines for the siting and design of new substations. In summary, like the Holford Rules, they facilitate consideration of environmental and amenity considerations within the design and siting of new substation infrastructure. An assessment as to how the project has taken into consideration and complied with the Horlock Rules is contained at Section 5.9. As such, in accordance with paragraph 130 of the NPPF, National Grid has sought to develop a well-designed project which responds positively to environmental constraints and comments from stakeholders and the public, taking into account the design principles devised from the Holford and Horlock Rules and providing mitigation where necessary in order to overcome adverse impacts.

7.4.14 In addition, paragraph 4.5.3 of EN-1 accepts that the nature of much energy infrastructure development will often be limited to the extent to which it is able to contribute to the enhancement of the quality of the area. Paragraph 4.5.3 of EN-1 also considers that '*whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation.'*

7.4.15 Environmental Statement Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project.

Meeting the Challenge of Climate Change, Flooding and Coastal Change

7.4.16 Paragraph 154 of the NPPF advises that new development should be planned in ways that:

'a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.'

Paragraph 159 asserts that '*inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere*.' Paragraph 167 expands on this further.

7.4.17 Paragraph 152 of the NPPF acknowledges the key role of planning in the transition to a low carbon future and the delivery of renewable and low carbon energy schemes as well as the provision of 'associated infrastructure'. As such, the NPPF identifies the role of associated infrastructure in achieving this transitional aim.

7.4.18 Whilst not a 'renewable energy scheme' by definition, the project facilitates the transmission of low carbon electricity across the network. Essentially, the project is required as part of the necessary network reinforcements borne out of the systemic shift away from fossil fuels and the Government target of achieving up to 50GW of offshore wind, a renewable energy source, by 2030.

7.4.19 During operation, the project has been designed to be resilient to climate change by locating the above ground elements of the project, including the GSP substation and the CSE compounds, outside of Flood Zones 2 and 3. Further details on the resilience to climate change can be found in the FRA (**application document 5.5**). Extreme climatic events are also assessed within Appendix 5.3: Major Accidents and Disasters Scoping (**application document 6.3.5.3**).

7.4.20 The drainage design will be in accordance with the requirements of the Essex County Council Sustainable Drainage System (SuDS) Design Guide (2020) and the Suffolk County Council SuDS Palette (2021) (see commitment 'W12' in the CEMP Appendix A: CoCP (**application document 7.5.1**) and will include allowances for climate change in accordance with current (May 2022) Environment Agency requirements. The drainage infrastructure would provide the storage necessary to achieve discharges at greenfield run-off rates. A specialist drainage contractor will review the designs and will provide advice to National Grid and its contractor during relevant construction and reinstatement activities.

7.4.21 In addition, National Grid sources its materials from global supply chains, and carefully considers the most carbon neutral procurement routes whilst committing to the highest

quality of its components. National Grid also works closely with its contractors to encourage sourcing materials from sustainable sources and reducing waste being sent to landfill. These include measures to recycle the 132kV and 400kV overhead line pylons and conductors that are being removed and also having a commitment to reuse soil on site where practicable and suitable quality, for example using this in the mounding at the GSP substation and spreading soil across the Order Limits over the top of the ducts. Further details on the management of materials and waste can be found in the MWMP (**application document 7.7**).

7.4.22 With these measures in place, the project is considered to be resilient to climate change and has been designed to reduce greenhouse gas emissions in accordance with paragraph 154 of the NPPF.

Conserving and Enhancing the Natural Environment

7.4.23 Paragraph 174 of the NPPF sets out the overarching principles for how planning decisions should contribute to and enhance the natural and local environment by:

'a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.'

7.4.24 Paragraph 175 further develops the principles around the protection of habitats and biodiversity from new development.

7.4.25 An EIA has been undertaken for the project which sets out how the above factors have been considered as part of the design. The ES sets out the likely effects and the embedded measures, good practice and additional mitigation identified to minimise the effects on the environment. Hence, it is considered that the project has met the aims of NPPF paragraphs 174 and 175.

7.4.26 Paragraph 176 notes that '*great weight should be given to conserving and enhancing landscape and scenic beauty in … Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks. The scale and extent of development within all these designated areas should be limited, while development*

within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.'

7.4.27 The project has considered the presence of nationally designated areas, in this case Dedham Vale AONB, throughout the design process. Overall, although Corridor 2 passes through parts of Dedham Vale AONB, the opportunity to remove the existing 132kV overhead line results in the least scale of change to the existing environment. Beneficial visual effects and beneficial effects on setting of historic assets are likely to occur where the existing 132kV and 400kV overhead lines are removed and an underground cable is proposed in Section E: Dedham Vale AONB and parts of Section G: Stour Valley.

7.4.28 Environmental Statement Chapter 6: Landscape and Visual (**application document 6.2.6**) summarises the benefits that the project will bring to the landscape of the AONB due to the removal of the 132kV overhead line and the new 400kV overhead line being underground.

7.4.29 As such, it is considered that the project design aligns with the fundamental aim of the NPPF paragraph 176, in regard to conserving and enhancing landscape and scenic beauty in AONB.

7.4.30 Paragraph 177 sets out the exceptional circumstances for when major development might be approved in AONB, providing it is in the public interest.

7.4.31 Section 104(3) of the 2008 Act states that applications must be decided in accordance with any relevant NPS, except where the SoS is satisfied that the adverse impact of the project would outweigh its benefits. The policy test in respect to 'exceptional circumstances' for development within AONB is set out at paragraph 5.9.10 of EN-1 and it is considered that exceptional circumstances are demonstrable for the reasons set out in paragraph 7.3.79. Hence, it is considered that the project has met the aims of NPPF paragraph 177.

Conserving and Enhancing the Historic Environment

7.4.32 Paragraph 197 of the NPPF advises that in determining planning applications that may affect heritage assets, LPA should take account of:

'a) the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;

b) the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and

c) the desirability of new development making a positive contribution to local character and distinctiveness.'

7.4.33 Paragraph 200 sets out further criteria for the consideration of potential impacts of new development where there would be any harm to, or loss of, the significance of a designated heritage asset.

7.4.34 Paragraph 201 sets out further criteria for the consideration of potential impacts of new development where there would be substantial harm to, or total loss of, the significance of a designated heritage asset.

7.4.35 Adverse impacts to the historic environment are addressed in ES Chapter 8: Historic Environment (**application document 6.2.8**) and ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**).

7.4.36 No direct physical impacts to listed buildings have been identified on the project. The impacts of additional visual intrusion from the proposed 400kV overhead line have been considered in the context of the presence of the existing 132kV overhead line and its visual relationship with designated assets. The impacts of the removal of the 132kV overhead line and replacement (along a partly different alignment) by the more visually intrusive 400kV overhead line is considered and a range of adverse and beneficial impacts identified.

7.4.37 Impacts to designated landscape features such as Protected Lanes in Essex have been identified and environmental commitments have been included to restore the changes resulting from construction.

7.4.38 Embedded design measures reduce the impacts to historic environment assets and the identification of assets at risk from substantial harm allows further design measures to be included to reduce risk further.

7.4.39 No heritage assets have been identified that would experience substantial harm to, or total loss of the significance. For these reasons, it is considered that the project has met the aims of NPPF paragraphs 200 and 201.

7.5 Sustainable Development

7.5.1 It is recognised at paragraph 4.1.4 of EN-1, in considering any proposed development, that '*the IPC should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.'* Environmental, social and economic considerations are also described as the 'three strands' or 'three objectives' to sustainable development in the NPPF paragraph 8. The project meets the three objectives in the following ways:

Economic Objective

7.5.2 National Grid has obligations under its Transmission Licence to provide an efficient, economic and co-ordinated transmission system in England and Wales. National Grid is required at all times to plan and develop the transmission system in accordance with the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS) and to offer connections to and/or use of the transmission system via the National Grid ESO.

7.5.3 In addition, National Grid is regulated by Ofgem, the electricity and gas markets regulator, to ensure value for money for consumers and is required under the Electricity Act to '*develop and maintain an efficient, coordinated and economical electricity transmission system, and to facilitate competition in supply and generation of electricity.*'

7.5.4 The National Grid ESO manages shortfalls in boundary capacity by reducing power flows and constraining generation. This is achieved by paying generators to reduce their outputs, known as 'constraint costs'. Ultimately, constraint costs are passed on to consumers and businesses through electricity bills. When constraint costs become higher than the cost of investment required to reinforce the network (and remove the need for constraint costs) it is considered right to proceed with investment for reinforcement. Without reinforcement beyond 2025 there can be no further unconstrained connections within East Anglia. There is, therefore, a clear economic benefit to reinforcing this part of the network with the cost of reinforcement being outweighed by the significant constraint costs that would otherwise be incurred in the long term if the project was to not go ahead.

7.5.5 Finally, the provision of cleaner, cheaper 'home-grown' energy to homes and businesses in the UK would benefit the UK economy as a whole.

Social Objective

7.5.6 The project will contribute to maintaining essential infrastructure for electricity supply and thus results in public benefits. The project will enable a greater proportion of new renewable energy to be connected to the network for the district and beyond. In addition, the project is required as part of the necessary shift away from fossil fuels and commitment to achieving 50GW of offshore wind connected to the network by 2030.

7.5.7 The key role of National Grid's transmission system is to connect the electricity generators' power stations with regional DNO who then supply businesses and homes. This means that more homes and businesses can be powered by renewable and sustainable energy sources to meet the needs of present and future generations. The project seeks to preserve the intrinsic and spatial qualities of the local landscape, whilst not impacting or severing public spaces or having an unacceptable impact on local roads or neighbouring amenity.

Environmental Objective

7.5.8 The project is a key step towards the UK's commitments to achieving net zero carbon emissions by 2050. In respect to the routeing of the project and siting of above ground infrastructure, robust environmental work has been undertaken. The ES Chapter 3: Alternatives Considered (**application document 6.2.3**) includes an environmental assessment of reasonable alternatives in choosing the preferred option and route.

7.5.9 The project is accompanied by an ES, which assesses the environmental effects associated with the project. The project would not cause unacceptable harm to the landscape and visual character of the area, not cause unacceptable impacts to protected and priority species, preserve amenity in respect to noise, air quality, pollution and traffic generation; preserve the natural and built historic environment; not give rise to concerns of flooding or highway safety; meanwhile the development secures an environmental net gain (despite not being a mandatory requirement) weighing in the schemes favour.

7.5.10 Finally, the project will enable a greater proportion of new renewable energy to be connected to the network for the district and beyond as part of the necessary shift away from fossil fuels, which would ultimately result in beneficial impacts to the environment as a whole.

7.6 Summary

7.6.1 The project has been subject to a comprehensive assessment against national planning policy in the form of EN-1, EN-5, the relevant draft replacement NPS, the NPPF. Appendix A and Appendix B of this document provide signposting to documents within the submission that demonstrates compliance with the requirements of EN-1 and EN-5.

7.6.2 The assessment demonstrates that National Grid has developed the project in accordance with the requirements of EN-1 and EN-5, and the proposed revised NPS where policy is materially different to that contained in the extant, designated NPS, and that the project is, therefore, in accordance with the relevant NPS.

7.6.3 Furthermore, taking into account the findings of the ES, there are not considered to be any adverse impacts which would conflict with the NPPF. The project is, therefore, in accordance with national planning policy.

8. Local Planning Policy Context and Assessment

8.1 Overview

8.1.1 The application for development consent will be considered by the SoS primarily against the policies in the relevant NPS, as described in Chapter 7 of this Planning Statement. The SoS must also take Development Plans into consideration if they are *'both important and relevant to the Secretary of State's decision'* (Section 104 of the Planning Act 2008).

8.1.2 The project is located in the following local planning authority areas (referred to collectively as the Host Authorities):

- Suffolk County Council;
- Essex County Council;
- Babergh District Council;
- Mid Suffolk District Council; and
- Braintree District Council.

8.1.3 This Chapter outlines the local planning policy context by firstly identifying the local Development Plans for the Host Authorities. To reflect changes in Local Planning Policy, the Applicant has updated this Planning Statement at Deadline 6 (20 December 2023) to incorporate any new and, or updated policies relevant to the project.

8.1.4 Table D.1 of Appendix D identifies the relevant policies for each local authority within the Order Limits, and then provides a detailed assessment of the project against those relevant policies. The assessment contained in Appendix D has been undertaken on a section-by-section basis (Section A – H) as the planning policy context for each section of the Order Limits is unique. In addition, each individual policy assessment has been given a reference number for ease of identification and reference. For example, '*A/MSCS/CS5*' = Section A - Mid-Suffolk Core Strategy - Policy CS5.

8.1.5 Finally, Table E.1 of Appendix E contains a list of the mentioned policies and their exact policy wording for ease of reference.

8.1.6 As stated previously, for the purposes of the local planning policy assessment, Section AB: Bramford Substation/Hintlesham has been separated into two sections: A: Bramford Substation and B: Hintlesham. This is largely due to the fact that the Bramford Substation compound is contained within the administrative boundaries of Mid Suffolk District Council, and this is the only section of the Order Limits that falls within the Mid Suffolk District Council jurisdiction. As such, the planning policy context at Bramford Substation will be distinct from the rest of the project.

8.2 Background

8.2.1 Although Babergh District Council and Mid Suffolk District Council are legally separate councils, since 2011, they have been working together and they share many services,

including a planning service, have the same office location and have recently adopted a Joint Local Plan, adopted on 20 November 2023.

8.2.2 National Grid has had regular meetings with the Host Authorities following the period of project pause in December 2020. These were originally held once every three months. In June 2021 the Host Authorities requested that the frequency of these meetings increase from January 2022 and since then they have been held once every two months. These meetings have provided an opportunity for the Host Authorities to share information about the status of their planning documents and to outline particular policies that they consider to be important and relevant to the project.

8.3 Suffolk County Council

8.3.1 The Suffolk Minerals and Waste Local Plan was adopted in July 2020. The Suffolk Minerals and Waste Local Plan indicates that large parts of the Order Limits fall within the Suffolk County Council MCA. Policy MP10 advises that these areas will be safeguarded from proposed development in excess of 5ha. As the Order Limits exceed 5ha in the MCA, the application for development consent needs to demonstrate that *'the sand and gravel present is not of economic value, or not practically or environmentally feasible to extract, or that the mineral will be worked before the development takes place or used within the development'.* As such, the potential effects on minerals are considered in ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**).

8.3.2 The Suffolk Minerals and Waste Local Plan also shows that the project is located within the following site allocated for sand and gravel extraction (however, the proposed extended/allocated area falls outside of the Order Limits, to the south):

- Allocation M5 (Layham Quarry) is for an extension to the existing sand and gravel operations at Rands Hall Pit in Layham.

8.3.3 A planning application to extend the timescales for extraction and restoration at Layham Quarry to April 2032 and October 2033, respectively, was approved in October 2019 (Planning Reference: SCC/0018/19B/VOC). This planning application is considered further in Appendix C; see Assessment Reference: D/2 of Appendix C.

8.3.4 The Order Limits include parts of Layham Quarry. Policy MP10 advises that the County Councill will safeguard '*areas falling within 250m of an existing, planned or potential site allocated in the Plan for sand and gravel extraction. The MPA [Minerals Planning Authority] will advise the Local Planning Authority whether any proposed development might prejudice the future extraction of minerals and should be refused, or whether such development itself might be prejudiced by proposed mineral working*.' As such, this policy is also engaged on the project.

8.3.5 Discussions have taken place with Suffolk County Council and the Quarry owners (Brett Aggregates) regarding Layham Quarry, to obtain an understanding of the history of mineral extraction at the site along with any future plans. Discussions with the Quarry owners have confirmed that, at present, the site is inactive (since 2013) and that planning permission was granted in 2019 to extend the existing permission.

8.3.6 The Suffolk Waste Policies Map identifies two allocated waste sites in Suffolk (AD5 and AW93) where the Order Limits cross the waste management site safeguarding areas. While the Order Limits fall within the safeguarding area(s) the project will not impact on these allocated waste sites.

8.3.7 The policies from the Minerals and Waste Local Plan that may potentially be important and relevant to the project are considered in Table D.1 of Appendix D.

8.4 Essex County Council

8.4.1 The Minerals and Waste Development Plan for Essex currently consists of the following:

- Essex and Southend-on-Sea Waste Local Plan (adopted July 2017); and
- Essex Minerals Local Plan (adopted July 2014).

8.4.2 The Essex Minerals Local Plan originally covered the period to 2029. It was the intention of Essex County Council to publish a new Local Development Scheme imminently after the consultation of the Draft Minerals Local Plan Review ended in March 2021, which would set out a new timetable for adoption of the Minerals Local Plan Review.

8.4.3 However, Essex County Council recently made the decision to extend the plan period for the Minerals Local Plan from 2029 to 2040 as part of the ongoing review of the Minerals Local Plan. Meanwhile, a new 'Call for Sites' exercise for the Minerals Local Plan was undertaken, closing on 9 November 2022.

8.4.4 Following discussions with Essex County Council with regards to progress with the ongoing Minerals Local Plan Review, it is their intention to carry out an additional consultation in late 2023 which will incorporate newly amended draft policies reflecting the extension of the Plan period to 2040, as well as interim site assessments for all sites received through the two 'Call for Sites' exercises.

8.4.5 The Waste Policies Map that forms part of the Waste Local Plan identifies the allocated waste sites in Essex. The project will not impact on any allocated waste sites.

8.4.6 The Policies Map within the adopted Minerals Local Plan confirms that parts of the project fall within a MSA for sand and gravel. Policy S8 of the Minerals Local Plan requires that the Minerals Planning Authority be consulted, and its views taken into account on *'all planning applications for development on a site located within an MSA that is 5ha or more for sand and gravel, 3ha or more for chalk and greater than 1 dwelling for brickearth or brick clay.'*

8.4.7 Where development exceeds these thresholds, an MRA is required. The project Order Limits exceeds 3ha and potential effects on minerals are considered in ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) which is supported by an MRA which is included at ES Appendix 10.3: MRA (**application document 6.3.10.3**).

8.4.8 The policies from the Essex Minerals and Waste Local Plans that may potentially be important and relevant are considered in Table D.1 of Appendix D.

8.5 Babergh and Mid Suffolk District Councils

8.5.1 Babergh and Mid Suffolk District Councils have recently worked together to prepare the Babergh and Mid Suffolk Joint Local Plan. Adopted 20 November 2023 the Joint Local Plan replaces all previously adopted Local Plans, Core Strategies and the Stowmarket Area Action Plan for Babergh and Mid Suffolk District Councils.

8.5.2 The Joint Local Plan was submitted for examination in March 2021, where it was suggested Babergh and Mid Suffolk District Councils prepare a Part 2 Plan. The Part 2 Plan is programmed to reach the pre-submission consultation during the autumn of 2024.

Consequently, only some weight is afforded to this aspect of the emerging Plan as it is not considered to be at an advanced stage of the local plan process.

8.6 Braintree District Council

8.6.1 Braintree District Council has recently adopted a new Local Plan for the period 2013-2033. The new Local Plan is split into two sections as follows:

- Section 1: Strategic Plan for North Essex shared with Colchester Borough Council and Tendring District Council. Section 1 was adopted on 22 February 2021. Section 1 is not considered to be an important or relevant consideration to the project as it covers strategic issues, including Garden Community development, across the three local authority areas.
- Section 2: Contains the policies, maps and sites for development within the Braintree District. Section 2 was adopted on 25 July 2022.

8.6.2 Those policies from the Section 2 Plan that may be important and relevant to the project are considered in Table D.1 of Appendix D.

8.7 Neighbourhood Plans

8.7.1 A Neighbourhood Plan forms part of the statutory Development Plan for an LPA once it has been approved at a referendum. At this point, it comes into force as part of the statutory Development Plan. Table 8.1 summarises the current status of Neighbourhood Plans which are within the Order Limits for the project.

Table 8.1 – Status of Neighbourhood Plan

Parish	Plan and Status
Bramford	No emerging plan
Sproughton	Neighbourhood Plan adopted 28 November 2023
Burstall	No emerging plan
Hintlesham and Chattisham	Neighbourhood Plan in progress
Hadleigh	Neighbourhood Plan in progress
Layham	No emerging plan
Polstead	No emerging plan
Shelley	No emerging plan
Stoke by Nayland	Neighbourhood Plan in progress
Leavenheath	Neighbourhood Plan adopted 27 July 2023
Assington	Neighbourhood Plan adopted 2 March 2022
Bures St Mary	Bures Hamlet and Bures St Mary are in the process of preparing a joint Neighbourhood Plan
Little Cornard	Neighbourhood Plan adopted 20 July 2022
Alphamstone and Lamarsh	No emerging plan
The Hennys', Middleton & Twinstead	No emerging plan
Bulmer	No emerging plan
Wickham St Paul	No emerging plan

Gestingthorpe	No emerging plan
Raydon	No emerging plan
Pebmarsh	No emerging plan
Little Maplestead	No emerging plan
Wenham Magna	No emerging plan

8.7.2 There are four adopted Neighbourhood Plans within the Order Limits; the Assington Neighbourhood Plan, the Leavenheath Neighbourhood Plan and the Little Cornard Neighbourhood Plan. Meanwhile, the Leavenheath Neighbourhood Plan is currently awaiting referendum.

Leavenheath Neighbourhood Plan

8.7.3 In an ‘out of meeting’ decision published on Thursday 27 July 2023, Babergh District Council agreed to adopt ('make') the Leavenheath Neighbourhood Plan. The project Order Limits are located across an area subject to the following policies in the Leavenheath Neighbourhood Plan, as detailed in the published referendum version:

- Policy LEAV4: Surface Water Drainage Issue Locations:
    - Location 3: Road outside Harrow Lodge driveway; and
    - Location 6: High Road outside Gedding Hall.

8.7.4 The project Order Limits are located immediately adjacent to an area subject to the following policies in the Leavenheath Neighbourhood Plan:

- Policy LEAV2: Local Green Space (Area 5): Land to north of entrance to Stoke Road junction with A134. As this allocation is outside the Order Limits, it has not been considered further;
- Policy LEAV2: Local Green Space (Area 8): Western part of Leadenhall Wood. Both areas are shown on Figure 15 of the Neighbourhood Plan. Policy LEAV2 only includes provisions for development on designated Local Green Space, therefore, this policy has not been considered further; and
- Policy LEAV3: Leavenheath Special Landscape Area: Policy LEAV3 only makes provision for development proposals within the Area of Local Landscape Sensitivity, therefore, this policy has not been considered further.

Assington Neighbourhood Plan

8.7.5 In a meeting on 2 March 2022, Babergh District Council agreed to adopt the Assington Neighbourhood Plan. This now forms part of the Development Plan for Babergh District Council. The project Order Limits are located across an area subject to the following policies in the Assington Neighbourhood Plan:

- Policy ASSN 7: Local Landscape Sensitivity;
- Policy ASSN 10: Protected Local Green Space (Mill Farm Land); and
- Policy ASSN 8: Protected views 12, 13, 14 and 15.

8.7.6 The policies contained in the Assington Neighbourhood Plan that may be important and relevant to the project are considered in Table D.1 of Appendix D.

Little Cornard Neighbourhood Plan

8.7.7 In a meeting on 20 July 2022, Babergh District Council agreed to adopt the Little Cornard Neighbourhood Plan. This now forms part of the Development Plan for Babergh District Council. The project Order Limits are located across an area subject to the following policies in the Little Cornard Neighbourhood Plan:

- Policy LC02: Access into the Countryside; and
- Policy LC03: Views.

8.7.8 The policies contained in the Little Cornard Neighbourhood Plan that may be important and relevant to the project are considered in Table D.1 of Appendix D.

Sproughton Neighbourhood Plan

8.7.9 In an 'out of meeting' decision published on 28 November 2023 Babergh District Council agreed to adopt ('make') the Sproughton Neighbourhood Plan. The Order Limits for the project only adjoins the boundary of the Sproughton Neighbourhood Plan area, where it is proposed to remove a section of the 132kV overhead line. As such, it is not considered that any of the policies of the Sproughton Neighbourhood Plan are capable of being important and relevant to the project.

8.8 Local Planning Policy Assessment

8.8.1 While the application for development consent will be considered by the SoS primarily against the policies in the relevant NPS, as described in Chapter 7 of this Planning Statement; the SoS must also take Development Plans into consideration if they are *'both important and relevant to the Secretary of State's decision'* (Section 104 of the Planning Act 2008).

8.8.2 As previously stated, Table D.1 of Appendix D identifies the relevant policies for each local authority within the Order Limits, and then provides a short assessment of the project against those relevant policies. The assessment contained in Appendix D has been undertaken on a section-by-section basis as the planning policy context for each section of the Order Limits is unique and the assessments are not replicated in this Chapter.

8.9 Summary

8.9.1 Paragraph 4.15 of EN-1 confirms that other matters which the SoS may consider both important and relevant to decision making includes Development Plan documents. The same paragraph confirms that in the event of a conflict, the NPS will prevail for the purpose of SoS decision making given the national significance of the infrastructure.

8.9.2 The local Development Plan documents do not contain policies relating to electricity networks infrastructure; however, they do contain policies in respect to conserving and enhancing the natural and historic environment which has been considered in developing the project.

8.9.3 Having regard to the Host Authorities Development Plans as a whole, the project would not cause unacceptable harm to the landscape and visual character of the area, not cause unacceptable impacts to protected and priority species, preserve amenity in respect to noise, air quality, pollution and traffic generation; not cause substantial harm to the natural and built historic environment; not give rise to concerns of flooding or highway safety; meanwhile, National Grid has made a commitment to deliver net gain by at least 10% or

greater in environmental value, including BNG, on this project (despite not being a mandatory requirement).

9. Open Space

9.1 Overview

9.1.1 This Chapter considers the impact of the project on open spaces as defined below. This assessment fundamentally concerns the impact of the project on the use and function of open spaces and does not consider the issue of open space in the context of 'Special Category Land' which is considered in the Statement of Reasons: Appendix C Special Category Land Report (**application document 4.2.3**).

9.2 Policy Context

9.2.1 As an NSIP, the application for this project will be decided in accordance with the policies contained in the relevant NPS. EN-1 sets out NPS land use policy including open space, green infrastructure and Green Belt policy. EN-1 provides general guidance on how to assess the effects of the proposed development on existing and proposed land uses including any effects that may preclude a new development or a use proposed in the development plan.

9.2.2 Sections 5.10.6, 5.10.14 and 5.10.21 of EN-1 set out that:

'Applicants will need to consult the local community on their proposals to build on open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements….

…'The IPC should not grant consent for development on existing open space, sports and recreational buildings and land unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements or the IPC determines that the benefits of the project (including need), outweigh the potential loss of such facilities, taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities. The loss of playing fields should only be allowed where applicants can demonstrate that they will be replaced with facilities of equivalent or better quantity or quality in a suitable location….

…'The IPC should also consider whether mitigation of any adverse effects on green infrastructure and other forms of open space is adequately provided for by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness and quality and, where possible, at least as accessible. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, replacement land provided under those sections will need to conform to the requirements of those sections.'

9.2.3 Meanwhile, very similar language is carried through to proposed revised EN-1 in section 5.11.

9.2.4 Also of relevance is the revised NPPF, which was published in July 2021, and states at paragraphs 98 and 99 that:

'98. Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities, and can deliver wider benefits for nature and support efforts to address climate change. Planning policies should be based on robust and up-to-date assessments of the need for open space, sport and recreation facilities (including quantitative or qualitative deficits or surpluses) and opportunities for new provision. Information gained from the assessments should be used to determine what open space, sport and recreational provision is needed, which plans should then seek to accommodate.

99. Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless:

(a) an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or

(b) the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or

(c) the development is for alternative sports and recreational provision, the benefits of which clearly outweigh the loss of the current or former use.'

9.2.5 Each LPA along the route of the project has local planning policies seeking to protect open spaces within its jurisdiction. It is important to acknowledge that the LPA policies and the NPPF do not form the basis for policy assessment for the project and instead, policy assessments are against the relevant NPS. Nevertheless, generally, the LPA policies relating to open space are consistent in seeking to protect open space provision, to increase the supply and to respond to identified deficits in the provision.

9.2.6 Table 9.1 sets out the district authorities up-to-date open space assessments and there are up-to-date assessments of open space for all three LPA.

Table 9.1: Up-to-Date Assessments

Authority	Development Plan Document	Open Space Assessments
Babergh and Mid-Suffolk District Councils	Emerging Babergh and Mid Suffolk Joint Local Plan	Babergh and Mid Suffolk Open Space Assessment (May 2019)
Braintree District Council	Braintree District Local Plan 2013-2033 Section 1 (adopted Feb 2021)	Braintree Open Space Study (2016 – 2033)
	Braintree District Local Plan 2013-2033 Section 2 (adopted 25 Jul 2022)	

9.3 Definitions

9.3.1 Open space is defined as '*land laid out as a public garden, or used for the purposes of public recreation, or land which is a disused burial ground.'*

9.3.2 However, the footnote to Section 5.10 of EN-1 which sets out the NPS approach to land use including open space, green infrastructure and Green Belt policy, states that:

'…open space should be taken to mean all open space of public value, including not just land, but also areas of water such as rivers, canals, lakes and reservoirs which offer important opportunities for sport and recreation and can also act as a visual amenity…

…Green infrastructure is a network of multi-functional green spaces, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.'

9.3.3 Whilst public gardens and burial grounds are relatively straightforward to define, the definition of 'public recreation' and 'visual amenity' is less so. Therefore, set out below is the approach to defining open space for the project.

9.4 Methodology

9.4.1 National Grid has undertaken a detailed assessment of the land within or nearby to the Order Limits to determine if it is open space, including via the following methods:

- Open space has been identified through desktop research processes using online mapping systems to ascertain DEFRA records of registered parks and gardens, publicly accessible leisure facilities and playing fields and publicly accessible nature reserves.
- Each LPA has been requested to provide information recorded and considered to be open space. Data has been taken from the up-to-date open space assessments.
- Site visits and reviews of aerial photography have also been undertaken to identify any land that appears to be open space (such as being set out as a public garden, appearing to be a disused burial ground (old gravestones etc.), used by the local community for recreation (sports, games, dog walking etc.), with evidence of potential recreational activities (such as park benches, picnic benches, local clubs (such as fishing or yachting clubs).
- Desktop referencing was undertaken through extraction of Land Registry data, requests for land interest information from landowners to identify open spaces.

9.4.2 While the above definition of open space is somewhat open to interpretation, the project has taken a precautionary approach to include all land that could be considered to be open space in the list of potential sites, assessing potential locations containing allotments, cemeteries, common land, golf courses, Accessible Natural Green Space, amenity land, parks, sports pitches, recreation grounds and village greens, consistent with EN-1 guidance. The identified sites are detailed at Table 9.2.

9.4.3 The assessment presented in Table 9.2 considers whether as a result of the project, the open space will be able to continue in use and function without impact. If it was considered that it will not be materially affected by the project; no further assessment was required as the NPS policy is not engaged.

9.5 Assessment

9.5.1 The Order Limits have been designed to avoid built development and proposed development allocations, in adopted and emerging local plans, including allocated and identified open space. However, on occasion, it is necessary for the overhead line to pass through open space to avoid settlements and conflicts with other developments, as detailed in the Open Space Assessment at 9.2.

9.5.2 In accordance with paragraph 5.10.6 of EN-1, which states, '*applicants will need to consult the local community on their proposals to build on open space, sports or recreational facilities, to substitute for any losses as a result of their proposal'*, and in accordance with requirements of the Planning Act 2008, National Grid undertook multi-stage pre-application consultations, allowing consultees several opportunities to provide feedback as the proposals evolved. Several rounds of consultation were undertaken between 2009 and 2013, when work was originally commenced on a reinforcement between Bramford and Twinstead.

9.5.3 A period of non-statutory consultation was then held for six weeks, between 25 March 2021 and 6 May 2021. Statutory consultation was then held for a period of eight weeks between 25 January 2022 and 21 March 2022 and provided the opportunity for the public and stakeholders to see how the project has evolved since the non-statutory consultation. Finally, National Grid held a targeted consultation between 8 September 2022 and 19 October 2022. Throughout the consultation activity, no concerns were raised in respect to the project's impact on any public open space or recreation space.

9.5.4 If the loss of open space is proposed, then in accordance with Section 5.10.6 of EN-1, the assessment must consider if any LPA or independent assessment identified whether the space was surplus to requirements. Alternatively, if the space is not considered surplus, then the assessment must consider whether the benefits of the project (including need) outweigh the loss of part of the existing space when taking into account any compensatory land proposed. As evidenced below, the issue of surplus land is not engaged.

9.5.5 Referring to Table 9.2, the areas identified can be viewed in Figure 2 (Open Space) of this Planning Statement.

Table 9.2: Open Space Assessment

Site	Distance	Purpose and Use of Space	Assessment	Loss?	Ref.
Hintlesham Golf Course	Adjacent	Hintlesham Golf Course is defined in the Babergh and Mid-Suffolk Open Space Assessment evidence base documentation as 'Sports Club Space'. Hintlesham Golf Course is a membership only golf course and is not open to the public. As such, the land itself is not publicly accessible. However, adopting a precautionary approach to the definition of open space, and having particular regard to the visual amenity aspect of the definition of open space, the golf course has been considered as potential open space.	A very small section of the north-western edge of Hintlesham Golf Course is within the Order Limits for the project. The Order Limits in this location are required for a low voltage line diversion, construction access and proposed landscape planting. These works are to be located in the vicinity of the Course Club House and maintenance yard, utilising an existing access route. Due to the fact the works in this location are very minor in nature, and aside from the proposed planting, temporary; it is not considered that the project would materially impact on the function or use of this space and there is no loss in the use or function of this space.	No	OP/1
Hintlesham Woods SSSI	Within	The Hintlesham Woods Site of Special Scientific Interest (SSSI) consists of Wolves Wood, Hintlesham Wood and Ramsey Wood, and comprises 118 hectares of ancient woodland.	The (new) 400kV overhead line would use the route and existing pylons of the existing 400kV overhead line through Hintlesham Woods, and the existing 400kV overhead line would be re-routed	No	OP/2

Site	Distance	Purpose and Use of Space	Assessment	Loss?	Ref.
		Parts of the SSSI are located within the Order Limits which is designated for its ancient woodland habitat and breeding bird assemblage and is managed by the RSPB as one of its reserves. Public Rights of Way are located through the woodlands. Collectively, the woodlands are considered to be a general green space for walking and enjoying the countryside. As such, the site has been considered as potential open space.	around to the north and west of the woods on newly constructed pylons. As no new permanent infrastructure is proposed within the site, other than the oversailing of the space with electricity lines, it is not considered that the project would materially impact on the function or use of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.		
Hadleigh Railway Walk	Within	Hadleigh Railway Walk is defined in the Babergh and Mid-Suffolk Open Space Assessment evidence base documentation as 'Accessible Natural Green Space'. The area is heavily signposted, well managed and provides a walking route with bins and seating interspersed. Although not a designated PRoW, Hadleigh Railway Walk is well used by cyclists and pedestrians. Hadleigh Railway Walk has, therefore, been considered as potential open space.	The proposed 400kV overhead line would run broadly parallel to the existing 400kV overhead line between Hadleigh Railway Walk in the east and Overbury Hall to the west. The proposed 400kV overhead line approximately follows the alignment of the existing 132kV overhead line, which would be removed in its entirety in this section. National Grid has made a commitment to keep this route open to users by using scaffolding or tunnelling to provide safety for users. As no new permanent infrastructure is proposed within the site, other than the oversailing of the space with electricity lines, it is not considered that the project would materially impact on the function or use of this space and there is no loss in the use or function of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/3
Dollops Wood	Within	Dollops Wood is ancient woodland habitat and comprises mature semi-natural woodland on a slope with boggy ground at the bottom adjacent to the public footpath which leads north from the Dollops. Dollops Wood is considered to be a general green space for walking and enjoying the countryside. As such, the site has been considered as potential open space.	The 132kV overhead line would be removed at Dollops Wood. At this location, construction would be confined to the existing maintenance swathe. The conductors would be lowered down and pulled out. No vehicles would be used within the woodland. Consequently, it is not considered that the project would materially impact on the function or use of this space and there is no loss in the use or function of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/4

Site	Distance	Purpose and Use of Space	Assessment	Loss?	Ref.
Stoke by Nayland Golf Course	Adjacent	Stoke by Nayland Golf Course is defined in the Babergh and Mid-Suffolk Open Space Assessment evidence base documentation as 'Sports Club Space'. Stoke by Nayland Golf Course is only open to paying guests and is not open to the public. As such, the land itself is not publicly accessible. However, adopting a precautionary approach to the definition of open space, and having particular regard to the visual amenity aspect of the definition of open space, the golf course has been considered as potential open space.	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/5
Mill Farm Land	Within	Mill Farm Land is designated in the Assington Neighbourhood Plan as 'Local Green Space'. The land is privately owned grazing land, orchard and wet woodland. A public right of way borders both the southern and western extents of the designated land, outside of the designation. As such, the land itself is not publicly accessible. However, adopting a precautionary approach to the definition of open space, the land has been considered as potential open space for the purposes of this assessment as it may provide public value in terms of visual amenity.	Within the designated Mill Farm land, it is proposed to remove the existing 132kV overhead line and one pylon (PCB 67). The proposed (new) 400kV overhead line would run broadly parallel to the existing 400kV overhead line and a new pylon may be sited within the designation, subject to the LoD implemented in this location (although, this is likely to be within the arable field within the designation). In any event, as the designation is not publicly accessible, it is not considered that the replacement of a 132kV pylon with a 400kV pylon within the designation would materially impact on the function or use of this space. Consequently, there would be, at worse, no net increase in the number of pylons within the designation, resulting in no loss in the use or function of this space.	No	OP/6
Assington Village Playing Field	Adjacent	Assington Village Playing Field is defined in the Babergh and Mid-Suffolk Open Space Assessment evidence base documentation as 'recreation/sports space'. The site comprises the Assington Village Hall and playing field which is a full-sized grass football pitch and the site has a car park with 60 spaces. As such, the site has been considered as potential open space.	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/7
Tiger Hill	Adjacent	Tiger Hill is defined in the Babergh and Mid-Suffolk Open Space Assessment evidence base documentation as 'Accessible	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of	No	OP/8

Site	Distance	Purpose and Use of Space	Assessment	Loss?	Ref.
		Natural Green Space'. Tiger Hill is a Local Nature Reserve for heathland, fen and woodland with hazel dormouse. The Tiger Hill Local Nature Reserve is considered to be a general green space for walking and enjoying the countryside. As such, the site has been considered as potential open space.	this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.		
Henny Road (1)	Adjacent	The Braintree Section 2 Local Plan allocated a small area of land adjacent to Henny Road as 'amenity green space'. Braintree defines amenity green space as spaces open to free and spontaneous use by the public, but neither laid out nor managed for a specific function such as a park, public playing field or recreation ground; nor managed as a natural or semi-natural habitat. As such, the site has been considered as potential open space.	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/9
Henny Road (2)	Adjacent	The Braintree Section 2 Local Plan allocated a small area of land adjacent to Henny Road as 'amenity green space'. Braintree defines amenity green space as spaces open to free and spontaneous use by the public, but neither laid out nor managed for a specific function such as a park, public playing field or recreation ground; nor managed as a natural or semi-natural habitat. As such, the site has been considered as potential open space.	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/10
Daws Hall	Adjacent	Daws Hall is a managed 'meadow' area on flat ground above the river valley and a damper sward on the gentle valley slopes, primarily comprised of areas of neutral grassland merging into more acidic swards. Also on the site is the Daws Hall Centre for Environmental Education (which offers regular public and educational events). As such, the site has been considered as potential open space.	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/11
Loshes Meadows	Within	Loshes Meadows Complex is an Essex Local Wildlife Site and comprises grassland, woodland, young plantations, hedgerows,	In this location, it is proposed to remove a section of the existing 400kV overhead line, as such, there would be a net loss of	No	OP/12

Site	Distance	Purpose and Use of Space	Assessment	Loss?	Ref.
		and marsh habitats. It supports a variety of flowering plants, breeding birds, butterflies, and reptiles. Loshes Meadow Complex is considered to be a general green space for walking and enjoying the countryside. As such, the site has been considered as potential open space.	overhead line infrastructure within Loshes Meadow. It is not considered that the project would materially impact on the function or use of this space and there is no loss in the use or function of this space. Hence, the NPS open space paragraphs are not engaged and no further assessment is required.		
Church of St John the Evangelist	Adjacent	The Church of St John the Evangelist comprises a church building and an ancient burial ground. As such, the site has been considered as potential open space.	As the site is located outside of the Order Limits, it is not considered that the project would materially impact on the function or use of this space . Hence, the NPS open space paragraphs are not engaged and no further assessment is required.	No	OP/13

9.6 Summary

9.6.1 The project has taken a precautionary approach to the identification of potential open space. In the case of the project, there will be no material impact or loss to the function or use of the spaces identified. Once the project is constructed, the spaces will be restored and continue to function with no impact from the operation of the project. This is evidenced by the assessment presented at Table 9.2.

9.6.2 Where the space will be able to continue in use and function without impact, it was considered that it will not be materially affected by the project and no further assessment was required. The reason for this is set out in Column 4 of Table 9.2.

9.6.3 Whilst there might be some short-term disturbance while the affected sections of the route are being constructed, there will be no material impact or loss to the area of open space in the long term and once constructed, the land will be restored to its former condition.

9.6.4 Overall, there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, the NPS policy relating to impact on open space provision are not engaged. Subsequently, there is no need to consider whether the open space in question is surplus to requirements or provide compensatory land as per the policy requirements of Section 5.10.6 of EN-1. These requirements are duplicated in proposed revised EN-1 and hence the emerging NPS makes no change to the assessment.

10. Conclusion

10.1 Overview

10.1.1 This Planning Statement has appraised the project as a whole against the requirements of relevant planning policy. Chapter 3 sets out the national need for the project while Chapter 4 provides a section-by-section overview of the project in respect to its physical context and a more detailed description of the proposed route alignment, whilst identifying the key planning constraints in each section which are then further assessed in Chapters 7 and 8. Chapter 5 of this Planning Statement sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; demonstrating how such policy and legislative objectives have been embedded into the design of the project.

10.1.2 This Chapter brings the conclusions of the previous Chapters together, demonstrating that the planning balance lies overwhelmingly in favour of the grant of development consent for the project; securing the project's benefits for generations to come.

10.1.3 This Chapter describes the project's benefits and its significant adverse effects during construction and operation. The Chapter then considers the overall planning balance, in view of the relevant NPS against which the application for development consent will be determined, including the three objectives to sustainable development (environmental, social and economic objective).

10.2 Project Need

10.2.1 The national need for the project is described in Chapter 3 of this Planning Statement and also in the Need Case (**application document 7.2.1)**. The existing electricity transmission network in East Anglia does not have the capability needed to reliably and securely transport all the energy that will be connected in the future, while working to the required standards.

10.2.2 With new offshore wind generation, a new nuclear power station at Sizewell C and greater interconnection with countries across the North Sea being proposed, there will be a large increase in the amount of renewable and low carbon electricity generation connecting along the East coast.

10.2.3 This increased generation will play a key role in delivering the UK Government's net zero ambitions and delivering up to 50GW of offshore wind connected by 2030. To facilitate these ambitions, electricity network infrastructure is needed to ensure that energy can be transported from where it is generated to where it is used.

10.2.4 Whilst the transmission system in East Anglia has been sufficient until today, it will soon exceed its current capability. This includes its thermal boundary capability (the physical capacity of the circuits to carry power) and transient stability (the ability to accommodate faults without damaging generators or the network).

10.2.5 Increased transmission capability is therefore required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its licence obligations, and to allow new sources of electricity generation to connect. This is vital to

facilitate the ambitious targets set by the Government, for secure, clean and affordable energy for the long term.

10.2.6 Further detail of the need that the Bramford to Twinstead reinforcement is addressing is set out in the Need Case (April 2023) (**application document 7.2.1**).

10.3 Project Benefits

10.3.1 The project results in clear and significant economic, social and environmental benefits, including:

- The project significantly contributes to National Grid maintaining a robust, efficient, co-ordinated and economic system of electricity transmission, in accordance with its statutory and licence obligations, thus allowing new sources of electricity generation to connect to the network;
- Supporting the security of the UK's energy supply; the project would create additional capacity within the transmission network and would help to meet Government targets to deliver net zero emissions;
- The project is fundamental to the delivery of the Government's ambition to achieve up to 50GW of offshore wind connected by 2030;
- There is a clear, long-term economic benefit to reinforcing this part of the network with the cost of reinforcement being outweighed by the significant constraint costs that would otherwise be incurred in the long term if the project was to not go ahead;
- Beneficial visual effects and beneficial effects on setting of historic assets are likely to occur where the existing 132kV and/or 400kV overhead lines are removed and an underground cable is proposed in Section E: Dedham Vale AONB and parts of Section G: Stour Valley; and
- National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). This net gain is in addition to any required EIA mitigation to avoid overlap or double counting.

10.4 Project Adverse Effects (During Construction)

10.4.1 As with the case with large NSIP, the projects are likely to result in some adverse effects during construction, the residual ones being assessed as:

- Construction activities associated with the 400kV underground cable in the landscape of the AONB affecting the natural beauty indicators of the AONB (reducing to a neutral effect once construction is complete, and the working area reinstated);
- Construction activities associated with the 400kV underground cable and Stour Valley East CSE compound affecting the landscape within the Stour Valley SLA (reducing to a neutral effect once construction is complete, and the working area reinstated);
- Construction activities within landscape character areas (reducing to a neutral effect once construction is complete, and the working area reinstated);
- Construction activities for the 400kV underground cable and CSE compound on the community areas of Polstead, Leavenheath, Lamarsh and Alphamstone (reducing to a neutral effect once construction is complete, and the working area reinstated);

- Direct impact on non-designated archaeological remains through below ground disturbance (archaeological recording (preservation by record) would reduce effect to neutral);
- Increase in amenity, fear and intimidation for walkers, cyclists and horse riders using Church Road, Twinstead (reducing to a neutral effect once construction is complete);
- Potential significant noise effects at noise sensitive receptors due to daytime construction noise and potential night working (seven due to daytime construction noise and 12 due to potential night working) (reducing to a neutral effect once construction is complete, and the working area reinstated);
- Habitat loss and modification/degradation of lowland mixed deciduous woodland Habitat of Priority Importance (reducing to a neutral effect once construction is complete, and the working area reinstated);
- Potential significant vibration effects at one property (Hill House Farm) from construction activities and potential significant noise effects at 19 noise sensitive receptors (reducing to a neutral effect once construction is complete, and the working area reinstated); and
- Inter-project cumulative effects for landscape and views (reducing to neutral once construction is complete, and the working area reinstated).

10.5 Project Adverse Effects (During Operation)

10.5.1 As with the case with large NSIP, the projects are likely to result in some adverse effects during operation, the residual ones being assessed as:

- Introduction of a new overhead line to the north of Ramsey Wood on LCA2 (long-term moderate adverse);
- Introduction of a new overhead line on the views from community areas at Burstall and Hintlesham (long-term moderate adverse); and
- Inter-project cumulative effects for landscape and visual around Bramford Substation when combined with East Anglia THREE and East Anglia GREEN (significant long-term adverse).

10.6 Planning Balance

10.6.1 The Need Case **(application document 7.2.1)** sets out the strategic need for the project, which is very strong and to which considerable weight should be attached in the planning balance.

10.6.2 Section 104 of the Planning Act 2008 states, amongst other matters, that applications must be decided in accordance with any relevant NPS, except where the SoS is satisfied that the adverse impact of the proposed development would outweigh its benefits.

10.6.3 As set out in detail in Chapter 6 of this Planning Statement, there are two relevant NPS, EN-1 (Overarching Energy) and EN-5 (Electricity Networks Infrastructure). The proposed revised NPSs were published and laid before Parliament in November 2023 in preparation for designation in early 2024 and have weight as important and relevant considerations. However , the application for development consent will be primarily determined against the current designated NPSs (2011). Regard has also been had to

emerging replacement NPS where they are materially different to the designated documents.

10.6.4 The need for new NSIP is set out in Part 3 of EN-1. Paragraph 3.1.3 on EN-1 states, *'the IPC should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPSs on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described for each of them in this Part.'*

10.6.5 In a section on the need for electricity transmission apparatus, paragraph 3.7.10 of EN1 states, *'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. The IPC should consider that the need for any given proposed new connection or reinforcement has been demonstrated if it represents an efficient and economical means of connecting a new generating station to the transmission or distribution network, or reinforcing the network to ensure that it is sufficiently resilient and has sufficient capacity.'*

10.6.6 Based on the level and urgency of need for energy projects, paragraph 4.1.2 of EN-1 states that the decision maker should *'start with a presumption in favour of granting consent to applications for energy NSIP'.*

10.6.7 The clear statements in the NPS weigh strongly in favour of granting development consent for all energy projects in general, and specifically electricity transmission projects; determining that the need for the project has already been established. The policy presumption in favour of granting development consent is, therefore, engaged. Notwithstanding the presumption in favour of consent, the level and urgency of the need for the project is set out in Chapter 3 of this Planning Statement and the Need Case (April 2023) (**application document 7.2.1**) which demonstrates how the project is supporting the UK's transition to net zero. Based upon this, substantial weight is afforded to the need for the project.

10.6.8 In addition, this Planning Statement has assessed local planning policy at Chapter 8; recognising that such policies may be a material consideration in the determination of applications for development consent. It is noted that, although there are no explicit policies which reference the project, the project is broadly consistent with the objectives of local plan policies with regard to minimising adverse effects and creating sustainable development, having regard to the three objectives of sustainable development, discussed in Chapter 8.

10.6.9 In respect of developing within the AONB, it has been assessed that 'exceptional circumstances' apply. The project complies with the tests as set out in paragraph 5.9.10 of EN-1; the project is demonstrably in the public interest and benefits from a strong needs case, as detailed in Chapter 3; the cost of, and scope for, developing outside the AONB or meeting the need in some other way has been considered as part of the evolution of the project; and any detrimental effect on the landscape can be offset by undergrounding in the AONB, meaning there would be a lack of significant permanent operational effects on these landscapes.

10.6.10 The ES identifies a number of potential significant effects of the project before mitigation and a smaller number of residual significant effects post mitigation during the construction and operation of the project, as highlighted at Sections 10.4 and 10.5. Any significant adverse effects during construction should be afforded very little weight in the planning balance. This is because, construction impacts would reduce to a neutral effect once construction is complete, and the working area reinstated. Additionally, construction activities and their resultant impact are temporary, sequenced and of a transient nature

given the linear construction site. In any single location, perceptible construction activities and their resultant impact are likely to be considerably shorter in duration when compared to the overall construction programme of up to five years. Moreover, extensive mechanisms (both good practice and additional mitigation) have been put in place to mitigate construction effects, including measures that require the approval of the LPA prior to the commencement of development. Given the proposed mitigation and temporary nature of these construction effects, the need for the project clearly outweighs these effects.

10.6.11 Of the possible adverse effects identified during operation, only one significant long-term residual adverse effect has been identified; inter-project cumulative effects for landscape and visual around Bramford Substation when combined with East Anglia THREE and East Anglia GREEN. While this significant adverse effect to landscape and visual receptors weighs negatively in the overall planning balance for the project, it is noted that paragraph 5.9.8 of EN1 indicates *'virtually all nationally significant energy infrastructure projects will have effects on the landscape',* and only one of the other projects has been consented.

10.6.12 The project has been designed carefully and, having regard to siting constraints, the potential harm to the landscape has been reduced through the provision of reasonable mitigation where possible and appropriate. In addition, this harm is offset in the overall planning balance by the beneficial visual effects which are likely to occur where the existing overhead lines in the landscape are removed. Weight should be afforded to the likely beneficial visual effects, and where applicable the beneficial effects on the setting of heritage assets, where existing overhead lines are removed and not replaced with new overhead line. This occurs where the existing 132kV overhead line is removed and not replaced with a new 400kV line in Dedham Vale AONB, part of the Stour Valley, and the stretch of Section AB within which the routes of the proposed 400kV overline and the existing 132kV overhead line diverge. Similarly, this also occurs where a stretch of existing 400kV overhead line is removed in the Stour Valley.

10.6.13 Finally, the presumption in Section 104(3) of the Planning Act 2008 is subject to other exceptions, such as whether the decision would lead to the UK being in breach of any of its international obligations. In this regard, a HRA Report (**application document 5.3**) presents the HRA undertaken for the project. Stage 2 Appropriate Assessment found that no adverse effect on the integrity of the SPA and Ramsar sites identified would occur once good practice CoCP measures and embedded measures are employed, as supported by the WFD Assessment [**REP1-009**]. As a result, the HRA does not need to progress onto Stage 3 of the HRA process and the project is compliant with the NPS in relation to HRA, meaning the presumption is engaged.

10.6.14 Overall, the need for the project is set out in the Need Case (April 2023) (**application document 7.2.1**) to which significant weight should be afforded. 'Need' is also clearly established by the NPS, which considers the need for new electricity transmission and distribution infrastructure as urgent as it supports the transition of the economy to net zero. This Planning Statement has assessed the policy considerations in the relevant NPS as well as local planning policy, the principles of the Holford and Horlock Rules and the Electricity Act and has not identified any matters that would outweigh the grant of development consent in the planning balance. The ES only identifies three residual adverse impacts (two of which would not be significant); meanwhile the long-term significant impact identified concerns cumulative impacts of future projects which only one has been consented. The planning balance is, therefore, very clearly in favour of granting consent as the benefits of the project clearly and significantly outweigh the adverse impacts.

10.7 Summary

10.7.1 It is the conclusion of this Planning Statement that the proposed development has been developed in accordance with EN-1 and EN-5 and provides significant benefits outweighing the limited adverse effects identified. Overall, the planning balance lies overwhelmingly in favour of the grant of development consent for the project, thus securing the project's benefits for generations to come.

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Figure 1: LPA Boundaries

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
PLANNING STATEMENT LPA BOUNDARIES
REGULATION 5(2)(q)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 7.1

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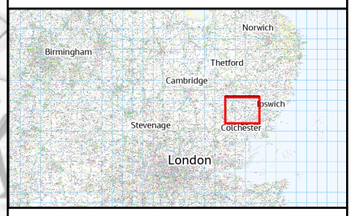
Legend
- Section boundaries
- Order Limits
- Local planning authority districts
- County council

Suffolk County Council
Mid-Suffolk District Council
West Suffolk Council
Babergh District Council
Braintree District Council
Colchester Borough Council
Tendring District Council
Essex County Council

Bramford
Burstall Hill
Burstall
Burstall Bridge
Hintlesham
Hadleigh
AB: Bramford Substation/Hintlesham
D: Polstead
Polstead Heath
Upper Layham
Lower Layham
C: Brett Valley
Polstead
E: Dedham Vale Area of Outstanding Natural Beauty
Leavenheath
F: Leavenheath /Assington
Assington
Workhouse Green
Lamarsh
Alphamstone
G: Stour Valley
Twinstead
Wickham St Paul
H: Grid Supply Point Substation
Sudbury
Colchester
A131
A134
A1087
A12

250000
245000
240000
235000
230000
585000
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595000
600000
605000
610000

0 1 2 3 4 5 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	GW	IF	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE : Figure 1 Planning Statement LPA Boundaries

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_PlanningStatement_Fig1_Rev0

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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0061	1	1	A

SCALE : 1:100000

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Figure 2: Open Space

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
PLANNING STATEMENT OPEN SPACE
REGULATION 5(2)(q)
SHEET 1 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 7.1

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- Section boundaries
- Order Limits
- Possible Open Space

AB: Bramford Substation/Hintlesham

C: Brett Valley

OP/1

OP/2

OP/3

Bramford

Burstall Hill

Burstall

Burstall Bridge

Hintlesham

Hadleigh

Upper Layham

Lower Layham

A12

A1071

247000
246000
245000
244000
243000
242000
241000
240000
239000

602000 603000 604000 605000 606000 607000 608000 609000 610000 611000 612000 613000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	IF	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure 2 Planning Statement Open Space

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_PlanningStatement_Fig2_Rev0

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NG DRAWING No. BT-JAC-020631-500-0062

SHEET NO. 1

NO. OF SHEETS 3

ISSUE: A

SCALE: 1:35000

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NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
PLANNING STATEMENT OPEN SPACE
REGULATION 5(2)(q)
SHEET 2 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 7.1

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- Section boundaries
- Order Limits
- Possible Open Space

D: Polstead

E: Dedham Vale Area of Outstanding Natural Beauty

F: Leavenheath/Assington

OP/4

OP/5

OP/6

OP/7

OP/8

Newton

Boxford

Polstead

Polstead Heath

Lower Layham

Assington

Leavenheath

Stoke-by-Nayland

Nayland

Polstead

A134

A1087

A1071

NEWTON CP

BOXFORD CP

POLSTEAD CP

ASSINGTON CP

LEAVENHEATH CP

STOKE-BY-NAYLAND CP

BURES ST MARY CP

SHELLEY CP

242000
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240000
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234000

591000 592000 593000 594000 595000 596000 597000 598000 599000 600000 601000 602000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	IF	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE : Figure 2 Planning Statement Open Space

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_PlanningStatement_Fig2_Rev0

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SHEET NO. 2

NO. OF SHEETS 3

ISSUE: A

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NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
PLANNING STATEMENT OPEN SPACE
REGULATION 5(2)(q)
SHEET 3 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 7.1

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- Section boundaries
- Order Limits
- Possible Open Space

H: Grid Supply Point Substation

OP/13
OP/12
OP/11
OP/9
OP/10

G: Stour Valley

Twinstead
Workhouse Green
Wickham St Paul
Alphamstone
Lamarsh
A131

BULMER CP
MIDDLETON CP
LITTLE HENNY CP
GREAT HENNY CP
LITTLE CORNARD CP
WICKHAM ST PAUL CP
GESTINGTHORPE CP
TWINSTEAD CP
ALPHAMSTONE CP
GREAT MAPLESTEAD CP
LITTLE MAPLESTEAD CP
PEBMARSH CP
BURES HAMLET CP

240000
239000
238000
237000
236000
235000
234000
233000
232000

580000 581000 582000 583000 584000 585000 586000 587000 588000 589000 590000 591000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	IF	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure 2 Planning Statement Open Space

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.: AAA_BTT_PlanningStatement_Fig2_Rev0

A3

NG DRAWING No.: BT-JAC-020631-500-0062

SHEET NO.: 3

NO. OF SHEETS: 3

ISSUE: A

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Appendix A: Signposting for Compliance with NPS EN-1

Table A.1: Table provides details as to how the project has had regard to the relevant paragraphs of NPS EN-1.

Para.	Requirement	How the Project Meets the Policy	Location
Part 4: Assessment Principles			
4.1 General Points			
4.1.2	*Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIP. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.2 of this NPS.*	Section 104 (3) of the Planning Act 2008 sets out that that an application for development consent should be determined in accordance with the relevant NPS except where a limited number of circumstances would apply, as repeated at paragraph 1.1.2 of EN-1. It is not considered that any of these limited circumstances would apply, therefore, the application will be against the relevant NPS, any local impact report (LIR) and any other matters the SoS thinks are both important and relevant to the decision. The level and urgency of the need for the project is set out in Planning Statement Chapter 3 (**application document 7.1**) and the Need Case (April 2023) (**application document 7.2.1**). Given the Planning Act 2008 requirements set out in Section 104, and the clear statements in respect to a presumption in favour of such types of energy infrastructure, specifically electricity transmission projects (3.7.10 of EN-1), as set out in EN-1; the need for the project has been established. The policy presumptions at Sections 3.7.10 and 4.1.2 of EN-1 in favour of granting development consent is, therefore, engaged.	Planning Statement Chapter 3 (**application document 7.1**) Need Case (April 2023) (**application document 7.2.1**)
4.1.3	*In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:*	Planning Statement Chapter 7 (**application document 7.1**) provides an assessment of the project against the three objectives to sustainable development.	Planning Statement Chapter 10 (**application document 7.1**)

Para.	Requirement	How the Project Meets the Policy	Location
	• *its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and* • *its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.*		
4.1.4	*In this context, the IPC should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels. These may be identified in this NPS, the relevant technology-specific NPS, in the application or elsewhere (including in local impact reports).*	As above at paragraph 4.1.3.	Planning Statement Chapter 10 (**application document 7.1**)
4.1.5	*The policy set out in this NPS and the technology-specific energy NPSs is, for the most part, intended to make existing policy and practice of the Secretary of State in consenting nationally significant energy infrastructure clearer and more transparent, rather than to change the underlying policies against which applications are assessed (or therefore the "benchmark" for what is, or is not, an acceptable nationally significant energy development). Other matters that the IPC may consider both important and relevant to its decision-making may include Development Plan Documents or other documents in the Local Development Framework. In the event of a conflict between these or any other documents and an NPS, the NPS prevails for purposes of IPC decision making given the national significance of the infrastructure. The energy NPSs have taken account of relevant Planning Policy Statements (PPSs) and older-style Planning Policy Guidance Notes (PPGs) in England and Technical Advice Notes (TANs) in Wales where appropriate.*	National Grid has identified Development Plan policies that may be considered important or relevant by the SoS. Policies relevant to the assessments contained in the ES are referred to in ES Appendix 2.2: Regulatory and Planning Policy Context (**application document 6.3.2.2**). In relation to the Planning Statement, the assessment of relevant policies is contained in Planning Statement Appendix D (**application document 7.1**)	ES Appendix 2.2: Regulatory and Planning Policy Context (**application document 6.3.2.2**) Planning Statement (**application document 7.1**)
4.1.7	*The IPC should only impose requirements in relation to a development consent that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. The IPC should take into account the guidance in Circular 11/95, as revised, on "The Use of Conditions in Planning Permissions" or any successor to it.*	The application for development consent for the project is accompanied by a draft DCO (**application document 3.1**) and a draft DCO Explanatory Memorandum (**application document 3.2**). The draft DCO, while may be subject to amendments throughout the examination, sets out the requirements in respect to the construction, operation and maintenance of the project. The Requirements and their suggested reason for imposition are also explained in the	Draft DCO (**application document 3.1**) Draft DCO Explanatory Memorandum (**application document 3.2**)

Para.	Requirement	How the Project Meets the Policy	Location
		draft DCO Explanatory Memorandum (**application document 3.2**). The proposed Requirements have been considered against the tests for planning conditions (necessary; relevant to planning; relevant to the development to be permitted; enforceable; precise; and reasonable in all other respects) as set out in paragraph 56 of the NPPF.	
4.1.8	*The IPC may take into account any development consent obligations that an applicant agrees with local authorities. These must be relevant to planning, necessary to make the proposed development acceptable in planning terms, directly related to the proposed development, fairly and reasonably related in scale and kind to the proposed development, and reasonable in all other respects.*	The application for development consent is not subject to any obligations, such as Section 106 Agreements, as such agreements/obligations were not considered necessary to make the project acceptable in planning terms; the project is acceptable in planning terms on its own merits.	N/A
4.1.9	*In deciding to bring forward a proposal for infrastructure development, the applicant will have made a judgement on the financial and technical viability of the proposed development, within the market framework and taking account of Government interventions. Where the IPC considers, on information provided in an application, that the financial viability and technical feasibility of the proposal has been properly assessed by the applicant it is unlikely to be of relevance in IPC decision making (any exceptions to this principle are dealt with where they arise in this or other energy NPSs and the reasons why financial viability or technical feasibility is likely to be of relevance explained).*	At multiple stages of the options appraisal process, National Grid has carried out assessments on the financial and technical viability of the project. The Funding Statement (**application document 4.1**) explains how the acquisition of the land necessary to build the project would be funded as well as how the project generally is to be funded.	Funding Statement (**application document 4.1**)
4.2 Environmental Statement			
4.2.1	*All proposals for projects that are subject to the European Environmental Impact Assessment Directive must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project. The Directive specifically refers to effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. The Directive requires an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary,*	The application for development consent is accompanied by an ES which meets the requirements of EN-1 and EN-5. ES Appendix 5.1: Scope of the Assessment (**application document 6.3.5.1**) outlines the scope of the assessment for air quality. This has been informed by the Scoping Opinion (**application document 6.6**).	Scoping Opinion (**application document 6.6**) ES (**application document 6.2**)

Para.	Requirement	How the Project Meets the Policy	Location
	cumulative, short, medium and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects.		
4.2.2	*To consider the potential effects, including benefits, of a proposal for a project, the IPC will find it helpful if the applicant sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated. This information could include matters such as employment, equality, community cohesion and well-being.*	Many of the contributory factors affecting social and economic effects such as employment, community services and health and well-being were scoped out of the assessment in the Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) and this was confirmed in the Scoping Opinion (**application document 6.6**). Therefore, no separate reporting is required and a standalone socio-economics chapter has not been included within the ES. Instead, the Socio Economics and Tourism Report (**application document 5.9**) sets the reasons why significant social and economic effects are not anticipated. This document sits outside the ES and concludes that the project is still unlikely to generate significant effects on these topics.	Socio-economics and Tourism Report (**application document 5.9**) ES (**application document 6.2**)
4.2.3	*For the purposes of this NPS and the technology-specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project. In some circumstances (for example, gas pipe-lines) it may be appropriate to assess effects arising from commissioning infrastructure once it is completed but before it comes into operation. Details of this and any other additional assessments are set out where necessary in Sections on individual impacts in this NPS and in the technology-specific NPSs. In the absence of any additional information on additional assessments, the principles set out in this Section will apply to all assessments.*	The ES (**application document 6.2**) provides an assessment of likely significant environmental effects arising during construction, operation and decommissioning of the project. Social and economic effects have been scoped out of the ES (see paragraph 4.2.2 above). The Planning Statement Chapter 7 (**application document 7.1**) provides an assessment of the environmental, social and economic impacts of the project from a planning perspective.	ES (**application document 6.2**) Planning Statement Chapter 7 (**application document 7.1**)
4.2.4	*When considering a proposal the IPC should satisfy itself that likely significant effects, including any significant residual effects taking account of any proposed mitigation measures or any adverse effects of those measures, have been adequately assessed. In doing so the IPC should also examine whether the assessment distinguishes between the project stages and identifies any mitigation measures at those stages. The IPC*	The ES (**application document 6.2**) has assessed the potential for significant effects and each topic chapter, where relevant, has identified the proposed mitigation measures required to avoid or reduce the potential significant adverse effects of the project. Mitigation measures are secured through the CEMP (**application document 7.5**).	ES (**application document 6.2**)

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	should request further information where necessary to ensure compliance with the EIA Directive.		
4.2.5	*When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence). The IPC may also have other evidence before it, for example from appraisals of sustainability of relevant NPSs or development plans, on such effects and potential interactions. Any such information may assist the IPC in reaching decisions on proposals and on mitigation measures that may be required.*	ES Chapter 15: CEA (**application document 6.2.15**) and the supporting appendix, ES Appendix 15.5: Inter project CEA (**application document 6.3.15.5**) set out the potential effects of the project in combination with other proposed developments.	ES Appendix 15.5: Inter project CEA (**application document 6.3.15.5**)
4.2.6	*The IPC should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.*	The ES Chapter 15: CEA **(application document 6.2.15**) and accompanying appendices details the CEA for the project. This includes an assessment of effects on the environment, local economy and community receptors.	ES Chapter 15: CEA (**application document 6.2.15**)
4.2.7	*In some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.*	The Order Limits include the LoD, which represent the maximum deviation for permanent infrastructure, such as the overhead line, pylons and underground cable and are shown on the Work Plans (**application document 2.5**). The assessment presented within the ES is based on the 'Proposed Alignment', which is shown in ES Figure 4.1: Proposed Project (**application document 6.4**). However, it should be noted that the permanent aspects of the project, including pylon locations are not fixed and could be located anywhere within the LoD as defined on the Works Plans (**application document 2.5**). The location and orientation of the CSE compounds and GSP substation may also change within the LoD. The LoD allow for adjustment to the final positioning of project features to avoid localised constraints or unknown or unforeseeable issues that may arise.	ES (**application document 6.2**) General Arrangement Plans (**application document 2.10**)
4.2.8	*Where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the*	Where details are still to be finalised, the ES assess the effects of the project against the maximum extent of the proposed development. Section 11 of the topic chapters covers flexibility in design or construction and sensitivity	ES (**application document 6.2**) ES Chapter 4: Project

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	project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.	testing. This outlines any new or different significant effects that may occur through the application of flexibility that is allowed for within the draft DCO compared to the baseline scenario presented in the earlier sections of the topic chapter. The flexibility allows for micro-siting of pylons and the alignment of the 400kV overhead line within the LoD during detailed design and construction, without triggering the need to revise the EIA. Further details regarding what is included within the baseline scenario and within the sensitivity assessment can be found in ES Chapter 4: Project Description (**application document 6.2.4**).	Description (**application document 6.2.4**)
4.2.9	*Should the IPC determine to grant development consent for an application where details are still to be finalised, it will need to reflect this in appropriate development consent requirements. Clearly, if development consent is granted for a proposal and at a later stage the developer wishes for technical or commercial reasons to construct it in such a way that its extent will be greater than has been provided for in the terms of the consent, it may be necessary to apply for a change to be made to the development consent, and the application to change the consent may need to be accompanied by further environmental information to supplement the original ES.*	This is noted and the flexibility in respect to the project would be secured in the drafting of the DCO. The project has sought to detail all flexible options in respect to the construction, operation and decommissioning of the project in the ES and other application documents in order to avoid the later possibility of a material amendment to the DCO.	ES (**application document 6.2**) ES Chapter 4: Project Description (**application document 6.2.4**)
4.2.10	*To help the IPC consider thoroughly the potential effects of a proposed project in cases where the EIA Directive does not apply and an ES is not therefore required, the applicant should instead provide information proportionate to the scale of the project on the likely significant environmental, social and economic effects. References to an Environmental Statement in this NPS should be taken as including a statement which provides this information, even if the EIA Directive does not apply.*	Noted.	
4.2.11	*In this NPS and the technology-specific NPSs, the terms 'effects', 'impacts' or 'benefits' should be understood to mean likely significant effects, impacts or benefits.*	Noted.	
4.3 Habitats and Species Regulations			

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4.3.1	*Prior to granting a development consent order, the IPC must, under the Habitats and Species Regulations, (which implement the relevant parts of the Habitats Directive and the Birds Directive in England and Wales) consider whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. Further information on the requirements of the Habitats and Species Regulations can be found in a Government Circular. Applicants should also refer to Section 5.3 of this NPS on biodiversity and geological conservation. The applicant should seek the advice of Natural England and/or the Countryside Council for Wales, and provide the IPC with such information as it may reasonably require to determine whether an Appropriate Assessment is required. In the event that an Appropriate Assessment is required, the applicant must provide the IPC with such information as may reasonably be required to enable it to conduct the Appropriate Assessment. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects.*	The HRA Report (**application document 5.3**) has been undertaken and one aspect was taken forward to Appropriate Assessment following advice from Natural England. The HRA Report concluded that when good practice measures are taken into account, that there would be no likely significant effects on European sites.	HRA Report (**application document 5.3**)
4.4 Alternatives			
4.4.1	As in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option.	National Grid undertakes an options appraisal on each new project. options appraisal is a robust and transparent process that is used to compare options and to assess the positive and negative effects they may have, across a wide range of criteria including environmental, socio-economic, technical and cost factors. The assessment is documented to provide in a transparent manner, the information on which decisions are based. Consultation with the relevant stakeholders and community have been carried out to inform the selection of the preferred options. The Evolution of the Project (**application document 7.2.6**) sets out how the project has evolved from a concept, through strategic options, route corridors and indicative alignments to the project presented within the application for development consent. The ES Chapter 3: Alternatives Considered (**application document 6.2.3**) includes an assessment of reasonable	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) The Evolution of the Project (**application document 7.2.6**)

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		alternatives, and environmental considerations in choosing a preferred option and route. The Order Limits are subsequently based on a refinement of the preferred route.	
4.4.2	However: • *applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility;* • *in some circumstances there are specific legislative requirements, notably under the Habitats Directive, for the IPC to consider alternatives. These should also be identified in the ES by the applicant; and in some circumstances, the relevant energy NPSs may impose a policy requirement to consider alternatives (as this NPS does in Sections 5.3, 5.7 and 5.9).*	The Infrastructure Planning (Environmental Impact Assessment) Regulations requires applicants to document alternative development options considered as part of the application for development consent. Part 1 of Schedule 4 of the EIA Regulations requires that the ES includes '*An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects'*. It is also noted that the NPS requires the ES to describe how the social, economic and environmental effects have been taken into account when making decisions between alternatives. The ES Chapter 3: Alternatives Considered (**application document 6.2.3**) includes an assessment of reasonable alternatives, and environmental considerations in choosing a preferred option and route. Alternatives are also a requirement of the HRA Report (**application document 5.3**), however, only if adverse effects on the integrity of European sites are identified at the Appropriate Assessment stage (Stage 2). As stated, the HRA Report (**application document 5.3**) confirms that Stage 2 Appropriate Assessment found no adverse effect on the integrity of the SPA and Ramsar would occur once good practice measures set out in the CEMP Appendix A: CoCP (**application document 7.5.1**) and embedded measures are employed, as supported by the WFD Assessment (**application document 5.6**). Hence, the project is not required to consider alternatives under the Habitats Directive, as per paragraph 4.4.2 of EN-1.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) HRA Report (**application document 5.3**) WFD Assessment (**application document 5.6**)
4.4.3	*Where there is a policy or legal requirement to consider alternatives the applicant should describe the alternatives considered in compliance with these requirements. Given the level and urgency of need for new energy infrastructure, the IPC should, subject to any relevant legal requirements (e.g. under the Habitats Directive) which indicate otherwise, be guided by the following*	The need for the project is summarised in the Planning Statement Chapter 3 (**application document 7.1**) and set out in detail in the Need Case (April 2023) (**application document 7.2.1**). The Infrastructure Planning (Environmental Impact Assessment) Regulations requires applicants to document	The Planning Statement Chapter 3: Statement of Need (**application document 7.1**) ES Chapter 3: Alternatives

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	principles when deciding what weight should be given to alternatives: • *the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner;* • *the IPC should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security and climate change benefits) in the same timescale as the proposed development;* • *where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies or (as in the case of nuclear) there is reason to suppose that the number of sites suitable for deployment of a technology on the scale and within the period of time envisaged by the relevant NPSs is constrained, the IPC should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals;* • *alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the IPC thinks they are both important and relevant to its decision;* • *as the IPC must decide an application in accordance with the relevant NPS (subject to the exceptions set out in the Planning Act 2008), if the IPC concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the IPC's decision;* • *alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals*	alternative development options considered as part of the application for development consent. The ES Chapter 3: Alternatives Considered (**application document 6.2.3**) includes an assessment of reasonable alternatives setting out the environmental considerations in choosing a preferred option and route. Chapter 5 of the Planning Statement (**application document 7.1**) sets out how planning policy, namely EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have influenced the options appraisal process; demonstrating how such policy objectives have been embedded into the design of the project.	Considered (**application document 6.2.3**)

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	for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the IPC's decision; • *alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant to the IPC's decision; and* • *it is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the IPC in respect of it (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant). Therefore where an alternative is first put forward by a third party after an application has been made, the IPC may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the IPC should not necessarily expect the applicant to have assessed it.*		
4.5 Criteria for "good design" for energy infrastructure			
4.5.1	*Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.*	ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives Considered (**application document 6.2.3**), which explains the different options that were considered during the project development, and also ES Chapter 4: Project Description (**application document 6.2.4**), which describes the design submitted within the application. The design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place.	ES Appendix 4.1: Good Design (**application document 6.3.4.1**) ES Chapter 3: Alternatives Considered (**application document 6.2.3**) ES Chapter 4: Project Description (**application document 6.2.4**)
4.5.2	*Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how*	ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects	ES Appendix 4.1: Good Design (**application document 6.3.4.1**)

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	good design, in terms of siting and use of appropriate technologies can help mitigate adverse impacts such as noise.	that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives Considered (**application document 6.2.3**) and also ES Chapter 4: Project Description (**application document 6.2.4**), which describes the design submitted within the application. The design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) Chapter 4: Project Description (**application document 6.2.4**)
4.5.3	*In the light of the above, and given the importance which the Planning Act 2008 places on good design and sustainability, the IPC needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be. In so doing, the IPC should satisfy itself that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.*	The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside ES Chapter 4: Project Description (**application document 6.2.4**), which describes the design submitted within the application. National Grid has also considered alternative design suggestions made in written representations, during consultation feedback from external stakeholders. The design change process was implemented by National Grid to address relevant design changes which arose from the external stakeholders. This process allowed for each identified change to be effectively assessed by National Grid's specialist teams covering environment, design and construction and land rights.	ES Appendix 4.1: Good Design (**application document 6.3.4.1**) ES Chapter 3: Alternatives Considered (**application document 6.2.3**) ES Chapter 4: Project Description (**application document 6.2.4**) Planning Statement Chapter 5 (**application document 7.1**).
4.5.4	*For the IPC to consider the proposal for a project, applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in*	In addition to the comments made above at paragraph 4.5.3, regard has also been had to the Horlock and Holford rules in respect to the siting of new transmission infrastructure and substations and as described in detail in Planning Statement Chapter 5 (**application document 7.1**). Both sets of rules have been deployed by National Grid and have formed an important part of developing the preferred route and design of the project. For example, the route seeks to avoid siting	ES Appendix 4.1: Good Design (**application document 6.3.4.1)** Planning Statement Chapter 5 (**application document 7.1**). ES Chapter 3: Alternatives Considered (**application**

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	mind the operational, safety and security requirements which the design has to satisfy.	above ground infrastructure in areas with significant amenity value, the most direct route is preferred to avoid the need for additional angle pylons, siting infrastructure in areas benefiting from existing advantageous vegetation screening is preferred and densely populated urban/residential areas should be avoided, where possible. Essentially the Proposed Alignment has been selected because it performed more strongly overall than any other options, having regard to these factors (amongst others).	**document 6.2.3**) ES Chapter 4: Project Description (**application document 6.2.4**)
4.8 Climate change adaptation			
4.8.1	Part 2 of this NPS covers the Government's energy and climate change strategy, including policies for mitigating climate change. This part of the NPS sets out how applicants and the IPC should take the effects of climate change into account when developing and consenting infrastructure. While climate change mitigation is essential to minimise the most dangerous impacts of climate change, previous global greenhouse gas emissions have already committed us to some degree of continued climate change for at least the next 30 years. If new energy infrastructure is not sufficiently resilient against the possible impacts of climate change, it will not be able to satisfy the energy needs as outlined in Part 3 of this NPS.	Climate change has been considered when designing the project. Firstly, the need for the project is summarised in Chapter 3 of the Planning Statement (**application document 7.1**) and set out in detail in the Need Case (April 2023) (**application document 7.2.1**). The Need Case demonstrates how the project is supporting the UK's transition to net zero. The risk of flooding, effects of greenhouse gas and embedded carbon have also been considered as part of the ES. ES Appendix 4.3: Greenhouse Gas Assessment (**application document 6.3.4.3**) presents a summary of the carbon that would be released during the construction (either embodied within the materials or associated with construction vehicles and machinery). The assessment concludes that the construction and operational carbon dioxide emission numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets. The project is accounting for the latest Environment Agency guidance on climate change, in particular climate change allowances for rainfall intensity. This would inform surface water drainage design for above ground infrastructure. The GSP substation and CSE compounds and all permanent above ground infrastructure would be located in Flood Zone 1, see the FRA (**application document 5.5**) for further details. During construction, the project would comply with the good practice measures outlined within the CEMP	Planning Statement Chapter 3:Needs Case (**application document 7.1**) FRA (**application document 5.5**) CEMP Appendix A - Code of Construction Practice (**application document 7.5.1**) ES Appendix 4.1: Good Design (**application document 6.3.4.1**) ES Appendix 4.3: Greenhouse Gas Assessment (**application document 6.3.4.3**)

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		Appendix A: CoCP (**application document 7.5.1**) to reduce the risk of flooding or other extreme weather conditions associated with climate change. Finally, the ES Appendix 4.1: Good Design (**application document 6.3.4.1**), presents the different choices made during the design process including reducing use of raw materials and waste generation. It also sets out how the project has been designed to be resilient to climate change.	
4.8.2	Climate change is likely to mean that the UK will experience hotter, drier summers and warmer, wetter winters. There is a likelihood of increased flooding, drought, heatwaves and intense rainfall events, as well as rising sea levels. Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening.	Extreme climatic events, such as flooding; extreme temperatures (high temperatures); extreme temperatures (low temperatures); ground subsidence; high winds/storm and tree fall are considered within ES Appendix 5.3: Major Accidents and Disasters (**application document 6.3.5.3**). The assessment has shown that the existing design measures, legal requirements, codes and standards adequately control the potential major accident and/or disaster. Also see above at paragraph 4.8.3.	ES Appendix 5.3: Major Accidents and Disasters (**application document 6.3.5.3**)
4.8.5	*New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change. While not required by the EIA Directive, this information will be needed by the IPC.*	The impact of climate change, including the risk of flooding, have been considered during the optioneering and design evolution process. The ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how the project has been designed to avoid area of significant flood risk. The GSP substation and CSE compounds and all permanent above ground infrastructure would be located in Flood Zone 1, see the FRA (**application document 5.5**) for further details. The remaining structures including above ground structures such as pylons and below ground structures such as the underground cable are designed to National Grid technical standards to be resilient to flooding, wind, storms, extreme temperature and earth movement. The permanent drainage design at the GSP substation and the CSE compounds would be designed to greenfield run-off rates. CEMP Appendix A: CoCP (**application document 7.5.1**) also states that where new, permanent areas of	ES Chapter 4: Project Description (**application document 6.2.4**) ES Appendix 5.3: Major Accidents and Disasters Scoping (**application document 6.3.5.3**) CEMP Appendix A: CoCP (**application document 7.5.1**) FRA (**application document 5.5**) ES Chapter 9: Water Environment (**application document 6.2.9**). ES Appendix 4.3: Greenhouse Gas

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		impermeable land cover are created, the drainage design will include allowances for climate change in accordance with current Environment Agency requirements. With these measures in place, the project is considered to be resilient to climate change over the project design life.	Assessment (**application document 6.3.4.2**) Planning Statement Chapter 3 Needs Case (**application document 7.1**) ES Appendix 4.1: Good Design (**application document 6.3.4.1**)
4.8.6	*The IPC should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate projections become available after the preparation of the ES, the IPC should consider whether they need to request further information from the applicant.*	The Met Office UK Climate Projections (UKCP18) (Met Office, 2021) provide an assessment of likely climate change trends for the 21st century, with potential changes including wetter winters and drier summers (with higher intensity rainfall), that could affect soil conditions, land grade and farming practices, increase the risk of flooding etc. These factors have been taken into account in the FRA and the assessments in the topic chapters of the ES such as ES Chapter 11: Agricultural and Soils (**application document 6.2.11**).	ES Chapter 11: Agricultural and Soils (**application document 6.2.11)**
4.8.7	*Applicants should apply as a minimum, the emissions scenario that the Independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections.*	The project takes account of the latest Met Office UK Climate Projections (UKCP18) (Met Office, 2021) in order that forecasts of long-term changing climatic conditions can be taken into account. UKCP18 has been reviewed to provide an overview of likely climate change scenarios where relevant in the ES.	FRA (**application document 5.5**) ES Chapter 11: Agricultural and Soils (**application document 6.2.11**)
4.8.8	*The IPC should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.*	The project takes account of the latest Met Office UK Climate Projections (UKCP18) (Met Office, 2021). The GSP substation and the CSE compounds are outside of Flood Zones 2 and 3, as described in the FRA (**application document 5.5**). The remaining aspects of the project (typically the pylons and underground cable) are designed to National Grid standards and have a high resilience to flooding. Consideration of climate change effects on flood risk over the lifetime of the proposed development are assessed within the FRA (**application document 5.5**) which also	FRA (**application document 5.5**)

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		documents the embedded and good practice measures included to make the project resilient to climate change. The FRA concludes that the project would be safe from flooding over its lifetime and would not cause any detrimental effects on flood risk to land outside the Order Limits.	
4.8.11	*Any adaptation measures should be based on the latest set of UK Climate projections, the Government's latest UK Climate Change Risk Assessment, when available and in consultation with the EA.*	Adaptation measures are detailed above at paragraph 4.8.8. The project is accounting for the latest guidance on climate change (UKCP18). National Grid has held several meetings with relevant organisations, including the Environment Agency and also with Essex County Council and Suffolk County Council in their roles as LLFA. Further details on the consultation undertaken with the Environment Agency, IDB and LLFA can be found in ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**) and the relevant SoCGs prepared with the Consultees; Draft SoCG The Environment Agency (**application document 7.3.3**) and Draft SoCG Local Authorities (**application document 7.3.1**)	ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**)
4.10 Pollution control and other environmental regulatory regimes			
4.10.4	*Applicants should consult the Marine Management Organisation (MMO) on nationally significant projects which would affect, or would be likely to affect, any relevant marine areas as defined in the Planning Act 2008 (as amended by s.23 of the Marine and Coastal Access Act 2009). The IPC consent may include a deemed marine licence and the MMO will advise on what conditions should apply to the deemed marine licence. The IPC and MMO should cooperate closely to ensure that energy NSIP are licensed in accordance with environmental legislation, including European directives.*	Consultation has not been undertaken with the MMO as the project does not affect any relevant marine areas as defined in the Planning Act 2008.	N/A
4.10.6	*Applicants are advised to make early contact with relevant regulators, including EA and the MMO, to discuss their requirements for environmental permits and other consents. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the IPC. Wherever possible, applicants are encouraged to submit applications for*	The required Environmental Permit applications are defined and set out in the Planning Statement (**application document 7.1**). Contact has been made and meetings will continue to be held with key stakeholders including the Environment Agency to discuss the requirements moving forward.	Planning Statement (**application document 7.1**)

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	Environmental Permits and other necessary consents at the same time as applying to the IPC for development consent.		
4.10.7	*The IPC should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with EA and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, the Countryside Council for Wales, Drainage Boards, and water and sewerage undertakers, the IPC should be satisfied, before consenting any potentially polluting developments, that:* • *the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and* • *the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.*	A CEMP (**application document 7.5**) has been submitted as part of the application for development consent. This sets out the actions and measures that would be implemented to reduce the risk of a pollution incident along with pro-active actions that would be taken should any pollution incident occur. Prior to application, the CEMP was shared with the relevant planning authorities, Natural England and the Environment Agency for comment and their comments were considered in the version submitted with the application. In addition, ES Chapter 16 Environmental Management and Mitigation (**application document 6.2.16**) sets out the environmental monitoring, management and mitigation measures that would be delivered as part of the project.	CEMP (**application document 7.5**) ES Chapter 16 Environmental Management and Mitigation (**application document 6.2.16**)
4.10.8	*The IPC should not refuse consent on the basis of pollution impacts unless it has good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted.*	The required Environmental Permit applications are defined and set out in the Planning Statement (**application document 7.1**). Contact has been made and meetings will continue to be held with key stakeholders including the Environment Agency to discuss the requirements moving forward. There have been no comments made to National Grid to date that indicate that licences or consents would not be granted.	Planning Statement (**application document 7.1**)
4.11 Safety			
4.11.1	*HSE is responsible for enforcing a range of occupational health and safety legislation some of which is relevant to the construction, operation and decommissioning of energy infrastructure. Applicants should consult with the Health and Safety Executive (HSE) on matters relating to safety.*	The HSE has been consulted throughout the consultation activities on the project. In its response to statutory consultation, the HSE considered matters within its remit and identified that the consultation Order Limits were in the 'consultation area' for two major accident hazard pipelines. However, as the project does not seek to increase the populations in proximity to the pipelines, they did not raise any concerns with the proposals in this respect. The HSE also confirmed that they did not have any concerns in	Consultation Report (**application document 5.1**)

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		relation to Hazardous Substance Consent, explosives sites or electrical safety (from a planning perspective.	
4.12 Hazardous Substances			
4.12.1	*All establishments wishing to hold stocks of certain hazardous substances above a threshold need Hazardous Substances consent. Applicants should consult the HSE at pre-application stage93 if the project is likely to need hazardous substances consent. Where hazardous substances consent is applied for, the IPC will consider whether to make an order directing that hazardous substances consent shall be deemed to be granted alongside making an order granting development consent. The IPC should consult HSE about this.*	The CEMP (**application document 7.5**) and CEMP Appendix A: CoCP (**application document 7.5.1**) set out measures to minimise the risk of a pollution incident occurring including appropriate storage and handling of fuels and other substances hazardous to the environment. The contractor would ensure that any potentially hazardous waste is correctly stored, tested, recorded and disposed of. National Grid continue to engage with HSE with respect to compliance with health and safety legislation.	The Consultation Report (**application document 5.1**) ES Chapter 16 Environmental Management and Mitigation (**application document 6.2.16**) Draft Construction Environmental Management Plan (**application document 7.5**) Code of Construction Practice **(application document 7.5.1**)
4.13 Health			
4.13.2	*As described in the relevant Sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the applicant and the IPC should consider the cumulative impact on health.*	Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) has concluded that there are no likely significant effects to human (health) receptors from the project arising from the operation or construction of the project. The SoS considers that a standalone assessment of health and wellbeing can be scoped out of the ES as detailed in the Scoping Opinion (**application document 6.6**). Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) states that impacts of the project on geology and hydrogeology, traffic and transport, air quality and noise and vibration will be assessed as part of separate aspect chapters, and that this will include where relevant assessment of the likely significant effects of those aspects during operation to human (health) receptors.	ES Chapter 13: Air Quality (**application document 6.2.13**) ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**) ES Chapter 15: CEA (**application document 6.2.14**) CEMP Appendix A: CoCP (**application document 7.5.1**) Environmental Impact Assessment Scoping

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		In addition, the SoS agrees that on the basis of the design measures to be incorporated into the project and the distance of the nearest noise sensitive receptors (NSR) from the location of the GSP substation (circa 300m) and the CSE compounds and sections of underground cable would not generate noise during operation, the SoS agrees that operational noise relating to human receptors can be scoped out of the ES. As described in ES Chapter 13: Air Quality (**application document 6.2.13**), during the construction phase, construction machinery and vehicles could generate dust and fine particulate matter, particularly through earthwork and soil stripping activities. Machinery and vehicles would also emit exhaust emissions through the combustion of fossil fuels. There is limited potential for the project to generate dust and emissions during the operational phase, due to the limited activities associated with inspection and maintenance, therefore, this has been scoped out of the assessment. A dust risk assessment has been undertaken and is reported in ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**). Cumulative impacts are assessed in ES Chapter 15: CEA (**application document 6.2.14**). During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP (**application document 7.5.1**) which has a number of measures that would avoid or reduce effects on health, for example, in accordance with commitment GG10 any activity carried out or equipment located within a construction compound that may produce a noticeable nuisance, including but not limited to dust, noise, vibration and lighting, would be located away from sensitive receptors such as residential properties or designated ecological sites where practicable.	Report Main Report (**application document 6.5.1**) Statement of Statutory Nuisance (**application document 5.4**) Scoping Opinion (**application document 6.6**).
4.13.3	*The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests.*	See paragraph 4.13.2 above.	

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4.13.4	*New energy infrastructure may also affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.*	The project is not anticipated to impact public and/or community services during construction or operation as outlined in the Socio-economics and Tourism Report (**application document 5.9**). Effects on transport use and access to PRoW are considered in ES Chapter 12: Traffic and Transport (**application document 6.2.12**) and the TA **(application document 5.7**). in addition, an Open Space Assessment is provided in Chapter 9 Planning Statement (**application document 7.1**).	Socio-economics and Tourism Report (**application document 5.9**) ES Chapter 12: Traffic and Transport (**application document 6.2.12**) TA (**application document 5.7**) Chapter 9 Planning Statement (**application document 7.1**)
4.13.5	*Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either constitute a reason to refused consents or require specific mitigation under the Planning Act 2008. However, the IPC will want to take account of health concerns when setting requirements relating to a range of impacts such as noise.*	See paragraph 4.13.2 above.	
4.14 Common law nuisance and statutory nuisance			
4.14.2	*It is very important that, at the application stage of an energy NSIP, possible sources of nuisance under Section 79(1) of the 1990 Act and how they may be mitigated or limited are considered by the IPC so that appropriate requirements can be included in any subsequent order granting development consent. (See Section 5.6 on Dust, odour, artificial light etc. and Section 5.11 on Noise and vibration.)*	To reduce the risk of Statutory Nuisance occurring, the CEMP (**application document 7.5**) includes good practice measures to avoid or reduce the effects of dust, lighting, noise and vibration. These measures would reduce impacts that could otherwise result in nuisance during construction. The development authorised by the DCO must be undertaken in accordance with the CEMP, pursuant to Requirement 5 of the draft DCO (**application document 3.1**). National Grid and its contractor would carry out all work in accordance with the CEMP during the construction of the project unless otherwise agreed with the relevant LPA. The Statement of Statutory Nuisance (**application document 5.4**) identifies the matters set out in Section 79(1)	Statement of Statutory Nuisance (**application document 5.4**) CEMP Appendix A: CoCP (**application document 7.5.1**)

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		of the EPA 1990 in respect of statutory nuisance and considers whether the project has the potential to cause nuisance. With the good practice measures in place outlined within the CEMP Appendix A: CoCP (**application document 7.5.1**) no breach of Section 79(1) of the EPA 1990 is expected to occur as a result of the construction and operation of the project.	
4.15 Security considerations			
4.15.2	*Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.*	The project is designed to avoid the risk of damage through sabotage and arson (including terrorism), and the risk of electrocution is also a further deterrent. The materials are resistant to damage and are not at risk of catching fire. During construction, the working area would have security fencing around the site and only authorised personnel would be admitted to the site. Outside of working hours, the site would have a security guard to check for trespassers that could result in sabotage or arson. During operation, the GSP substation, the CSE compounds and pylons would be surrounded by security fencing to prevent trespass. Wilful sabotage of overhead lines is also very rare due to the perceived risk of electrocution that could result from this.	N/A
4.15.3	*DECC will be notified at pre-application stage about every likely future application for energy NSIP, so that any national security implications can be identified. Where national security implications have been identified, the applicant should consult with relevant security experts from CPNI, OCNS and DECC to ensure that physical, procedural and personnel security measures have been adequately considered in the design process and that adequate consideration has been given to the management of security risks. If CPNI, OCNS and/or DECC are satisfied that security issues have been adequately addressed in the project when the application is submitted to the IPC, it will provide confirmation of this to the IPC. The IPC should not need to give any further consideration to the details of the security measures in its examination.*	Overall responsibility for security of the energy sector lies with the Department for Energy Security and Net Zero which works closely with Government security agencies including the CPNI to reduce the vulnerability of the most 'critical' infrastructure assets in the sector to terrorism and other national security threats. National Grid is a provider of critical infrastructure across the UK. In this role, National Grid maintains regular dialogue with a range of organisations with responsibility for both local and national crime prevention and security. As such, all sites and infrastructure would be designed and operated to the relevant security standards. Department for Energy Security and Net Zero have been comprehensively briefed on the project; most notably during a meeting on 8 January 2021, which the project was	N/A

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		presented in the context of the upcoming application for development consent including timings etc.	
4.15.4	*The applicant should only include sufficient information in the application as is necessary to enable the IPC to examine the development consent issues and make a properly informed decision on the application.*	Noted.	N/A
Part 5 Generic Impacts			
5.2 Air quality and emissions			
5.2.2	*CO2 emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided (even with full deployment of CCS technology). However, given the characteristics of these and other technologies, as noted in Part 3 of this NPS, and the range of non-planning policies aimed at decarbonising electricity generation such as EU ETS (see Section 2.2 above), Government has determined that CO2 emissions are not reasons to prohibit the consenting of projects which use these technologies or to impose more restrictions on them in the planning policy framework than are set out in the energy NPSs (e.g. the CCR and, for coal, CCS requirements). Any ES on air emissions will include an assessment of CO2 emissions, but the policies set out in Section 2, including the EU ETS, apply to these emissions. The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets and this Section does not address CO2 emissions or any Emissions Performance Standard that may apply to plant.*	The project need is set out in Planning Statement Chapter 3 (**application document 7.1**) and the Need Case (April 2023) (**application document 7.2.1**) which demonstrates how the project is supporting the UK's transition to net zero. ES Appendix 4.3: Greenhouse Gas Assessment (**application document 6.3.4.3**) presents a summary of the carbon that would be released during construction and operation of the project. The assessment concludes that the carbon dioxide emissions from the project are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets.	Planning Statement Chapter 3: Needs Case (**application document 7.1**) ES Appendix 4.3: Greenhouse Gas Assessment (**application document 6.3.4.3**) Need Case (April 2023) (**application document 7.2.1**)
5.2.6	*Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the ES (ES).*	An air quality assessment has been undertaken within the ES Chapter 13: Air Quality (**application document 6.2.13**).	ES Chapter 13: Air Quality (**application document 6.2.13**)
5.2.7	*The ES should describe:* • *any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking*	The air quality assessment presented in ES Chapter 13: Air Quality (**application document 6.2.13**) describes the existing baseline levels of air quality and the potential effects from emissions including from generators and construction plant, construction vehicles and dust from earth moving. The	CEMP Appendix A: CoCP (**application document 7.5.1**)

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	account of any significant emissions from any road traffic generated by the project; • *the predicted absolute emission levels of the proposed project, after mitigation methods have been applied;* • *existing air quality levels and the relative change in air quality from existing levels; and* • *any potential eutrophication impacts.*	assessment has concluded that with the good practice measures in the CEMP Appendix A: CoCP (**application document 7.5.1**) there would be no significant effects on air quality. During the operation, vehicle numbers are expected to be very low and the only anticipated emissions should be from maintenance vehicles; which is likely to be negligible and sporadic with no quantifiable effect on local air quality. No eutrophication effects are anticipated as the project does not result in the increase in new residential accommodation or intensified agricultural uses.	ES Chapter 13: Air Quality (**application document 6.2.13**) ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**).
5.2.10	*In all cases the IPC must take account of any relevant statutory air quality limits. Where a project is likely to lead to a breach of such limits the developers should work with the relevant authorities to secure appropriate mitigation measures to allow the proposal to proceed. In the event that a project will lead to non-compliance with a statutory limit the IPC should refuse consent.*	There should be no significant emissions resulting from the project that would pose a threat to statutory air quality limits. During the operation of the project, vehicle numbers are expected to be very low and the only anticipated emissions should be from maintenance vehicles; which is likely to be negligible and sporadic with no quantifiable effect on local air quality.	ES Chapter 13: Air Quality (**application document 6.2.13**)
5.2.11	*The IPC should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage.*	The CEMP Appendix A: CoCP (**application document 7.5.1**) contains a list of relevant good practice measures relating to air quality. With the good practice measures in place, no significant effects on air quality are anticipated.	CEMP (**application document 7.5)** CEMP Appendix A: CoCP (**application document 7.5.1**)
5.2.13	*The mitigations identified in Section 5.13 on traffic and transport impacts will help mitigate the effects of air emissions from transport.*	The CEMP Appendix A: CoCP (**application document 7.5.1**) contains a list of relevant good practice measures relating to air quality. With the good practice measures in place, no significant effects on air quality are anticipated.	CEMP (**application document 7.5)** CEMP Appendix A: CoCP (**application document 7.5.1**)
5.3 Biodiversity and geological conservation			
5.3.3	*Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for*	ES Chapter 7: Biodiversity (**application document 6.2.7**) details the likely significant effects of the project with respect to biodiversity, including: internationally, nationally and locally designated sites; protected species and habitats; and	ES Chapter 7: Biodiversity (**application document 6.2.7**) ES Chapter 10: Geology and Hydrogeology

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	the conservation of biodiversity. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the IPC consider thoroughly the potential effects of a proposed project.	other species identified as being of principal importance for the conservation of biodiversity. ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) details the likely significant effects of the project with respect to geology and hydrogeology. As identified in ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**), there are no statutory designated sites for geological importance and no potential Local Geological Sites or notified Local Geological Sites within the study area.	(**application document 6.2.10**)
5.3.4	*The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.*	National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**)	Environmental Gain Report (**application document 7.4**) ES Chapter 7: Biodiversity (**application document 6.2.7**)
5.3.7	*As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (as set out in Section 4.4 above); where significant harm cannot be avoided, then appropriate compensation measures should be sought.*	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) addresses the alternatives considered on the project including how the project has avoided designated sites during the routing of corridors and alignments. ES Chapter 7: Biodiversity (**application document 6.2.7**) covers assessment and describes mitigation where required. ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) of the ES concludes there are no likely significant effects on geological conservation interests.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) Chapter 7: Biodiversity (**application document 6.2.7**) ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**)
5.3.9	*The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for these sites but do not provide statutory protection for potential Special Protection Areas (pSPAs) before they have been classified as a Special Protection Area. For the purposes of considering development proposals affecting them, as a matter of policy the Government wishes pSPAs to be considered in the same way as*	The HRA Report (**application document 5.3**) covers Ramsar sites and confirm that there are no pSPAs within the study area.	HRA Report (**application document 5.3**)

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	if they had already been classified. Listed Ramsar sites should, also as a matter of policy, receive the same protection.		
5.3.10	*Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified as SSSIs.*	ES Chapter 7: Biodiversity (**application document 6.2.7**) concludes that there is no significant effect on any SSSI as a result of the project. Furthermore, ES Appendix 15.5: Inter-Project CEA (**application document 6.3.15.5**) concludes that no significant cumulative effects are anticipated for biodiversity during construction or operation in combination with other developments.	ES Chapter 7: Biodiversity (**application document 6.2.7**)
5.3.11	*Where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect, after mitigation, on the site's notified special interest features is likely, an exception should only be made where the benefits (including need) of the development at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. The IPC should use requirements and/or planning obligations to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest.*	Chapter 5 of the Planning Statement (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; including limiting impacts to SSSI features in the routing and design studies. This is also reported in the ES Chapter 3: Alternatives Considered (**application document 6.2.3**) which documents the key environmental factors that were considered in the optioneering and design evolution process. ES Chapter 7: Biodiversity (**application document 6.2.7**) concludes that there is no significant effect on any SSSI as a result of the project. Furthermore, ES Appendix 15.5: Inter-Project CEA (**application document 6.3.15.5**) concludes that no significant cumulative effects are anticipated for biodiversity during construction or operation in combination with other developments. ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) concludes there are no likely significant effects on SSSI with geological conservation interests.	ES Chapter 7: Biodiversity (**application document 6.2.7**) ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) ES Appendix 15.5: Inter-Project CEA (**application document 6.3.15.5**)
5.3.13	*Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. The IPC should give due consideration to such regional or local designations. However,*	As noted in ES Chapter 10: Geology and Soils **(application document 6.2.10**) there are no Regional or Local Geological Sites affected by the project. Potential impacts on sites of regional and local biodiversity interest have been assessed in ES Chapter 7: Biodiversity (**application document 6.2.7**). Through design and embedded measures impacts to these receptors have been	ES Chapter 7: Biodiversity (**application document 6.2.7**) ES Chapter 10: Geology and Hydrogeology **(application document 6.2.10**)

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	given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.	reduced. Where impacts are unavoidable, habitat reinstatement would take place post-construction. No likely significant residual effects in relation to biodiversity receptors during construction or operation are anticipated as a result of the project.	
5.3.14	*Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat. Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why.*	Commitments specifically put in place to reduce potential effects at Hintlesham Woods are described in Table 3.1 of Annex B of ES Appendix 7.1: Hintlesham Woods SSSI Assessment (**application document 6.3.7.1.2**). These measures are contained within the REAC which is Appendix B of the CEMP (**application document 7.5.2**). The commitments to reduce impacts upon the high valued ancient woodland habitat would result in a neutral impact to this habitat once the coppiced vegetation had re-established. As such, as a result of the project, it is not considered that the loss or deterioration of the AWI would occur.	ES Chapter 7: Biodiversity (**application document 6.2.7**) ES Appendix 7.1: Hintlesham Woods SSSI Assessment (**application document 6.3.7.1.2**) LEMP (**application document 7.8**) Appendix B of the CEMP (**application document 7.5.2**)
5.3.17	*The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development.*	Habitats of Principal Importance have been considered in ES Chapter 7: Biodiversity (**application document 6.2.7**) and ES Chapter 16: Environmental Management and Mitigation (**application document 6.2.16**) applied where required.	ES Chapter 7: Biodiversity (**application document 6.2.7**) ES Chapter 16: Environmental Management and Mitigation (**application document 6.2.16**)
5.3.18	*The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:* • *during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;* • *during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;*	Appropriate mitigation measures have been put in place and are detailed in ES Chapter 7: Biodiversity (**application document 6.7.1**). The CEMP (**application document 7.5**) provides details of how these measures would be undertaken during construction and the LEMP (**application document 7.8**) details the habitat restoration and mitigation proposals.	ES Chapter 7: Biodiversity (**application document 6.7.1**) CEMP (**application document 7.5**) LEMP (**application document 7.8**)

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	• *habitats will, where practicable, be restored after construction works have finished; and* • *opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.*		
5.4 Civil and military aviation and defence interests			
5.4.2	*UK airspace is important for both civilian and military aviation interests. It is essential that the safety of UK aerodromes, aircraft and airspace is not adversely affected by new energy infrastructure. Similarly, aerodromes can have important economic and social benefits, particularly at the regional and local level. Commercial civil aviation is largely confined to designated corridors of controlled airspace and set approaches to airports. However, civilian leisure and military aircraft may often fly outside of 'controlled air space'. The approaches and flight patterns to aerodromes are not necessarily routine and can be irregular owing to a variety of factors including the performance characteristics of the aircraft concerned and the prevailing meteorological conditions.*	NATS (En Route) Public Limited Company ('NERL'), who are the UK's leading provider of air traffic control services have been consulted on the proposals during consultation activities on the project. NERL confirm that from a technical safeguarding aspect, the project does not conflict with their safeguarding criteria, accordingly, NERL has no safeguarding objection to the proposal. It has, therefore, been identified that the project would not adversely affect aviation sites, including aerodromes.	N/A
5.4.9	*Other operational defence assets may be affected by new development, for example the Seismological Monitoring Station at Eskdalemuir and maritime acoustic facilities used to test and calibrate noise emissions from naval vessels, such as at Portland Harbour. The MoD also operates Air Defence radars and Meteorological radars which have wide coverage over the UK (onshore and offshore). It is important that new energy infrastructure does not significantly impede or compromise the safe and effective use of any defence assets.*	As above at paragraph 5.4.2.	N/A
5.4.10	*Where the proposed development may have an effect on civil or military aviation and/or other defence assets an assessment of potential effects should be set out in the ES.*	As above at paragraph 5.4.2.	
5.4.11	*The applicant should consult the MoD, CAA, NATS and any aerodrome – licensed or otherwise – likely to be affected by the*	As above at paragraph 5.4.2.	

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	proposed development in preparing an assessment of the proposal on aviation or other defence interests.		
5.4.12	*Any assessment of aviation or other defence interests should include potential impacts of the project upon the operation of CNS infrastructure, flight patterns (both civil and military), other defence assets and aerodrome operational procedures. It should also assess the cumulative effects of the project with other relevant projects in relation to aviation and defence.*	As above at paragraph 5.4.2.	
5.4.13	*If any relevant changes are made to proposals during the pre-application and determination period, it is the responsibility of the applicant to ensure that the relevant aviation and defence consultees are informed as soon as reasonably possible.*	As above at paragraph 5.4.2.	
5.4.14	*The IPC should be satisfied that the effects on civil and military aerodromes, aviation technical sites and other defence assets have been addressed by the applicant and that any necessary assessment of the proposal on aviation or defence interests has been carried out. In particular, it should be satisfied that the proposal has been designed to minimise adverse impacts on the operation and safety of aerodromes and that reasonable mitigation is carried out. It may also be appropriate to expect operators of the aerodrome to consider making reasonable changes to operational procedures. When assessing the necessity, acceptability and reasonableness of operational changes to aerodromes, the IPC should satisfy itself that it has the necessary information regarding the operational procedures along with any demonstrable risks or harm of such changes, taking into account the cases put forward by all parties. When making such a judgement in the case of military aerodromes, the IPC should have regard to interests of defence and national security.*	As above at paragraph 5.4.2.	
5.4.15	*If there are conflicts between the Government's energy and transport policies and military interests in relation to the application, the IPC should expect the relevant parties to have made appropriate efforts to work together to identify realistic and pragmatic solutions to the conflicts. In so doing, the parties should*	As above at paragraph 5.4.2.	N/A

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	seek to protect the aims and interests of the other parties as far as possible.		
5.4.16	*There are statutory requirements concerning lighting to tall structures. Where lighting is requested on structures that goes beyond statutory requirements by any of the relevant aviation and defence consultees, the IPC should satisfy itself of the necessity of such lighting taking into account the case put forward by the consultees. The effect of such lighting on the landscape and ecology may be a relevant consideration.*	The only permanent lighting is proposed at the GSP substation and such lighting is not erected on tall structures. Pylons are not equipped with external lighting as detailed in ES Chapter 4: Project Description (**application document 6.2.4**)	ES Chapter 4: Project Description (**application document 6.2.4**)
5.4.17	*Where, after reasonable mitigation, operational changes, obligations and requirements have been proposed, the IPC considers that:* • *a development would prevent a licensed aerodrome from maintaining its licence;* • *the benefits of the proposed development are outweighed by the harm to aerodromes serving business, training or emergency service needs, taking into account the relevant importance and need for such aviation infrastructure; or* • *the development would significantly impede or compromise the safe and effective use of defence assets or significantly limit military training;* • *the development would have an impact on the safe and efficient provision of en route air traffic control services for civil aviation, in particular through an adverse effect on the infrastructure required to support communications, navigation or surveillance systems;* *consent should not be granted.*	NATS (En Route) Public Limited Company ('NERL'), which is the UK's leading provider of air traffic control services has been consulted on the proposals during consultation activities on the project. NERL confirms that from a technical safeguarding aspect, the project does not conflict with its safeguarding criteria, accordingly, NERL has no safeguarding objection to the proposal. It has, therefore, been identified that the project would not adversely affect aviation sites, including aerodromes. In addition, the project does not impact on any on civil and military aerodromes, aviation technical sites and other defence assets. This has been confirmed by a vigorous land referencing process.	N/A
5.4.18	*Where a proposed energy infrastructure development would significantly impede or compromise the safe and effective use of civil or military aviation or defence assets and or significantly limit military training, the IPC may consider the use of 'Grampian, or other forms of condition which relate to the use of future technological solutions, to mitigate impacts. Where technological*	As above at paragraph 5.4.17.	N/A

Para.	Requirement	How the Project Meets the Policy	Location
	solutions have not yet been developed or proven, the IPC will need to consider the likelihood of a solution becoming available within the time limit for implementation of the development consent. In this context, where new technologies to mitigate the adverse effects of wind farms on radar are concerned, the IPC should have regard to any Government guidance which emerges from the joint Government/Industry Aviation Plan		
5.4.19	*Mitigation for infringement of OLS may include:* • *amendments to layout or scale of infrastructure to reduce the height, provided that it does not result in an unreasonable reduction of capacity or unreasonable constraints on the operation of the proposed energy infrastructure;* • *changes to operational procedures of the aerodromes in accordance with relevant guidance, provided that safety assurances can be provided by the operator that are acceptable to the CAA where the changes are proposed to a civilian aerodrome (and provided that it does not result in an unreasonable reduction of capacity or unreasonable constraints on the operation of the aerodrome); and* • *installation of obstacle lighting and/or by notification in Aeronautical Information Service publications.*	As above at paragraph 5.4.17.	N/A
5.4.20	*For CNS infrastructure, the UK military Low Flying system (including TTAs) and designated air traffic routes, mitigation may also include:* • *lighting;* • *operational airspace changes; and* • *upgrading of existing CNS infrastructure, the cost of which the applicant may reasonably be required to contribute in part or in full.*	As above at paragraph 5.4.17.	N/A
5.6 Dust, odour, artificial light, smoke, steam and insect infestation			

Para.	Requirement	How the Project Meets the Policy	Location
5.6.4	*The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the ES*	No significant effects in respect to odour, dust, steam, smoke and artificial light are expected during the operational phase of the project. As described in ES Chapter 13: Air Quality (**application document 6.2.13**), during the construction phase, construction machinery and vehicles could generate dust and fine particulate matter, particularly through earthwork and soil stripping activities. Machinery and vehicles would also emit exhaust emissions through the combustion of fossil fuels. There is limited potential for the project to generate dust and emissions during the operational phase, due to the limited activities associated with inspection and maintenance therefore this has been scoped out of the assessment. A dust risk assessment has been undertaken and is reported in ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**). The impact of lighting is assessed in ES Chapter 6: Landscape and Visual (**application document 6.2.6**). Lighting shall be the lowest average lux levels necessary for safe delivery of each task and shall be positioned and directed to reduce the intrusion into adjacent properties and habitats, where practicable as per the good practice measure in the CEMP Appendix A: CoCP (**application document 7.5.1**). During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP (**application document 7.5.1**) to reduce the potential for adverse impacts due to the release of emissions or insect infestation. For example, in accordance with commitment GG11 within the CEMP Appendix A: CoCP (**application document 7.5.1**) site layout and housekeeping measures would be implemented by the contractor during the set-up of the temporary compounds preventing pests and vermin control, and treating any infestation promptly, including arrangements for the proper storage and disposal of waste produced on site.	ES Chapter 13: Air Quality (**application document 6.2.13**) ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**) ES Chapter 6: Landscape and Visual (**application document 6.2.6**) CEMP Appendix A: CoCP (**application document 7.5.1**) Statement of Statutory Nuisance (**application document 5.4**)

Para.	Requirement	How the Project Meets the Policy	Location
		In addition, a statement of statutory nuisance has been undertaken. See the Statement of Statutory Nuisance (**application 5.4**).	
5.6.5	*In particular, the assessment provided by the applicant should describe:* • *the type, quantity and timing of emissions;* • *aspects of the development which may give rise to emissions;* • *premises or locations that may be affected by the emissions;* • *effects of the emission on identified premises or locations; and* • *measures to be employed in preventing or mitigating the emissions*	No significant effects in respect to emissions during operation of the project are expected. As described in ES Chapter 13: Air Quality (**application document 6.2.13**), during the construction phase, construction machinery and vehicles could generate dust and fine particulate matter, particularly through earthwork and soil stripping activities. Machinery and vehicles would also emit exhaust emissions through the combustion of fossil fuels. A dust risk assessment has been undertaken and is reported in ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**). During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP (**application document 7.5.1**) to reduce the potential for adverse impacts due to the release of emissions or infestation. In addition, a statement of statutory nuisance has been undertaken. See the Statement of Statutory Nuisance (**application 5.4**).	ES Chapter 13: Air Quality (**application document 6.2.13**) ES Appendix 13.1: Dust Risk Assessment (**application document 6.3.13.1**) CEMP Appendix A: CoCP (**application document 7.5.1**) Statement of Statutory Nuisance (**application 5.4**)
5.6.6	*The applicant is advised to consult the relevant local planning authority and, where appropriate, the EA about the scope and methodology of the assessment.*	National Grid has had regular meetings with the Host Authorities and other relevant consultees, such as Natural England and the Environment Agency, since the project relaunch in December 2020. These have included thematic meetings to discuss survey methodology and results of surveys and the scope and methodology of the EIA assessment. Further details on these meetings can be found in ES Appendix 5.2: Response to Scoping Comments (**application document 6.3.5.2**) Separate to this, SoCG were progressed with the Host Authorities and Statutory Consultees which provided a record of engagement and subject matters which are agreed/not agreed, including the scope of the environmental	Consultation Report (**application document 5.1**) ES Appendix 5.2: Response to Scoping Comments (**application document 6.3.5.2**)

Para.	Requirement	How the Project Meets the Policy	Location
		assessments. Further information can be found in the relevant consultee SoCG. See Table 2.1 for further details.	
5.6.7	*The IPC should satisfy itself that:* • *an assessment of the potential for artificial light, dust, odour, smoke, steam and insect infestation to have a detrimental impact on amenity has been carried out; and* • *that all reasonable steps have been taken, and will be taken, to minimise any such detrimental impacts.*	See response to 5.6.4 and 5.6.5.	N/A
5.6.11	*Mitigation measures may include one or more of the following:* • *engineering: prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated;* • *lay-out: adequate distance between source and sensitive receptors; reduced transport or handling of material; and* • *administrative: limiting operating times; restricting activities allowed on the site; implementing management plans.*	During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP (**application document 7.5.1**) to reduce the potential for adverse impacts due to the release of emissions or infestation. These include control measures such as turning off machinery when not in use (GG12), layout measures such as locating equipment away from sensitive receptors where practicable (GG10) and the implementation of management plans (GG03).	CEMP Appendix A: CoCP (**application document 7.5.1**)
5.7 Flood risk			
5.7.4	*Applications for energy projects of 1 hectare or greater in Flood Zone 1 in England or Zone A in Wales and all proposals for energy projects located in Flood Zones 2 and 3 in England or Zones B and C in Wales should be accompanied by a flood risk assessment (FRA). An FRA will also be required where an energy project less than 1 hectare may be subject to sources of flooding other than rivers and the sea (for example surface water), or where the EA, Internal Drainage Board or other body have indicated that there may be drainage problems. This should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.*	The FRA (**application document 5.5**) has been submitted as part of the application for development consent focussing on flood risk from fluvial, surface water and groundwater sources. As detailed within the FRA (**application document 5.5**) flooding from other sources such as tidal, sewers and canals are scoped out of the assessment. National Grid also circulated a draft version of the FRA to the Environment Agency, IDB and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the submission version of the FRA.	FRA (**application document 5.5**)
5.7.5	*The minimum requirements for FRAs are that they should:*	The project has prepared a proportionate FRA (**application document 5.5**). This has been prepared by a competent	FRA (**application document 5.5)**

Para.	Requirement	How the Project Meets the Policy	Location
	• *be proportionate to the risk and appropriate to the scale, nature and location of the project;* • *consider the risk of flooding arising from the project in addition to the risk of flooding to the project;* • *take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made;* • *be undertaken by competent people, as early as possible in the process of preparing the proposal;* • *consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure;* • *consider the vulnerability of those using the site, including arrangements for safe access;* • *consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and identify flood risk reduction measures, so that assessments are fit for the purpose of the decisions being made;* • *consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes;* • *include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project;* • *consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems;* • *consider if there is a need to be safe and remain operational during a worst-case flood event over the development's lifetime; and*	person and draws on available data including historical information on previous events. The FRA assesses all relevant forms of flooding, although flooding from tidal, sewers and canals were scoped out of the assessment. It also takes into account the impacts of climate change over the development lifetime. It assesses the effects of the development on flood risk and of flood risk on the development. The draft FRA was shared with the Environment Agency, IDB and LLFA ahead of the submission for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the application submission version of the FRA, as well as in accordance with the minimum requirements detailed in paragraph 5.7.5. The FRA demonstrates that the project is acceptable with respect to flood risk and the flood risk management measures identified would be secured through the CEMP (**application document 7.5**) and Requirement 5 of the draft DCO.	

Para.	Requirement	How the Project Meets the Policy	Location
	• *be supported by appropriate data and information, including historical information on previous events.*		
5.7.7	*Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions with the EA, and, where relevant, other bodies such as Internal Drainage Boards, sewerage undertakers, navigation authorities, highways authorities and reservoir owners and operators. Such discussions should identify the likelihood and possible extent and nature of the flood risk, help scope the FRA, and identify the information that will be required by the IPC to reach a decision on the application when it is submitted. The IPC should advise applicants to undertake these steps where they appear necessary, but have not yet been addressed.*	National Grid has held several meetings with relevant organisations, including the Environment Agency and Essex County Council and Suffolk County Council in their roles as the LLFA to inform the development of the FRA (**application document 5.5**). National Grid also circulated a draft version of the FRA to the Environment Agency, IDB and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the submission version of the FRA. Details on the consultation undertaken can be found in Section 1.3 of the FRA (**application document 5.5**).	FRA (**application document 5.5**)
5.7.8	*If the EA has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the EA and take all reasonable steps to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns.*	National Grid has held a number of meetings with relevant organisations, including the Environment Agency and the LLFA. Discussions have informed the development of the FRA (**application document 5.5**). Details on the consultation undertaken can be found in ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**).	FRA (**application document 5.5**) ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**)
5.7.9	*In determining an application for development consent, the IPC should be* *satisfied that where relevant:* • *the application is supported by an appropriate FRA;* • *the Sequential Test has been applied as part of site selection;* • *a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk;* • *the proposal is in line with any relevant national and local flood risk management strategy;*	The FRA (**application document 5.5**) has been undertaken in line with relevant guidance and planning policy requirements as summarised in the document. Flood risk and land drainage effects during operation have been avoided through design. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Further details can be found in the FRA (**application document 5.5**). During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A:	FRA (**application document 5.5**) CEMP Appendix A: CoCP (**application document 7.5.1**)

Para.	Requirement	How the Project Meets the Policy	Location
	• *priority has been given to the use of sustainable drainage systems (SuDs) (as required in the next paragraph on National Standards); and* • *in flood risk areas the project is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed over the lifetime of the development.*	CoCP (**application document 7.5.1**) to reduce the risk of flooding. Section 4 of the FRA describes the embedded and good practice measures included to make the project resilient to climate change. These include surface water runoff from the GSP substation being drained using appropriate SuDS techniques to meet the discharge requirements of the LLFA.	
5.7.10	*For construction work which has drainage implications, approval for the project's drainage system will form part of the development consent issued by the IPC. The IPC will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010. In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any SuDS, including any necessary access rights to property. The IPC should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body, such as an Internal Drainage Board.*	The construction phase drainage would be managed in accordance with the measures outlined in commitment W16 of the CoCP (**application document 7.5.1**). Surface water runoff from the GSP substation would be drained using appropriate SuDS techniques to meet the discharge requirements of the Essex LLFA.	CEMP Appendix A: CoCP (**application document 7.5.1**)
5.7.11	*If the EA continues to have concerns and objects to the grant of development consent on the grounds of flood risk, the IPC can grant consent, but would need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the EA to try to resolve the concerns.*	National Grid has held a number of meetings with relevant organisations, including the Environment Agency. Discussions have informed the development of the FRA. Details on the consultation undertaken can be found in Section 1.3 of the FRA (**application document 5.5**) and ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**).	ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**) FRA (**application document 5.5**)
5.7.12	*The IPC should not consent development in Flood Zone 2 in England or Zone B in Wales unless it is satisfied that the sequential test requirements have been met. It should not consent development in Flood Zone 3 or Zone C unless it is satisfied that the Sequential and Exception Test requirements have been met. The technology-specific NPSs set out some exceptions to the*	A sequential approach has been taken in siting the project. Due to the linear nature of the project some sections must necessarily be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). Detail on the Sequential and Exception Test are provided in Section 3 of the FRA (**application document 5.5**) submitted as part of	FRA (**application document 5.5**)

Para.	Requirement	How the Project Meets the Policy	Location
	application of the sequential test. However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test, informed by a strategic flood risk assessment, applicants need not apply the Sequential Test, but should apply the sequential approach to locating development within the site.	the application for development consent. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Therefore, the application of the Exception Test is subsequently unnecessary for this project.	
5.7.16	*All three elements of the test will have to be passed for development to be consented. For the Exception Test to be passed:* • *it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk;* • *the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and* • *a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall.*	See response to 5.7.12.	FRA (**application document 5.5**)
5.7.18	*To satisfactorily manage flood risk, arrangements are required to manage surface water and the impact of the natural water cycle on people and property*	Drainage would be managed in accordance with the measures outlined in the CoCP (**application document 7.5.1**). Where new, permanent areas of impermeable land cover are created, the drainage design would be in accordance with the requirements of the Essex County Council SuDS Design Guide (2020) and the Suffolk County Council SuDS Palette (2021) and would include allowances for climate change in accordance with current (May 2022) Environment Agency requirements. The drainage infrastructure would provide the storage necessary to achieve discharges at	CEMP Appendix A: CoCP (**application document 7.5.1**). ES, Chapter 9: Water Environment (**application document 6.2.9**) FRA (**application document 5.5**)

Para.	Requirement	How the Project Meets the Policy	Location
		greenfield rates and would not significantly alter groundwater recharge patterns by transferring a significant recharge quantity from one catchment to another. A specialised drainage contractor would review the designs and would provide advice to National Grid and its contractor during relevant construction and reinstatement activities.	
5.7.20	*Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.*	As above at paragraph 5.7.18.	
5.7.21	*The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.*	As above at paragraph 5.7.18.	
5.7.22	*It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration facilities or attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation*	As above at paragraph 5.7.18.	
5.7.23	*The sequential approach should be applied to the layout and design of the project. More vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.*	A sequential approach has been taken in siting the project. Due to the linear nature of the project some sections must necessarily be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). Detail on the Sequential and Exception Test are provided in Section 3 of the FRA (**application document 5.5**) submitted as part of the application for development consent. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Therefore, the application of the Exception Test is subsequently unnecessary for this project. Surface water runoff from permanent infrastructure	FRA (**application document 5.5**)

Para.	Requirement	How the Project Meets the Policy	Location
		would be drained using appropriate SuDS techniques to meet the discharge requirements of the LLFA.	
5.7.24	*Essential energy infrastructure which has to be located in flood risk areas should be designed to remain operational when floods occur. In addition, any energy projects proposed in Flood Zone 3b the Functional Floodplain (where water has to flow or be stored in times of flood), or Zone C2 in Wales, should only be permitted if the development will not result in a net loss of floodplain storage, and will not impede water flows.*	The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. The remaining project features (pylons and underground cable) are not susceptible to flooding. Good practice commitment W07 in CEMP Appendix A: CoCP (**application document 7.5.1**), states that no construction materials or stockpiles of soils/arisings should be stored within Flood Zone 3 and areas of high and medium risk of flooding from surface water. Where this cannot be avoided, stockpiles would be aligned to avoid creating continuous barriers to floodplain flows (other measures are included in the CEMP). All construction compounds would be located in Flood Zone 1. Where this is not practicable, additional measures would be identified within a flood risk action plan. As such, the project, which comprises essential energy infrastructure, is not located in areas at high risk of flooding.	FRA (**application document 5.5**)
5.7.25	*The receipt of and response to warnings of floods is an essential element in the management of the residual risk of flooding. Flood Warning and evacuation plans should be in place for those areas at an identified risk of flooding. The applicant should take advice from the emergency services when producing an evacuation plan for a manned energy project as part of the FRA. Any emergency planning documents, flood warning and evacuation procedures that are required should be identified in the FRA.*	Good practice commitment W08 in the CoCP (**application document 7.5.1**), states that the contractor would subscribe to the Environment Agency's Floodline service, which provides advance warning of potential local flooding events, and subscribe to the Met Office's Weather Warnings email alerts system and any other relevant flood warning information. The contractor would implement a suitable flood risk action plan, which would include appropriate evacuation procedures should a flood occur or be forecast. This and other flood risk measures in the CoCP would be secured through the CEMP (**application document 7.5**) and Requirement 5 of the draft DCO. No flood warning and evacuation plan is required for operation of the project as the permanent above ground infrastructure is unmanned during operation.	CEMP Appendix A: CoCP (**application document 7.5.1**) FRA (**application document 5.5**)
5.8 Historic environment			

Para.	Requirement	How the Project Meets the Policy	Location
5.8.8	*As part of the ES (see Section 4.2) the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, English Heritage or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact.*	The heritage assets are described in ES Appendix 8.1: Historic Environment Baseline (**application document 6.3.8.1**), which in turn is supported by a gazetteer of heritage assets from archaeological remains, historic landscape features and historic buildings, both designated and non-designated. All publicly available historic environment data has been acquired from open data sources and the county HER for Essex and Suffolk. ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**) presents a proportionate assessment of the impacts of the project on the heritage assets, including their setting.	ES Appendix 8.1: Historic Environment Baseline **(application document 6.3.8.1**) ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.**2)
5.8.9	*Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.*	The desk-based assessment of heritage assets is presented in ES Chapter 8: Historic Environment (**application document 6.2.8**). This has been supplemented by field evaluation, including geophysical survey and trial trenching. Details of these can be found in ES Chapter 8: Historic Environment (**application document 6.2.8**). ES Chapter 8: Historic Environment (**application document 6.2.8**) and ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**) presents the impact of the project on setting of heritage assets and cross references to the visualisations in ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1-6.3.6.4.7**) and photomontages (**application documents 5.8**).	ES Chapter 8: Historic Environment (**application document 6.2.8**) ES Appendix 8.2: Historic Environment Impact Assessment **(application document 6.3.8.2**) ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1-6.3.6.4.7**) Photomontages (**application documents 5.8**)
5.8.10	*The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents.*	ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the impact of the project on heritage assets. This is supported by the visualisations in ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1-6.3.6.4.7**) and photomontages (**application documents 5.8**).	ES Chapter 8: Historic Environment (**application document 6.2.8**) ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1-6.3.6.4.7**) Photomontages (**application documents 5.8**)

Para.	Requirement	How the Project Meets the Policy	Location
5.8.14	*There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II* listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional.*	ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**) supporting ES Chapter 8: Historic Environment (**application document 6.2.8**) has examined all sources of impact to heritage assets during construction and operation, following a process of eliminating those assets not at risk of change from further assessment. Potential construction impacts include excavation which can disturb buried archaeology and temporary effects on setting such as increased noise and vibration and increased local traffic levels. Operational impacts generally comprise the additional visual intrusion on the skyline from the proposed 400kV overhead line which has the potential to cause changes to the setting on heritage assets, particularly listed buildings. The impact assessment has not identified any substantial harm to designated heritage assets. The changes to visual setting of listed buildings have been identified but, in all cases, these are not significant and would result in less than substantial harm to the assets in question. Overall, the assessment presented in ES Chapter 8: Historic Environment (**application document 6.2.8**) has concluded that with the proposed mitigation in place (as outlined in the AFS and the OWSI), there are no residual significant adverse effects on the historic environment. No substantial harm, including in relation to setting, has been identified to any designated assets including Grade I and II* listed buildings.	ES Chapter 8: Historic Environment (**application document 6.2.8**) ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**)
5.8.15	*Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss. Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.*	The impact assessment has not identified any substantial harm to designated heritage assets.	ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**) ES Chapter 8: Historic Environment (**application document 6.2.8**)

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5.8.20	*Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost. The extent of the requirement should be proportionate to the nature and level of the asset's significance. Developers should be required to publish this evidence and deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.*	The AFS (**application document 7.9**) and OWSI (**application document 7.10**) stipulate the need for preservation by record i.e., archaeological hand excavation and recording, of archaeological remains not deemed significant enough to be preserved in place. The OWSI (**application document 7.10)** outlines the proposed process for publishing, depositing and archiving data.	AFS (**application document 7.9**) OWSI (**application document 7.10**)
5.8.21	*Where appropriate, the IPC should impose requirements on a consent that such work is carried out in a timely manner in accordance with a written scheme of investigation that meets the requirements of this Section and has been agreed in writing with the relevant Local Authority (where the development is in English waters, the Marine Management Organisation and English Heritage, or where it is in Welsh waters, the MMO and Cadw)) and that the completion of the exercise is properly secured.*	The strategy for archaeological mitigation is defined within the AFS (**application document 7.9**) and further detail regarding specific sites are contained within the OWSI (**application document 7.10**). Both these documents have been informed by discussions with historic environment advisers from the respective LPA.	AFS (**application document 7.9**) OWSI (**application document 7.10**)
5.9 Landscape and visual			
5.9.5	*The applicant should carry out a landscape and visual assessment and report it in the ES. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.*	ES Chapter 6 Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment. Reference to landscape character assessments has been made in ES Chapter 6 Landscape and Visual (**application document 6.2.6**) and ES Appendix 6.3 Assessment of effects on Landscape Character (**application document 6.3.6.3**). Information on landscape character has been used to inform the visual assessment. Local planning policies taken into account in the assessment are reported in ES Appendix 2.2 (**application document 6.3.2.2**).	ES Chapter 6: Landscape and Visual **(application document 6.2.6)** ES Appendix 6.3 Assessment of effect on Landscape Character (**application document 6.3.6.3**) ES Appendix 2.2 Local Planning Policy (**application document 6.3.2.2**)
5.9.6	*The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.*	ES Chapter 6 Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of construction and operation of the project on landscape receptors.	ES 6: Landscape and Visual **(application document 6.2.6)**

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5.9.7	*The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.*	ES Chapter 6 Landscape and Visual (**application document 6.2.6**) and ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1-6.3.6.4.7**) present the visual assessment including the effects of construction and operation of the project on landscape receptors.	ES 6: Landscape and Visual **(application document 6.2.6)**
5.9.8	*Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.*	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of construction and operation of the project on visual receptors. Reference to landscape character assessments has been made in ES Chapter 6 Landscape and Visual (**application document 6.2.6**) and ES Appendix 6.3 Assessment of effects on Landscape Character (**application document 6.3.6.3**). Information on landscape character has been used to inform the visual assessment. This also sets out any mitigation required to mitigate significant effects. ES Appendix 6.1: Landscape and Visual Methodology (**application document 6.3.6.1**) outlines how the value of landscape receptors has been derived. ES Chapter 3: Alternatives Considered (**application document 6.2.3**) describes how sensitive landscape features were avoided, where practicable through routeing and design. This is also reported in Chapter 5 of the Planning Statement (**application document 7.1**); which sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process, demonstrating how such policy and legislative objectives have been embedded into the design of the project.	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) ES Appendix 6.1: Landscape and Visual Methodology (**application document 6.3.6.1**) ES Chapter 3: Alternatives Considered (**application document 6.2.3**)
5.9.9	*National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in*	The project does not affect any National Parks. The project has considered the presence of nationally designated areas, in this case Dedham Vale AONB, throughout the design process. ES Chapter 3: Alternatives Considered (**application document 6.2.3**) demonstrates how sensitive	ES Chapter 3, Alternatives Considered (**application document 6.2.3**) ES Appendix 6.2: Assessment of Effects on

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	its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas.	landscape features were avoided, where practicable through routeing and design. This is also reported in Chapter 5 of the Planning Statement (**application document 7.1**); which sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process, demonstrating how such policy and legislative objectives have been embedded into the design of the project. ES Appendix 6.2: Assessment of Effects on Designated Landscapes (**application document 6.3.6.2**) assesses the effects of the project on Dedham Vale AONB.	Designated Landscapes (**application document 6.3.6.2**) ES Chapter 6: Landscape and Visual (**application document 6.2.6** Planning Statement (**application document 7.1**)
5.9.10	*Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of:* • *the need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy;* • *the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and* • *any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.*	The need for the project is set out in the Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 **(application document 7.1**). It is considered that exceptional circumstances apply, the project is demonstrably in the public interest as detailed in The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1**) and that the tests in the NPS are met, which are considered at length in Planning Statement Chapter 7 (**application document 7.1**). ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of construction and operation of the project on landscape receptors and sets out the proposed mitigation.	Need Case (April 2023) (**application document 7.1.1**) ES, Chapter 1: Introduction (**application document 6.2.1**) Planning Statement (**application document 7.1**) Need Case (April 2023) (**application document 7.2.1**) ES Chapter 6: Landscape and Visual (**application document 6.2.6**)
5.9.12	*The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant*	The project does not affect any National Parks. The project has considered the presence of nationally designated areas, in this case Dedham Vale AONB, throughout the design process. Chapter 5 of the Planning Statement (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) ES Chapter 6: Landscape and Visual (**application document 6.2.6**)

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	constraints. This should include projects in England which may have impacts on National Scenic Areas in Scotland.	and design evolution process; including the consideration of protected landscapes such as AONB. This is also reported in the ES Chapter 3: Alternatives Considered (**application document 6.2.3**) which documents the main alternatives considered by National Grid and the environmental assessment of those alternatives. ES Appendix 6.2: Assessment of effects on Designated Landscapes (**application document 6.3.6.2**) assesses the effects of the project on Dedham Vale AONB.	ES Appendix 6.2: Assessment of Effects on Designated Landscapes (**application document 6.3.6.2**)
5.9.14	*Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.*	The project has considered the presence of locally designated areas, in this case SLA. ES Appendix 6.2 Assessment of Effects on Designated Landscapes (**application document 6.3.6.2**) identifies and assesses the effects of the project on SLA.	ES Chapter 6: Landscape and Visual **(application document 6.2.6)** ES Appendix 6.2 Assessment of Effects on Designated Landscapes **(application document 6.3.6.2**)
5.9.15	*The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.*	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of the construction and operation of the project on visual receptors. The viewpoints presented in the Landscape and Visual Chapter were agreed with the Host Authorities. The need for the project is set out in the Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 **(application document 7.1**).	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) Need Case (April 2023) (**application document 7.2.1**) Planning Statement Chapter 3 **(application document 7.1**)
5.9.16	*In reaching a judgment, the IPC should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable.*	ES Chapter 6 Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of construction of the project on landscape receptors.	ES Chapter 6: Landscape and Visual **(application document 6.2.6)**
5.9.17	*The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.*	Chapter 5 of the Planning Statement (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; including the consideration of	ES Chapter 3: Alternatives Considered (**application document 6.2.3**)

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		protected landscapes such as AONB. This is also reported in the ES Chapter 3: Alternatives Considered (**application document 6.2.3**) which documents the main environmental alternatives considered by National Grid and the assessment of those alternatives. The landscape and visual effects of the project are described in ES Chapter 6: Landscape and Visual (**application document 6.2.6**) along with the proposed mitigation required to reduce any significant effects.	ES Chapter 6: Landscape and Visual (**application document 6.2.6**)
5.9.18	*All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.*	ES Chapter 6 Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of construction and operation of the project on visual receptors including communities and recreational receptors. The project is not anticipated to affect any coastal areas given the distance between the Order Limits and the coastline.	ES Chapter 6: Landscape and Visual **(application document 6.2.6**)
5.9.22	*Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.*	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) describes how sensitive landscape features were avoided, where practicable through routeing and design. The ES Appendix 4.1: Good Design (**application document 6.3.4.1**) describes the considerations that have been made through the design process to date. The proposed landscaping, including mitigation planting is set out in the LEMP (**application document 7.8**).	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) ES Appendix 4.1: Good Design (**application document 6.3.4.1)** LEMP (**application document 7.8**).
5.9.23	*Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.*	Planting proposals are set out in the LEMP (**application document 7.8**). ES Chapter 6 Landscape and Visual **(application document 6.2.6)** also identifies properties that could benefit from landscape softening which are also identified in the LEMP.	ES Chapter 6 Landscape and Visual **(application document 6.2.6)** LEMP (**application document 7.8**).
5.10 Land use including open space, green infrastructure and Green Belt			
5.10.5	*The ES (see Section 4.2) should identify existing and proposed land uses near the project, any effects of replacing an existing*	ES Chapter 11: Agriculture and Soils (**application document 6.2.11**) assesses the effects of the project on the	ES Chapter 11: Agriculture and Soils (**application**

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	development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.	existing land use, which is predominantly agricultural within the Order Limits. ES Chapter 15: CEA (**application document 6.2.15**) assesses the effects of the project on emerging developments. The project has sought to avoid works within designated open space. An Open Space Assessment is provided in Chapter 9 Planning Statement (**application document 7.1**). In the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project	**document 6.2.11**) ES Chapter 15: CEA (**application document 6.2.15**) Planning Statement Chapter 9: Open Space Assessment **(application document 7.1**)
5.10.6	*Applicants will need to consult the local community on their proposals to build on open space, sports or recreational facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements.*	In the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, policies relating to impact on open space provision are not engaged. Subsequently, there is no need to consider whether the open space in question is surplus to requirements or provide compensatory land.	Planning Statement Chapter 9: Open Space Assessment **(application document 7.1**)
5.10.8	*Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.*	As reported in ES Chapter 11: Agriculture and Soils (**application reference 6.2.11**) the potential presence of BMV land has been assessed through reference to published information and surveys of the areas permanently affected. The assessment sets out the total area of each land grade permanently affected and estimates the likely area of land at each grade. Measures have been outlined in the CoCP (**application document 7.5.1**) to reduce the potential negative impacts on soils which are handled and disturbed, such as those to protect the quality of soils when they are stripped, stockpiled and restored and measures to reduce the disruption to agricultural activities, for example AS01 and AS02, with all land required temporarily being returned to its pre-construction condition.	Chapter 11: Agriculture and Soils (**application reference 6.2.11**) Appendix 11.1: ALC Survey (**application reference 6.3.11.1**) CEMP Appendix A: CoCP (**application document 7.5.1**)
5.10.9	*Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.*	An MRA has been undertaken to support the assessment undertaken in ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**). This concludes that the quantity of mineral sterilised by the project is considered to	ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**)

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		be insignificant in the context of the extensive occurrence of sand and gravel within the counties of Essex and Suffolk and the national need/significance of the project.	ES Appendix 10.3: MRA (**application document 6.3.10.3**)
5.10.10	*The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and if it is, whether their proposal may be inappropriate development within the meaning of Green Belt policy (see paragraph 5.10.17 below).*	The project does not impact Green Belt land.	N/A
5.10.11	*However, infilling or redevelopment of major developed sites in the Green Belt, if identified as such by the local planning authority, may be suitable for energy infrastructure. It may help to secure jobs and prosperity without further prejudicing the Green Belt or offer the opportunity for environmental improvement. Applicants should refer to relevant criteria on such developments in Green Belts.*	The project does not impact Green Belt land.	N/A
5.10.12	*An applicant may be able to demonstrate that a particular type of energy infrastructure, such as an underground pipeline, which, in Green Belt policy terms, may be considered as an "engineering operation" rather than a building is not in the circumstances of the application inappropriate development. It may also be possible for an applicant to show that the physical characteristics of a proposed overhead line development or wind farm are such that it has no adverse effects which conflict with the fundamental purposes of Green Belt designation.*	The project does not impact Green Belt land.	N/A
5.10.17	*When located in the Green Belt, energy infrastructure projects are likely to comprise 'inappropriate development'. Inappropriate development is by definition harmful to the Green Belt and the general planning policy presumption against it applies with equal force in relation to major energy infrastructure projects. The IPC will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the harm by reason of inappropriateness, and*	The project does not impact Green Belt land.	N/A

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	any other harm, is outweighed by other considerations. In view of the presumption against inappropriate development, the IPC will attach substantial weight to the harm to the Green Belt when considering any application for such development while taking account, in relation to renewable and linear infrastructure, of the extent to which its physical characteristics are such that it has limited or no impact on the fundamental purposes of Green Belt designation.		
5.10.19	*Although in the case of much energy infrastructure there may be little that can be done to mitigate the direct effects of an energy project on the existing use of the proposed site (assuming that some at least of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project.*	The project design is the result of an iterative process which has sought to avoid, reduce and mitigate potential environmental effects. The Evolution of the Project (**application document 7.2.6**) sets out how the project has evolved from a concept, through strategic options, route corridors and indicative alignments to the project presented within the application for development consent. ES Chapter 4: Project Description (**application document 6.2.4**) outlines how the project has continued to avoid sensitive features through embedded measures within the design, and ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different choices made during the design process.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) ES Chapter 4: Project Description (**application document 6.2.4**) ES Appendix 4.1: Good Design (**application document 6.3.4.1**)
5.10.23	*Where a project has a sterilising effect on land use (for example in some cases under transmission lines) there may be scope for this to be mitigated through, for example, using or incorporating the land for nature conservation or wildlife corridors or for parking and storage in employment areas.*	No sterilising effects on land use are anticipated as a result of the project. Unless otherwise identified for embedded or mitigation areas, landowners will still be able to farm beneath the overhead lines and above the underground cable. As reported in ES Chapter 11: Agriculture and Soils (**application document 6.2.11**) no likely significant effects on agricultural operations and viability are anticipated during operation. As identified in ES Appendix 10.3 - MRA (**application document 6.3.10.3**), the quantity of mineral sterilised by the project is considered to be insignificant in the context of the extensive occurrence of sand and gravel within the counties of Essex and Suffolk and the national need/significance of the project.	ES Chapter 11: Agriculture and Soils (**application document 6.2.11**) ES Appendix 10.3 - MRA (**application document 6.3.10.3**) LEMP (**application document 7.8**)

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		The LEMP (**application document 7.8**) sets out how land use would be reinstated following construction, including reinstatement of habitats.	
5.10.24	*Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.*	No National Trails are affected by the project. Effects on PRoW are presented in ES Chapter 12: Traffic and Transport (**application document 6.2.12**) and within the TA (**application document 5.7**). There are no operational effects anticipated to PRoW and there are no permanent closures or diversions proposed. There would be temporary closures and diversions during construction. These would be kept as short as possible, subject to safety requirements of users during works. The PRoW affected are shown on the Access, PRoW of Navigation Plans (**application document 2.7**).	ES Chapter 12: Traffic and Transport (**application document 6.2.1**2) TA (**application document 5.7**)
5.11 Noise and vibration			
5.11.4	*Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment:* • *a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise;* • *identification of noise sensitive premises and noise sensitive areas that may be affected;* • *the characteristics of the existing noise environment;* • *a prediction of how the noise environment will change with the proposed development;* • *in the shorter term such as during the construction period;* • *in the longer term during the operating life of the infrastructure;* • *at particular times of the day, evening and night as appropriate.*	Operational noise is scoped out in ES Chapter 14: Noise and Vibration (**application document 6.2.14**) as significant adverse effects would be avoided by design (e.g., noise enclosure around the transformers at the GSP substation). However, additional information regarding operational noise impacts from the GSP substation and overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**) and ES Appendix 14.4: Grid Supply Point Substation Noise Assessment (**application document 6.3.14.4**). ES Chapter 14: Noise and Vibration (**application document 6.2.14**) includes an assessment of the likely significant effects from noise and vibration from the project, including those associated with potential working at night during the construction of the project. This identifies a small number of locations that would require additional mitigation measures to reduce noise. These measures are described in and secured through the CEMP (**application document 7.5**).	ES Chapter 14: Noise and Vibration (**application document 6.2.14**)

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	• *an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas; and* • *measures to be employed in mitigating noise.* *The nature and extent of the noise assessment should be proportionate to the likely noise impact.*		
5.11.5	*The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should also be considered.*	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) includes an assessment of the likely significant effects from noise and vibration from increased traffic movements during construction. Further information is also provided in ES Appendix 14.2: Construction Traffic Noise and Vibration Assessment (**application document 6.2.14.2**).	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) ES Appendix 14.2: Construction Traffic Noise and Vibration Assessment (**application document 6.2.14.2**)
5.11.6	*Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. Further information on assessment of particular noise sources may be contained in the technology-specific NPSs. In particular, for renewables (EN:3) and electricity networks (EN:5) there is assessment guidance for specific features of those technologies. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.*	Operational noise is scoped out in ES Chapter 14: Noise and Vibration (**application document 6.2.14**) as significant adverse effects would be avoided by design. However, additional information regarding operational noise impacts from the GSP substation and overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**) and ES Appendix 14.4: Grid Supply Point Substation Noise Assessment (**application document 6.3.14.4**).	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**) ES Appendix 14.4: Grid Supply Point Substation Noise Assessment (**application document 6.3.14.4**)
5.11.7	*The applicant should consult EA and Natural England (NE), or the Countryside Council for Wales (CCW), as necessary and in particular with regard to assessment of noise on protected species or other wildlife. The seasonality of potentially affected species in nearby sites may also need to be taken into account.*	The effects of noise from the project on ecological receptors are considered in ES Chapter 7: Biodiversity (**application document application document 6.2.7**) using supporting data from ES Chapter 14: Noise and Vibration (**application document 6.2.14**).	ES Chapter 7: Biodiversity **(application document 6.2.7**)
5.11.8	*The project should demonstrate good design through selection of the quietest cost-effective plant available; containment of noise*	Significant adverse effects from operational noise would be avoided by embedded measures which commits to using	CEMP (**application document 7.5**)

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	within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.	triple araucaria or other BPM for the conductors (EM-P03), and a noise enclosure around the transformers at the GSP substation (EM-H01) both secured through the CEMP (**application document 7.5**).	ES Chapter 14: Noise and Vibration (**application document 6.2.14**)
5.11.9	*The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims:* ●*avoid significant adverse impacts on health and quality of life from noise;* ●*mitigate and minimise other adverse impacts on health and quality of life from noise; and* ●*where possible, contribute to improvements to health and quality of life through the effective management and control of noise.*	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) includes an assessment of the likely significant effects from noise and vibration during the construction and operation of the project. This has identified that there would be no residual effects on on health and quality of life from noise with the good practice measures and mitigation in place.	ES Chapter 14: Noise and Vibration (**application document 6.2.14**)
5.11.12	*Mitigation measures may include one or more of the following:* • *engineering: reduction of noise at point of generation and containment of noise generated;* • *lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural barriers, or other buildings; and* • *administrative: restricting activities allowed on the site; specifying acceptable noise limits; and taking into account seasonality of wildlife in nearby designated sites.*	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) identifies measures to reduce noise included engineering measures at point of generation (use of triple araucaria or other BPM for the conductors) and layout (noise enclosure around the transformers at the GSP substation). The CoCP (**application document 7.5.1**) also contains other measures to reduce noise at source and to increase the distance between source and noise sensitive receptors.	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) CoCP (**application document 7.5.1**)
5.12 Socio-economic			
5.12.2	*Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES.*	Chapter 15 of the Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) sets out the scoping assessment for socio-economics and concluded that the project would be unlikely to result in significant effects, when taking into account the embedded and good practice measures. The Planning Inspectorate agreed with this decision as confirmed in the Scoping Opinion (**application document 6.6**).	Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) Scoping Opinion (**application document 6.6**).

Para.	Requirement	How the Project Meets the Policy	Location
		National Grid has produced a Socio-economics and Tourism Report (**application document 5.9**) as part of its ongoing back check and to confirm that there are still not anticipated to be any significant effects on socio-economics as a result of the project.	Socio-economics and Tourism Report (**application document 5.9**)
5.12.3	*This assessment should consider all relevant socio-economic impacts, which* *may include:* *●the creation of jobs and training opportunities;* *● the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;* *● effects on tourism;* *● the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development; and* *●cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.*	Chapter 15 of the Scoping Report (**application document 6.5.1**) sets out the scoping assessment for Socio-economics, Recreation and Tourism Chapter and considered creation of jobs, local services, effects on tourism and influx of workers. This concluded that the project would be unlikely to result in significant effects in these areas, when taking into account the embedded and good practice measures. The Planning Inspectorate agreed with this decision as confirmed in the Scoping Opinion (**application document 6.6**). National Grid has produced a Socio-economics and Tourism Report (**application document 5.9**) as part of its ongoing back check and to confirm that there are still not anticipated to be any significant effects on socio-economics and tourism as a result of the project. ES Chapter 15: CEA (**application document 6.2.15**) considers the in combination with other proposed developments (inter-project) including on availability of construction workers.	Scoping Report (**application document 6.5.1**) ES Chapter 15: CEA (**application document 6.2.15**) Socio-economics and Tourism Report (**application document 5.9**)
5.12.4	*Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.*	The Socio-economics and Tourism Report (**application document 5.9**) presents the existing socio-economic conditions in the areas surrounding the proposed development. Chapter 8 of the Planning Statement (**application document 7.1**) outlines the local planning policy context by identifying the local Development Plans and relevant	Socio-economics and Tourism Report (**application document 5.9**) Planning Statement (**application document 7.1**)

Para.	Requirement	How the Project Meets the Policy	Location
		policies for each local authority within the Order Limits, and then assesses the project against those relevant policies.	
5.12.5	*Socio-economic impacts may be linked to other impacts, for example the visual impact of a development is considered in Section 5.9 but may also have an impact on tourism and local businesses.*	Chapter 15 of the Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) sets out the scoping assessment for Socio-economics, Recreation and Tourism Chapter including impacts on tourism and local businesses. This concluded that the project would be unlikely to result in significant effects, when taking into account the embedded and good practice measures. The Planning Inspectorate agreed with this decision as confirmed in the Scoping Opinion (**application document 6.6**). National Grid has produced a Socio-economics and Tourism Report (**application document 5.9**) as part of its ongoing back check and to confirm that there are still not anticipated to be any significant effects on tourism and local businesses.	Environmental Impact Assessment Scoping Report Main Report (**application document 6.5.1**) Socio-economics and Tourism Report (**application document 5.9**)
5.13 Traffic and transport			
5.13.3	*If a project is likely to have significant transport implications, the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.*	A TA (**application document 5.7**) has been produced for the project. The TA (**application document 5.7**) has been developed in line with DLUHC guidance (Travel Plans, Transport Assessments and Statements) and relevant TAG (formerly WebTAG) principles. The Traffic and Transport assessment reported in ES Chapter 12 (**application document 6.2.12**) is developed using a methodology based on both DMRB and GEART guidance. Both National Highways and the relevant highway authorities have been consulted on the scope of the TA and the ES traffic and transport assessment, and their comments have informed both assessments.	TA (**application document 5.7**) ES Chapter 12: Traffic and Transport (**application document 6.2.12**)
5.13.4	*Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.*	The project would only require a very small number of workers during the operational phase (of a similar level to inspections on the existing network). Therefore, no additional parking is proposed outside of the fenced compounds and an operational travel plan and measures to improve public transport are not required.	TA (**application document 5.7**) CTMP (**application document 7.6**).

Para.	Requirement	How the Project Meets the Policy	Location
		Commitments regarding travel planning during construction are set out in the CTMP (**application document 7.6**).	
5.13.5	*If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time.*	N/A: no new transport infrastructure proposed.	TA (**application document 5.7**)
5.13.6	*A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.*	The TA (**application document 5.7**) fulfils the requirements for an assessment of transport impacts required. The CTMP sets out the good practice measures to reduce impacts on the local road network during construction. During the operation and maintenance of the project, vehicle numbers are expected to be very low and the only vehicle movements should be from maintenance vehicles; which is likely to be negligible and sporadic with no quantifiable effect on the local road network.	TA (**application document 5.7**) CTMP (**application document 7.6**).
5.13.8	*Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts.*	N/A: no new transport infrastructure proposed.	TA (**application document 5.7**)
5.13.9	*The IPC should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as the aim to secure more sustainable patterns of transport development when considering mitigation measures.*	N/A: no new transport infrastructure proposed.	TA (**application document 5.7**)
5.13.10	*Water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective.*	Given the number of construction sites proposed and the rural location of the scheme away from any notable waterways and rail stations, it is not possible to rely on water-borne or rail transport for construction of the scheme. The TA (**application document 5.7**) provides further details on this.	TA (**application document 5.7**)

Para.	Requirement	How the Project Meets the Policy	Location
5.13.11	*The IPC may attach requirements to a consent where there is likely to be substantial HGV traffic that:* • *control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;* • *make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and* • *ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.*	The CTMP (**application document 7.6**) sets out the proposed measures for monitoring and managing the numbers, routings and timings of heavy goods vehicles (HGV) deliveries to reduce impacts on the local road network.	CTMP (**application document 7.6**)
5.14 Waste management			
5.14.6	*The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.*	The MWMP (**application document 7.7**) sets out the process for managing waste on the project. It also presents a high-level assessment of the waste capacity in the region. It also sets out how the project intends to implement the waste hierarchy and to reduce waste being sent to landfill.	MWMP (**application document 7.7**)
5.14.7	*The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that:*	The HSE have been consulted throughout the consultation activities on the project. In its response to statutory consultation, the HSE considered matters within its remit and confirmed that they did not have any concerns in relation to Hazardous Substance Consent and it is not anticipated that the project would give rise to any hazardous waste.	MWMP (**application document 7.7**)

Para.	Requirement	How the Project Meets the Policy	Location
	• *any such waste will be properly managed, both on-site and off-site;* • *the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and* • *adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.*	MWMP (**application document 7.7**) sets out the process for managing waste, including potentially hazardous waste on the project. It also sets out how the project intends to implement the waste hierarchy and to reduce waste being sent to disposal.	
5.14.9	*Where the project will be subject to the EP regime, waste management arrangements during operations will be covered by the permit and the considerations set out in Section 4.10 will apply.*	No waste is anticipated from the project during operation. No permits are anticipated during construction or operation.	MWMP **(application document 7.7**)
5.15 Water quality and resources			
5.15.2	*Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES or equivalent.*	ES Chapter 9: Water Environment (**application document 6.2.9**) details the likely significant effects of the project on the water environment with respect to surface water. The baseline of the water environment is characterised in this chapter. The assessment has been informed by a WFD Assessment (**application document 5.6**).	ES Chapter 9: Water Environment (**application document 6.2.9**) WFD Assessment (**application document 5.6**)
5.15.3	*The ES should in particular describe:* • *the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges;* • *existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new*	ES Chapter 9: Water Environment (**application document 6.2.9**) details the existing baseline (including quality and existing physical characteristics) and the likely significant effects of the project on the water environment with respect to surface water. ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) describes the existing baseline and the likely significant effects of the project on groundwater receptors (including SPZ and abstractions). The assessment has been informed by a WFD Assessment (**application document 5.6**).	ES, Chapter 9: Water Environment (**application document 6.2.9**) ES, Chapter 9: Water Environment (**application document 6.2.10**) WFD Assessment (**application document 5.6**)

Para.	Requirement	How the Project Meets the Policy	Location
	abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies); • *existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics; and* • *any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions.*		
5.15.6	*The IPC should satisfy itself that a proposal has regard to the River Basin Management Plans and meets the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater. The specific objectives for particular river basins are set out in River Basin Management Plans. The IPC should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline/Estuary Management Plans.*	The Anglian River Basin Management Plan has been used to inform ES Chapter 9: Water Environment (**application document 6.2.9**) and the WFD Assessment (**application document 5.6**) The WFD assessment concludes that the project is compliant with the objectives of the Anglian River Basin Management Plan.	ES Chapter 9: Water Environment (**application document 6.2.9**) WFD Assessment (**application document 5.6**)
5.15.8	*The IPC should consider whether mitigation measures are needed over and above any which may form part of the project application. A construction management plan may help codify mitigation at that stage.*	The assessment presented in ES Chapter 9: Water Environment (**application document 6.2.9**) has concluded that there are no likely significant residual effects in relation to water environment receptors during the construction or operation of the project. The good practice measures for reducing effects to water are set out in the CEMP Appendix A: CoCP (**application document 7.5.1**).	ES Chapter 9: Water Environment (**application document 6.2.9**) CEMP (**application document 7.5**)
5.15.9	*The risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice. For example, designated areas for storage and unloading, with appropriate drainage facilities, should be clearly marked.*	Embedded measures relevant to the water environment are summarised in Section 9.4 of ES Chapter 9: Water Environment (**application document 6.2.9**) and good practice measures are set out in the CEMP Appendix A: CoCP (**application document 7.5.1**)	ES Chapter 9: Water Environment (**application document 6.2.9**)

Para.	Requirement	How the Project Meets the Policy	Location
			CEMP (**application document 7.5**)
5.5.10	*The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling.*	No new consumptive surface water abstractions are anticipated to facilitate the project during construction or operation of the project. Discharges from dewatering of open cut trenches to remove rainwater and minor groundwater seepages would be made to ground. At deeper excavations, for trenchless crossings, for example, of the River Stour, it is assumed that discharges would be subject to treatment to settle sediments, prior to discharge to ground not watercourses. Further details are provided in ES, Chapter 10: Geology and Hydrogeology (**application document 6.2.10**).	ES, Chapter 10: Geology and Hydrogeology (**application document 6.2.10**)

Appendix B: Signposting for Compliance with EN-5

Table B.1: Table provides details as to how the project has had regard to the relevant paragraphs of EN-5.

Para.	Requirement	How the project Meets the Policy	Location in DCO
Part 2 Assessment and Technology-Specific Information			
2.2 Factors influencing site selection by applicants			
2.2.2	*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.*	The need for the project is summarised in Planning Statement Chapter 3 (**application document 7.1**) and set out in detail in the Need Case (April 2023) (**application document 7.2.1**). In addition, Planning Statement Chapter 5 (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; demonstrating how such policy and legislative objectives have been embedded into the design of the project. A wide range of alternative options have been considered, influenced by the various consultation stages and feedback received from consultees both through formal consultation feedback and through project meetings. This, therefore, necessitates the location of the project and is where the network reinforcement is needed to remedy the existing bottleneck in the network. Finally, the ES Chapter 3: Alternatives Considered (**application document 6.2.3**) includes an environmental assessment of reasonable alternatives in choosing a preferred option and route.	Planning Statement Chapter 3 Needs Case (**application document 7.1**) ES Chapter 3: Alternatives Considered (**application document 6.2.3**) Need Case (April 2023) (**application document 7.2.1**)
2.2.3	*In order to be able lawfully to install, inspect, maintain, repair, adjust, alter, replace or remove an electric line (above or below ground) and any related equipment such as poles, pylons/transmission towers, transformers and cables, network companies need either to own the land on, over or under which construction is to take place or to hold*	In the Book of Reference (**application document 4.3**) each land plot is numbered uniquely so that the prefix of the plot number relates to the land plan sheet number on which the plot appears. The Land Plans (**application document 2.3**) show the Order Limits and the numbered plots within the	Book of Reference (**application document 4.3**) Land Plans (**application document 2.3**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
	sufficient rights over, or interest in that land (typically in the form of an easement), or to have permission from the current owner or occupier to install their electric lines and associated equipment and carry out related works (usually referred to as a "wayleave").	Order Limits that are listed in the sections of the Book of Reference. Each plot is coloured. The colouring serves to differentiate the type of rights or powers sought for each given plot within the Order Limits which corresponds to the respective interest, right or power to be acquired or used. Justification for the use of compulsory acquisition powers is set out in the Statement of Reasons **(application document 4.2**). This work has been undertaken to allow National Grid the necessary land rights to lawfully to install, inspect, maintain, repair, adjust, alter, replace or remove the project.	Statement of Reasons (**application document 4.2**)
2.2.4	*Where the network company does not own (or wish to own) the relevant land itself, it may reach a voluntary agreement that gives it either an easement over the land or at least a wayleave permission to use it during the tenure of the current owner or occupier. Where it does not succeed in reaching the agreement it wants, the company may, as part of its application to the IPC, seek to acquire rights compulsorily over the relevant land by means of a provision in the DCO. The applicant may also apply for the compulsory purchase of land: this is not normally sought where lines and cables are installed, but may occur where other electricity network infrastructure, such as a new substation, is required. The above issues may be relevant considerations when the electricity company is considering various potential routes.*	Justification for the use of compulsory acquisition powers is set out in the Statement of Reasons (**application document 4.2**). However, National Grid will continue to seek all rights it needs by voluntary agreement, subject to the DCO being made. National Grid has undergone extensive consultation with all persons with an interest in the relevant land in order to try to avoid the need for compulsory acquisition. This approach to making the application for the DCO in parallel to conducting negotiations to acquire rights in land by agreement wherever practicable, is in accordance with paragraph 25 of the Planning Act 2008 (the PA 2008): Guidance related to procedures for compulsory acquisition produced by the DCLG, as updated September 2013.	Book of Reference (**application document 4.3**) Land Plans (**application document 2.3**) Statement of Reasons (**application document 4.2**)
2.2.5	*There will usually be some flexibility around the location of the associated substations and applicants will give consideration to how they are placed in the local landscape taking account of such things as local topography and the possibility of screening.*	Planning Statement Chapter 5 (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; demonstrating how such policy and legislative objectives have been embedded into the design of the project. Potential sites extending from Twinstead Tee to Thaxted, focused along the 400kV overhead line, were considered. Following an initial desk-based study, eight potential study areas were identified. After assessing the eight study areas, three were shortlisted for further investigation.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) Substation Siting Study (February 2013) (**application document 7.2.5**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
		The GSP substation and CSE compounds have been sited taking account of the local landscape, making best use of topography and local screening where practicable, and have been adjusted in response to consultation feedback. More information on the siting of the GSP substation can be found in the Substation Siting Study (February 2013) (**application document 7.2.5**).	
2.2.6	*As well as having duties under section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), developers will be influenced by Schedule 9 to the Electricity Act 1989, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, 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 … do what [they] 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." Depending on the location of the proposed development, statutory duties under section 85 of the Countryside and Rights of Way Act 2000 and section 11A of the National Parks and Access to the Countryside Act 1949 may be relevant.*	National Grid's Schedule 9 Statement (2016) sets out how the company would meet the duty placed upon it by the aforementioned legislation. This includes only seeking to build new transmission lines and substations where the existing transmission infrastructure cannot be upgraded to meet transmission security standards; seeking to avoid nationally and internationally designated areas where new infrastructure is required; and reducing the effects of new infrastructure on other sites valued for their amenity. Further details on how National Grid is meeting its duties under the Electricity Act are presented in the Planning Statement (**application document 7.1**). Meanwhile, ES Chapter 3: Alternatives Considered (**application document 6.2.3**) addresses the alternatives considered from an environmental perspective.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) Planning Statement (**application document 7.1**)
2.2.7	*Transmission and distribution licence holders are also required under Schedule 9 of the Act to produce and publish a statement setting out how they propose to perform this duty generally*	National Grid's published Schedule 9 Statement (2016) sets out how the company would meet the duty placed upon it by the aforementioned legislation. Further details on how National Grid is meeting its duties under the Electricity Act are presented in the Planning Statement (**application document 7.1**).	Planning Statement (**application document 7.1**)
2.3 General assessment principles for electricity networks			
2.3.1	*EN-1 explains in Section 4.9 that the Planning Act aims to create a holistic planning regime so that the cumulative effects of different elements of the same project can be considered together. Therefore, the Government envisages that, wherever reasonably possible,*	As noted in the Planning Statement (**application document 7.**1), National Grid has a separate grant of planning permission for the GSP substation under the TCPA in advance of submission of an application for development consent.	ES Volume (**application document 6.2**). ES Chapter 15: CEA (**application document 6.2.15**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
	applications for new generating stations and related infrastructure should be contained in a single application to the IPC.	In order to construct the project, three key stages must happen in sequential order. Firstly, the GSP substation must be constructed and operational. This is a technical necessity, required to replace distribution network capacity. Only once the GSP substation is operational can the existing 132kV overhead line between Burstall Bridge and Twinstead Tee be removed. Once the existing 132kV overhead line is removed, the new 400kV overhead line can be constructed. The project is required to be operational by 2028, in order to support the Government objectives for 50GW by 2030, tackling climate change and cleaning up the UK energy system, and reaching net zero carbon emissions by 2050. Therefore, it is important that the GSP is delivered as early as feasible, to allow the removal of the existing 132kV overhead line and the commencement of the project once development consent is granted. However, for the purposes of a complete assessment of the effects of the project and as a consenting fall-back position, the GSP substation is also included in the application for development consent and the likely significant effects are assessed within ES Chapters 6 to 15 (**application document 6.2**). The baseline construction programme assumes that the GSP substation is constructed in advance of DCO consent. This is the preferred construction schedule and, therefore, has been assumed as the baseline programme for the purposes of assessment. The sensitivity testing presented in Section 11 of each topic chapter, identifies whether constructing the GSP substation as part of the DCO, would result in any new or different significant effects to those assessed in the baseline scenario. ES Chapter 15: CEA (**application document 6.2.15**) assesses the intra cumulative effects of the project e.g. where different impacts of the project affect the same receptors.	Planning Statement (**application document 7.1**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
2.3.3	*Where an electricity networks infrastructure project is submitted to the IPC without an accompanying application for a generating station, the IPC should have regard to the matters specified in paragraph 4.9.3 of EN-1, as well as the need for the proposed infrastructure (as set out in Part 3 of EN-1). Circumstances in which the IPC considers it appropriate to consider a networks application separately from related proposals may include where, although the proposed generating station has yet to be consented, there is clear evidence of demand in that:* ●*the project is wholly or substantially supported by connection agreements or contractual arrangements to provide connection; or* ●*the project is based on reasonably anticipated future requirements. This might be because it is located in an area where there is likely to be either significant increased generation or a significant increase in load on the existing network. An example of how this could be demonstrated is Round 39 for offshore windfarms where site licensing arrangements will give a clear indication of the areas within which future applications for consent will be received.*	The level of generation and interconnection capacity expected to connect in East Anglia is significant and is largely driven by new nuclear, offshore wind and interconnection capacity as the UK drives towards net zero. The limited number of physical routes for electrical power to flow in and out of the region limits the amount of additional generation that can be incorporated to the national transmission system without further reinforcement. This is because: there are currently three double circuit overhead transmission lines carrying power into Bramford; one from Norwich and two from Sizewell. To the west of Bramford however, out to Twinstead Tee, there is currently only one double circuit line carrying power out of the region. With substantial new sources of energy connecting in the region by the end of the decade, the existing overhead line west of Bramford would be overloaded. Beyond Twinstead Tee there are two routes out of the region; one west to Pelham and one south to Braintree-Rayleigh-Tilbury. Adding a double circuit route between Bramford to Twinstead would remove the current bottleneck on the network and make efficient use of the capacity available in those two routes. Reinforcing the network between Bramford and Twinstead would create two independent double circuit transmission routes west of Bramford – one from Bramford to Pelham and one from Bramford to Braintree to Rayleigh to Tilbury.	Need Case (April 2023) (**application document 7.2.1**)
2.3.4	*If the IPC believes it needs to probe further then factors it may wish to consider include whether the project would make a significant contribution to the promotion of renewable energy, the achievement of climate change objectives, the maintenance of an appropriate level of security of electricity supply or whether it helps achieve other energy policy objectives.*	Offshore renewable generation is expected to grow in East Anglia and more interconnectors would be commissioned in the south coast and East Anglia. Combined with the increase in renewable generation in other parts of the country, National Grid expect that the main driver of constraints in the long term would be the north-to-south flows through the region, as well as the flows through and across the East Anglia area. A new double circuit in East Anglia supports the export of power out of the area and reinforces the south-east area. The need to reinforce the network between Bramford and Twinstead has been identified as 'critical' in all future energy scenarios in the	Planning Statement Chapter 3 (**application document 7.1**) Need Case (April 2023) (**application document 7.2.1**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
		2020, 2021 and 2022 editions of the Network Options Assessment report and concludes that the project needs to be in place by autumn 2028. Hence, the project must now be taken forward to help make the transition to a cleaner greener energy future as the UK strives towards net zero by 2050. See Planning Statement Chapter 3 (**application document 7.1**) and Need Case (April 2023) (**application document 7.2.1**) for further information.	
2.3.5	*The IPC should also take into account that National Grid, as the owner of the electricity transmission system in England and Wales, as well as Distribution Network Operators (DNOs), are required under section 9 of the Electricity Act 1989 to bring forward efficient and economical proposals in terms of network design, taking into account current and reasonably anticipated future generation demand. National Grid is also required to facilitate competition in the supply and generation of electricity and so has a statutory duty to provide a connection whenever or wherever one is required.*	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. This includes a statutory obligation to offer to connect any new generating stations or interconnectors applying to connect to the transmission system. National Grid undertakes an options appraisal on each new project, informed by the latest National Grid guidance. options appraisal is a robust and transparent process that is used to compare options and to assess the positive and negative effects they may have, across a wide range of criteria including environmental, socio-economic, technical and cost factors. The aim is to find a balanced outcome, bearing in mind the range of National Grid's statutory duties, including those detailed under section 9 of the Electricity Act. Further details on how National Grid is meeting its duties under the Electricity Act are presented in the Planning Statement (**application document 7.1**).	Planning Statement (**application document 7.1**)
2.4 Climate change adaption			
2.4.1	*Part 2 of EN-1 provides information regarding the Government's energy and climate change strategy including policies for mitigating climate change. Section 4.8 of EN-1 sets out the generic considerations that applicants and the IPC should take into account to help ensure that electricity networks infrastructure is resilient to climate change. As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or*	National Grid has assessed potential impacts of climate change and incorporated adaptation/resilience throughout the lifetime of the project. The project has been designed to be resilient to climate change by locating the above ground elements of the project, including the GSP substation and the CSE compounds, outside of Flood Zones 2 and 3 as described in the FRA (**application document 5.5**). This is	FRA (**application document 5.5**). ES Appendix 5.3: Major Accidents and Disasters Scoping (**application document 6.3.5.3**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
	in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it would be resilient to: • *flooding, particularly for substations that are vital for the electricity transmission and distribution network;* • *effects of wind and storms on overhead lines;* • *higher average temperatures leading to increased transmission losses; and* • *earth movement or subsidence caused by flooding or drought (for underground cables).*	secured via commitment EM-P07 (embedded design measure) which states '*the GSP substation and the CSE compounds have been located outside of areas at medium and high risk of river flooding (Flood Zones 2 and 3).'* This measure will be secured as part of the CEMP (**application document 7.5.1**) alongside the good practice measures set out in the CoCP Appendix A of the CEMP (**application document 7.5.2**). The residual impact of extreme climatic events, such as flooding; extreme temperatures (high and low temperatures); ground subsidence; high winds/storm and tree fall are considered within ES Appendix 5.3: Major Accidents and Disasters Scoping **(application document 6.3.5.3**). The assessment has shown that the existing design measures, legal requirements, codes and standards adequately control the potential major accident and/or disaster throughout the project lifetime (construction, operation and decommissioning).	
2.4.2	*Section 4.8 of EN-1 advises that the resilience of the project to climate change should be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment.*	See response to 2.4.1.	N/A
2.5 Consideration of good design			
2.5.1	*Section 4.5 of EN-1 sets out the principles for good design that should be applied to all energy infrastructure.*	ES Appendix 4.1: Good Design (**application document 6.3.4.1**) presents the different design choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives (**application document 6.2.3**), which explains the different options that were considered during the project development, and also ES Chapter 4: Project Description (**application document 6.2.4**), which describes the design submitted within the application. The design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety	ES Appendix 4.1: Good Design (**application document 6.3.4.1**) ES Chapter 3: Alternatives (**application document 6.2.3**) ES Chapter 4: project Description (**application document 6.2.4**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
		processes that National Grid has in place than govern how it designs and constructs its projects safely.	
2.5.2	*Proposals for electricity networks infrastructure should demonstrate good design in their approach to mitigating the potential adverse impacts which can be associated with overhead lines, particularly those set out in Sections 2.7 to 2.10 below.*	See paragraphs 2.7 to 2.10 below.	
2.6 Impacts of electricity networks			
2.6.3	*The impacts identified in Part 5 of EN-1 and Part 2 of this NPS are not intended to be exhaustive. Applicants are required to assess all likely significant effects of their proposals (see Section 4.2 of EN-1) and the IPC should consider any impacts which it determines are relevant and important to its decision.*	National Grid considers that all likely significant effects have been identified and assessed in the ES.	Environmental Statement (**application document 6.2**) ES Appendix 5.1: Scope of the Assessment (**application document 6.3.5.1**)
2.7 Biodiversity and Geological Conservation			
2.7.2	*The applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the Environmental Impact Assessment (EIA) and ES (see Section 4.2 of EN-1). Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds.*	The full assessment of the impacts and related mitigation measures are detailed in the ES (**application document 6.2**) submitted as part of this DCO application. The full list of what has been included within the scope of the assessment or justification as to why it is not included, can be found ES Appendix 5.1: Scope of the Assessment (**application document 6.3.5.1**). Effects on breeding and overwintering birds are assessed in ES Chapter 7: Biodiversity (**application document 6.2.7**).	Environmental Statement (**application document 6.2**) ES Appendix 5.1: Scope of the Assessment (**application document 6.3.5.1**) ES Chapter 7: Biodiversity (**application document 6.2.7**)
2.7.4	*Careful siting of a line away from, or parallel to, but not across, known flight paths can reduce the numbers of birds colliding with overhead lines considerably.*	ES Chapter 7: Biodiversity (**application document 6.2.7**) concludes that there would be negligible impacts on birds at the operational stage of the project. There is unlikely to be any additional risk of collision as the project actually results in the spatial extent of features in the landscape being reduced, largely as a result of the removal of the existing 132kV overhead line and the undergrounding of some sections.	ES Chapter 7: Biodiversity (**application document 6.2.7**)
2.7.5	*Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird*	ES Chapter 7: Biodiversity (**application document 6.2.7**) concludes that there would be negligible impacts on birds at the operational stage of the project. There is unlikely to	ES Chapter 7: Biodiversity (**application document 6.2.7**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
	vision can also reduce the number of deaths. The design and colour of the diverters will be specific to the conditions – the line and pylon/transmission tower specifications and the species at risk.	be any additional risk of collision as the project actually results in the spatial extent of features in the landscape being reduced, largely as a result of the removal of the existing 132kV overhead line and the undergrounding of some sections.	
2.7.6	*Electrocution risks can be reduced through the design of crossarms, insulators and the construction of other parts of high voltage power lines so that birds find no opportunity to perch near energised power lines on which they might electrocute themselves.*	Birds are not generally earthed when in flight or when perched on electricity infrastructure. To avoid earthing by design, insulators are of a sufficient size to prevent birds from being able to connect with both the conductor and the earthed pylon at the same time, which could result in electrocution. In addition, vegetation clearance in the permanent easement corridor (associated with statutory safety clearances) would be maintained to a three-year growth to avoid branches interfering with the conductors and subsequently birds perching on branches close to power lines which could result in earthing and electrocution.	N/A
2.8 Landscape and Visual			
2.8.4	*Where possible, applicants should follow the principles below in designing the route of their overhead line proposals and it will be for applicants to offer constructive proposals for additional mitigation of the proposed overhead line. While proposed underground lines do not require development consent under the Planning Act 2008, wherever the nature or proposed route of an overhead line proposal makes it likely that its visual impact will be particularly significant, the applicant should have given appropriate consideration to the potential costs and benefits of other feasible means of connection or reinforcement, including underground and sub-sea cables where appropriate. The ES should set out details of how consideration has been given to undergrounding or sub-sea cables as a way of mitigating such impacts, including, where these have not been adopted on grounds of additional cost, how the costs of mitigation have been calculated.*	The need for the project is set out in the Need Case (April 2023) (**application document 7.2.1**) and is also summarised in Planning Statement Chapter 3 (**application document 7.1**). The Strategic Options Report (June 2011) (**application document 7.2.2**) considered the feasibility of alternative connections such as sub-sea cables. The Connections Option Report (May 2012) (**application document 7.2.4**) sets out the justification for why certain sections are overhead line or underground cable. Further details on the environmental effects of the different options can be found in ES Chapter 3: Alternatives Considered (**application document 6.2.3)**.	Need Case (April 2023) (**application document 7.2.1**) ES Chapter 3: Alternatives Considered (**application document 6.2.3)** The Strategic Options Report (June 2011) (**application document 7.2.2**) Connections Option Report (**application document 7.2.4**) Planning Statement Chapter 3 (**application document 7.1**)
2.8.5	*Guidelines for the routeing of new overhead lines, the Holford Rules, were originally set out in 1959 by Lord Holford, and are intended as a common sense approach to the routeing of new overhead lines. These guidelines were reviewed and updated by the industry in the*	National Grid recognise that the Holford Rules and their accompanying notes form the basis for the approach to routeing new 400kV overhead lines. The Holford Rules have been used when considering alternatives the need for	ES Chapter 3: Alternatives Considered (**application document 6.2.3)**

Para.	Requirement	How the project Meets the Policy	Location in DCO
	1990s and should be followed by developers when designing their proposals.	any additional mitigation measures. The iterative design and assessment of the project has applied the Holford Rules. Further details on the environmental effects of the different route corridors and alignments can be found in ES Chapter 3: Alternatives Considered (**application document 6.2.3)** and an assessment of the project against the Holford Rules is set out in Planning Statement Chapter 5 (**application document 7.1**).	Planning Statement Chapter 5 (**application document 7.1**).
2.8.6	*In overview, the Holford Rules state that developers should:* • *avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence;* • *avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers, i.e., the bigger structures which are used when lines change direction;* • *other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers;* • *choose tree and hill backgrounds in preference to sky backgrounds wherever possible. When a line has to cross a ridge, secure this opaque background as long as possible, cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees;* • *prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees;* • *where country is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration of lines or "wirescape"; and* • *approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land*	In cases where a predominantly overhead route has been selected, as is the case for the project, National Grid will continue to apply the Holford Rules as a starting point, and have identified any sections where it would be more appropriate to place the infrastructure underground. The same approach has been adopted for siting the associated land-based/above-ground infrastructure such as substations or sealing end compounds. However, it is worth noting that other factors have also influence the final design, including consultation feedback. An assessment of the project against the Holford Rules is set out in Planning Statement Chapter 5 (**application document 7.1**).	Planning Statement Chapter 5 (**application document 7.1**).

Para.	Requirement	How the project Meets the Policy	Location in DCO
	intervenes between the approach line and the substation, carefully assess the comparative costs of undergrounding.		
2.8.10	*In addition to following the principles set out in the Holford Rules and considering undergrounding, the main opportunities for mitigating potential adverse landscape and visual impacts of electricity networks infrastructure are:* • *consideration of network reinforcement options (where alternatives exist) which may allow improvements to an existing line rather than the building of an entirely new line; and* • *selection of the most suitable type and design of support structure (i.e., different lattice tower types, use of wooden poles etc) in order to minimise the overall visual impact on the landscape.*	The need for the project is set out in the Need Case (April 2023) (**application document 7.2.1**) and is also summarised in Planning Statement Chapter 3 (**application document 7.1**)**.** ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out the environmental factors of the alternatives considered. The design evolution of the project and how it demonstrates good design is reported in ES Appendix 4.1: Good Design (**application document 6.3.4.1**) including different types of pylons considered. Consideration of network reinforcement options allowing improvements to an existing line rather than the building of an entirely new line were considered as part of the options appraisal process and are documents in the Planning Statement (**application document 7.1**). The design of the 400kV overhead line and the siting of associated infrastructure has been developed within the underlying principle of good design. Of additional importance is that the design has responded to the opportunities afforded by removal of the existing 132kV overhead line to reduce landscape and visual effects.	Need Case (April 2023) (**application document 7.2.1**) ES Chapter 1: Introduction **(application document 6.2.1)** ES Appendix 4.1: Good Design (**application document 6.3.4.1**) Planning Statement Chapter 3 (**application document 7.1**)
2.8.11	*There are some more specific measures that might be taken, and which the IPC could require through requirements if appropriate, as follows:* • *Landscape schemes, comprising off-site tree and hedgerow planting are sometimes used for larger new overhead line projects to mitigate potential landscape and visual impacts, softening the effect of a new above ground line whilst providing some screening from important visual receptors. These can only be implemented with the agreement of the relevant landowner(s) and advice from the relevant statutory advisor may also be needed; and* • *Screening, comprising localised planting in the immediate vicinity of residential properties and principal viewpoints can*	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) identifies the likely significant effects in relation to landscape and visual and also identifies potential landscape softening which could reduce effects from specific properties. Additional measures for off-site planting to soften the effect (not mitigation) would be discussed with relevant landowners outside of the DCO process.	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) LEMP (**application document 7.8**).

Para.	Requirement	How the project Meets the Policy	Location in DCO
	also help to screen or soften the effect of the line, reducing the visual impact from a particular receptor.		
2.9 Noise and Vibration			
2.9.8	*While standard methods of assessment and interpretation using the principles of the relevant British Standards are satisfactory for dry weather conditions, they are not appropriate for assessing noise during rain, which is when overhead line noise mostly occurs, and when the background noise itself will vary according to the intensity of the rain.*	Operational noise is scoped out of the ES as significant adverse effects would be avoided by design (the use of triple araucaria conductors or other BPM to avoid line 'crackle'). Additional information regarding operational noise impacts from overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**).	ES Chapter 14: Noise and Vibration (**application document 6.2.14**) ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**)
2.9.9	*Therefore an alternative noise assessment method to deal with rain-induced noise is needed, such as the one developed by National Grid as described in report TR(T)94,1993. This follows recommendations broadly outlined in ISO 1996 (BS 7445:1991) and in that respect is consistent with BS 4142:1997. The IPC is likely to be able to regard it as acceptable for the applicant to use this or another methodology that appropriately addresses these particular issues.*	See response to 2.9.8.	N/A
2.9.12	*Applicants should have considered the following measures:* • *the positioning of lines (see Section 2.8 (landscape/visual impact)) to help mitigate noise;* • *ensuring that the appropriately sized conductor arrangement is used to minimise potential noise;* • *quality assurance through manufacturing and transportation to avoid damage to overhead line conductors which can increase potential noise effects; and* • *ensuring that conductors are kept clean and free of surface contaminants during stringing/installation.*	Large settlements and properties were avoided during the corridor and alignment routing where practicable, as described in ES Chapter 3: Alternatives Considered (**application document 6.2.3**) and Chapter 5 of this Planning Statement. Embedded measures include a commitment to use triple araucaria or other BPM for the conductors (EM-P03), and a noise enclosure around the transformers at the GSP substation both secured through the CEMP (**application document 7.5**). Additional information regarding operational noise impacts from overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**).	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) ES Chapter 14: Noise and Vibration (**application document 6.2.14**) ES Appendix 14.3: Overhead Line Noise Assessment (**application document 6.3.14.3**)
2.9.13	*The ES should include information on planned maintenance arrangements. Where this is not the case, the IPC should consider*	The maintenance activities are likely to be quieter than construction activities and of shorter duration and, therefore, not significant.	ES Chapter 14: Noise and Vibration (**application document 6.2.14**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
	including these by way of requirements attached to any grant of development consent.		
	2.10 Electric Magnetic Fields (EMFs)		
2.10.5	*The Health Protection Agency's (HPA) Centre for Radiation, Chemical and Environmental Hazards (CRCE) provides advice on standards of protection for exposure to non-ionizing radiation, including the ELF EMFs arising from the transmission and use of electricity. In March 2004, the National Radiological Protection Board (NRPB) (now part of HPA CRCE), published advice on limiting public exposure to electromagnetic fields. The advice recommended the adoption in the UK of the EMF exposure guidelines published by ICNIRP in 1998. These guidelines also form the basis of a 1999 EU Recommendation on public exposure and a Directive on occupational exposure. Resulting from these recommendations, Government policy is that exposure of the public should comply with the ICNIRP (1998) guidelines in terms of the EU Recommendation. The electricity industry has agreed to follow this policy. Applications should show evidence of this compliance as specified in 2.10.9 below*	The project has been designed and assessed in line with the Code of Practice Power Lines: Demonstrating compliance with EMF exposure guidelines. All the EMF produced would comply with the Government adopted ICNIRP 1998 guidelines, as demonstrated in EMF Compliance Report (**application document 5.2**).	EMF Compliance Report (**application document 5.2**)
2.10.9	*This NPS does not repeat the detail of the ICNIRP 1998 guidelines on restrictions or reference levels nor the 1999 EU Recommendation. Government has developed with the electricity industry a Code of Practice, "Power Lines: Demonstrating compliance with EMF public exposure guidelines – a voluntary Code of Practice", published in February 2011 that specifies the evidence acceptable to show compliance with ICNIRP (1998) in terms of the EU Recommendation. Before granting consent to an overhead line application, the IPC should satisfy itself that the proposal is in accordance with the guidelines, considering the evidence provided by the applicant and any other relevant evidence. It may also need to take expert advice from the Department of Health.*	The project has been designed and assessed in line with the Code of Practice Power Lines: Demonstrating compliance with EMF exposure guidelines. All the EMF produced would comply with the Government adopted ICNIRP 1998 guidelines, as demonstrated in EMF Compliance Report (**application document 5.2**).	EMF Compliance Report (**application document 5.2**)
2.10.10	*There is no direct statutory provision in the planning system relating to protection from EMFs and the construction of new overhead power lines near residential or other occupied buildings. However, the Electricity Safety, Quality and Continuity Regulations 2002 set out the minimum height, position, insulation and protection specifications at which conductors can be strung between towers to ensure safe*	The overhead line and all other assets associated with the project are demonstrated in the EMF Compliance Report (**application document 5.2**) to comply with the Government adopted ICNIRP 1998 guidelines.	EMF Compliance Report (**application document 5.2**)

Para.	Requirement	How the project Meets the Policy	Location in DCO
	clearance of objects. The effect of these requirements should be that power lines at or below 132kV will comply with the ICNIRP 1998 basic restrictions, although the IPC should be satisfied that this is the case on the basis of the evidence produced as specified in the Code of Practice.		
2.10.15	*The applicant should have considered the following factors:* • *height, position, insulation and protection (electrical or mechanical as appropriate) measures subject to ensuring compliance with the Electricity Safety, Quality and Continuity Regulations 2002;* • *that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise effects of EMFs; and* • *any new advice emerging from the Department of Health relating to Government policy for EMF exposure guidelines.* *However, where it can be shown that the line will comply with the current public exposure guidelines and the policy on phasing, no further mitigation should be necessary.*	The proposed overhead line has been designed to comply with the statutory requirements of the Electricity Safety, Quality and Continuity Regulations 2002. EMF requirements can, for some designs of overhead line, result in conductor clearances to ground (one of the requirements of these regulations) being increased but never reduced compared to the requirements of the Electricity Safety, Quality and Continuity Regulations 2002. The minimum conductor clearance information provided in EMF Compliance Report (**application document 5.2**) demonstrates this compliance. The overhead line has been designed in line with the policy on optimum phasing as specified in the Code of Practice on Optimum Phasing. This has been considered in the EMF Compliance Report (**application document 5.2**) and all current advice has been used for the assessment. The assessment has been carried out against the current Government-recommended EMF exposure guidelines and policies.	EMF Compliance Report (**application document 5.2**)
2.10.16	*Where EMF exposure is within the relevant public exposure guidelines, re-routeing a proposed overhead line purely on the basis of EMF exposure, or undergrounding a line solely to further reduce the level of EMF exposure are unlikely to be proportionate mitigation measures.*	Section 6 of the EMF Compliance Report (**application document 5.2**) shows that the project would be compliant with the current public exposure guidelines of ICNIRP 1998 and the policy on phasing using the principles in the Codes of Practice on Compliance and Optimum Phasing. No further mitigation measures are necessary.	EMF Compliance Report (**application document 5.2**)

Appendix C: Committed Developments Overlapping with Order Limits

Table C.1: Table containing an assessment of the committed developments overlapping with Order Limits for the project.

Please note, refused or withdrawn application have been excluded from this assessment.

The original data freeze date: 31 January 2023. However, this table was updated for Examination Deadline 6 (20 December 2023), so has an updated Data freeze date of 1 December 2023.

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
SECTION AB: BRAMFORD SUBSTATION							
DC/22/05127	Mr & Mrs Avis	Land North Of Clay Hill Hintlesham Suffolk	Application for Outline Planning Permission (Access Points to be considered, Appearance, Layout, Landscaping and Scale to be reserved) Town and Country Planning Act 1990 (as amended) - Erection of 5No. dwellings with associated cart lodges and parking (re-submission of withdrawn application DC/21/06539). | Land North Of Clay Hill Hintlesham Suffolk	Appeal lodged	26/4/2023	The proposed dwellings are beneath the existing 132kV overhead line and accordingly within the Order Limits for the project. National Grid propose to remove this section of overhead line. National Grid made representations in respect to the planning application, drawing attention to the interaction between the proposed five dwellings and the upcoming project (including the powers to be granted by the DCO), including the potential interaction of the proposed construction phases, and ask that this is fully considered by all parties. Subject to on-going negotiations with the landowner/developer, It is unlikely that the proposed development would impact on National Grid's ability to construct or operate the project.	**AB/1**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/21/01427	Mr G Hambling	Land Rear Of Lilivan Duke Street Hintlesham Suffolk	Change of use of agricultural land to equestrian use including siting of ancillary touring caravan (retention of)	Approved	09/06/2021	The proposed development adjoins the boundary of the Order Limits where a temporary access route is proposed. As there is no physical overlap of built development or uses (including access points), the proposed development would not impact on National Grid's ability to construct or operate the project	**AB/2**
DCO	Scottish Power Renewables (SPR)	East Anglia THREE comprises an offshore windfarm approximately 69km from the Suffolk coast and an onshore cable route to transport energy to a convertor station in Bramford.	Development of an offshore windfarm with an approximate capacity of 1200MW off the coast of East Anglia, within the area known as Zone 5, under the Round 3 Offshore Wind Licensing Arrangements.	Development Consent	07/08/2017	This is a consented application for development consent which overlaps with the Order Limits for the project, particularly in relation to a small area of landscaping proposed by SPR adjacent to Bramford Substation. Due to the nature and scale of the proposed development and the prospect of significant cumulative effects around Bramford Substation, a SoCG with this Applicant has been prepared. See the SoCG prepared with TC East Anglia ONE OFTO Limited and East Anglia Three Limited [**REP1-030 and REP1-031**] which considers the project's relationship with this DCO. The location of this DCO can also be seen at ES Chapter 15: CEA, Figure 15.1: Nationally Significant Infrastructure Projects [**APP-155**].	**AB/3**
DC/21/05468	Bramford Power Ltd	Land To The South Of Bullen Lane Bramford Suffolk IP8 4JD	Construction and operation of a 100MW Battery Energy Storage System, and related infrastructure with associated access, landscaping and drainage	Approved	07/07/2022	The proposed development is located to the east of Bramford Substation. The application site red line boundary shows connection to the public highway which also overlaps with the access route proposed for the project within the Order Limits. As there is no physical overlap of built development or uses, the proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/4**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/21/01419	Mr Thomas Newman	Dale View Washbrook Road Hintlesham Ipswich Suffolk IP8 3NW	Householder Planning Application - Siting residential park home for ancillary use to the host dwelling (following removal of storage container).	Approved	26/04/2022	The red line boundary for the proposed development adjoins the Order Limits for the project. However, the siting of the caravan falls outside the Order Limits and is contained within the residential curtilage for the dwelling. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/5**
DC/22/00683	Statkraft AS	Land South Of Tye Lane Bramford (Part In The Parishes Of Flowton And Burstall)	Full Planning Application - Installation of a solar array, battery energy storage system and associated infrastructure and construction of vehicular accesses and roadways.	Awaiting Decision	21/03/2022	The Applicant has an interest in land which is within the Order Limits for the project and propose, as part of their planning application for their solar energy farm, to establish their grid connection to Bramford Substation within land in the Order Limits for the project. It is understood from the Applicant's Planning Statement in respect to DC/22/01243 and DC/22/00683, that although the grid connection corridor is included as part of the planning application for the proposed development, the final cable route grid connection will be subject to a detailed route alignment process that would be undertaken following receipt of planning permission in consultation with the DNO. It is also understood that it is the intention of the Applicant to connect into the DNO (southern) side of Bramford Substation as such a connection could be achieved more quickly when compared to connecting into the higher voltage National Grid network. The proposed development's grid & access corridors directly overlap the proposed	**AB/6**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
						Order Limits as the proposed development connects into Bramford Substation. National Grid has been in discussions with the Applicant in respect to their proposed development and it is not considered that the proposed development would impact on National Grid's ability to construct or operate the project.	
DC/22/01243	Statkraft AS	Land South Of Tye Lane Bramford (Part In The Parishes Of Flowton And Burstall)	Full Planning Application - Installation of a solar array, battery energy storage system and associated infrastructure and construction of vehicular accesses and roadways.	Awaiting Decision	08/02/2022	Duplication application (same as **Assessment Reference: AB/6**) as the site area is cross boundary two separate planning applications are made (one to Babergh District Council and one to Mid-Suffolk District Council).	**AB/7**
DC/21/06349	Mr and Mrs Strelitz	Thorpe Farm Washbrook Road Hintlesham Suffolk IP8 3NW	Planning Application - Change of use of agricultural land to equestrian use, erection of hay store. Construction of extensions to main house, swimming pool and landscaping within residential curtilage	Approved	01/02/2022	The proposed hay store is within the Order Limits where the removal of the 132kV overhead line is proposed. National Grid will liaise with the Applicants on the implementation of their scheme.	**AB/8**
DC/21/06759	WP Grid Services Limited	Land West Of Bramford Substation Bullen Lane Bramford Suffolk	Environmental Impact Assessment Screening Request for the development of grid stability infrastructure.	EIA not required	22/12/2021	There is a physical overlap of the proposed development within the Order Limits, although, the proposed development is only at the screening stage and has, therefore, not progressed to a stage where further consideration is considered necessary.	**AB/9**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/21/01494	Mr and Mrs John and Margaret Barrett	California House 1 California Lane Hintlesham Ipswich Suffolk IP8 3QJ	Householder application - Erection of side garage extension	Approved	19/04/2021	The red line boundary for the proposed development slightly overlaps with the Order Limits, but the side garage extension falls outside the Order Limits and is adjacent to the existing dwelling. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/10**
DC/21/01098	Messrs. Godfrey and Dollar	The Barn Hill Farm Burstall Hill Burstall Suffolk IP8 3DJ	Full Planning Application - Siting temporary mobile home for a period of 18 months from the date of consent for the use of both a rural worker and for the duration of the conversion of an agricultural barn to a residential dwelling (DC/21/00028 for the occupier).	Approved	29/03/2021	The proposed development is a temporary planning permission, directly within the Order Limits and below the 400kV overhead line (existing-modified). However, the permission will expire before the overhead line is modified in this location. Hence the proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/11**
DC/21/00028	Messrs Godfrey And Dollar	The Barn Burstall Hill Burstall Suffolk IP8 3DJ	Notification for Prior Approval for a Proposed Change of Use of Agricultural Building to 1no. Dwellinghouse (Class C3), and for Associated Operational Development. Town and Country Planning (General Permitted Development) Order 2015 (as amended)	Approved	11/02/2021	The application was granted subject to the General Permitted Development Order and the prior approval of certain matters was required. The location is directly below the existing 400kV overhead line that would require some modification. National Grid will liaise with the Applicants on the implementation of their scheme.	**AB/12**
DC/21/00060	Bramford Green Limited	Land to the East of The Channel Burstall Hill	Installation of renewable led energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity	Babergh Council – Approved	17/01/2023*	The Applicant has an interest in land which is within the Order Limits for the project and propose, as part of their planning application, to establish their grid connection to Bramford Substation, via an	**AB/13**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
			storage containers together with substation, inverter / transformer stations, site accesses, internal access tracks, security measures, access gates, other ancillary infrastructure, landscaping and biodiversity enhancements including Nature Areas.			underground cable and approach that will also be used to link the north and south two solar array areas, within land in the Order Limits for the project, particularly in the area of land to the northeast of Hill Farm where three pylons and the intervening spans of conductors would be removed pursuant to the project. Due to this interaction, National Grid has been in discussions with the Applicant.	
DC/20/05895	Bramford Green Limited	Land to the South of Church Farm Somersham IP8 4PN and Land to the East of The Channel Burstall IP8 4JL	Installation of renewable energy generating station, comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with substation, inverter/transformer stations, site accesses, internal access tracks, security measures, access gates, other ancillary infrastructure, landscaping and biodiversity enhancements including Nature Areas.	Allowed at Appeal	17/2/2023	Duplication application (same as AB/13); as the site area is cross boundary two separate planning applications are made (one to Babergh District Council and one to Mid-Suffolk District Council).	**AB/14**
DC/19/04694	J. Cousins	Barn West Of Rose Cottage Church Hill Burstall Suffolk IP8 3DX	Change of use, extension and conversion of barn to create 1no. dwelling. Landscaping works including garage/store, access drive and change of use of agricultural land to create residential garden	Approved	23/12/2019	This application was granted planning permission on 23 December 2019, and therefore, must be implemented before 23 December 2022. The Applicant has a number of pre-commencement conditions in relation to protected species, including mitigation. It appears that the conditions have not been discharged and the permission has likely, therefore, lapsed.	**AB/15**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/19/03008	Pivot Power	Land Adjacent To Bramford Substation Bullen Lane Bramford IP8 4JH	Installation and operation of a 49.9 MW Battery Storage Facility, with associated infrastructure including inverters, transformers, switchgear, spares container, fencing, CCTV Cameras and access road.	Approved	23/09/2019	The proposed development is located to the east of Bramford Substation. The application site red line boundary shows connection to the public highway which also overlaps with the access route proposed for the project within the Order Limits. As there is no physical overlap of built development or uses, the proposed development would not impact on National Grid's ability to construct or operate the project. Also note this application was subject to amendment application DC/21/06919 to amend the description of development to remove reference to the megawatt output of the battery.	**AB/16**
DC/19/02232	Mrs Nicola Pond	3 California Lane Hintlesham Ipswich Suffolk IP8 3QJ	Householder Planning Application - Erection of front porch, rear single storey extensions and cartlodge garage.	Approved	25/06/2019	The red line boundary for the dwelling just overlaps with the proposed Order Limits, but the built extension development falls outside the proposed Order Limits and is adjacent to the existing dwelling within the plot. As there is no physical overlap of built development, proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/17**
DC/17/05331	Astra Ventures	Land Between Proposed Brook Farm Battery Storage Development And Bramford Substation Off Bullen Lane Ipswich	Planning Application- Construction of an underground cable to connect a proposed Battery Storage Development to the primary substation off Bullen Lane.	Approved	12/06/2018	It is understood from the LPA (Babergh & Mid-Suffolk District Council) that the consent has lapsed, but some elements are now proposed as permitted development, and this includes an underground cable that overlaps the order limits for the project. National Grid is currently undertaking enquiries about these works, but at present the indications are that the work will have been undertaken before the application for development consent has been determined.	**AB/18**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/17/04737	Hintlesham Hall Farms Ltd	Home Wood Hintlesham Hall Park Hintlesham Ipswich	Change of use of land for the erection of 4 'Safari tent' type holiday units with associated parking and landscaping.	Approved	19/12/2017	The proposed access points for the proposed development slightly overlap with the Order Limits for the project in a number of locations. However, due to the nature and scale of the proposed development and the fact there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/19**
DC/17/02746	Astra Ventures Ltd	Land at Brook Farm off Church Hill Road North Of Burstall (in close proximity to the Bramford Substation) Ipswich	Erection and operation of battery storage unit.	Approved	16/11/2017	The proposed access points for the proposed development slightly overlap with the Order Limits for the project. However, due to the nature and scale of the proposed development and the fact there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project. Note that this permission has been subject to various amendments; DC/18/05121; DC/19/01601; DC/21/01514; DC/21/06574; DC/21/06801. Also is related to DC/17/05331.	**AB/20**
DC/22/06309	Anglian Water Services Ltd	Anglian Water Services Bury To Colchester Pipeline	Cross Boundary - Hybrid Planning Application - Full Application for Bury St Edmunds to Colchester 69k Pipeline Scheme and associated above ground infrastructure at Raydon Water and Rushbrooke Water Treatment Works, Raydon Tee Chemical Dosing Site and Wherstead Water Reservoir. Outline Application for above ground infrastructure at Little	Approved	3/10/2023	There is an area of land in common for both infrastructure projects within the Order Limits (land in the vicinity of Hadleigh Bee Farm). Having reviewed the submission documentation it is understood that the Anglian Water pipeline project proposes an open cut crossing through the area of land in common to accommodate the pipeline itself, along with the main compound and a separate laydown construction compound (enabling works). The application documentation states that enabling works for the Anglian Water pipeline project will commence in early 2023, whilst the main	**AB/23**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
			Saxham Water Reservoir, Little Whelnetham, Nedging Tye Water Reservoir, Hadleigh Water Reservoir and Great Horkesley with all matters reserved except for Access (accompanied by EIA Statement)			construction phase will begin immediately after the enabling works and is anticipated to be completed by early 2024. Notwithstanding that the construction programmes as currently proposed do not anticipate a conflict; positive discussions with Anglian Water are ongoing. As part of these discussions, National Grid will seek to enter into an interface agreement with Anglian Water to agree measures to prevent any conflict between the two projects, and to clearly set out the responsibilities of both parties in terms of maintaining an ongoing and collaborative dialogue throughout the pre-construction and construction phases of both sets of works.	
DCO	Scottish Power Renewables East Anglia ONE	Situated 43km off the Suffolk coast	East Anglia ONE Offshore Windfarm	Approved	06/01/2014	This is a consented application for development consent which overlaps with the Order Limits for the project, particularly in relation to a small area of landscaping proposed by SPR adjacent to Bramford Substation. Due to the nature and scale of the proposed development and the prospect of significant cumulative effects around Bramford Substation, a SoCG with this Applicant has been prepared. See the SoCG prepared with TC East Anglia ONE OFTO Limited and East Anglia Three Limited [**REP1-030 and REP1-031**] which considers the project's relationship with this DCO. The location of this DCO can also be seen at ES Chapter 15: CEA, Figure 15.1: Nationally Significant Infrastructure Projects [**APP-155**].	**AB/24**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/22/04875	Lorford's Antiques Ltd	Vine Cottage Duke Street Hintlesham Ipswich IP8 3PL	Planning Application - Erection of 1no. dwelling with new shared vehicular access	Approved	29/11/2022	The visibility splay for the proposed access overlaps with the Order Limits for the project. However, due to the nature and scale of the proposed development and the fact there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project.	**AB/25**
DC/21/03299	Mr & Mrs A Bryce	Mill Farm Barns Priory Road Hintlesham Suffolk IP8 3NX	Full Planning Application - Change of use of agricultural land to domestic garden use to allow for installation of new all-weather tennis court with perimeter fencing and associated single storey ancillary building.	Approved	08/05/2021	The Order Limits overlap an area of land with the proposed development. The Order Limits in this location are required for planting. As such, no built infrastructure is proposed pursuant to the project in this location. Therefore, the proposed development would not impact on National Grid's ability to construct or operate the project or impact on the existing facility's ability to operate.	**AB/26**
DC/23/02118	Bramford Green Limited	Land To The South Of Church Farm, Somersham IP8 4PN And Land To The East Of The Channel, Burstall Suffolk IP8 4JL	Planning Application - Installation of renewable led energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with substation, inverter/transformer stations, site accesses,	Approved	14/9/2023	Resubmission application (same as AB/14); for the Mid-Suffolk District Council refusal.	**AB/29**
DC/23/04729	Bramford Green Limited.	Bramford Solar Farm And Battery Storage Facility And On Adjoining Land, Land East Of The Channel,	Cross Boundary Planning Application - Installation of underground cable.	Awaiting Decision	13/10/2023	The proposed underground cable route is pursuant to AB/29 and AP/13 and would traverse beneath land within the Order Limits for the DCO where it is proposed to: a) Remove a short section of the existing 400kV overhead line and pylons between	**AB/31**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
		Burstall, (Part In The Parish Of Bramford) IP8 4JL				4YL002 and 4YL004 (shown as a green line on the plan); b) Realignment of the removed 400kV overhead line extending to the southwest from Bramford substation between 4YL003C and 4YL004A (grey line); c) Construction of a new 400kV overhead line to the south west from Bramford Substation between RB1C and RB2 (purple line); and d) Associated works including access, vegetation removal, construction compounds, landscaping and mitigation planting. As such, National Grid made representations in respect to the planning application, drawing attention to the interaction between the proposed change of use and the project (including the powers to be granted by the DCO) and ask that this is fully considered by all parties.	
DC/23/04730	Bramford Green Limited.	Bramford Solar Farm And Battery Storage Facility And On Adjoining Land, Land East Of The Channel, Burstall, (Part In The Parish Of Bramford) IP8 4JL	Cross Boundary Planning Application - Installation of underground cable.	Awaiting Decision	13/10/2023	Duplication application (same as AB/31); as the site area is cross boundary two separate planning applications are made (one to Babergh District Council and one to Mid-Suffolk District Council).	**AB/32**
			SECTION C: BRETT VALLEY				

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/17/03633	Mrs Zoe Manterfield	Benton End Farm Benton End Hadleigh Suffolk IP7 5JR	Change of use of existing grazing area to dog running and exercise fields.	Approved	13/12/2017	The proposed change of use field is directly below the new 400kV overhead line and 132kV overhead line removal within the Order Limits. However, the proposed development does not result in any built development, nor are any pylons proposed in the field. The proposed development would not impact on National Grid's ability to construct or operate the project or impact on the existing facility's ability to operate.	**C/1**
DC/22/06245	K and J Ashdown and Cox	Land North Of The Street Layham Suffolk IP7 5JU	Application for Outline Planning Permission (Access points to be considered, Appearance, Landscaping, Layout and Scale to be reserved) Town and Country Planning Act 1990 (as amended) - Erection of 5No. dwellings including new vehicular access (amended scheme to DC/22/02937).	Appeal lodged	13/2/2023	The proposed development's red line boundary is adjacent to the Order Limits, although the proposed development is outside of the Order Limits. As there is no physical overlap of built development or uses, the proposed development would not impact on National Grid's ability to construct or operate the project.	**C/3**
			SECTION D: POLSTEAD				
DC/21/05866	Mr & Mrs Osborne	Popes Green Farm House Popes Green Lane Layham Suffolk IP7 5FF	Householder application - Erection of single storey north side lean-to with porch (following demolition of existing lean-to extension) and south side/rear orangery extensions to main dwelling. Erection of pole barn/workshop and lodge with provision of accommodation ancillary to host dwelling. External and internal renovation and repair	Approved	15/03/2022	The proposed development's red line boundary is adjacent to the Order Limits, although the proposed development is an extension to the main dwelling, which is well outside of the Order Limits. As there is no physical overlap of built development or uses, the proposed development would not impact on National Grid's ability to construct or operate the project.	**D/1**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
			associated works as detailed within the Design and Access Statement, Schedule of Works and Moreton Repair Schedule of Works reports.				
DC/22/00684	Mrs R Goodbody	Valley Farm Rands Road Layham Suffolk IP7 5RW	Householder Application - Installation of sewage treatment plant (Klargester BA Gravity Discharge) with amendments to existing foul drainage following the removal of septic tank.	Approved	01/04/2022	The red line boundary for the proposed development just overlaps the Order Limits for the project. However, the development proposed is minimal and confined to the residential curtilage associated with the dwelling and the development is located below ground. As such, the proposed development would not impact on National Grid's ability to construct or operate the project.	**D/2**
SCC/0018/19 B/VOC	Brett Aggregates Ltd	Layham Quarry Valley Farm Rands Road Layham, Ipswich IP7 5RW	Variation of conditions 3 (Cessation), 25 (Details of working and restoration) & 48 (Cessation of mineral working) of permission B/01/00045 to provide additional time periods for the completion of extraction and restoration.	Approved	31/10/2019	This planning permission sought to vary a number of conditions on B/01/00045 to allow the quarry use to continue until 30 April 2032, delay the submission of the restoration details and ultimately delay the date the site is finally restored (31 October 2033). The existing 400kV overhead line and the existing 132kV overhead line parallel each other, set apart by about 160m, through the northern extent of the Layham Quarry site. In this location, it is proposed to retain the existing 400kV overhead line and replace the 132kV overhead line with a new 400kV overhead line. Both overhead lines are contained within the Plant Site area. The Plant Site area would remain in operation until the mineral extraction ceases and the site is restored (31 October 2032). The phases to be worked/which have been worked are contained to the south of the Plant Site.	**D/3**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
						There is also an allocated site to the south of the phases and at present, there is no planning permission for the use of this allocation. Due to this interaction, National Grid has been in discussions with the Applicant.	
B/13/01127/CMA	Brett Group	Layham Quarry Rands Road Layham Ipswich Suffolk	Variation of Condition of Planning Permission B/97/0765 (Landfilling and restoration to agriculture and silviculture) to extend completion of both by 15 years respectively; replace the phasing of operations plan and raise the height of perimeter bunding around Phases 4 and 5	Approved	03/04/2014	This permission relates to the phasing areas which fall outside the Plant Site area which is within the Order Limits for the project (**see Assessment Reference: D3**).	**D/4**
			SECTION E: DEDHAM VALE AONB				
DC/18/02836	Konings Juices and Drinks UK Ltd	Hill Farm Stoke Road Polstead Sudbury Suffolk CO10 5AF	Erection of extension to existing production premises, associated car parking, landscaping and drainage infrastructure.	Approved	15/03/2019	The Order Limits adopt an access route through the Konings Juice facility. Currently the existing 400kV overhead line runs through the site, over the car parking area, and the existing 132kV overhead line parallels the existing 400kV overhead line and falls just outside of the site to the south, within the Order Limits for the project. In this location, it is proposed to remove the 132kV overhead line and underground the proposed (new) 400kV overhead line which falls outside the boundary for the Konings Juice facility, some distance to the south. As such, no new overhead lines or pylons are proposed in this location and the proposed development would not impact on National Grid's ability to construct or operate the	**E/1**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
						project, or impact on the existing facility's ability to operate.	
B13/01060/CDP/NMA	Mr Matthew Manning	Hill Farm Brick Kiln Farm Boxford Sudbury Suffolk CO10 5NY	Non-Material Amendment of original application: B13/01060/CDP. Formalising the design of rotary digestate dryer and inclusion of a containerised biogas boiler. The construction of the rotary digestate dryer has been a design and build research project and as such design plans could not be submitted prior to construction.	Approved	06/06/2022	The access route for the Brick Kiln Farm facility is beneath the existing 400kV overhead line and the existing 132kV overhead line, within the Order Limits for the project; the access route has also been partly adopted by the project. In this location, it is proposed to remove the 132kV overhead line and underground the proposed (new) 400kV overhead line. However, the underground cable falls well outside the boundary of this site. As such, no new overhead lines, underground cable or pylons are proposed within the Brick Kiln facility and the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the existing facility's ability to operate.	**E/2**
DC/23/00480	Mr G Bradshaw	Land To The East Of Alverstoke Farm Cottage Calais Street White Street Green Polstead CO6 5DW	Severance of garden and erection of 1No single storey dwelling and new vehicular access (following demolition of outbuilding)	Appeal lodged	12/05/2023	The proposed development's red line boundary is adjacent to the Order Limits, although the proposed development is outside of the Order Limits. As there is no physical overlap of built development or uses, the proposed development would not impact on National Grid's ability to construct or operate the project.	**E/3**
SECTION F: LEAVENHEATH/ASSINGTON							

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
DC/21/02579	Assington Autos	Assington Autos Cotton Wood Barracks Road Assington CO10 5LP	Change of use of land to extend an Authorised Treatment Facility (salvage yard); construction of 5 no. storage buildings, and other associated operational works.	Awaiting Decision	30/04/2021	The Order Limits for the project overlap with the southern extent of the Assington Autos site, where the (new) 400kV overhead line is proposed and the existing 132kV overhead line is removed. Engine storage is proposed beneath the (new) 400kV overhead line in this location. National Grid made representations in respect to the planning application, drawing attention to the interaction between the proposed change of use and the project (including the powers to be granted by the DCO) and ask that this is fully considered by all parties. However, no new overhead lines or pylons are within the site and the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the existing facility's ability to operate.	**F/1**
B/16/00928	Stoke by Nayland Club Limited	Stoke by Nayland Golf Club Keepers Lane Stoke by Nayland Colchester CO6 4PZ	Construction of 18-hole golf course, together with a new nine-hole par 3 course, short game area; Relocation of 1 halfway hut and construction of 1 new halfway hut, new car park; 3 new tennis courts and a children's golf activity area.	Approved	19/08/2021	The red line boundary for the proposed development just overlaps the Order Limits for the project where an access route is proposed. However, this overlap is negligible. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the existing facility's ability to operate.	**F/2**
DC/22/06367	Mr M Volk	Woodthorpes Farm Nayland Road Assington Sudbury Suffolk	Full Planning Application - Change of use of land for the siting of 5No. shepherds huts for use as holiday lets (resubmission of withdrawn application DC/22/04903 to include highway report).	Approved	13/3/2023	The proposed change of use of land for the siting of 5 no. shepherds huts is in close proximity to the proposed 400kV overhead line alignment and within the proposed Order Limits for the project, within which works are proposed to the existing lower voltage infrastructure. As such, National	**F/4**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
		CO10 5LR				Grid made representations in respect to the planning application to ensure the Applicant is aware of the project and powers to be granted by the DCO in this location.	
DC/23/00226	Mrs M Dowde and Mrs N Ong Mrs M Dowde and Mrs N Ong	10 The Gurdons Assington Sudbury Suffolk CO10 5LW	Application under S73a for Removal or Variation of a Condition following grant of Planning Permission DC/19/01570 dated 24/06/2019 Erection of 4 dwellings and 2 detached garages	Appeal lodged	2/08/2023	The red line boundary for the proposed development adjoins the Order Limits for the project where an access route is proposed. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the proposed development's use or operation.	**F/5**
DC/23/00694	Mr D Borthwick & Mrs M Dowde	Land South Of Aisling House The Street Assington Suffolk	Change of Use of land currently used as dog walking and exercise area to equine use; Erection of stables, post and rail fencing and creation of new vehicular access.	Approved	16/02/2023	The red line boundary for the proposed development adjoins the Order Limits for the project where an access route is proposed. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the proposed development's use or operation.	**F/6**
DC/23/02668	Mrs Rachel Bellenie	9 Stoke Road Leavenheath Colchester Suffolk CO6 4PP	Full Planning Application - Change of use of an existing summerhouse to a dog grooming salon and erection of single storey outbuilding to accommodate a water cylinder and gravity fed water tank for the sole use of the business.	Approved	8/04/2023	The red line boundary for the proposed development adjoins the Order Limits for the project where an access route is proposed. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the proposed development's use or operation.	**F/7**
DC/23/04936	The Ryes College	The Ryes College	Full Planning Application - Erection of 2No single storey	Awaiting Decision	27/10/2023	The red line boundary for the proposed development adjoins the Order Limits for the project where an access route is proposed.	**F/8**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
			buildings to offer additional classroom spaces.			As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the proposed development's use or operation.	
				SECTION G: STOUR VALLEY			
19/01298/COUA	Miss Cheryl Sutton	Hill Farm Barn Lorkin's Lane Twinstead Essex CO10 7PD	Prior Approval of Proposed Change of Use of Agricultural Building to Dwellinghouse (Use Class C3) and for associated operational development - 1no. residential dwelling	Prior Approval Required and Given	18/09/2021	The application was granted subject to the General Permitted Development Order and adjoins the boundary of the Order Limits where a temporary access route is proposed. As there is no physical overlap of built development or uses, the permitted development would not impact on National Grid's ability to construct or operate the project.	**G/1**
22/01008/COUPA	Mr Matt Pearson	Dove House Farm Amos Hill Great Henny Essex CO10 7NQ	Prior approval for the change of use of agricultural building to a dwellinghouse (Class C3), and for associated operational development - Change of use to 1 no. residential dwelling.	Prior Approval Required and Given	23/1/2022	The application was granted subject to the General Permitted Development Order for the conversion of an existing building into a dwelling. The access route to the building is partly shared with a proposed access route to the existing 400kV overhead line. The building/proposed dwelling itself is outside the Order Limits. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project.	**G/2**
19/01958/HH	Mr Matthew Pearson	Dove House Farm Amos Hill Great Henny Essex	Proposed outbuilding within residential curtilage for annexe accommodation for dependent relative.	Approved	19/12/2019	The access route to the building is partly shared with a proposed access route to the existing 400kV Line. The building/proposed dwelling itself is outside the Order Limits. As there is no physical overlap of built development, the proposed development	**G/3**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
		CO10 7NQ				would not impact on National Grid's ability to construct or operate the project.	
16/01327/AGR	Mr Steve Stevenson	Crown Castle And T-Mobile Site 1496398 Dove House Farm Amos Hill Great Henny Essex CO10 7NQ	Prior notification of agricultural or forestry development - Erection of storage barn	Approved	25/08/2016	The application was granted subject to the General Permitted Development Order and adjoins the boundary of the Order Limits where a temporary access route is proposed. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project.	**G/4**
19/01298/COUPA	Mr Richard Fordham	Hill Farm Barn Lorkin's Lane Twinstead Essex CO10 7PD	Prior Approval of Proposed Change of Use of Agricultural Building to Dwellinghouse (Use Class C3) and for associated operational development - 1no. residential dwelling	Approved	18/09/2019	The application was granted subject to the General Permitted Development Order and adjoins the boundary of the Order Limits where a temporary access route is proposed. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project	**G/5**
23/01847/FUL	Kate Wilson	New Hill Farmhouse Lorkin's Lane Twinstead Essex CO10 7PD	Erection of permanent two bedroom agricultural workers dwelling, and erection of temporary dwelling for occupation as agricultural workers dwelling for a period of 3 years	Awaiting Decision	08/05/2023	The red line boundary for the proposed development adjoins the Order Limits for the project where the removal of the existing 400kV overhead line is proposed. As there is no physical overlap of built development, the proposed development would not impact on National Grid's ability to construct or operate the project, or impact on the proposed development's use or operation.	**G/9**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
			SECTION H: GSP SUBSTATION				
22/01147/FUL	National Grid Electricity Transmission	Land Adjacent Butlers Wood And Waldergrave Wood West Of A131 (In The Parishes Of Bulmer And Twinstead) Sudbury Road Bulmer Essex	A new 400/132 kilovolt (kV) Grid Supply Point (GSP) substation including two supergrid transformers, associated buildings, equipment and switchgear, a single circuit cable sealing end compound, a new permanent vehicular access to the public highway, associated landscaping (including boundary fencing, an area for Biodiversity Net Gain, and landscape mounding) and drainage	Approved	29/04/2022	The development is pursuant to the GSP substation planning application which forms part of this application for development consent.	**H/1**
23/00709/FUL	Mrs Hayley Lee	Land South Of Old Road Wickham St Paul Essex	Proposed storage barn.	Approved	31/5/2023	The proposed development's red line boundary is adjacent to the Order Limits, although the proposed development is outside of the Order Limits. As there is no physical overlap of built development or uses, the proposed development would not impact on National Grid's ability to construct or operate the project.	**H/6**
23/01488/VAR	National Grid Electricity Transmission	Land Adjacent Butlers Wood And Waldergrave Wood West Of A131 (In The Parishes Of Bulmer And Twinstead) Sudbury Road Bulmer Essex	Variation of Condition 2 (Approved Plans) & Condition 3 (Surface Water Drainage) of approved application 22/01147/FUL granted	Approved	22/9/2023	The development, a material amendment application to 22/01147/FUL, is pursuant to the GSP substation planning application and forms part of this application for development consent.	**H/7**

Ref	Applicant	Site Location	Development Description	Status	Decision Or Submitted	Assessment	Ref.
The location of these applications can be seen at ES Chapter 15: Cumulative Effects Assessment, Figure 15.1: Nationally Significant Infrastructure Projects (application document 6.4) and in Figure 15.2 Proposed Developments (application document 6.4)							

Appendix D: Local Planning Policy Assessments

Table D.1: Table provides details as to how the project has had regard to the relevant local planning policies.

Please note, whilst the main body of this Planning Statement and existing policies in Appendix D refer to the document numbers allocated by National Grid at the submission of the application for development consent in April 2023, additional policies have been inserted at Examination Deadline 6 (20 December 2023) and therefore, instead refer to the Examination Library document numbers (correct as of 20 December 2023).

SECTION A B: HINTLESHAM				
Local Plan	**Policy**	**Policy Assessment**	**How the Project has Complied with the Policy**	**Reference**
Babergh and Mid Suffolk Joint Local Plan (2023)	SP09 Enhancement and Management of the Environment	General policy which seeks development to support and enhance the management of the natural, local environment and green infrastructure (landscape, biodiversity, geodiversity and the historic environment/ landscapes). Development required to comply with the Habitats Regulations Assessment (HRA) and maintain, protect, and enhance biodiversity net gain (BNG).	The HRA Report (**application document 5.3**) concludes that there would be no adverse impacts on the integrity of the Stour and Orwell Estuaries SPA and Ramsar as a result of the project alone or in-combination with other plans or projects. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**).	**B/JLP/SP09**
	LP15 Environmental Protection and Conservation	To ensure that all developments are environmentally sustainable and appropriately mitigated against adverse environmental impacts and climate change. Development proposals must consider a broad range of environmental issues such as air quality, water consumption and quality, drainage, sewerage, energy, noise, light, waste, contamination, design and building materials.	The ES sets out the impacts of the project on the environment including ES Chapter 13: Air Quality (**application document 6.2.13**), ES Chapter 9: Water Environment (**application document 6.2.9**), ES Chapter 14: Noise and Vibration (**application document 6.2.14**) and ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**). The GSP substation and CSE compounds would be located in Flood Zone 1, see the FRA (**application document 5.5**) for further details. The CEMP (**application document 7.5**) describes the measures that would be undertaken during construction to reduce the environmental	**B/JLP/LP15**

		effects in relation to air quality, water pollution, noise, light, waste and contamination.	
LP16 Biodiversity and Geodiversity	Part 1 advocates a hierarchical approach to development affecting habitats; enhance, mitigate, compensate. Part 2 seeks to protect designated sites, improve sites of geological value, conserve and enhance biodiversity, creation of biodiversity networks, demonstrate a BNG of at least 10%, apply measures to assist with protected species recovery. Part 3 states development which has an adverse impact on protected species will not be supported. Part 4 concerns the use of planning conditions and obligations to secure appropriate mitigation.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how the project had regard for designated ecological sites during the routing studies. In addition, Chapter 5 of the Planning Statement (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; including limiting impacts to sites of biodiversity and geodiversity of importance, such as SSSI. ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment on habitats and species. In regard to these receptors, the assessment identified that the impacts mainly related to habitat loss during construction. Mostly, habitat reinstatement post-construction would replace those habitats temporarily lost, meaning there would be no long-term adverse impact for these. However, some of the woodland habitats cannot be replaced due to safety clearances and therefore, mitigation in the form of compensation planting is proposed. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**).	**B/JLP/LP16**
LP17 Landscape	Part 1 seeks development to protect and enhance landscapes, landscape character, visual amenities, dark skies etc. and proposals should have regard to the Suffolk Landscape Character Assessment and Settlement Sensitivity Assessment. Part 2 considers that some proposals should be accompanied by a Landscape and Visual Impact Assessment (LVIA), a strategic, landscape masterplan and/or a landscape and a management plan detailing mitigation.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how the project had regard for landscape character and important landscape features during the design optioneering process. This is also reported from a planning policy perspective in Planning Statement Chapter 5 (**application document 7.1**). ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the results of the Landscape and Visual Impact Assessment (LVIA) that has been undertaken on the project. The LEMP (**application document 7.8**) outlines the proposals for landscaping on the project, including the landscape reinstatement plans. No significant adverse effects have been identified for landscape designations during operation; while some have been identified during construction. In addition, there would be residual effects on the landscape and views resulting from the project. In the main these would not be significant although there are areas where effects remain	**B/JLP/LP17**

		significant. However, for a project of this nature, it must be recognised that all proposed energy infrastructure is likely to have visual effects and this is considered in the overall planning balance discussed at Planning Statement Chapter 10 (**application document 7.1**). Also see Assessment Reference: **B/BLP2/CR04** in respect to SLA.	
LP19 The Historic Environment	Reflects the Planning (Listed Buildings and Conservation Areas) Act 1990, Historic England Advice and Guidance and the NPPF Paragraphs in respect to the historic environment including, listed buildings, ancient scheduled monuments, and archaeology. Requires Heritage Assessments in some cases.	In Section B, there is only one built heritage asset identified within the Order Limits; Hintlesham Hall Gate Piers and adjacent wall is a Grade II listed building (**Listed Building Reference Number: 1036916**), the designation forms part of the perimeter to the Hintlesham Hall estate. The piers and wall are located on the A1071 within an irregular triangle of mature trees, and with a modern housing development in between them and the Order Limits to the south and has no inter-visibility with the project. Meanwhile, the setting of Hintlesham Hall would undergo change, chiefly as a consequence of changes to the setting of Hintlesham Park. ES Chapter 8: Historic Environment [**APP-076**] presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown that, no substantial harm has been identified for archaeological remains, built heritage or the historic landscape in Section B, given the embedded and good practice measures. In addition, the project would result in a beneficial impact and make a positive contribution to the significance of some built heritage assets in Section B where these are located in the areas of undergrounding and dismantling of the existing 132kV overhead line. The AFS [**APP-186**] sets out the proposed approach to managing and recording archaeological features on the project. Also see Assessment Reference: **B/BLP2/CN15** in respect to Historic Parks & Gardens (Local) in Section B.	**B/JLP/LP19**

SECTION A B: HINTLESHAM			
LP23 Sustainable Construction and Design	This Policy requires new development to minimise its dependence on fossil fuels and to make the fullest contribution to the mitigation of climate change through adopting a sustainable approach to energy use.	The project, if granted development consent, would make an important contribution to reducing greenhouse gases and helping the UK reaching the Government's target of net zero by 2050, by supporting the distribution of greener energy. 7.2.34 ES Appendix 4.2: Assessment of Greenhouse Gas and Carbon [**APP-092**] presents a summary of the carbon dioxide equivalent emissions that would be released during the construction and operation of the project. The assessment concludes that the total carbon dioxide equivalent numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets.	**B/JLP/LP23**
LP24 Design and Residential Amenity	Policy requires all new development to be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must respond to and safeguard the existing character/context, create character and interest, be designed for health, amenity, well-being and safety and meet Space Standards.	The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives [**APP-071**] which documents the key environmental factors in consideration of the main alternatives, and Chapter 5 of this Planning Statement, which explains how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process. The latter demonstrating how such policy and legislative objectives have been embedded into the design of the project.	**B/JLP/LP24**
LP25 Energy Sources, Storage and Distribution	Policy support for renewable, decentralised and community energy generating proposals, subject to material considerations, being considered suitable technology, impact of any ancillary infrastructure, mitigation and grid connections capacity. Planning obligations and conditions will be used to ensure site restoration when energy generation ceases. Development must mitigate against impacts to Special Protection Areas, Special Areas of Conservation, Sites of Special Scientific Interest, AONB and Local Wildlife sites.	The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1**) sets out the need for the project and shows how the project would contribute towards the Government's ambitions for a low carbon economy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. Section B is not within Dedham Vale AONB or considered to be within the setting of Dedham Vale AONB.	**B/JLP/LP25**

		ES Chapter 7: Biodiversity (**application document 6.2.7**) assesses the impacts of the project on designated sites including SSSI ad LWS. The ES includes mitigation proposals for reducing any impacts.	
LP26 Water Resources and Infrastructure	Development will be supported where; It confirms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefit; Considers its impact on water resources; Demonstrates consultation with relevant authorities; Separates foul and surface water flows; Complies with relevant statutory environmental body policy on culverts; and the proposal will not result in any adverse effect on the integrity of the Protected Habitat Sites and designated AONB.	ES Chapter 9: Water Environment [**APP-077**] assesses the potential effects of the project on the water environment and in particular drinking water quality and its impact to human health. It also details the existing baseline and the likely significant effects of the project on the water environment with respect to surface water including surface water quality and features (e.g. main rivers and ordinary watercourses) and functional floodplain. ES Chapter 10: Geology and Hydrogeology [**APP-078**] describes the existing baseline and the likely significant effects of the project on groundwater receptors. The assessment concluded that there are no likely significant residual effects in relation to surface water receptors during construction or operation of the project. Therefore, no mitigation measures have been identified beyond the good practice measures set out in the CEMP Appendix A: CoCP [**REP3-026**] and the embedded measures summarised in ES Chapter 9: Water Environment [**APP-077**]. The assessment presented in ES Chapter 10: Geology and Hydrogeology [**APP-078**] has also concluded that there are no likely significant residual effects in relation to groundwater receptors, including private water supplies, during construction or operation of the project. Therefore, no mitigation measures have been identified beyond the good practice measures set out in the CEMP Appendix A: CoCP [**REP3-026**] and the embedded measures summarised in ES Chapter 10: Geology and Hydrogeology [**APP-079**].	**B/JLP/LP26**
LP27 Flood Risk and Vulnerability	Reflects National Planning Policy in respect to flood risk, sequential/exception tests, sustainable drainage systems (SuDS), surface water drainage and coastal erosion.	The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk including providing the evidence around the sequential and exception tests. The drainage design associated with permanent features will be in accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide.	**B/JLP/LP27**
LP29 Safe, Sustainable	All developments will be required to demonstrate safe and suitable access for all	ES Chapter 12: Traffic and Transport [**APP-080**] assesses the potential effects of the project on local communities, pedestrians,	**C/JLP/LP29**

	and Active Transport	and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.	motorists and users of PRoW, and in particular, impacts to health in respect to temporary PRoW diversions, road restrictions, diversions, closures of the public highway and an increase in traffic. The TA [**APP-060**] sets out the baseline existing transport conditions and the future baseline transport conditions relating to the project, highlighting the impacts the project would have on transport modes. The TA provides an assessment to determine whether there would be severe transport impacts resulting from the project and demonstrates that there would be no substantial adverse impacts upon the transport network and therefore mitigation is not required. 7.4.8 The project would only require a very small number of workers during the operational phase (of a similar level to inspections on the existing network). Therefore, no operational travel plan and measures to improve public transport are considered necessary. Commitments regarding travel planning during construction are set out in the Construction Traffic Management Plan (CTMP) [**REP3-030**]. 7.4.9 National Grid has identified 126 temporary access points, 74 of which make use of existing access points on the local road network. Some of these may need to be widened to create a bellmouth to safely accommodate construction vehicles. Others involve creating new temporary entrances where a current access point does not exist. The proposed access points are shown on the Access, Rights of Way and Public Rights of Navigation Plans [**APP-012**] and a generic bellmouth design is shown on the Design and Layout Plans: Temporary Bellmouth for Access [**APP-030**].	
The Suffolk Minerals and Waste Local Plan (adopted in July 2020)	WP18 Safeguarding of waste management sites	The Policy seeks to ensure that existing and allocated waste sites and infrastructure are protected from inappropriate nearby developments that may prejudice their continuing efficient operation or ability to carry out their allocated function in the future. Consultation is required with the County Council when a potentially conflicting proposal falls within the 250 or 400m safeguarding zones as defined in the Safeguarding Maps.	In Section B, the Order Limits cross one safeguarding zone allocation; a water recycling centre at Hintlesham-wilderness Sewage Treatment Works. The project would not affect this safeguarding allocation. Further details can be found in ES Chapter 9: Water Environment (**application document 6.2.9**).	**B/MWP/WP18**

SECTION C: BRETT VALLEY				
Local Plan	**Policy**	**Policy Assessment**	**How the Project has Complied with the Policy**	**Reference**
Babergh and Mid Suffolk Joint Local Plan (2023)	SP09 Enhancement and Management of the Environment	General policy which seeks development to support and enhance the management of the natural, local environment and green infrastructure (landscape, biodiversity, geodiversity and the historic environment/ landscapes). Development required to comply with the Habitats Regulations Assessment (HRA) and maintain, protect, and enhance biodiversity net gain (BNG).	See Assessment Reference: **B/JLP/SP09.**	**C/JLP/SP09**
	LP15 Environmental Protection	To ensure that all developments are environmentally sustainable and appropriately mitigated against adverse environmental impacts and climate change. Development proposals must consider a broad range of environmental issues such as air quality, water consumption and quality, drainage, sewerage, energy, noise, light, waste, contamination, design and building materials.	See Assessment Reference: **B/JLP/LP15**. Also see Assessment Reference: **B/JLP/LP15** in respect to general environmental protection measure deployed on the project.	**C/JLP/LP15**
	LP16 Biodiversity and Geodiversity	Part 1 advocates a hierarchical approach to development affecting habitats; enhance, mitigate, compensate. Part 2 seeks to protect designated sites, improve sites of geological value, conserve and enhance biodiversity, creation of biodiversity networks, demonstrate a BNG of at least 10%, apply measures to assist with protected species recovery. Part 3 states development which has an adverse impact on protected species will not be supported.	See Assessment Reference **B/JLP/LP16.**	**C/JLP/LP16**

	Part 4 concerns the use of planning conditions and obligations to secure appropriate mitigation.		
LP17 Landscape	Part 1 seeks development to protect and enhance landscapes, landscape character, visual amenities, dark skies etc. and proposals should have regard to the Suffolk Landscape Character Assessment and Settlement Sensitivity Assessment. Part 2 considers that some proposals should be accompanied by a Landscape and Visual Impact Assessment (LVIA), a strategic, landscape masterplan and/or a landscape and a management plan detailing mitigation.	See Assessment Reference: **B/JLP/LP17.** Also see Assessment Reference: **C/BLP2/CR04** in respect to SLA and **B/JLP/LP17** in respect to landscape impact generally.	**C/JLP/LP17**
LP18 Area of Outstanding Natural Beauty	Part 1 reflects Paragraph 172 of the National Planning Policy Framework (NPPF) where great weight is given to conserving and enhancing the landscape and scenic beauty in the AONB and the conservation and enhancement of wildlife and why cultural heritage are important considerations.	It is considered that exceptional circumstances for developing within the AONB apply and that the tests in the NPS are met, which are considered at length in Planning Statement Chapter 7 (**application document 7.1**). The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1**) sets out the national need for the project and the impact of not consenting the project would be significant. ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the landscape and visual assessment including the effects of construction and operation of the project on landscape receptors. ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the assessment of impacts on the AONB and gives due regard to Dedham Vale AONB (including its setting) and Stour Valley. Section C is not within Dedham Vale AONB, however, parts of it may be considered to be within the setting of the AONB. ES Chapter 7: Biodiversity (**application document 6.2.7**) and Chapter 8: Historic Environment (**application document 6.2.8**) present the assessment of impacts on wildlife and cultural heritage respectively.	**C/JLP/LP18**
LP19 The Historic Environment	Reflects the Planning (Listed Buildings and Conservation Areas) Act 1990, Historic England Advice and Guidance	ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown	**C/JLP/LP19**

	and the NPPF Paragraphs in respect to the historic environment including, listed buildings, ancient scheduled monuments, and archaeology. Requires Heritage Assessments in some cases.	that, no substantial harm has been identified for archelogy, listed buildings and historic landscape assets in Section C, given the embedded measures and application of landscape replacement planting and earthwork restoration, where appropriate. In addition, the project would result in a beneficial impact and make a positive contribution to the significance of some built heritage assets in Section C where these are located in the areas of undergrounding and dismantling of the existing 132kV overhead line.	
LP23 Sustainable Construction and Design	This Policy requires new development to minimise its dependence on fossil fuels and to make the fullest contribution to the mitigation of climate change through adopting a sustainable approach to energy use.	See Assessment Reference **B/JLP/LP23.**	**C/JLP/LP23**
LP26 Design and Residential Amenity	Policy requires all new development to be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must respond to and safeguard the existing character/context, create character and interest, be designed for health, amenity, well-being and safety and meet Space Standards.	See Assessment Reference **B/JLP/LP23.**	**C/JLP/LP24**
LP25 Energy Sources, Storage and Distribution	Policy support for renewable, decentralised and community energy generating proposals, subject to material considerations, being considered suitable technology, impact of any ancillary infrastructure, mitigation and grid connections capacity. Planning obligations and conditions will be used to ensure site restoration when energy generation ceases. Development must mitigate against impacts to Special Protection Areas, Special Areas of	Planning Statement Chapter 3 (**application document 7.1**) sets out the need for the project and shows how the project would contribute towards the Government's ambitions for a low carbon economy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. Section C is not within Dedham Vale AONB, however, parts of it may be considered to be within the setting of the AONB. ES Chapter 7: Biodiversity (**application document 6.2.7**) assesses the likely impacts of the project on designated sites and includes proposals for reducing any adverse impacts to such sites.	**C/JLP/LP25**

	Conservation, SSSI, AONB and Local Wildlife sites.		
LP26 Water Resources and Infrastructure	Development will be supported where; It confirms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefit; Considers its impact on water resources; Demonstrates consultation with relevant authorities; Separates foul and surface water flows; Complies with relevant statutory environmental body policy on culverts; and the proposal will not result in any adverse effect on the integrity of the Protected Habitat Sites and designated AONB.	See Assessment Reference **B/JLP/LP26.**	**C/JLP/LP26**
LP27 Flood Risk and Vulnerability	Reflects National Planning Policy in respect to flood risk, sequential/exception tests, sustainable drainage systems (SuDS), surface water drainage and coastal erosion.	The Order Limits crosses a belt of Flood Zone 3 in Section C between proposed pylons RB25 and RB26 on the proposed 400kV line which is largely the floodplain associated with the River Brett. The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. A sequential approach has been taken in siting the project. Due to the linear nature of the project some sections must necessarily be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). Detail on the Sequential and Exception Test are provided in Section 3 of the FRA (**application document 5.5**) submitted as part of the application for development consent. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Therefore, the application of the Exception Test is subsequently unnecessary for this project. The drainage design associated with permanent features is in accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide.	**C/JLP/LP27**

SECTION C: BRETT VALLEY				
	LP29 Safe, Sustainable and Active Transport	All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.	See Assessment Reference **B/JLP/LP29.**	**C/JLP/LP29**

SECTION D: POLSTEAD				
Local Plan	**Policy**	**Policy Assessment**	**How the Project has Complied with the Policy**	**Reference**
Babergh and Mid Suffolk Joint Local Plan (2023)	SP09 Enhancement and Management of the Environment	General policy which seeks development to support and enhance the management of the natural, local environment and green infrastructure (landscape, biodiversity, geodiversity and the historic environment/ landscapes). Development required to comply with the Habitats Regulations Assessment (HRA) and maintain, protect, and enhance biodiversity net gain (BNG).	See Assessment Reference: **B/JLP/SP09.**	**D/JLP/SP09**
	LP15 Environmental Protection	To ensure that all developments are environmentally sustainable and appropriately mitigated against adverse environmental impacts and climate change. Development proposals must	See Assessment Reference: **B/JLP/LP15**. Also see Assessment Reference: **B/JLP/LP15** in respect to general environmental protection measure deployed on the project.	**D/JLP/LP15**

	consider a broad range of environmental issues such as air quality, water consumption and quality, drainage, sewerage, energy, noise, light, waste, contamination, design and building materials.		
LP16 Biodiversity and Geodiversity	Part 1 advocates a hierarchical approach to development affecting habitats; enhance, mitigate, compensate. Part 2 seeks to protect designated sites, improve sites of geological value, conserve and enhance biodiversity, creation of biodiversity networks, demonstrate a BNG of at least 10%, apply measures to assist with protected species recovery. Part 3 states development which has an adverse impact on protected species will not be supported. Part 4 concerns the use of planning conditions and obligations to secure appropriate mitigation.	See Assessment Reference **B/JLP/LP16.**	**D/JLP/LP16**
LP17 Landscape	Part 1 seeks development to protect and enhance landscapes, landscape character, visual amenities, dark skies etc. and proposals should have regard to the Suffolk Landscape Character Assessment and Settlement Sensitivity Assessment. Part 2 considers that some proposals should be accompanied by a Landscape and Visual Impact Assessment (LVIA), a strategic, landscape masterplan and/or a landscape and a management plan detailing mitigation.	See **B/JLP/LP17.** Also see Assessment Reference: **D/BLP2/CR04** in respect to local SLA in Section D and **B/JLP/LP17** in respect to landscape impact generally.	**D/JLP/LP17**

SECTION D: POLSTEAD			
LP18 Area of Outstanding Natural Beauty	Part 1 reflects Paragraph 172 of the National Planning Policy Framework (NPPF) where great weight is given to conserving and enhancing the landscape and scenic beauty in the AONB and the conservation and enhancement of wildlife and why cultural heritage are important considerations.	The options appraisal process has identified the need for undergrounding within Dedham Vale AONB, as a high value landscape. The project is also removing the existing 132kV overhead line, which would help to conserve and enhance the AONB. Both of these are embedded measures. Also see Assessment Reference: **D/BLP2/CR**04 and **D/JLP/LP19** in respect to landscape impacts in Section D. ES Chapter 7: Biodiversity (**application document 6.2.7**) and Chapter 8: Historic Environment (**application document 6.2.8**) present the assessment of impacts on wildlife and cultural heritage respectively.	**D/JLP/LP18**
LP19 The Historic Environment	Reflects the Planning (Listed Buildings and Conservation Areas) Act 1990, Historic England Advice and Guidance and the NPPF Paragraphs in respect to the historic environment including, listed buildings, ancient scheduled monuments, and archaeology. Requires Heritage Assessments in some cases.	ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. ES Appendix 8.2: Historic Environment Impact Assessment (**application document 6.3.8.2**) presents the results of the heritage assessment.	**D/JLP/LP19**
LP23 Sustainable Construction and Design	This Policy requires new development to minimise its dependence on fossil fuels and to make the fullest contribution to the mitigation of climate change through adopting a sustainable approach to energy use.	See Assessment Reference **B/JLP/LP23.**	**D/JLP/LP23**
LP24 Design and Residential Amenity	Policy requires all new development to be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must respond to and safeguard the existing character/context, create character and interest, be designed for health, amenity, well-being and safety and meet Space Standards.	See Assessment Reference **B/JLP/LP24.**	**D/JLP/LP24**

	LP25 Energy Sources, Storage and Distribution	Policy support for renewable, decentralised and community energy generating proposals, subject to material considerations, being considered suitable technology, impact of any ancillary infrastructure, mitigation and grid connections capacity. Planning obligations and conditions will be used to ensure site restoration when energy generation ceases. Development must mitigate against impacts to Special Protection Areas, Special Areas of Conservation, Sites of Special Scientific Interest, AONB and Local Wildlife sites.	The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1**) sets out the need for the project and shows how the project would contribute towards the Government's ambitions for a low carbon economy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. The options appraisal has identified the need for undergrounding within Dedham Vale AONB, as a high value landscape. See Assessment Reference: **D/BLP2/CR04** and **D/JLP/LP19** in respect to landscape impacts in Section D ES Chapter 7: Biodiversity (**application document 6.2.7**) assesses the likely impacts of the project on designated sites and includes proposals for reducing any adverse impacts to such sites.	**D/JLP/LP25**
	LP26 Water Resources and Infrastructure	Development will be supported where; It confirms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefit; Considers its impact on water resources; Demonstrates consultation with relevant authorities; Separates foul and surface water flows; Complies with relevant statutory environmental body policy on culverts; and the proposal will not result in any adverse effect on the integrity of the Protected Habitat Sites and designated AONB.	See Assessment Reference **B/JLP/LP26.**	**D/JLP/LP26**
	LP27 Flood Risk and Vulnerability	Reflects National Planning Policy in respect to flood risk, sequential/exception tests, sustainable drainage systems (SuDS), surface water drainage and coastal erosion.	The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. All of the Order Limits, including the Dedham Vale East CSE is located in Flood Zone 1 in Section D. The drainage design associated with permanent features will be in accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide.	**D/JLP/LP27**

SECTION D: POLSTEAD				
	LP29 Safe, Sustainable and Active Transport	All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.	See Assessment Reference **B/JLP/LP29.**	**D/JLP/LP29**
The Suffolk Minerals and Waste Local Plan (adopted in July 2020)	MS5 Layham	Layham Quarry is allocated for mineral extraction in the adopted version of the Suffolk Minerals Local Plan, having an estimated mineral resource of 829,000 tonnes. The policy states that the Council will grant planning permission at this site for future sand and gravel extraction.	The proposed 400kV overhead line would cross the allocated site of Layham Quarry (not currently operational), which is currently crossed by both the existing 400kV and the existing 132kV overhead lines. There is a planning application to extend the timescales for extraction and restoration at Layham Quarry to April 2032 and October 2033, respectively which were approved in October 2019 (Planning Ref: SCC/0018/19B/VOC). Discussions have taken place with Suffolk County Council and the Quarry owners (Brett Aggregates) regarding Layham Quarry, to obtain an understanding of the history of mineral extraction at the site along with any future plans. It is understood from discussions with the Quarry Owners that at present the site is inactive (since 2013). The new overhead line would not result in sterilisation of minerals, as minerals could be extracted from beneath the overhead line, as evidenced at Layham Quarry, which is crossed by both the existing 400kV overhead line and the existing 132kV overhead line. As such the project would not result in sterilisation of minerals at Layham Quarry. Consequently, the temporary construction impacts on Layham Quarry would be negligible.	**D/SMWLP/MS5**
	MP10 (Minerals consultation and safeguarding areas)	The County Council has defined the Minerals Safeguarding Areas (MSA) which will be safeguarded from proposed development exceeding 5ha. Development within 250m of an existing/planned site will be subject to scrutiny by the County Council.	Policy MP10 advises that the County Councill will safeguard areas falling within 250m of an existing, planned or potential site allocated in the Plan for sand and gravel extraction. Layham Quarry benefits from this safeguarding area. See Assessment Reference: **D/SMWLP/MS5.** An MRA has been undertaken and included at ES Appendix 10.3: MRA (**application document 6.3.10.3**). The MRA determines that the actual areas where built operational development would effectively sterilise any	**D/SMWLP/MP10**

			valuable mineral are insignificant (<0.2% of the total MSA/MCA). Therefore, the quantity of mineral sterilised by the project is considered to be insignificant in the context of the extensive occurrence of sand and gravel within both counties and the national need/significance of the project.	

SECTION E: DEDHAM VALE AONB

Local Plan	Policy	Policy Assessment	How the Project has Complied with the Policy	Reference
Babergh and Mid Suffolk Joint Local Plan (2023)	SP09 Enhancement and Management of the Environment	General policy which seeks development to support and enhance the management of the natural, local environment and green infrastructure (landscape, biodiversity, geodiversity and the historic environment/ landscapes). Development required to comply with the Habitats Regulations Assessment (HRA) and maintain, protect, and enhance biodiversity net gain (BNG).	See Assessment Reference: **B/JLP/SP09.**	**E/JLP/SP09**
	LP15 Environmental Protection	To ensure that all developments are environmentally sustainable and appropriately mitigated against adverse environmental impacts and climate change. Development proposals must consider a broad range of environmental issues such as air quality, water consumption and quality, drainage, sewerage, energy, noise, light, waste, contamination, design and building materials.	See Assessment Reference: **B/JLP/LP15**. Also see Assessment Reference: **B/JLP/LP15** in respect to general environmental protection measure deployed on the project.	**E/JLP/LP15**

SECTION E: DEDHAM VALE AONB			
LP16 Biodiversity and Geodiversity	Part 1 advocates a hierarchical approach to development affecting habitats; enhance, mitigate, compensate. Part 2 seeks to protect designated sites, improve sites of geological value, conserve and enhance biodiversity, creation of biodiversity networks, demonstrate a BNG of at least 10%, apply measures to assist with protected species recovery. Part 3 states development which has an adverse impact on protected species will not be supported. Part 4 concerns the use of planning conditions and obligations to secure appropriate mitigation.	See Assessment Reference **B/JLP/LP16.**	**E/JLP/LP16**
LP17 Landscape	Part 1 seeks development to protect and enhance landscapes, landscape character, visual amenities, dark skies etc. and proposals should have regard to the Suffolk Landscape Character Assessment and Settlement Sensitivity Assessment. Part 2 considers that some proposals should be accompanied by a Landscape and Visual Impact Assessment (LVIA), a strategic, landscape masterplan and/or a landscape and a management plan detailing mitigation.	See Assessment Reference: **B/JLP/LP17.**	**E/JLP/LP19**
LP18 Area of Outstanding Natural Beauty	Part 1 reflects Paragraph 172 of the National Planning Policy Framework (NPPF) where great weight is given to conserving and enhancing the landscape and scenic beauty in the AONB and the conservation and enhancement of wildlife and why cultural heritage are important considerations.	Chapter 5 of the Planning Statement (**application document 7.1**) sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; including limiting impacts to sites of biodiversity and geodiversity of importance, such as SSSI. ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment on habitats and species. In regard to these receptors, the assessment identified that the impacts mainly related to habitat loss	**E/JLP/LP18**

		during construction. Mostly, habitat reinstatement post-construction would replace those habitats temporarily lost, meaning there would be no long-term adverse impact for these. However, some of the woodland habitats cannot be replaced due to safety clearances and therefore, mitigation in the form of compensation planting is proposed. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). The options appraisal process identified the need for undergrounding within Dedham Vale AONB, as a high value landscape. This is included as an embedded measure into the designs. The project is also removing the existing 132kV overhead line, which would help to conserve and enhance the AONB. Also see Assessment Reference: **E/BLP2/CR04** and **E/JLP/LP19** in respect to landscape impacts in Section E. ES Chapter 7: Biodiversity (**application document 6.2.7**) and Chapter 8: Historic Environment (**application document 6.2.8**) present the assessment of impacts on wildlife and cultural heritage respectively.	
LP19 The Historic Environment	Reflects the Planning (Listed Buildings and Conservation Areas) Act 1990, Historic England Advice and Guidance and the NPPF Paragraphs in respect to the historic environment including, listed buildings, ancient scheduled monuments, and archaeology. Requires Heritage Assessments in some cases.	ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown that, no substantial harm has been identified for archaeological, listed buildings and historic landscape assets in Section E, given the embedded measures and application of landscape replacement planting and earthwork restoration, where appropriate. In addition, the project would result in a beneficial impact and make a positive contribution to the significance of some built heritage assets in Section E where these are located in the areas of undergrounding and dismantling of the existing 132kV overhead line. The AFS (**application document 7.9**) sets out the proposed approach to managing and recording archaeological features on the project.	**E/JLP/LP19**
LP23 Sustainable Construction and Design	This Policy requires new development to minimise its dependence on fossil fuels and to make the fullest contribution to the mitigation of climate change through	See Assessment Reference **B/JLP/LP23.**	**E/JLP/LP23**

	adopting a sustainable approach to energy use.		
LP24 Design and Residential Amenity	Policy requires all new development to be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must respond to and safeguard the existing character/context, create character and interest, be designed for health, amenity, well-being and safety and meet Space Standards.	See Assessment Reference **B/JLP/LP24.**	**E/JLP/LP24**
LP25 Energy Sources, Storage and Distribution	Policy support for renewable, decentralised and community energy generating proposals, subject to material considerations, being considered suitable technology, impact of any ancillary infrastructure, mitigation and grid connections capacity. Planning obligations and conditions will be used to ensure site restoration when energy generation ceases. Development must mitigate against impacts to Special Protection Areas, Special Areas of Conservation, Sites of Special Scientific Interest, AONB and Local Wildlife sites.	The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1**) sets out the need for the project and shows how the project would contribute towards the Government's ambitions for a low carbon economy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. The options appraisal has identified the need for undergrounding within Dedham Vale AONB, as a high value landscape. See Assessment Reference: **E/BLP2/CR04** and **E/JLP/LP19** in respect to landscape impacts in Section E. ES Chapter 7: Biodiversity (**application document 6.2.7**) assesses the likely impacts of the project on designated sites and includes proposals for reducing any adverse impacts to such sites.	**E/JLP/LP25**
LP26 Water Resources and Infrastructure	Development will be supported where; It confirms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefit; Considers its impact on water resources; Demonstrates consultation with relevant authorities;	See Assessment Reference **B/JLP/LP26.**	**E/JLP/LP26**

	Separates foul and surface water flows; Complies with relevant statutory environmental body policy on culverts; and the proposal will not result in any adverse effect on the integrity of the Protected Habitat Sites and designated AONB.		
LP27 Flood Risk and Vulnerability	Reflects National Planning Policy in respect to flood risk, sequential/exception tests, sustainable drainage systems (SuDS), surface water drainage and coastal erosion.	The Order Limits crosses a belt of Flood Zone 3 in Section E between existing pylons 4YL43 and 4YL44 on the 400kV line which is largely the flood plain associated with the River Brett which the alignment passes under. The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. A sequential approach has been taken in siting project infrastructure, particularly those elements that could be at risk of flooding. Due to its linear nature some components of the project must unavoidably be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). However, evidence of passing the Sequential Test is presented and application of the Exception Test is unnecessary for this project. The drainage design associated with permanent features will be accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide.	**E/JLP/LP27**
LP29 Safe, Sustainable and Active Transport	All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.	See Assessment Reference **B/JLP/LP29.**	**E/JLP/LP29**

SECTION E: DEDHAM VALE AONB				
The Suffolk Minerals and Waste Local Plan (adopted in July 2020)	WP18 Safeguarding of waste management sites	The Policy seeks to ensure that existing and allocated waste sites and infrastructure are protected from inappropriate nearby developments that may prejudice their continuing efficient operation or ability to carry out their allocated function in the future. Consultation is required with the County Council when a potentially conflicting proposal falls within the 250 or 400m safeguarding zones as defined in the Safeguarding Maps.	One allocated waste safeguarding site is within the Order Limits within Section E: the anaerobic digestion plant at Hill Farm, Boxford. The project would not affect this waste management site safeguarding area. Further details can be found in ES Chapter 9: Water Environment (**application document 6.2.9**).	**E/SMWLP/WP18**

SECTION F: LEAVENHEATH/ASSINGTON				
Local Plan	**Policy**	**Policy Assessment**	**How the Project has Complied with the Policy**	**Reference**
Babergh and Mid Suffolk Joint Local Plan (2023)	SP09 Enhancement and Management of the Environment	General policy which seeks development to support and enhance the management of the natural, local environment and green infrastructure (landscape, biodiversity, geodiversity and the historic environment/ landscapes). Development required to comply with the Habitats Regulations Assessment (HRA) and maintain, protect, and enhance biodiversity net gain (BNG).	See Assessment Reference: **B/JLP/SP09.**	**F/JLP/SP09**
	LP15 Environmental Protection	To ensure that all developments are environmentally sustainable and appropriately mitigated against adverse environmental impacts and climate change. Development proposals must consider a broad range of environmental issues such as air quality, water consumption and quality, drainage, sewerage, energy, noise, light, waste,	See Assessment Reference: **B/JLP/LP15**. Also see Assessment Reference: **B/JLP/LP15** in respect to general environmental protection measure deployed on the project.	**F/JLP/LP15**

	contamination, design and building materials.		
LP16 Biodiversity and Geodiversity	Part 1 advocates a hierarchical approach to development affecting habitats; enhance, mitigate, compensate. Part 2 seeks to protect designated sites, improve sites of geological value, conserve and enhance biodiversity, creation of biodiversity networks, demonstrate a BNG of at least 10%, apply measures to assist with protected species recovery. Part 3 states development which has an adverse impact on protected species will not be supported. Part 4 concerns the use of planning conditions and obligations to secure appropriate mitigation.	See Assessment Reference **B/JLP/LP16.**	**F/JLP/LP16**
LP17 Landscape	Part 1 seeks development to protect and enhance landscapes, landscape character, visual amenities, dark skies etc. and proposals should have regard to the Suffolk Landscape Character Assessment and Settlement Sensitivity Assessment. Part 2 considers that some proposals should be accompanied by a Landscape and Visual Impact Assessment (LVIA), a strategic, landscape masterplan and/or a landscape and a management plan detailing mitigation.	See Assessment Reference: B/JLP/LP19**.** Also see Assessment Reference: **F/BLP2/CR04** in respect to local SLA in Section E and **F/BLP2/CR02** in respect to Dedham Vale AONB and Stour Valley SLA and **B/JLP/LP17** in respect to landscape impact generally.	**F/JLP/LP17**
LP18 Area of Outstanding Natural Beauty	Part 1 reflects Paragraph 172 of the National Planning Policy Framework (NPPF) where great weight is given to conserving and enhancing the landscape and scenic beauty in the AONB and the	The options appraisal has identified the need for undergrounding within Dedham Vale AONB and the most sensitive parts of the Stour Valley SLA, as high value landscapes. This is included as an embedded measure into the designs. The project is also removing the existing 132kV overhead line, which would help to conserve and enhance the AONB and Stour	**F/JLP/LP18**

	conservation and enhancement of wildlife and why cultural heritage are important considerations.	Valley SLA. Also see Assessment Reference: **F/BLP2/CR04** and **F/JLP/LP19** in respect to landscape impacts in Section F. ES Chapter 7: Biodiversity (**application document 6.2.7**) and Chapter 8: Historic Environment (**application document 6.2.8**) present the assessment of impacts on wildlife and cultural heritage respectively.	
LP19 The Historic Environment	Reflects the Planning (Listed Buildings and Conservation Areas) Act 1990, Historic England Advice and Guidance and the NPPF Paragraphs in respect to the historic environment including, listed buildings, ancient scheduled monuments, and archaeology. Requires Heritage Assessments in some cases.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out the options appraisal process and how designated heritage sites, such as scheduled monuments and listed buildings, were avoided during the routing studies. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown that, no substantial harm has been identified for archaeological, listed buildings and historic landscape assets in Section F, given the embedded measures and application of landscape replacement planting and earthwork restoration, where appropriate. In addition, the project would result in a beneficial impact and make a positive contribution to the significance of some built heritage assets in Section F where these are located in the areas of undergrounding and dismantling of the existing 132kV overhead line. The AFS Strategy (**application document 7.9**) sets out the proposed approach to managing and recording archaeological features on the project.	**F/JLP/LP19**
LP24 Design and Residential Amenity	Policy requires all new development to be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must respond to and safeguard the existing character/context, create character and interest, be designed for health, amenity, well-being and safety and meet Space Standards.	See Assessment Reference **B/JLP/LP24.**	**F/JLP/LP24**
LP25 Energy Sources,	Policy support for renewable, decentralised and community energy	The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1)** sets out the need for	**F/JLP/LP25**

Storage and Distribution	generating proposals, subject to material considerations, being considered suitable technology, impact of any ancillary infrastructure, mitigation and grid connections capacity. Planning obligations and conditions will be used to ensure site restoration when energy generation ceases. Development must mitigate against impacts to Special Protection Areas, Special Areas of Conservation, Sites of Special Scientific Interest, AONB and Local Wildlife sites.	the project and shows how the project would contribute towards the Government's ambitions for a low carbon economy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. The options appraisal has identified the need for undergrounding within Dedham Vale AONB and Stour Valley SLA, as a high value landscape. See Assessment Reference: **F/BLP2/CR04** and **F/JLP/LP19** in respect to landscape impacts in Section F. ES Chapter 7: Biodiversity (**application document 6.2.7**) assesses the likely impacts of the project on designated sites and includes proposals for reducing any adverse impacts to such sites.	
LP26 Water Resources and Infrastructure	Development will be supported where; It confirms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefit; Considers its impact on water resources; Demonstrates consultation with relevant authorities; Separates foul and surface water flows; Complies with relevant statutory environmental body policy on culverts; and the proposal will not result in any adverse effect on the integrity of the Protected Habitat Sites and designated AONB.	See Assessment Reference **B/JLP/LP26.**	**F/JLP/LP26**
LP27 Flood Risk and Vulnerability	Reflects National Planning Policy in respect to flood risk, sequential/exception tests, sustainable drainage systems (SuDS), surface water drainage and coastal erosion.	The Order Limits crosses a belt of Flood Zone 3 in the Stour Valley section between existing pylons 4YL67 and 4YL69 on the existing 400kV line and existing pylons PCB79 and PCB81 which is largely the flood plain associated with the River Stour. This Flood Zone also extends eastwards in two locations, between existing pylons 4YL73 and 4YL74 on the 400kV line and 4YLA002 and 4YLA003. The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. A sequential approach has been taken in siting project infrastructure, particularly those elements that could	**F/JLP/LP29**

			be at risk of flooding. Due to its linear nature some components of the project must unavoidably be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). However, evidence of passing the Sequential Test is presented and application of the Exception Test is unnecessary for this project. The drainage design associated with permanent features is in accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide.	
	LP29 Safe, Sustainable and Active Transport	All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.	See Assessment Reference **B/JLP/LP29.**	**F/JLP/LP29**
Leavenheath Neighbourhood Plan (Emerging)	LEAV4: Surface water drainage	Development proposals within the immediate locality of any of the surface water drainage areas should use appropriate drainage methods to prevent, and, where appropriate, alleviate the drainage issues. Future development must not cause or contribute to new flooding or drainage issues, exacerbate existing issues, or cause water pollution, and should mitigate its own flooding and drainage impacts.	The drainage design associated with permanent features is in accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide.	**F/LNP/LEAV4**
Assington Neighbourhood Plan (Babergh)	ASSN7 Area of Local Landscape	Development proposals in the Area of Local Landscape Sensitivity, as identified on the Policies Map, will be permitted only	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the assessment of impacts on the Area of Local Landscape Sensitivity.	**F/ANP/7**

(Adopted in March 2022)	Sensitivity	where they i) protect or enhance the special landscape qualities of the area; and ii) are designed and sited so as to harmonise with the landscape setting.		
	ASSN8 Protected Views	Development proposals must not have a detrimental impact on the key features of the 'protected views' identified on the Policies Map.	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the assessment of impacts on the protected views. Viewpoint F-06, F-09 and F2.14 are the representative views from Assington in ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1-6.3.6.4.7**).	**F/ANP/8**
	ASSN10 Local Green Spaces	Local Green Spaces are designated in this Plan and identified on the Policies Map. Development in the Local Green Spaces will be consistent with national policy for Green Belts	Local Green Space Mill Farm Land (ASSN10-10) lies within the Order Limits. The project has sought to avoid works within designated open space. An Open Space Assessment is provided in Chapter 9 Planning Statement (**application document 7.1**). In the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, the local policies relating to impact on open space provision are not engaged.	**F/ANP/10**
	ASSN11 Biodiversity	Development proposals should avoid the loss of, or harm to trees, hedgerows and other natural features. Where such losses are unavoidable, adequate mitigation measures or, as a last resort, compensation measures will be sought. If suitable mitigation or compensation measures cannot be provided, then planning permission should be refused. Proposals should result in a BNG.	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment of impacts on habitats. The Environmental Gain Report (**application document 7.4**) outlines how National Grid is seeking to deliver a 10% BNG across the project. Also see Assessment Reference: **F/JLP/LP17**; **F/BCS/CS14** and **F/BLP2/CR08.**	**F/ANP/11**
	ASSN12 Heritage Assets	General policy which requires development to be appropriate to its historical context. Requires development to preserve or enhance the significance of heritage assets, including their setting and the wider built environment; retain buildings and spaces, the loss of which would cause harm to the character or appearance of the Special Character Area; contribute to the village's local	ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including the Special Character Area. Also see Assessment Reference: **F/JLP/LP19**; **F/BLP2/CN15** and **F/BLP2/CR08.**	**F/ALP/12**

SECTION F: LEAVENHEATH/ASSINGTON				
		distinctiveness; be of an appropriate scale, form, height, massing; also providing a clear understanding / assessment of significance.		

SECTION G: STOUR VALLEY				
Local Plan	**Policy**	**Policy Assessment**	**How the Project has Complied with the Policy**	**Reference**
Braintree Local Plan Section 2 (Adopted in February 2021)	SP1 (Presumption in Favour of Sustainable Development)	Policy SP1 states that the Local Planning Authorities *'will take a positive approach that reflects the presumption in favour of sustainable development contained within the National Planning Policy Framework.'*	The ES sets out the impacts of the project on the environment including ES Chapter 13: Air Quality [**APP-081**] ES Chapter 9: Water Environment [**APP-077**], ES Chapter 14: Noise and Vibration [**APP-082**] and ES Chapter 10: Geology and Hydrogeology [**APP-078**]. In addition, the project is required as part of the necessary network reinforcements borne out of the systemic shift away from fossil fuels and commitment to achieving 50GW of offshore wind, a renewable energy source, connected to the network by 2030. Planning Statement Chapter 7 [**APP-160**] provides an assessment of the project against the three objectives to sustainable development.	**G/BLP2/SP1**
	SP3 (Spatial Strategy for North Essex)	Policy SP3 addresses the spatial strategy for North Essex, identifying that existing settlements will be the principal focus for additional growth with a settlement hierarchy to be identified. Beyond the main settlements the diversification of the rural economy and conservation and enhancement of the natural environment will be supported.	See Assessment Reference: **G/BLP2/LPP63**.	**G/BLP2/SP3**
	SP7 (Place Shaping Principles)	Policy SP7 states inter alia that all new development must meet high standards of urban and architectural design, respond positively to local character and context	See Assessment Reference: **B/JLP/LP24**	**G/BLP2/SP7**

	and protect and enhance assets of historical or natural value.		
LPP 1 (Development Boundaries)	Policy LPP 1 details that development in the countryside 'will be confined to uses appropriate to the countryside' in order to protect its intrinsic character and beauty.	Section G falls outside of a defined development boundary and is, therefore, considered to fall within the countryside for planning policy purposes. Policy LPP 1 details that development in the countryside 'will be confined to uses appropriate to the countryside' in order to protect its intrinsic character and beauty. Policy LPP 76 (Renewable Energy Schemes) provides in principle policy support for renewable energy schemes which align with the aim of providing low carbon energy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. It is considered, therefore, that Policy LPP 76, which does not preclude countryside settings for renewable energy schemes, provides general policy support for project in the countryside location.	**G/BLP2/LPP1**
LPP 47 (Built and Historic Environment)	Concerns development that may affect the. Promote heritage as a driving of re setting of listed buildings and buildings of historic or architectural significance, Conservation Areas, Registered Parks and Gardens and areas of high archaeological and landscape sensitivity generation through tourism and leisure. Encourage locally listed buildings. Create good quality built areas and promote the reuse of buildings.	ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets including their setting. There are no registered or locally important parks and gardens within the Order Limits or the 250m study area in Section G. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown that, no substantial harm has been identified for archaeological, listed buildings and historic landscape assets in Section G, given the embedded measures and application of landscape replacement planting and earthwork restoration, where appropriate. In addition, the project would result in a beneficial impact and make a positive contribution to the significance of some built heritage assets in Section G where these are located in the areas of undergrounding and dismantling of the existing 132kV overhead line. The AFS (**application document 7.9**) sets out the proposed approach to managing and recording archaeological features on the project.	**G/BLP2/LP947**

		ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how designated heritage sites, such as Conservation Areas and Registered Parks and Gardens, were avoided during the routing studies.	
LPP 50 Provision for Open Space, Sport and Recreation	Relevant to the project, existing open space, sports and recreational land and buildings shall not be lost or built on unless an a robust and up to date assessment has been undertaken which has clearly demonstrated that they are surplus to requirements or the proposed development is otherwise compliant with this policy as a whole. For open space, 'surplus to requirements' should include consideration of all the functions that open space can perform. Not all open space, sport and recreational land and buildings are of equal merit and some may be available for alternative uses. Developers will need to consult the local community and demonstrate that any proposals are widely supported by them.	The project has sought to avoid works within designated open space. An Open Space Assessment is provided in Chapter 9 Planning Statement [**APP-160**]. In the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, the local policies relating to impact on open space provision are not engaged.	**G/BLP/LPP50**
LPP 52 (Layout and Design of Development)	Policy LPP 52 requires a high standard of design and layout in all development.	See Assessment Reference: **B/JLP/LP24**	**G/BLP/LPP52**
LPP 53 (Conservation Areas)	Development proposals in Conservation Areas, or affecting their setting, should be of a quality that respects the historic and architectural character of the area.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how direct impacts to conservation areas were avoided during the routing studies. There are no conservation areas within 250m (study area) of Section G. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on the setting of conservation areas.	**G/BLP/LPP53**
LPP 57 (Heritage Assets and their Settings)	Works to heritage assets including a listed building/structures have equal status. Works should not harm the setting, character, stability, fabric of the building resulting in substantial harm. Works should	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how direct impacts to listed buildings were avoided during the routing studies.	**G/BLP/LPP57**

	comprise suitable materials. A Heritage Statement and specialist building recording may be required. The immediate settings of heritage assets will be preserved.	ES Chapter 8: Historic Environment (**application document 6.2.**8) presents the assessment of impacts on the setting of listed buildings. Also see Assessment Reference: **G/BLP2/LP947**.	
LPP 59 Archaeological Evaluation, Excavation and Recording	Where archaeological evaluations are required, the Essex Historic Environment Record (HER) should be the primary source of information for development impacting archaeology. Archaeological evaluations will be required where important archaeological remains are thought to be at risk. Where archaeological potential is identified and where preservation in situ is not warranted, development would be permitted subject to an appropriate programme of archaeological investigation, recording, reporting and archiving.	The HER is one of the desktop sources that has been used as part of developing an understanding of the baseline environment. This data, along with project specific survey reports, has been used to identify areas for further evaluation. The AFS (**application document 7.9**) sets out the proposed programme of archaeological investigation, recording, reporting and archiving. Also see Assessment Reference: **G/BLP2/LP947**.	**G/BLP/LPP59**
LPP 63 (Natural Environment and Green Infrastructure)	Development proposals to ensure the protection and enhancement of the natural environment, habitats, biodiversity and geodiversity; taking climate change and water scarcity into account. Proposals which adversely affect designated nature conservation will not normally be acceptable. Proposals inside the district which are likely to adversely affect, either individually or cumulatively, International or Nationally designated nature conservation sites within and outside the district will not normally be acceptable. All development proposals to contribute towards the delivery of new Green Infrastructure, proportionate to the scale of the development and context. The Council encourage development which contributes	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment of impacts on habitats and species. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). An area of land within Section G has been identified for landscape planting around the Stour Valley West CSE compound. The planting proposals for the enhancement areas have been designed to complement and tie into the reinstatement set out in the LEMP (**application document 7.8**). These environmental areas would contribute to the objectives of the policy in terms of improving Green Infrastructure.	**G/BLP/LPP63**

	to the District's existing Green Infrastructure. Open space and green infrastructure may in some instances be required to provide alternatives to European sites.		
LPP 64 Protected Sites	Concerns the protection of local, national and international environmental designations. Supports proposals which provide a net gain in priority habitats. Proposals for the loss of irreplaceable habitats such as ancient woodland will not normally be supported. Endorses Appropriate Assessment and proposals should follow the avoid, mitigate, compensate hierarchy. Compensation measures will be secured through planning conditions/obligations where necessary.	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment on habitats and species. In regard to these receptors, the assessment identified that the impacts mainly related to habitat loss during construction. Mostly, habitat reinstatement post-construction would replace those habitats temporarily lost, meaning there would be no long-term adverse impacts for these. However, some of the woodland habitats cannot be replaced due to safety clearances. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). An area of land within Section G has been identified for landscape planting around the Stour Valley West CSE compound.	**G/BLP/LPP64**
LPP 65 Tree Protection	Promotes the protection of established healthy trees which offer significant amenity value and considers the impact to trees a material consideration. Advocates British Standards in terms of planting new trees.	The project has undertaken an Arboricultural Impact Assessment **(application document: 5.10)** in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction. This has identified trees that offer significant amenity value, such as veteran trees, which the project has sought to avoid through commitments where practicable. The Arboricultural Impact Assessment **(application document: 5.10)** has also informed the reinstatement proposals and protective measures set out within the LEMP (**application document 7.8.1**).	**G/BLP/LPP65**
LPP 66 Protection, Enhancement, Management & Monitoring of Biodiversity	Development proposals shall provide for the protection of biodiversity and the mitigation or compensation of any adverse impacts or shall be refused. Proposals are encouraged to be in compliance with the Anglian River Basin Management Plan (RBMP) (Environment Agency, 2015). The reuse of Previously Developed Land for biodiversity is a possibility.	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment on habitats and species. In regard to these receptors, the assessment identified that the impacts mainly related to habitat loss during construction. Mostly, habitat reinstatement post-construction would replace those habitats temporarily lost, meaning there would be no long-term adverse impacts for these. However, some of the woodland habitats cannot be replaced due to safety clearances and/or being considered irreplaceable habitat National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further	**G/BLP/LPP66**

		details can be found in the Environmental Gain Report (**application document 7.4**). An area of land within Section G has been identified for landscape planting around the Stour Valley West CSE compound. The WFD Assessment (**application document 5.6**) sets out the assessment work undertaken in relation to the Anglian RBMP.	
LPP 67 Landscape Character and Features	Proposals for new development should be informed by, and be sympathetic to, the character of the landscape as identified in the District Council's Landscape Character Assessments. Additional landscaping including planting of native species of trees, hedgerows and other flora may be required to maintain and enhance these features. Green infrastructure is encouraged and development proposals which result in harm to the setting of the AONB will not be permitted.	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the assessment of impacts on landscape character and on the setting of Dedham Vale AONB and Stour Valley SLA. The whole of Section G: Stour Valley, lies within the SVPA, which, while not a designated landscape in itself, has been described as having similar picturesque landscape qualities to Dedham Vale and is, therefore, considered to be part of the setting of the AONB. As such, an underground cable option is proposed through the most sensitive parts of the Stour Valley.	**G/BLP/LPP67**
LPP 69 Protected Lanes	The Council will seek to protect and influence others to protect the features of a Protected Lane including their verges. Material increases in traffic using a protected lane due to development proposals will not be permitted.	The project has sought to avoid works at Protected Lanes, where practicable. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the historic assessment of impacts on Protected Lanes. In Section G there are seven Protected Lanes. The Protected Lanes have certain features in common such as being sunken lanes/roads with one of more features such as banks, ditches and historic hedgerows alongside. Whilst most appear to be medieval in origin, it is likely that some of them are much earlier. Any impacts on Protected Lanes would be limited to the construction of the project and would be temporary in nature. Whilst there would be some impacts during construction, such as the loss of historic earthworks and hedgerows and severance of some linear features, National Grid is committed to reinstating and restoring the historic character of these assets. It is, therefore, considered the project would protect the features of the Protected Lanes. Further information can also be found in Planning Statement Chapter 7**.**	**G/BLP/LPP69**
LPP 70 Protecting and Enhancing Natural Resources,	Proposals should prevent unacceptable risks from all pollution including, emissions, noise, light, ground contamination, air	The ES sets out the impacts of the project from pollution including ES Chapter 13: Air Quality (**application document 6.2.13**), ES Chapter 9: Water Environment (**application document 6.2.9**), ES Chapter 14:	**G/BLP/LPP70**

Minimising Pollution and Safeguarding from Hazards	quality, water quality, unstable land and hazardous substances. Development which poses unacceptable risks will not be supported. Soil quality must be protected during development to protect good quality land and to protect the ability of soil to allow water penetration by avoiding compaction.	Noise and Vibration (**application document 6.2.14**) and ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**). The CEMP (**application document 7.5.1**) includes details of the measures to reduce impacts from emissions.	
LPP 74 Flooding Risk and Surface Water Drainage	Reflects NPPF in respect to flood risk and seeks to steer development away from areas at high risk from flooding. Provides parameters for when a FRA is required and advises that FRA must take into account climate change. that needs to be adhered to in respect to development adjacent to watercourses. In addition, development should not have an adverse impact on any flood defence, watercourse, local flood storage, reduce existing development in the floodplain, be at least 8m from Main Rivers and 3m from Ordinary Watercourses.	The Order Limits crosses a belt of Flood Zone 3 in Section H between existing pylons 4YL67 and 4YL69 on the existing 400kV line and existing pylons PCB79 and PCB81 which is largely the flood plain associated with the River Stour. This Flood Zone also extends eastwards in two locations, between existing pylons 4YL73 and 4YL74 on the 400kV line and 4YLA002 and 4YLA003. The FRA [(**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. A sequential approach has been taken in siting project infrastructure, particularly those elements that could be at risk of flooding. Due to its linear nature some components of the project must unavoidably be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). However, evidence of passing the Sequential Test is presented and application of the Exception Test is unnecessary for this project.	**G/BLP/LPP74**
LPP 73 (Renewable Energy Schemes)	Policy LPP 73 provides in principle policy support for renewable energy schemes which align with the aim of providing low carbon energy.	Whilst not a ‘renewable energy scheme’ by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. The project is required as part of the necessary network reinforcements borne out of the systemic shift away from fossil fuels and commitment to achieving 50GW of offshore wind, a renewable energy source, connected to the network by 2030. In this context, Braintree District Council declared a Climate Change Emergency in July 2019 and announced a target to be carbon neutral as a Council as far as practical by 2030, as well as supporting their local communities to reduce the impacts of climate change. It is considered, therefore, that Policy LPP 76, which does not preclude countryside settings for renewable energy schemes, provides general policy support for the project due to the fundamental aim of the Policy mirroring the needs case for the project.	**G/BLP/LPP73**

SECTION G: STOUR VALLEY				
	LPP 76 Sustainable Urban Drainage Systems	The Lead Local Flood Authority, Risk Management Authorities and planners will be working together to achieve SuDS and early engagement with these bodies is key to ensuring that adequate surface water management measures are included in new developments. SuDS design should be an integral part of the layout and clear details of proposed.	The FRA (**application document 5.5**) notes that the drainage design associated with permanent features would be in accordance with the Suffolk SuDS Palette and the Essex SuDS Design Guide. Also see Assessment Reference: **G/BLP/LPP74.**	**G/BLP/LPP76**
	LPP 77 External Lighting	External artificial lighting must be integral to the development; low energy combined with features to limit use, avoid spillage to the night sky; provide just adequate illumination; no loss of privacy or amenity and not harmful to biodiversity.	The method and approach to lighting during construction is set out in the CEMP **(application document 7.5)**. During construction, a standard lighting approach would be implemented. This approach would use mobile lighting towers, orientated away from any adjacent receptors. By preference these would be solar lighting towers. Lighting shall be the lowest average lux levels necessary for safe delivery of each task. The primary source of temporary lighting requirements would be provided by mobile solar lighting towers or similar. The use of solar lighting towers would be limited to the working hours authorised under Requirement 8 of the draft DCO **(application document 3.1)**. The main construction compound would require security lighting and operational lighting. Construction compounds would not be lit at night outside core working hours except for welfare and site security cabins that would include low level lighting. During operation permanent external lighting would be required at the GSP substation only. See Assessment Reference: **H/BLP/LPP77**.	**G/BLP/LPP77**
Babergh and Mid Suffolk Joint Local Plan (2023)	SP09 Enhancement and Management of the Environment	General policy which seeks development to support and enhance the management of the natural, local environment and green infrastructure (landscape, biodiversity, geodiversity and the historic environment/ landscapes). Development required to comply with the Habitats Regulations Assessment (HRA) and maintain, protect, and enhance biodiversity net gain (BNG).	See Assessment Reference: **B/JLP/SP09.** An area of land within Section G has been identified for landscape planting around the Stour Valley West CSE compound. The planting proposals for the enhancement areas have been designed to complement and tie into the reinstatement set out in the LEMP (**application document 7.8**). These environmental areas would contribute to the objectives of the policy in terms of improving Green Infrastructure.	**G/JLP/SP09**

SECTION G: STOUR VALLEY			
LP15 Environmental Protection	To ensure that all developments are environmentally sustainable and appropriately mitigated against adverse environmental impacts and climate change. Development proposals must consider a broad range of environmental issues such as air quality, water consumption and quality, drainage, sewerage, energy, noise, light, waste, contamination, design and building materials.	See Assessment Reference: **B/JLP/LP15**. Also see Assessment Reference: **B/JLP/LP15** in respect to general environmental protection measure deployed on the project.	**G/JLP/LP15**
LP16 Biodiversity and Geodiversity	Part 1 advocates a hierarchical approach to development affecting habitats; enhance, mitigate, compensate. Part 2 seeks to protect designated sites, improve sites of geological value, conserve and enhance biodiversity, creation of biodiversity networks, demonstrate a BNG of at least 10%, apply measures to assist with protected species recovery. Part 3 states development which has an adverse impact on protected species will not be supported. Part 4 concerns the use of planning conditions and obligations to secure appropriate mitigation.	See Assessment Reference B/JLP/LP16**.**	**G/JLP/LP16**
LP17 Landscape	Part 1 seeks development to protect and enhance landscapes, landscape character, visual amenities, dark skies etc. and proposals should have regard to the Suffolk Landscape Character Assessment and Settlement Sensitivity Assessment. Part 2 considers that some proposals should be accompanied by a Landscape and Visual Impact Assessment (LVIA), a strategic, landscape masterplan and/or a	See Assessment Reference: B/JLP/LP17.	**G/JLP/LP17**

	landscape and a management plan detailing mitigation.		
LP18 Area of Outstanding Natural Beauty	Part 1 reflects Paragraph 172 of the National Planning Policy Framework (NPPF) where great weight is given to conserving and enhancing the landscape and scenic beauty in the AONB and the conservation and enhancement of wildlife and why cultural heritage are important considerations.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how the project had regard for landscape character and features during the design and routing studies. Underground cable is proposed within Section E: Dedham Vale AONB and parts of Section G: Stour Valley, as well as removing the existing 132kV overhead line (embedded measure), which would help to protect these high value landscapes. ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the results of the LVIA that has been undertaken on the project. The LEMP (**application document 7.8.1**) outlines the proposals for landscaping on the project, including the landscape reinstatement plans showing the mitigation proposals.	**G/JLP/LP18**
LP19 The Historic Environment	Reflects the Planning (Listed Buildings and Conservation Areas) Act 1990, Historic England Advice and Guidance and the NPPF Paragraphs in respect to the historic environment including, listed buildings, ancient scheduled monuments, and archaeology. Requires Heritage Assessments in some cases.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how designated heritage sites, such as scheduled monuments and listed buildings, were avoided during the routing studies. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown that, no substantial harm has been identified for archaeological, listed buildings and historic landscape assets in Section G, given the embedded measures and application of landscape replacement planting and earthwork restoration, where appropriate. In addition, the project would result in a beneficial impact and make a positive contribution to the significance of some built heritage assets in Section G where these are located in the areas of undergrounding and dismantling of the existing 132kV overhead line. The AFS (**application document 7.9**) sets out the proposed approach to managing and recording archaeological features on the project.	**G/JLP/LP19**
LP23 Sustainable Construction and Design	This Policy requires new development to minimise its dependence on fossil fuels and to make the fullest contribution to the mitigation of climate change through adopting a sustainable approach to energy use.	See Assessment Reference: **B/JLP/LP23.**	**G/JLP/LP23**

SECTION G: STOUR VALLEY			
LP24 Design and Residential Amenity	Policy requires all new development to be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must respond to and safeguard the existing character/context, create character and interest, be designed for health, amenity, well-being and safety and meet Space Standards.	See Assessment Reference: **B/JLP/LP24.**	**G/JLP/LP24**
LP25 Energy Sources, Storage and Distribution	Policy support for renewable, decentralised and community energy generating proposals, subject to material considerations, being considered suitable technology, impact of any ancillary infrastructure, mitigation and grid connections capacity. Planning obligations and conditions will be used to ensure site restoration when energy generation ceases. Development must mitigate against impacts to Special Protection Areas, Special Areas of Conservation, Sites of Special Scientific Interest, AONB and Local Wildlife sites.	The Need Case (April 2023) (**application document 7.2.1**) and Planning Statement Chapter 3 (**application document 7.1**) sets out the need for the project and shows how the project would contribute towards the Government's ambitions for a low carbon economy. Whilst not a 'renewable energy scheme' by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. The options appraisal has identified the need for undergrounding within Dedham Vale AONB and Stour Valley SLA, as a high value landscape. See Assessment Reference: **G/BLP2/CR04** and **G/JLP/LP19** in respect to landscape impacts in Section G. ES Chapter 7: Biodiversity (**application document 6.2.7**) assesses the likely impacts of the project on designated sites and includes proposals for reducing any adverse impacts to such sites.	**G/JLP/LP25**
LP26 Water Resources and Infrastructure	Development will be supported where; It confirms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefit; Considers its impact on water resources; Demonstrates consultation with relevant authorities; Separates foul and surface water flows; Complies with relevant statutory environmental body policy on culverts; and	See Assessment Reference: **B/JLP/LP26.**	**G/JLP/LP26**

		the proposal will not result in any adverse effect on the integrity of the Protected Habitat Sites and designated AONB.		
	LP27 Flood Risk and Vulnerability	Reflects National Planning Policy in respect to flood risk, sequential/exception tests, sustainable drainage systems (SuDS), surface water drainage and coastal erosion.	The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. The drainage design associated with permanent features is in accordance with the Suffolk SuDS Palette and Essex SuDS Design Guide. Also see Assessment Reference: **G/BLP/LPP74.**	**G/JLP/LP27**
	LP29 Safe, Sustainable and Active Transport	All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.	See Assessment Reference: **B/JLP/LP29.**	**G/JLP/LP29**
Little Cornard Neighbourhood Plan (Babergh) 2022	LCO2 Access into the countryside	The Policy seeks to promote access to the countryside by preserving and enhancing Public Rights of Way (PRoW). Development which leads to the loss or degradation of PRoW will not be supported. Proposals which enhance pedestrian routes will be encouraged.	ES Chapter 12: Traffic and Transport (**application document 6.2.12**) presents the assessment of impacts on PRoW.	**G/LCNP/02**
	LCO3 Views	Development proposals are expected to conserve the scenic beauty of the Parish. In particular, the views as identified on the Policies Map. Development which may impact on any of these views must	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the assessment of impacts on the views. The area around Little Cornard is underground cable and, therefore, would benefit from the removal of the 132kV overhead line.	**G/LCNP/03**

SECTION G: STOUR VALLEY				
		demonstrate through its layout how vistas from public viewpoints will be preserved.		
Essex and Southend on Sea Minerals Local Plan (adopted Jul 2014)	S8 (Safeguarding Minerals Resources)	Sets out the approach to the safeguarding of both mineral resources that are potentially viable to extract as well as associated mineral infrastructure such as quarries and processing plants. This policy incorporates two separate safeguarding approaches one based on a resource (MSA), the other based around protecting existing mineral operations (MCA).	The Order Limits cross a MSA for sand and gravel in Essex. An MRA has been undertaken and included at ES Appendix 10.3: MRA (**application document 6.3.10.3**). The MRA determines that the actual areas where built operational development would effectively sterilise any valuable mineral are insignificant (<0.2% of the total MSA/MCA). Therefore, the quantity of mineral sterilised by the project is considered to be insignificant in the context of the extensive occurrence of sand and gravel within both counties and the national need/significance of the project.	**G/EMLP/S8**
	S4 (Reducing the Use of Mineral Resources)	The Policy applies to all development across Essex to promote a reduction in mineral use when determining planning applications. The Policy advocates for the reducing of the use of mineral resources through reusing and recycling minerals generated as a result of development.	The MWMP (**application document 7.7**) outlines the measures that would be considered for reducing the use of mineral resources through reuse and recycling.	**G/EMLP/S8**

SECTION H: GSP SUBSTATION				
Local Plan	**Policy**	**Policy Assessment**	**How the Project has Complied with the Policy**	**Reference**
Braintree Local Plan Section 2 (Adopted in February 2021)	SP1 (Presumption in Favour of Sustainable Development)	Policy SP1 states that the Local Planning Authorities *'will take a positive approach that reflects the presumption in favour of sustainable development contained within the National Planning Policy Framework.'*	See Assessment Reference: **G/BLP2/SP1.**	**G/BLP2/SP1**
	SP3 (Spatial Strategy for North Essex)	Policy SP3 addresses the spatial strategy for North Essex, identifying that existing settlements will be the principal focus for additional growth with a settlement hierarchy to be identified. Beyond the main	See Assessment Reference: **G/BLP2/LPP63**.	**G/BLP2/SP3**

	settlements the diversification of the rural economy and conservation and enhancement of the natural environment will be supported.		
SP7 (Place Shaping Principles)	Policy SP7 states inter alia that all new development must meet high standards of urban and architectural design, respond positively to local character and context and protect and enhance assets of historical or natural value.	See Assessment Reference: **B/JLP/LP24**	**G/BLP2/SP7**
LPP 1 (Development Boundaries)	Policy LPP 1 details that development in the countryside 'will be confined to uses appropriate to the countryside' in order to protect its intrinsic character and beauty.	See Assessment Reference: **G/BLP2/LPP1.**	**H/BLP2/LPP1**
LPP 47 (Built and Historic Environment)	Concerns development that may affect the. Promote heritage as a driving of re setting of listed buildings and buildings of historic or architectural significance, Conservation Areas, Registered Parks and Gardens and areas of high archaeological and landscape sensitivity generation through tourism and leisure. Encourage locally listed buildings. Create good quality built areas and promote the reuse of buildings.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how designated heritage sites, such as Conservation Areas and Registered Parks and Gardens, were avoided during the routing studies. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on heritage assets and their setting, including listed buildings and archaeology. The assessment has shown that, no substantial harm has been identified for archaeological, listed buildings and historic landscape assets in Section G, given the embedded measures and application of landscape replacement planting and earthwork restoration, where appropriate. No Conservation Areas or designated historic landscapes (Registered Parks and Gardens) are present within 2km of the proposed GSP substation compound itself. In terms of setting, the closest listed buildings are situated approximately 250m away from the substation compound to the northeast. Butler's Wood and Waldegrave Wood would largely filter views of the proposed GSP substation.	**H/BLP2/LPP47**
LPP 50 Provision for Open Space,	Relevant to the project, existing open space, sports and recreational land and buildings shall not be lost or built on unless	The project has sought to avoid works within designated open space. An Open Space Assessment is provided in Chapter 9 Planning Statement In the case of the project, there are no increased demands	**H/BLP2/LPP50**

Sport and Recreation	an a robust and up to date assessment has been undertaken which has clearly demonstrated that they are surplus to requirements or the proposed development is otherwise compliant with this policy as a whole. For open space, 'surplus to requirements' should include consideration of all the functions that open space can perform. Not all open space, sport and recreational land and buildings are of equal merit and some may be available for alternative uses. Developers will need to consult the local community and demonstrate that any proposals are widely supported by them.	or impacts on open spaces as a result of the operation of the project and, therefore, the local policies relating to impact on open space provision are not engaged.	
LPP 52 (Layout and Design of Development)	Policy LPP 52 requires a high standard of design and layout in all development.	See Assessment Reference: **B/JLP/LP24**	**G/BLP/LPP52**
LPP 53 (Conservation Areas)	Development proposals in Conservation Areas, or affecting their setting, should be of a quality that respects the historic and architectural character of the area.	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets how direct impacts to conservation areas were avoided during the routing studies. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on the setting of conservation areas. No Conservation Areas or designated historic landscapes (Registered Parks and Gardens) are present within 2km of the proposed GSP substation compound itself.	**H/BLP2/LPP53**
LPP 57 (Heritage Assets and their Settings)	Works to heritage assets including a listed building/structures have equal status. Works should not harm the setting, character, stability, fabric of the building resulting in substantial harm. Works should comprise suitable materials. A Heritage Statement and specialist building recording may be required. The immediate	ES Chapter 3: Alternatives Considered (**application document 6.2.3**) sets out how direct impacts to listed buildings were avoided during the routing studies. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the assessment of impacts on the setting of listed buildings. No works to heritage assets are proposed in Section H.	**H/BLP2/LPP57**

	settings of heritage assets will be preserved.		
LPP 59 Archaeological Evaluation, Excavation and Recording	Where archaeological evaluations are required, the Essex Historic Environment Record (HER) should be the primary source of information for development impacting archaeology. Archaeological evaluations will be required where important archaeological remains are thought to be at risk. Where archaeological potential is identified and where preservation in situ is not warranted, development would be permitted subject to an appropriate programme of archaeological investigation, recording, reporting and archiving.	The HER is one of the desktop sources that has been used as part of developing an understanding of the baseline environment. This data, along with project specific survey reports, has been used to identify areas for further evaluation. The AFS (**application document 7.9**) sets out the proposed programme of archaeological investigation, recording, reporting and archiving. No archaeological anomalies were identified during archaeological Geophysical Surveys undertaken for the proposed GSP substation. Eighteen trial trenches were excavated within the vicinity of the proposed GSP substation. Fifteen trenches recorded no archaeological features. A total of four archaeological features were recorded in the remaining three trenches. The nature of the archaeological remains and the very low density of features indicates that there is a low potential for complex archaeological remains to be present within the site.	**H/BLP2/LPP59**
LPP 63 Natural Environment and Green Infrastructure	Development proposals to ensure the protection and enhancement of the natural environment, habitats, biodiversity and geodiversity; taking climate change and water scarcity into account. Proposals which adversely affect designated nature conservation will not normally be acceptable. Proposals inside the district which are likely to adversely affect, either individually or cumulatively, International or Nationally designated nature conservation sites within and outside the district will not normally be acceptable. All development proposals to contribute towards the delivery of new Green Infrastructure, proportionate to the scale of the development and context. The Council	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment of impacts on habitats and species. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). The planting proposals for the enhancement areas have been designed to complement and tie into the reinstatement set out in the LEMP (**application document 7.8**). These environmental areas would contribute to the objectives of the policy in terms of improving Green Infrastructure. Protected species are present in the wider environment and in proximity to the GSP substation in Section H. Where protected species have been identified in the pre-construction surveys licences may be required and should additional protected species be identified prior to or during construction. In addition, where individuals of protected species may be present, potential disturbance impacts would be managed through the good practice measures in the CEMP Appendix A: CoCP (**application document 7.5.1**).	**H/BLP2/LPP63**

	encourage development which contributes to the District's existing Green Infrastructure. Open space and green infrastructure may in some instances be required to provide alternatives to European sites.		
LPP 64 Protected Sites	Concerns the protection of local, national and international environmental designations. Supports proposals which provide a net gain in priority habitats. Proposals for the loss of irreplaceable habitats such as ancient woodland will not normally be supported. Endorses Appropriate Assessment and proposals should follow the avoid, mitigate, compensate hierarchy. Compensation measures will be secured through planning conditions/obligations where necessary.	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment of impacts on habitats and species. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). In Section H, Butlers Wood and Waldegrave Wood are both ancient woodlands and are designated as Local Wildlife Sites. The woodland blocks are directly adjacent to the Order Limits, to the north and south of the GSP substation. No felling of these woodland blocks is required and measures have been embedded into the design and Appendix A: CoCP of the CEMP (**application document 7.5.1**). to avoid direct and reduce indirect impacts on these irreplaceable and priority habitats. The good practice measures include those relating to pollution prevention and control; drainage; and dust management and control.	**H/BLP2/LPP64**
LPP 65 Tree Protection	Promotes the protection of established healthy trees which offer significant amenity value and considers the impact to trees a material consideration. Advocates British Standards in terms of planting new trees.	The project has undertaken an Arboricultural Impact Assessment **(application document: 5.10)** in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction. This has identified trees that offer significant amenity value, such as veteran trees, which the project has sought to avoid through commitments where practicable. The Arboricultural Impact Assessment **(application document: 5.10)** has also informed the reinstatement proposals and protective measures set out within the LEMP (**application document 7.8.1**).	**H/BLP/LPP65**
LPP 66 Protection, Enhancement, Management	Development proposals shall provide for the protection of biodiversity and the mitigation or compensation of any adverse impacts or shall be refused. Proposals are encouraged to be in compliance with the	ES Chapter 7: Biodiversity (**application document 6.2.7**) presents the assessment on habitats and species. In regard to these receptors, the assessment identified that the impacts mainly related to habitat loss during construction. Mostly, habitat reinstatement post-construction would replace those habitats temporarily lost,	**H/BLP/LPP66**

& Monitoring of Biodiversity	Anglian River Basin Management Plan (RBMP) (Environment Agency, 2015). The reuse of Previously Developed Land for biodiversity is a possibility.	meaning there would be no long-term adverse impacts for these. However, some of the woodland habitats cannot be replaced due to safety clearances and/or being considered irreplaceable habitat. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report (**application document 7.4**). An area of land within Section H has been identified for landscape planting around the GSP substation and to provide connectively with the two parcels of ancient woodland. The WFD Assessment (**application document 5.6**) sets out the assessment work undertaken in relation to the Anglian RBMP.	
LPP 67 Landscape Character and Features	Proposals for new development should be informed by, and be sympathetic to, the character of the landscape as identified in the District Council's Landscape Character Assessments. Additional landscaping including planting of native species of trees, hedgerows and other flora may be required to maintain and enhance these features. Green infrastructure is encouraged and development proposals which result in harm to the setting of the AONB will not be permitted.	ES Chapter 6: Landscape and Visual (**application document 6.2.6**) presents the assessment of impacts on landscape character and on the setting of Dedham Vale AONB. Section H is not within Dedham Vale AONB or considered to be within its setting. The planting proposals for the enhancement areas have been designed to complement and tie into the reinstatement set out in the LEMP (**application document 7.8**). These environmental areas would contribute to the objectives of the policy in terms of improving Green Infrastructure.	**H/BLP/LPP67**
LPP 69 Protected Lanes	The Council will seek to protect and influence others to protect the features of a Protected Lane including their verges. Material increases in traffic using a protected lane due to development proposals will not be permitted.	The project has sought to avoid works at Protected Lanes, where practicable. ES Chapter 8: Historic Environment (**application document 6.2.8**) presents the historic assessment of impacts on Protected Lanes. The Protected Lanes have certain features in common such as being sunken lanes/roads with one of more features such as banks, ditches and historic hedgerows alongside. Whilst most appear to be medieval in origin, it is likely that some of them are much earlier. Any impacts on Protected Lanes would be limited to the construction of the project and would be temporary in nature. Whilst there would be some impacts during construction, such as the loss of historic earthworks and hedgerows and severance of some linear features, National Grid is committed to	**H/BLP/LPP69**

		reinstating and restoring the historic character of these assets. It is, therefore, considered the project would protect the features of the Protected Lanes. Further information can also be found in Planning Statement Chapter 7 (**application document 7.1**).	
LPP 70 Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards	Proposals should prevent unacceptable risks from all pollution including, emissions, noise, light, ground contamination, air quality, water quality, unstable land and hazardous substances. Development which poses unacceptable risks will not be supported. Soil quality must be protected during development to protect good quality land and to protect the ability of soil to allow water penetration by avoiding compaction.	The ES sets out the impacts of the project from pollution including ES Chapter 13: Air Quality (**application document 6.2.13**), ES Chapter 9: Water Environment (**application document 6.2.9**), ES Chapter 14: Noise and Vibration (**application document 6.2.14**) and ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**). The CEMP (**application document 7.5.1**) includes details of the measures to reduce impacts from emissions.	**H/BLP/LPP70**
LPP 74 Flooding Risk and Surface Water Drainage	Reflects NPPF in respect to flood risk and seeks to steer development away from areas at high risk from flooding. Provides parameters for when a FRA is required and advises that FRA must take into account climate change. that needs to be adhered to in respect to development adjacent to watercourses. In addition, development should not have an adverse impact on any flood defence, watercourse, local flood storage, reduce existing development in the floodplain, be at least 8m from Main Rivers and 3m from Ordinary Watercourses.	The Order Limits crosses a belt of Flood Zone 3 in Section G across the temporary 3.5 km haul road from Sudbury Road (A131) to Henny Back Road. The FRA (**application document 5.5**) demonstrates how the project meets the requirements of national planning policy in respect of flood risk. A sequential approach has been taken in siting project infrastructure, particularly those elements that could be at risk of flooding. Due to its linear nature some components of the project must unavoidably be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). However, evidence of passing the Sequential Test is presented and application of the Exception Test is unnecessary for this project.	**H/BLP/LPP74**
LPP 73 (Renewable Energy Schemes)	Policy LPP 73 provides in principle policy support for renewable energy schemes which align with the aim of providing low carbon energy.	Whilst not a ‘renewable energy scheme’ by definition, the project is intrinsically linked to such schemes in the East of England as it facilitates the distribution of low carbon electricity across the region and beyond. The project is required as part of the necessary network reinforcements borne out of the systemic shift away from fossil fuels and commitment to achieving 50GW of offshore wind, a renewable energy source, connected to the network by 2030. In this context,	**H/BLP/LPP73**

			Braintree District Council declared a Climate Change Emergency in July 2019 and announced a target to be carbon neutral as a Council as far as practical by 2030, as well as supporting their local communities to reduce the impacts of climate change. It is considered, therefore, that Policy LPP 76, which does not preclude countryside settings for renewable energy schemes, provides general policy support for the project due to the fundamental aim of the Policy mirroring the needs case for the project.	
	LPP 76 Sustainable Urban Drainage Systems	The Lead Local Flood Authority, Risk Management Authorities and planners will be working together to achieve SuDS and early engagement with these bodies is key to ensuring that adequate surface water management measures are included in new developments. SuDS design should be an integral part of the layout and clear details of proposed.	The FRA (**application document 5.5**) notes that the drainage design associated with permanent features would be in accordance with the Suffolk SuDS Palette and the Essex SuDS Design Guide. Also see Assessment Reference: **H/BLP/LPP74**.	**H/BLP/LPP75**
	LPP 77 External Lighting	External artificial lighting must be integral to the development; low energy combined with features to limit use, avoid spillage to the night sky; provide just adequate illumination; no loss of privacy or amenity and not harmful to biodiversity.	The permanent lighting at the GSP substation would be low lux level light-emitting diode (LED) type luminaires with directable light output that would be triggered by motion (the lighting would only turn on when people visit the site). As site visits are infrequent, and usually during the day, the lighting may only be required during an emergency and it is not intended to facilitate maintenance activities, whether planned or unplanned. Fencing around the site means that wildlife would not activate the lighting. Also see Assessment Reference: **G/BLP/LPP77** in respect to lighting deployed during construction.	**H/BLP/LPP77**
Essex and Southend on Sea Minerals Local Plan (adopted Jul 2014)	S8 Safeguarding Minerals Resources	Sets out the approach to the safeguarding of both mineral resources that are potentially viable to extract as well as associated mineral infrastructure such as quarries and processing plants. This policy incorporates two separate safeguarding approaches one based on a resource (MSA), the other based around protecting existing mineral operations (MCA).	See Assessment Reference: **G/EMLP/S8.**	**H/EMLP/S8**

SECTION H: GSP SUBSTATION			
S4 Reducing the Use of Mineral Resources	The Policy applies to all development across Essex to promote a reduction in mineral use when determining planning applications. The Policy advocates for the reducing of the use of mineral resources through reusing and recycling minerals generated as a result of development.	The MWMP (**application document 7.7**) outlines the measures that would be considered for reducing the use of mineral resources through reuse and recycling.	**H/EMLP/S4**

Appendix E: Local Planning Policy Context

Table E.1: Table containing policy wording of relevant local planning policy documents.

Local Policy	Policy Reference	Policy Wording
Suffolk Minerals and Waste Local Plan	**MP10 (Minerals consultation and safeguarding areas)**	The County Council will safeguard: a) those Minerals Safeguarding Areas located within the Minerals Consultation Areas identified on the Proposals Map from proposed development in excess of five Ha The County Council will, when consulted by the Local Planning Authority, object to such development unless it can be shown that the sand and gravel present is not of economic value, or not practically or environmentally feasible to extract, or that the mineral will be worked before the development takes place or used within the development; b) areas falling within 250m of an existing, planned or potential site allocated in the Plan for sand and gravel extraction. The MPA will advise the Local Planning Authority whether any proposed development might prejudice the future extraction of minerals and should be refused, or whether such development itself might be prejudiced by proposed mineral working. District and Borough Councils should consult the County Council when a proposal falls within the Minerals Consultation Area as defined on the Proposals Map. The County Council will then refer to Policy MP10 before providing a consultation response. Responsibility for any mitigation required falls on the development that receives planning permission last.
	WP18 Safeguarding of waste management sites	The County Council will seek to safeguard existing sites and sites proposed for waste management use as shown on the Proposals & Safeguarding Maps and will object to development proposals that would prevent or prejudice the use of such sites for those purposes unless suitable alternative provision is made. Development proposals in close proximity to existing sites, should demonstrate that they would not prejudice or be prejudiced by a waste management facility. The safeguarding policy will also apply to any site where planning permission has already been granted. Where existing business or other use could have a significant adverse effect in any proposed new development, the applicant must provide suitable mitigation before the development is completed so that the existing use is not disadvantaged by new development. District and Borough Councils should consult the County Council when a potentially conflicting proposal falls within the 250 or 400 metre safeguarding zones as defined in the Appendix 3 Safeguarding Maps. The County Council will then refer to Policies WP18 before providing a consultation response.

Local Policy	Policy Reference	Policy Wording
	MS5 Layham	Development will be acceptable so long as the proposals, adequately address the following: a) a progressive working and low-level restoration scheme that is sympathetic to the wider Special Landscape Area and to the nearby Area of Outstanding Natural Beauty; b) protection of residential amenity; c) potential impacts upon nature conservation interest including CWS including ancient woodland, European Protected Species (dormice, otters, bats, and great crested newts), priority species (BAP) and, priority habitats including hedgerows. Appropriate surveys and mitigation will be required; d) the provision of an air quality assessment which considers the potential impacts of increased dust and pollutant concentration associated with the extraction and infilling process, the potential for cumulative impacts, and which defines the mitigation and monitoring which will be implemented at the site to minimise the risk at residential properties within 250m; e) the provision of measures to mitigate noise, and; f) the implications for the underlying groundwater and controlled waters Proposals must also be generally in accordance with other policies of the development plan including the environmental criteria set out in Policy GP4.
Babergh and Mid Suffolk Joint Local Plan (2023)	**SP09 Enhancement and Management of the Environment**	1) The Councils will require development to support and contribute to the conservation, enhancement and management of the natural and local environment and networks of green infrastructure, including: landscape, biodiversity, geodiversity and the historic environment and historic landscapes. 2) Development within the identified Protected Habitats Sites Mitigation Zone should seek to avoid harm in the first instance. Where this is not possible, development will be required to demonstrate adverse effects on site integrity will be avoided from increased recreational pressure. Development consisting of over 50 dwellings will be required to demonstrate well-designed open space/green infrastructure, proportionate to its scale. Development will also be required to make appropriate contributions through legal agreements towards management projects and/or monitoring of visitor pressure and urban effects on Habitats Sites and be compliant with the HRA Recreational Disturbance and Avoidance Mitigation Strategy. Development will otherwise need to submit separate evidence of compliance with the HRA regarding predicted impacts upon relevant designated sites. 3) All development that would have an impact on a Protected Habitats Site, will be required to embed mitigation measures to avoid adverse effect on integrity. 4) Through biodiversity net gain, all development will be required to protect and enhance biodiversity ensuring the measures are resilient to climate change.

Local Policy	Policy Reference	Policy Wording
		5) Where the monitoring of air quality from traffic on roads within 200 metres of Protected Habitats Sites demonstrates an adverse effect on their integrity, then the Councils will address any mitigation measures required in the Part 2 Plan.
	LP15 Environmental Protection and Conservation	1. Development proposals must demonstrate appropriate consideration of the following: 2. LAND Efficient and Effective Use of Resources/Land a. Previously developed land will be prioritised. Where development needs to take place on greenfield land, avoidance of the best and most versatile agricultural land should be prioritised. b. Make more efficient use or re-use of existing resources and reducing the lifecycle impact of building materials used in construction. c. Must not prejudice the ability of future allocated sites to come forward by, for example, restricting or blocking access to services such as water, gas, electricity, drainage, the free flow of air, and daylight. Land Contamination and Instability d. Where necessary, development will include measures to remediate land affected by contamination and avoid unacceptable proximity to hazardous sources. e. Where necessary, development will include measures to address land instability issues where identified. 3. POLLUTION Pollution and Environmental Amenity a. Prevent, or where not practicable, mitigate and reduce to a minimum all forms of possible pollution including, but not limited to: air, land, ground and surface water, waste, odour, noise, light and any other general amenity, including public amenity and visual amenity impacts. This must be convincingly demonstrated by impact assessments where appropriate. b. Significant adverse amenity impacts are avoided where a proposal is located adjacent to or close to existing uses. This would include an assessment of any identified amenity impacts that have a significant adverse effect and how the continued operation of existing use(s) would not be prejudiced. 4. WATER a. Comply with the relevant SCC Construction Surface Water Management Plan.

Local Policy	Policy Reference	Policy Wording
		b. Demonstrate, in a water supply management statement, protection and where practicable enhancement of groundwater, surface water features and must not lead to a deterioration in the quality of the environment to help achieve the objectives of the Water Framework Directive.
	LP16 Biodiversity and Geodiversity	1) All development must follow the biodiversity mitigation hierarchy. 2) Development must: a) Protect designated and, where known, potentially designated sites. Proposed development which is likely to have an adverse impact upon designated and potentially designated sites, or that will result in the loss or deterioration of irreplaceable biodiversity or geological features or habitats (such as ancient woodland and veteran/ancient trees) will not be supported; b) Protect and improve sites of geological value and in particular geological sites of international, national and local significance; c) Conserve, restore and contribute to the enhancement of biodiversity and geological conservation interests including Priority habitats and species. Enhancement for biodiversity should be commensurate with the scale of development; d) Where possible plan positively for the creation, protection, enhancement and management of local networks of biodiversity with wildlife corridors that connect areas. This could include links to existing green infrastructure networks and areas identified by local partnerships for habitat restoration or creation so that these ecological networks will be more resilient to current and future pressures; e) Identify and pursue opportunities for securing measurable net gains, equivalent of a minimum 10% increase, for biodiversity. The Councils will seek appropriate resources from developers for monitoring of biodiversity net gain from developments. Where biodiversity assets cannot be retained or enhanced on site, the Councils will support the delivery of net gain in biodiversity off-site; and f) Apply measures to assist with the recovery of species listed in S41 of the NERC Act 2006. 3) Development which would have an adverse impact on species protected by legislation, or subsequent legislation, will not be permitted unless there is no alternative and the LPA is satisfied that suitable measures have been taken to: a. Reduce disturbance to a minimum; b. Maintain the population identified on site; and c. Provide adequate alternative habitats to sustain at least the current levels of population. 4) Where appropriate, the LPA will use planning obligations and/or planning conditions to achieve appropriate mitigation and/or compensatory measures and to ensure that any potential harm is kept to a minimum.
	LP17 Landscape	

Local Policy	Policy Reference	Policy Wording
		1. To conserve and enhance landscape character development must: a. Integrate with the existing landscape character of the area and reinforce the local distinctiveness and identity of individual settlements; b. Be sensitive to the landscape and visual amenity impacts (including on dark skies and tranquil areas) on the natural environment and built character; and c. Consider the topographical cumulative impact on landscape sensitivity. 2. Where significant landscape or visual impacts are likely to occur, a Landscape and Visual Appraisal (LVA) or a Landscape and Visual Impact Assessment (LVIA) must be prepared to identify ways of avoiding, reducing and mitigating any adverse effects and opportunities for enhancement.
	LP18 Area of Outstanding Natural Beauty	1. Proposals for major development28 within the AONBs will be refused other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. 2. The Councils will support non-major development within the AONBs and development within the setting of the AONBs that: a. Gives great weight to conserving and enhancing the landscape and scenic beauty; b. Integrates positively with the character of the area and reinforces local distinctiveness of the AONBs; c. Is sensitive to the natural and built landscape and visual impacts (including on dark skies and tranquil areas); d. Supports the provision and maintenance of local services, facilities and assets (including affordable housing), so long as it is commensurate with the character and objectives of the AONBs; e. Demonstrates special regard to conserving and enhancing landscape character, landscape values and heritage assets in the AONBs; and f. Conserves the distinctiveness of the AONBs (including quality views), supports the public enjoyment of these areas and the wider social and economic objectives set out in the AONB Management Plans. 3. Development within the AONB Project Areas should have regard to the relevant Valued Landscape Assessment.
	LP19 The Historic Environment	

Local Policy	Policy Reference	Policy Wording
		1. Where an application potentially affects heritage assets, the Councils will require the applicant to submit a heritage statement that describes the significance of any heritage asset that is affected including any contribution made by their setting. The level of detail should be proportionate to the asset's importance and sufficient to understand the potential impact. 2. In addition, where an application potentially affects heritage assets of archaeological interest, the heritage statement must: a) Include an appropriate desk-based assessment and, where necessary, a field evaluation by a suitably qualified person; and b) If relevant, demonstrate how preservation in situ of those archaeological assets can be achieved through the design of the development and safeguarding during construction. 3. The Councils will: a. Support the re-use/ redevelopment of a heritage asset, including Heritage at Risk and assets outside settlement boundaries, where it would represent a viable use, and the proposal preserves the building, its setting and any features which form part of the building's special architectural or historic interest; b. Support development proposals that contribute to local distinctiveness, respecting the built form and scale of the heritage asset, through the use of appropriate design and materials; c. Support proposals to enhance the environmental performance of heritage assets, where the special characteristics of the heritage asset are safeguarded and a sensitive approach to design and specification ensures that the significance of the asset is sustained; and d. Take account of the positive contribution that the conservation of heritage assets can make to sustainable communities, including their economic vitality. 4. In order to safeguard and enhance the historic environment, the Councils will have regard (or special regard consistent with the Councils' statutory duties) where appropriate to the historic environment and take account of the contribution any designated or non-designated heritage assets make to the character of the area and its sense of place. All designated and non-designated heritage assets must be preserved, enhanced or conserved in accordance with statutory tests and their significance, including consideration of any contribution made to that significance by their setting. 5. When considering applications where a level of harm is identified to heritage assets (including historic landscapes) the Councils will consider the extent of harm and significance of the asset in accordance with the relevant national policies. Harm to designated heritage assets (regardless of the level of harm) will require clear and convincing justification in line with the tests in the National Planning Policy Framework. 6. Proposals which potentially affect heritage assets should have regard to all relevant Historic England Advice and Guidance.

Local Policy	Policy Reference	Policy Wording
		7. Where development is otherwise considered acceptable, planning conditions/obligations will be used to secure appropriate mitigation measures and if appropriate a programme of archaeological investigation, recording, reporting, archiving, publication, and community involvement; to advance public understanding of the significance of any heritage assets to be lost (wholly or in part); and to make this evidence and any archive generated publicly accessible.
	LP23 Sustainable Construction and Design	1. All new development is required to minimise its dependence on fossil fuels and to make the fullest contribution to the mitigation of climate change through adopting a sustainable approach to energy use. 2. All new residential development is required to: a. Achieve reductions in CO2 emissions for the Target Emissions Rate of new dwellings and new buildings as set out in the 2021 Edition of 2010 Building Regulations (Part L) or any subsequent more recent legislation which would lead to a greater reduction in CO2 emissions, where practicable; b. Meet the higher water efficiency standards of 110 litres per person per day, as set out in Building Regulations Part G2 (or any subsequent more recent legislation); c. Demonstrate climate change adaptation and mitigation measures by adopting effective design principles (including shading, landscaping, site layout and building orientation); d. Be designed to minimise the energy demand of the building through maximising natural sunlight and ventilation, effectively utilising solar gain and to help buildings respond to winter and summer temperatures and incorporating flood mitigation measures; e. Provide energy efficiency measures with a proactive approach to improving on the minimum standards specified in the Building Regulations where possible; f. Provide feasible and viable on-site renewable and other low carbon energy generation to allow the greatest CO2 reduction32; g. Demonstrate how it has incorporated sustainable building materials wherever possible; and h. Plan for the risks associated with future climate change as part of the layout of the scheme and design of its buildings to ensure its longer-term resilience. 3. In meeting the above, all major developments33 are required to submit a Sustainability Design and Construction Statement. This should be submitted at the appropriate stage in the application process and demonstrate how the principles set out in 2c)-2h) will be incorporated into the design of the development. 4. Non-residential development of 1,000sqm and above must achieve a minimum of BREEAM 'Very Good' standard or equivalent. Developers will be expected to provide certification evidence of the levels for BREEAM at design stage and on completion of development. All new developments will also be expected to meet the higher water efficiency standards as set out in 2b), unless it is convincingly demonstrated that it is not possible.

Local Policy	Policy Reference	Policy Wording
		5. All residential developments are encouraged to achieve water usage of not more than 100 litres per person per day. This is in addition to criterion 2b) in accordance with recommendation from Anglian Water. Water re-use and recycling, rainwater and stormwater harvesting, and other suitable measures should be incorporated wherever feasible to reduce demand on mains water supply.
	LP24 Design and Residential Amenity	1. All new development must be of high-quality design, with a clear vision as to the positive contribution the development will make to its context. As appropriate to the scale and nature of the development, proposals must: a. Respond to and safeguard the existing character/context; b. Create character and interest; c. Be designed for health, amenity, well-being and safety; and d. Meet Space Standards. 2. In order to achieve this development proposals shall: a) Respond to the wider townscape/landscapes and safeguarding the historic assets/ environment and natural and built features of merit; b) Be compatible/harmonious with its location and appropriate in terms of scale, mass, form, siting, design, materials, texture and colour in relation to the surrounding area; c) Protect and retain important natural features including trees or hedgerows during and post construction; d) Create/reinforce a strong design to the public realm incorporating visual signatures; e) Take account of the Building for a Healthy Life design assessment framework and include good practice in design principles. Nonhouseholder schemes of exceptional design and/or development within a sensitive area/ landscape will be required to undertake a design review to test incorporation of good design principles; f) Incorporate high levels of soft landscaping, trees and public open space that creates, and connects to, green infrastructure and networks; g) Prioritise movement by foot, bicycle and public transport, including linkages to create/contribute to a ‘walkable neighbourhood’; h) Design-out crime and create an environment for people to feel safe, and has a strong community focus;

Local Policy	Policy Reference	Policy Wording
		i) Protect the health and amenity of occupiers and surrounding uses by avoiding development that is overlooking, overbearing, results in a loss of daylight, and/or unacceptable levels of light pollution, noise, vibration, odour, emissions and dust, including any other amenity issues; j) Provide appropriate long-term design principles and measures in terms of privacy and adequate facilities such as bin storage (including recycling and re-use bins), secure cycle storage and garden space; k) Where appropriate demonstrate that the design considers the needs of disabled people and an ageing population and follow Dementia-Friendly Design principles; and l) Provide at least 50% of dwellings which meet the requirements for accessible and adaptable dwellings under Part M4(2) of Building Regulations (or any relevant regulation that supersedes and replaces). Where site viability issues exist, proposals must be supported by a viability assessment which convincingly demonstrates what the maximum viable contribution for accessible and adaptable dwellings is. 3. All developments must also demonstrate that they have regard to the design principles set out through Suffolk Design, the Councils' Design Supplementary Planning Documents, design documents which support Neighbourhood Plans and/or village design statements. Development which fails to maintain and, wherever possible improve, the quality and character of the area will not be supported.
	LP25 Energy Sources, Storage and Distribution	1. Renewable and low carbon, decentralised and community energy generating proposals will be supported subject to: a. The impact on (but not limited to) landscape, highway safety, ecology, heritage, residential amenity, drainage, airfield safeguarding and the local community having been fully taken into consideration and where appropriate, effectively mitigated; b. Where renewable or low carbon energy designs are to be incorporated within a development, an integrated approach being taken, using technology that is suitable for the location and designed to maximise operational efficiency without comprising amenity; c. The impact of on and off-site power generation infrastructure36 being acceptable, having regard to other policies in this Plan; d. The provision of mitigation, enhancement and compensation measures when necessary; and e. Approval of connection rights, and capacity in the UK power network, to be demonstrated as part of the planning application (where applicable). 2. The relevant LPA will normally use conditions attached to planning consents for energy development schemes to ensure the site is restored when energy generation ceases or becomes non-functioning for a period of six months.

Local Policy	Policy Reference	Policy Wording
		3. Where proposals for renewable and low carbon energy impact on nature conservation sites, the Areas of Outstanding Natural Beauty, or the setting of heritage assets (including conservation areas), the applicant must be able to convincingly demonstrate that potential harm resultant from development can be effectively mitigated and that there are no alternative sites available within the District or for community initiatives within the area which it is intended to serve. This includes providing underground power lines and cabling.
	LP26 Water resources and infrastructure	Development will be supported where it: 1. Conforms to the principle of Holistic Water Management including the use of appropriate water efficiency and re-use measures, together with surface water drainage which provides community and environmental benefits; 2. Considers its impact on water resources and the capacity of water supply network infrastructure, taking into account the effects of climate change; 3. Demonstrates the applicant has consulted with the relevant authority regarding wastewater treatment and that capacity within the foul sewerage network and receiving water recycling centre is available or can be made available in time to serve the development; 4. Separates foul and surface water flows; 5. Complies with the relevant statutory environmental body policy on culverts; and 6. The proposal will not result in any adverse effect (either through construction and / or operation) on the integrity of the Protected Habitats Sites and designated AONBs.
	LP27 Flood Risk and Vulnerability	Proposals for new development can be approved where: 1. The Strategic Flood Risk Assessment, as a starting point, has been used to assess whether the proposal is at risk of flooding and any impact of the proposal on flood risk. Other available flooding evidence should also be considered where it is relevant and/or is more up to date; 2. In areas at medium or high risk from flooding, it has been soundly demonstrated that the new development or intensification of development, can be made safe for its lifetime without increasing flooding elsewhere. This includes addressing the 'sequential test'; where needed the 'exception test' and also a site specific flood risk assessment; 3. Mitigation is provided against existing and potential flood risks throughout the life of the development (including fluvial, pluvial, tidal and sewer flooding) through application of a sequential approach to flood risk within the design and layout of the site, the implementation of Sustainable Drainage Systems (SuDS), and avoiding or mitigating risks to ground or surface water quality;

Local Policy	Policy Reference	Policy Wording
		4. Above ground, appropriate SuDS are incorporated within new developments unless it can be demonstrated that ground conditions are unsuitable for such measures, and take these opportunities to provide multifunctional benefits, including biodiversity, landscape, amenity and water quality enhancement (but excluding public open space); 5. Details appropriate to the scale of development are provided regarding how on-site surface water drainage will be managed so as to not cause or increase flooding elsewhere. This includes taking account of the cumulative impact of minor developments; 6. Opportunities to provide betterment of greenfield runoff rates to reduce the overall risk of flooding, have been provided wherever possible; 7. In circumstances requiring surface water management measures (including rain water harvesting), adequate mitigation which removes any increased flood risks and/or detrimental impacts are provided to support any planning application to the satisfaction of the Lead Local Flood Authority; 8. Further indicative details of long-term maintenance, management and where appropriate adoption by an appropriate body are provided at application stage; and 9. There is no unacceptable impact upon areas identified as vulnerable to coastal erosion.
	LP29 Safe, Sustainable and Active Transport	1) All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Where possible, active travel is to be tied in with the green infrastructure network to support net environmental gains. 2) Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network. 3) All development should be informed by the relevant parking guidance, with adequate access for servicing and emergency vehicles. 4) Where necessary, development will be expected to provide home to school transport contributions. 5) Development proposals that are expected to, or likely to cause a significant increase in transport movements must: a) Be supported by a transport statement and if appropriate a transport assessment; and b) Provide a travel plan informed by the relevant Count/National Guidance to mitigate the highway impact of development and maximise sustainable transport modes. 6) Significant impacts on highway safety or the function of the highway network must be mitigated. Impact on highway safety must not be unacceptable and the residual cumulative impacts on the road network must not be severe.

Local Policy	Policy Reference	Policy Wording
Assington Neighbourhood Plan (Babergh) 2022	**ASSN7 Area of Local Landscape Sensitivity**	Development proposals in the Area of Local Landscape Sensitivity, as identified on the Policies Map, will be permitted only where they: i) protect or enhance the special landscape qualities of the area; and ii) are designed and sited so as to harmonise with the landscape setting
	ASSN8 Protected Views	Development proposals must not have a detrimental impact on the key features of the 'protected views' identified on the Policies Map.
	ASSN10 Local Green Spaces	The following Local Green Spaces are designated in this Plan and identified on the Policies Map. 1 Assington Park, north part 2 Assington Park, south part 3 Area of the Old Vicarage 4 Hill Farm Land 5 Meadow View 6 Wildlife Area 7 The Mere 8 Oatetch Grove and Meadow 9 The Reservoir 10 Mill Farm Land
	ASSN11 Biodiversity	Development proposals should avoid the loss of, or material harm to trees, hedgerows and other natural features such as ponds. Where such losses or harm are unavoidable, adequate mitigation measures or, as a last resort, compensation measures will be sought. If suitable mitigation or compensation measures cannot be provided, then planning permission should be refused. Where new access is created, or an existing access is widened through an existing hedgerow, a new hedgerow of native species shall be planted on the splay returns into the site to maintain the appearance and continuity of hedgerows in the vicinity. Otherwise acceptable development proposals will be supported where they provide a net gain in biodiversity through, for example,

Local Policy	Policy Reference	Policy Wording
		a) the creation of new natural habitats including ponds; b) the planting of additional trees and hedgerows (reflecting the character of Assington's traditional hedgerows), and; c) restoring and repairing fragmented biodiversity networks through, for example, including holes in fences which allow access for hedgehogs.
	ASSN12 Heritage Assets	To ensure the conservation and enhancement of the village's heritage designated assets, proposals must: a. preserve or enhance the significance of the designated heritage assets of the village, their setting and the wider built environment, including views into, within and out of the Special Character Area as identified on the Policies Map; b. retain buildings and spaces, the loss of which would cause harm to the character or appearance of the Special Character Area; c. contribute to the village's local distinctiveness, built form and scale of its heritage assets, as described in the AECOM Design Guidelines, through the use of appropriate design and materials; d. be of an appropriate scale, form, height, massing, alignment and detailed design which respects the area's character, appearance and its setting, taking account of the AECOM Design Guidelines for Assington; e. demonstrate a clear understanding of the significance of the asset and of the wider context in which the heritage asset sits, alongside an assessment of the potential impact of the development on the heritage asset and its context; and f. provide clear justification, through the submission of a heritage statement, for any works that could harm a heritage asset yet be of wider substantial public benefit, through detailed analysis of the asset and the proposal. Proposals will not be supported where the harm caused as a result of the impact of a proposed scheme is not justified by the public benefits that would be provided. Where a planning proposal affects a heritage asset, it must be accompanied by a Heritage Statement identifying, as a minimum, the significance of the asset, and an assessment of the impact of the proposal on heritage assets. The level of detail of the Heritage Statement should be proportionate to the importance of the asset, the works proposed and sufficient to understand the potential impact of the proposal on its significance and/or setting.
Braintree District Local Plan Section 2	**SP1** (Presumption in Favour of Sustainable Development)	When considering development proposals the Local Planning Authorities will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. They will always work pro-actively with applicants to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area. Development that complies with the Plan will be approved without delay, unless material considerations indicate otherwise.

Local Policy	Policy Reference	Policy Wording
	SP3 (Spatial Strategy for North Essex)	When considering development proposals the Local Planning Authorities will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. They will always work pro-actively with applicants to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area. Development that complies with the Plan will be approved without delay, unless material considerations indicate otherwise.
	SP7 (Place Shaping Principles)	All new development must meet high standards of urban and architectural design. Development frameworks, masterplans, design codes, and other design guidance documents will be prepared in consultation with stakeholders where they are needed to support this objective. • All new development should reflect the following place shaping principles, where applicable: • Respond positively to local character and context to preserve and enhance the quality of existing places and their environs; • Provide buildings that exhibit individual architectural quality within well-considered public and private realms; • Protect and enhance assets of historical or natural value; Incorporate biodiversity creation and enhancement measures; Create well-connected places that prioritise the needs of pedestrians, cyclists and public transport services above use of the private car; • Provide a mix of land uses, services and densities with well-defined public and private spaces to create sustainable well-designed neighbourhoods; • Enhance the public realm through additional landscaping, street furniture and other distinctive features that help to create a sense of place; • Provide streets and spaces that are overlooked and active and promote inclusive access; • Include parking facilities that are well integrated as part of the overall design and are adaptable if levels of private car ownership fall; • Provide an integrated and connected network of biodiverse public open space and green and blue infrastructure, thereby helping to alleviate recreational pressure on designated sites; • Include measures to promote environmental sustainability including addressing energy and water efficiency, and provision of appropriate water and wastewater and flood mitigation measures including the use of open space to provide flora and fauna rich sustainable drainage solutions; • and Protect the amenity of existing and future residents and users with regard to noise, vibration, smell, loss of light, overbearing and overlooking.
	LPP (Development Boundaries) **1**	Within development boundaries, development will be permitted where it satisfies amenity, design, environmental and highway criteria and where it can take place without material adverse detriment to the existing character and historic interest of the settlement. Development outside development boundaries will be confined to uses appropriate to the countryside whilst also protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils to protect the intrinsic character and beauty of the countryside.

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	LPP 47 (Built and Historic Environment)	The Council will promote and secure a high standard of design and layout in all new development and the protection and enhancement of the historic environment in order to: a. Respect and respond to the local context, especially in the District's historic areas, where development may affect the setting of listed buildings and other buildings of historic or architectural significance, conservation areas, registered parks and gardens, scheduled monuments and areas of high archaeological and landscape sensitivity b. Promote and encourage the contribution that heritage assets can make towards driving regeneration, economic development, tourism and leisure provision in the District c. Actively encourage local groups to formulate Local Lists of buildings and structures of historic or architectural significance d. Create built environments which are safe and accessible to everyone and which will contribute towards the quality of life in all towns and villages e. Create good quality built environments in commercial and business districts and in the public realm as well as in residential areas f. Be capable of meeting the changing future needs of occupiers g. Promote the sympathetic re-use of buildings, particularly where they make a positive contribution to the delivery of sustainable development and regeneration.
	LPP 50 Provision for Open Space, Sport and Recreation	All developments will be expected to provide new open spaces in line with the requirements set out in the Open Spaces Supplementary Planning Document 2009 or successor document. Where the Council has identified, in an up-to-date and robust evidence base and strategy, a surplus in one type of open space or sports and recreational facility but a deficit or qualitative issues in another type, planning conditions or obligations may be used to secure part of the development site for the type of open space or sports and recreational facility that is in deficit or needs quality improvements to increase capacity. The Council will also consider where development may also provide the opportunity to exchange the use of one site for another to substitute for any loss of open space, or sports or recreational facility. Such replacement provision should be equivalent or better in terms of quality and quantity and be in a suitable location. For small sites where on-site provision is impractical, consideration will be given to opportunities for off-site provision or improvements within the ward or an adjacent ward. Open space, sports and recreational land and buildings that are identified as needed in the Council's Open Space Study and/or are of particular value to a local community, will be protected by the Council. Areas of particular quality may include: • Small areas of open space in urban areas that provide an important local amenity and offer recreational and play opportunities

Local Policy	Policy Reference	Policy Wording
		• Areas of open space that provide a community resource and can be used for informal or formal events such as community, religious and cultural festivals • Areas of open space that particularly benefit wildlife and biodiversity • Areas identified as visually important on the Proposals Map • Play areas, and sport and recreation grounds and associated facilities. Existing open space, sports and recreational buildings shall not be built on unless a robust and up to date assessment has been undertaken which has clearly demonstrated that they are surplus to requirements or the proposed development is otherwise compliant with this policy as a whole. For open space, 'surplus to requirements' should include consideration of all the functions that open space can perform. Not all open space, sport and recreational land and buildings are of equal merit and some may be available for alternative uses. Developers will need to consult the local community and demonstrate that any proposals are widely supported by them. In considering planning applications which could impact on open space, the Council shall weigh any benefits being offered to the community against the loss of open space that will occur. The Council will seek to ensure that all proposed development takes account of, and is sensitive to, the local context. In this regard, the Council shall consider applications with the intention of: • Avoiding any erosion of recreational function and maintaining or enhancing the character of open spaces • Ensuring that open spaces do not suffer from increased overlooking, traffic flows or other encroachment • Protecting and enhancing those parts of the rights of way network that may benefit open space and access to the wider countryside • Mitigating the impact of any development on biodiversity and nature conservation.
	LPP 52 (Layout and Design of Development)	The Council will seek a high standard of layout and design in all developments in the District and encourage innovative design where appropriate. Planning permission will be granted where the relevant following criteria are met: a. The scale, layout, height and massing of buildings and overall elevation design should reflect or enhance the area's local distinctiveness and shall be in harmony with the character and appearance of the surrounding area; including their form, scale and impact on the skyline and the building line b. Buildings and structures should be of high architectural quality, be of a proportion, composition, scale and orientation that enhances, activates and appropriately defines the public realm and comprise details and materials that complement, but not necessarily replicate, the local architectural character

Local Policy	Policy Reference	Policy Wording
		c. There shall be no unacceptable impact on the amenity of any nearby properties including on privacy, overshadowing, loss of light and overbearing impact d. The public realm including buildings, open areas, circulation spaces, and other townscape and landscape features shall be of a high standard of design and materials and they shall be consistent with affordable long term maintenance which is appropriate to the character and historic value of the area e. Designs shall be sensitive to the need to conserve and enhance local features of architectural, historic and landscape importance, particularly within Conservation Areas and in proximity to heritage assets f. Development proposals will incorporate measures for environmental sustainability throughout the construction, occupation and demolition of the development; in relation to energy conservation, water efficiency, waste separation (internal and external), climate change, flood resilience and resistant construction and the use of materials with low overall energy requirements g. Designs shall incorporate details of waste storage and collection arrangements, including provision for recycling, within the site to ensure that the impact on amenity and character are considered and recycling is optimised h. Designs and layouts shall promote a safe and secure environment, crime reduction and prevention, and shall encourage the related objective of enhancing personal safety with the maximum amount of natural surveillance of roads, paths and all other open areas and all open spaces incorporated into schemes i. Landscape proposals should consist of native plant species and their design shall promote and enhance local biodiversity and historic environmental assets. Biodiversity net gain in line with the requirements of national policy through the provision of new priority habitat where appropriate is encouraged. Development layouts must be appropriately designed to accommodate structural tree and hedge planting and ensure that future interference with highway safety, roads, pavements, services and properties is minimised j. The design and level of any lighting proposals will need to be in context with the local area, comply with national policy and avoid or minimise glare, spill and light pollution on local amenity, intrinsically dark landscapes and nature conservation k. Use of sustainable modes of transport are promoted in the design and layout of new development. The highway impact shall be assessed and the resultant traffic generation and its management shall seek to address safety concerns. Developments which will result in a severe impact upon the highway network (taking into account cumulative impacts) will be refused unless they can be effectively mitigated l. Proposals for the long-term maintenance of public areas and landscaping are included m. The development proposed should not have a detrimental impact on the safety of highways or any other public right of way, and its users n. Developments shall be legible and accessible to all and create or contribute to a coherent sense of place that is well articulated and visually interesting and welcoming o. Developments shall be permeable and well-connected to walking and cycling networks, open spaces and facilities

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		p. Residential developments shall provide a high standard of accommodation and amenity for all prospective occupants q. Developments should avoid single aspect dwellings that are: North facing; exposed to noise categories C or D; or contain three or more bedrooms. Where single aspect dwellings are proposed, the designer should demonstrate how good levels of ventilation, daylight and privacy will be provided to each habitable room r. The provision of private outdoor amenity space shall be provided having regard to the standards set out in the Essex Design Guide, or its successor, and shall be accessible, usable and well-related to the development s. Development proposals should demonstrate that adequate foul water treatment and disposal already exists or can be provided in time to serve the development.
	LPP 53 (Conservation Areas)	The Council will encourage the preservation and enhancement of the character and appearance of designated Conservation Areas and their settings. These include the buildings, open spaces, landscape and historic features and views into, out from and within the constituent parts of designated areas. Built or other development within or adjacent to a Conservation Area and affecting its setting will be permitted provided that all the following criteria are met: a. Where the proposal enhances the character, appearance and essential feature of the Conservation Area or its setting b. Details of existing buildings which make a positive contribution to the character and appearance of the Conservation Area will be retained c. Building materials are of high quality and appropriate to the local context.
	LPP 57 (Heritage Assets and their Settings)	Development of internal, or external alterations, or extensions, to a listed building or listed structure (including any structures defined as having equivalent status due to being situated within the curtilage of a listed building and locally listed heritage assets) and changes of use will be permitted when all the following criteria are met: For designated heritage assets: The development meets the tests set out in national policy. For all heritage assets: a. The works or uses include the use of appropriate materials and finishes b. The application submitted contains details of the significance of the heritage asset, within a Heritage Statement which should include any contribution made by their setting c. There may be a requirement for appropriate specialist recording to be carried out prior to the change of use, demolition or conversion of a listed building or associated historic building

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		The Council will seek to preserve and enhance the immediate settings of heritage assets by appropriate control over the development, design and use of adjoining land.
	LPP 59 **Archaeological Evaluation, Excavation and Recording**	Where important archaeological remains are thought to be at risk from development, or if the development could impact on a Scheduled Monument or Registered Park and Garden, the developer will be required to arrange for an archaeological evaluation of the site to be undertaken and submitted as part of the planning application. The Essex Historic Environment Record should be the primary source for assessment for archaeological potential. The evaluation will assess the character, significance and extent of the archaeological remains and will allow an informed decision to be made on the planning application. Such assessments should be proportionate to the importance of the site and a programme of archaeological investigation may be necessary for sites likely to contain significant archaeology. Planning permission will not be granted if the remains identified are of sufficient importance to be preserved in situ and cannot be so preserved in the context of the development proposed, taking account of the necessary construction techniques to be used. Where archaeological potential is identified but there is no overriding case for any remains to be preserved in situ, development which would destroy or disturb potential remains will be permitted, subject to conditions ensuring an appropriate programme of archaeological investigation, recording, reporting and archiving, prior to development commencing. There will be a requirement to make the result of these investigations publicly accessible.
	LPP 63 Natural Environment and Green Infrastructure	Development proposals must take available measures to ensure the protection and enhancement of the natural environment, habitats, biodiversity and geodiversity of the District and to be acceptable, also taking climate change and water scarcity into account in their design. This will include protection from pollution. Proposals inside the District which are likely to adversely affect, either individually or cumulatively, International or Nationally designated nature conservation sites within and outside the District will not normally be acceptable. The Council will expect all development proposals, where appropriate, to contribute towards the delivery of new Green Infrastructure which develops and enhances a network of multi-functional spaces and natural features throughout the District. This will be proportionate to the scale of the proposed development and the rural or urban context. The Council will support and encourage development which contributes to the District's existing Green Infrastructure and where possible, enhances and protects networks and adds to their functions. It will secure additional provision where deficiencies have been identified. Open space and green infrastructure may in some instances be required to provide alternatives to European sites and that such sites should be designed and managed appropriately to maximise their potential effectiveness in this role. Proposals which undermine these principles will not be acceptable.
	LPP 64 Protected Sites	International Designations

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		Sites designated for their international importance to nature conservation; including Ramsar sites, Special Protection Areas (SPA), Special Areas of Conservation (SAC), should be protected from development likely to have an adverse effect on their integrity whether they are inside or outside the District. Proposals which are considered to have a likely significant effect on these sites will require an Appropriate Assessment (AA) in line with European and domestic legislation. Developers should provide information sufficient to inform this assessment. Planning permission will only be granted if, in light of the AA, it can be ascertained that the development would not adversely affect the integrity of these sites or, if there are no alternative solutions, imperative reasons of overriding public interest can be demonstrated. In accordance with the Habitats Regulations, development proposals should follow the avoid-mitigate-compensate hierarchy. Where this cannot be achieved, development proposals will not be permitted. Residential developments must contribute to the Essex Coast Recreational disturbance Avoidance and Mitigation Strategy 2018-2038 (RAMS) where they fall within the Zones of Influence of international designations as defined in the RAMS, in accordance with SP2. Nationally Designated sites Sites designated for their national importance to nature conservation; including Sites of Special Scientific Interest (SSSIs) should also be protected from development which is likely to adversely affect the features for which they are designated. Where necessary, developers should therefore ensure that sufficient assessment of potential impacts to SSSIs is also submitted with any planning application. Locally Designated sites Proposals likely to have an adverse effect on a Local Wildlife Site (LWS), Local Nature Reserve (LNR) and Special Roadside Verge will not be permitted unless the benefits of the development clearly outweigh the harm to the nature conservation value of the site. If such benefits exist, the developer will be required to demonstrate that impacts will be avoided, and impacts that cannot be avoided will be mitigated on-site. Protected Species, Priority Species and Priority Habitat Proposals that result in a net gain in priority habitat will be supported in principle, subject to other policies in this plan. Where priority habitats are likely to be adversely impacted by the proposal, the developer must demonstrate that adverse impacts will be avoided, and impacts that cannot be avoided are mitigated on-site. Where residual impacts remain, off-site compensation will be required so that there is no net loss in quantity and quality of priority habitat in Braintree District. Where there is a confirmed presence or reasonable likelihood of protected species or priority species being present on or immediately adjacent to a development site, the developer will be required to undertake an ecological survey and will be required to demonstrate that an adequate mitigation plan is in place to ensure no harm to protected species and no net loss of priority species.

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		Proposals resulting in the loss, deterioration or fragmentation of irreplaceable habitats such as ancient woodland or veteran trees will not normally be acceptable unless the need for, and benefits of the development in that location clearly outweigh the loss. All development proposals In all cases a precautionary approach will be taken where insufficient information is provided about avoidance, management, mitigation and compensation measures. Management, mitigation and compensation measures will be secured through planning conditions/obligations where necessary.
	LPP 65 Tree Protection	The Council will consider the protection of established healthy trees which offer significant amenity value to the locality by: • Assessing the value and contribution made by trees to the Conservation Areas in which they are located when determining S211 notifications for works to trees, including their removal • Serving Tree Preservation Orders in response to an objection to such a notification or in other circumstances as detailed below. Prominent trees which contribute to the character of the local landscape and are considered to have reasonable life expectancy will be protected by tree preservation orders particularly if they are considered to be under threat from removal. Trees which make a significant positive contribution to the character and appearance of their surroundings will be retained unless there is a good arboricultural reason for their removal for example they are considered to be dangerous or in poor condition. Similarly alterations to trees such as pruning or crown lifting should not harm the tree or disfigure it; any tree surgery should be carried out to reflect BS3998:2010 (as superseded). When considering the impact of development on good quality trees the Council will expect developers to reflect the best practice guidance set out in BS5837:2012 (as amended). The standard recommends that trees of higher quality are a material consideration in the development process. Where trees are to be retained on new development sites there must be a suitable distance provided between the established tree and any new development to allow for its continued wellbeing and ensure it is less vulnerable to pressures from adjacent properties for its removal. Planning conditions will be applied to protect trees during development. New landscape proposals for tree planting on development sites should reflect the recommendations set out in BS5837:2012 (as amended) and BS8545:2014 (as superseded). In considering works to trees, new planting and the trees in new development schemes the Council will expect proposals to be in general conformity to and contribute to the aims of Braintree District's Tree Strategy.
	LPP 66 Protection, Enhancement,	Development proposals shall provide for the protection of biodiversity and the mitigation or compensation of any adverse impacts. Additionally, enhancement of biodiversity should be included in all proposals, commensurate with the scale of the development. For example, such enhancement could include watercourse improvements to benefit biodiversity and improve water quality, habitat

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	Management & Monitoring of Biodiversity	creation, wildlife links (including as part of green or blue infrastructure) and building design which creates wildlife habitat (e.g. green roofs, bird or bat boxes as integral parts of buildings in partnership with organisations such as The Swift Conservation Group and Essex Wildlife Trust). Previously developed land (brownfield sites) can harbour biodiversity. The reuse of such sites must be undertaken carefully with regard to existing features of biodiversity interest. Development proposals on such sites will be expected to include measures that maintain and enhance important features and appropriately incorporate them within any development of the site. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then planning permission should be refused.
	LPP 67 Landscape Character and Features	In its decision-making on applications, the Local Planning Authority will take into account the different roles and character of the various landscape areas in the District, and recognise the intrinsic character and beauty of the countryside, in order to ensure that any development permitted is suitable for the local context. In doing so regard must be given to the hierarchy of designations as expressed in NPPF 2012 paragraph 113. At a landscape scale, Braintree is located primarily in the South Suffolk and North Essex Clayland National Character Area and this character assessment is relevant in considering applications for development. Proposals for new development should be informed by, and be sympathetic to, the character of the landscape as identified in the District Council's Landscape Character Assessments. Proposals which may impact on the landscape such as settlement edge, countryside or large schemes will be required to include an assessment of their impact on the landscape and should not be detrimental to the distinctive landscape features of the area such as trees, hedges, woodlands, grasslands, ponds and rivers. Development which would not successfully integrate into the local landscape will not be permitted. Where development is proposed close to existing features, it should be designed and located to ensure that the condition and future retention/management will not be prejudiced but enhanced where appropriate. Additional landscaping including planting of native species of trees, hedgerows and other flora may be required to maintain and enhance these features. The restoration and enhancement of the natural environment will be encouraged through: • Maximising opportunities for creation of new green infrastructure and networks in sites allocated for development • Creating green infrastructure networks to link urban areas to the countryside, and creating and enhancing the biodiversity value of wildlife corridors. Development proposals which result in harm to the setting of the AONB will not be permitted.

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	LPP 69 **Protected Lanes**	The District Council will conserve the traditional landscape and nature conservation character of roads designated on the Proposals Map as Protected Lanes, including their verges, banks, ditches and natural features such as hedgerows, hedgerow trees and other structural elements contributing to the historic features of the lanes. Any proposals that would have a materially adverse impact on the physical appearance of these Protected Lanes or generate traffic of a type or amount inappropriate for the traditional landscape and nature conservation character of a protected lane, will not be permitted.
	LPP 70 **Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards**	Proposals for all new developments should prevent unacceptable risks from all emissions and other forms of pollution (including light and noise pollution) and ensure no deterioration to either air or water quality. All applications for development where the existence of, or potential for creation of, pollution is suspected must contain sufficient information to enable the Local Planning Authority to make a full assessment of potential hazards. Development will not be permitted where, individually or cumulatively and after mitigation, there are likely to be unacceptable impacts arising from the development on: a. The natural environment, general amenity and the tranquillity of the wider rural area b. The health and safety of the public including existing residents, and future occupiers of all new developments c. Air quality d. Surface water and groundwater quality, groundwater source protection areas, drinking water protected zones e. Odour f. Compliance with statutory environmental quality standards g. Noise. Development will be permitted when there is no unacceptable risk due to: • Siting on known or suspected unstable land • Siting on land which is known to be or potentially affected by contamination or where the land may have a particularly sensitive end use • The storage or use of hazardous substances. Proposals for development on, or adjacent to land which is known to be potentially affected by contamination, or land which may have a particular sensitive end use, or involving the storage and/or use of hazardous substances, will be required to submit an appropriate assessment of the risk levels, site investigations and other relevant studies, remediation proposals and implementation schedule prior to, or as part of any planning application.

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		Soil quality must be protected during development to protect good quality land and to protect the ability of soil to allow water penetration by avoiding compaction. In appropriate cases, the Local Planning Authority may impose planning conditions, or through a legal obligation, secure mitigation measures, remedial works and/or monitoring processes.
	LPP 74 Flooding Risk and Surface Water Drainage	Where development must be located in an area of higher flood risk, it must be designed to be flood resilient and resistant and safe for its users for the lifetime of the development, taking climate change and the vulnerability of the residents into account. New development shall be located on Flood Zone 1 or areas with the lowest probability of flooding, taking climate change into account, and will not increase flood risk elsewhere. Any proposals for new development (except water compatible uses) within Flood Zones 2 and 3a will be required to provide sufficient evidence for the Council to assess whether the requirements of the sequential test and exception test have been satisfied, taking climate change into account. Where development must be located in an area of higher flood risk, it must be designed to be flood resilient and resistant and safe for its users for the lifetime of the development, taking climate change and the vulnerability of any residents into account. For developments within Flood Zones 2 and 3, and for developments elsewhere involving sites of 1ha or more, development proposals must be accompanied by a site specific Flood Risk Assessment which meet the requirements of the NPPF and Planning Practice Guidance. Flood Risk Assessments submitted must take into account an assessment of flood risk across the life of the development taking climate change into account by using the most up to date allowances available. For all developments (excluding minor developments and change of use) proposed in Flood Zone 2 or 3, a Flood Warning and Evacuation Plan should be prepared. For developments located in areas at risk of fluvial flooding, safe access/egress must be provided for new development as follows in order of preference: a. Safe dry route for people and vehicles b. Safe dry route for people c. If a. is not possible a route for people where the flood hazard is low and should not cause risk to people d. If a-c is not possible planning permission will not usually be granted. All new development in Flood Zones 2 and 3 should not adversely affect flood routing and thereby increase flood risk elsewhere. All new development in Flood Zones 2 and 3 must not result in a net loss of flood storage capacity. Where possible opportunities must be sought to achieve an increase in floodplain storage.

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		All more Vulnerable and Highly Vulnerable development within Flood Zones 2 and 3 should set finished floor levels 300mm above the known or modelled 1 in 100 annual probability (1% AEP) flood level including an allowance for climate change. In areas at risk of flooding at low depths (<0.3m), flood resistance measures should be considered as part of the design and in areas at risk of frequent or prolonged flooding, flood resilience measures should also be included. Where applicable proposals for new development should: • Demonstrate that the scheme does not have an adverse impact on any watercourse, floodplain or flood defence • Not impede access to flood defence and management facilities • demonstrate that the cumulative impact of development would not have a significant effect on local flood storage capacity or flood flows • Where appropriate opportunities may be taken to reduce wider flood risk issues by removing development from the floodplain through land swapping • Where applicable retain at least an 8m wide undeveloped buffer strip alongside Main Rivers, or at least a 3m buffer strip on at least one side of an Ordinary watercourse, and explore opportunities for riverside restoration • Ensure there is no adverse impact on the operational functions of any existing flood defence infrastructure and new development should not be positioned in areas which would be in an area of hazard should defences fail. Where the development site would benefit from the construction of Flood Management Infrastructure such as Flood Alleviation Schemes, appropriate financial contributions will be sought.
LPP (Renewable Energy Schemes)	**73**	Renewable Energy Schemes Proposals for renewable energy schemes will be encouraged where the benefit in terms of low carbon energy generating potential outweighs harm to or loss of: • Natural landscape or other natural assets • Landscape character • Nature conservation • Best and most versatile agricultural land • Heritage assets, including the setting of heritage assets • Public rights of way

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		• Air traffic and safety • Ministry of Defence operations • Watercourse engineering and hydrological impact. Renewable energy schemes should not result in pollution to air, land or water. Renewable energy schemes will also need to demonstrate that they will not result in unacceptable impacts on residential amenity including visual impact, noise, shadow flicker, reflection, odour, fumes and traffic generation. The development must be capable of efficient connection to existing national energy infrastructure, or it can be demonstrated that the energy generated would be used for on-site needs only. In considering planning applications, the Local Planning Authority will take into account the energy generating potential of the scheme. Where appropriate, large scale solar farms shall be accompanied by a sequential assessment which considers alternative brownfield sites and lower quality agricultural land. Compelling justification must be provided for proposals on high quality agricultural land. Where proposals are accepted on agricultural land, they should demonstrate how the installation allows for continued agricultural use and/or enhances biodiversity around the panels. A condition will be attached to planning permissions for energy development schemes to require the site to be decommissioned and restored when energy generation use ceases or becomes non-functioning for a period of 6 months or more. Such a scheme shall include, if appropriate, measures to restore and protect soil quality.
LPP Sustainable Urban Drainage Systems	**76**	All new development of 10 dwellings or more and major commercial development, car parks and hard standings will incorporate Sustainable Drainage Systems (SuDs) appropriate to the nature of the site. Such systems shall provide optimum water runoff rates and volumes taking into account relevant local or national standards and the impact of the Water Framework Directive on flood risk issues, unless it can be clearly demonstrated that they are impracticable. SuDs design quality will be expected to reflect the up-to-date standards encompassed in the relevant BRE and CIRIA standards, Essex County Council SuDs Design Guide (as updated) and Non-Statutory Technical Standards for Sustainable Drainage Systems, to the satisfaction of the Lead Local Flood Authority. Large development areas with a number of new allocations will be required to develop a strategy for providing a joint SuDs scheme. Surface water should be managed as close to its source as possible and on the surface where practicable to do so. Measures such as rain water recycling, green roofs, water butts and permeable surfaces will be encouraged incorporating measures to prevent pollution where appropriate.

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		Only where there is a significant risk of pollution to the water environment, inappropriate soil conditions and/or engineering difficulties, should alternative methods of drainage be considered. If alternative methods are to be considered, adequate assessment and justification should be provided and consideration should still be given to pre and post runoff rates. SuDS design should be an integral part of the layout and clear details of proposed SuDS together with how they will be managed and maintained will be required as part of any planning application. Only proposals which clearly demonstrate that a satisfactory SuDs layout with appropriate maintenance is possible, or compelling justification as to why SuDs should not be incorporated into a scheme, or are unviable, are likely to be successful. Contributions in the form of commuted sums may be sought in legal agreements to ensure that the drainage systems can be adequately maintained into the future. The SuD system should be designed to ensure that the maintenance and operation requirements are economically proportionate. The dual use of land for Sustainable Urban Drainage and Open Space can be supported where neither use is compromised by the other. It may be supported in circumstances where land is safely usable by the public as open space, and where use as open space does not compromise the efficient and effective functioning of the SuDs in the short or longer term.
	LPP 77 External Lighting	Proposals for external lighting within development proposals and standalone lighting schemes, will be permitted where all the following criteria are met: a. The lighting is designed as an integral element of the development and shall be capable of adoption by the Highway Authority when it is on the public highway b. Low energy lighting is used in conjunction with features such as movement sensors, daylight sensors and time controls, and hours of illumination shall be controlled c. The alignment of lamps and provision of shielding minimises spillage, glare and glow, including into the night sky d. The lighting intensity is no greater than necessary to provide adequate illumination e. There is no loss of privacy or amenity to nearby residential properties and no danger to pedestrians and road users f. There is no harm to biodiversity, natural ecosystems, intrinsically dark landscapes and/or heritage assets.
Little Cornard Neighbourhood Plan (Babergh) 2022	**LCO2 Access into the countryside**	A. Access to the countryside will be promoted through protection and maintenance of the existing Public Rights of Way (PROW) network (see Figure 7), its enhancement where possible, provision of bridleways and the safety of users of rural roads and lanes. B. Any developments which leads to the loss or degradation of any PROW will not be permitted in other than very special circumstances. Proposals to divert PROWs or cycleways should provide clear and demonstrable benefits for the wider community. Where possible, development should enhance PROWs by improving existing routes and improving connectivity through the creation of new routes.

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		C. Proposals to create a pedestrian route between Workhouse Green and Bures and to secure this as a PROW will be strongly encouraged.
	LCO3 Views	Development proposals are expected to conserve the scenic beauty of the parish. In particular, the cherished views shown in Figure 10 shall be preserved. Development which may impact on any of these views must demonstrate through its layout how vistas from public viewpoints will be preserved.
Essex and South end on Sea Minerals Local Plan (adopted Jul 2014)	**S8 (Safeguarding Minerals Resources)**	By applying Mineral Safeguarding Areas (MSAs) and/ or Mineral Consultation Areas (MCAs), the Mineral Planning Authority will safeguard mineral resources of national and local importance from surface development that would sterilise a significant economic resource or prejudice the effective working of a permitted mineral reserve, Preferred or Reserve Site allocation within the Minerals Local Plan. The Minerals Planning Authority shall be consulted, and its views taken into account, on proposed developments within MSAs and MCAs except for the excluded development identified in Appendix 5. Mineral Safeguarding Areas Mineral Safeguarding Areas are designated for mineral deposits of sand and gravel, silica sand, chalk, brickearth and brick clay considered to be of national and local importance, as defined on the Policies Map. The Mineral Planning Authority shall be consulted on: a) all planning applications for development on a site located within an MSA that is 5ha or more for sand and gravel, 3ha or more for chalk and greater than 1 dwelling for brickearth or brick clay; and b) any land-use policy, proposal or allocation relating to land within an MSA being considered by the Local Planning Authority for possible development as part of preparing a Local Plan (with regard to the above thresholds). Non-mineral proposals that exceed these thresholds shall be supported by a minerals resource assessment to establish the existence or otherwise of a mineral resource of economic importance. If, in the opinion of the Local Planning Authority, surface development should be permitted, consideration shall be given to the prior extraction of existing minerals. Mineral Consultation Areas MCAs are designated within and up to an area of 250 metres from each safeguarded permitted minerals development and Preferred and Reserve Site allocation as shown on the Policies Map and defined on the maps in Appendix 6. The Mineral Planning Authority shall be consulted on: a) Any planning application for development on a site located within an MCA except for the excluded development identified in Appendix 5,

Local Policy	Policy Reference	Policy Wording
		b) Any land-use policy, proposal or allocation relating to land within an MCA that is being considered as part of preparing a Local Plan Proposals which would unnecessarily sterilise mineral resources or conflict with the effective workings of permitted minerals development, Preferred or Reserve Mineral Site allocation shall be opposed.
	S4 (Reducing the Use of Mineral Resources)	All development proposals shall ensure that mineral waste is minimised and that minerals on development/ redevelopment sites are re-used and recycled. This is to ensure both a reduction in the need for primary minerals and the amount of construction, demolition, and excavation wastes going to landfill. This will be supported by joint working with strategic partners to ensure: 1. The use of best practice in the extraction, processing and transportation of primary minerals to minimise mineral waste, 2. The application of national and local standards for sustainable design and construction in proposed development, 3. The application of procurement policies which promote sustainable design and construction in proposed development, and 4. The maximum possible recovery of minerals from construction, demolition and excavation wastes produced at development or redevelopment sites. This will be promoted by on-site re-use/ recycling, or if not environmentally acceptable to do so, through re-use/ recycling at other nearby aggregate recycling facilities in proximity to the site.

Appendix F: Signposting for Compliance with EN-1 (November 2023)

Table F.1: Signposting for Compliance with EN-1 (November 2023)

Please note, whilst the main body of this Planning Statement refers to the document numbers allocated by National Grid at the submission of the application for development consent in April 2023, Appendix F & G have been inserted at Examination Deadline 6 (20 December 2023) and therefore, instead refer to the Examination Library document numbers (correct as of 20 December 2023).

Also note, paragraphs of the NPS have been deleted from Appendix F and G where National Grid do not consider them relevant to the project; hence, the paragraph numbers may not always be in consecutive order.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
	The need for new electricity networks	
3.3.65	There is an urgent need for new electricity network infrastructure to be brought forward at pace to meet our energy objectives.	Noted.
3.3.66	The security and reliability of the UK's current and future energy supply is very highly dependent on having an electricity network which will enable new renewable electricity generation, storage, and interconnection infrastructure that our country needs to meet the rapid increase in electricity demand required to transition to net zero while maintaining energy security. The delivery of this important infrastructure also needs to balance cost to consumers, accelerated timelines for delivery and the minimisation of community and environmental impacts.	Noted.
3.3.67	The need to connect to new sources of electricity generation and new sources of demand is not the only driver for new electricity network infrastructure. As the electricity system grows in scale, dispersion, variety, and complexity, work will be needed to protect against the risk of large-scale supply interruptions in the absence of sufficiently robust electricity networks. While existing transmission and distribution networks must adapt and evolve to cope with this reality, development of new lines of 132kV (and	National Grid lies at the heart of a transforming energy system. National Grid play a vital role in connecting millions of people to the energy they use, while continually seeking ways to make the energy system cleaner. National Grid owns and manages the national high-voltage electricity transmission system throughout England and Wales. National Grid owns, builds and maintains the infrastructure; overhead lines, buried

Paragraph No.	Policy Requirement	How the Project Meets the Policy
	over 2km) and above will also be necessary to preserve and guarantee the robust and reliable operation of the whole electricity system.	cables and substations as a few examples, to allow power to move around the country. The key role of this transmission system is to connect the electricity generators' power stations with regional DNO who then supply businesses and homes. In return for the connection, users of the transmission network pay a tariff to National Grid.
3.3.68	The volume of onshore reinforcement works needed to meet decarbonisation targets is substantial. National Grid ESO forecasts that over the next decade the onshore and offshore transmission network, some of which is located offshore will require a doubling of north-south power transfer capacity due to increased wind generation in Scotland; substantial reinforcement in the Midlands to accommodate increased power flows from Scotland and the North of England; substantial reinforcement in London and the South of England to allow for Europe-bound export of excess wind generation from Scotland and the North of England, as well as the importation of energy from Europe to increase resilience during any periods which may be affected by intermittent energy generation mix and as part of the country's transition to increased energy security; and substantial reinforcement in East Anglia to handle increased power flows from offshore wind generation63 (this may also require additional offshore connections coming to land in England).	National Grid notes that the project intends to, in part, remedy the '*substantial reinforcement in East Anglia to handle increased power flows from offshore wind generation63 (this may also require additional offshore connections coming to land in England)',* as per 3.3.68.
3.3.69	It is important to note that the crucial national benefits of increased system robustness through new electricity network infrastructure projects are shared by all users of the system.	National Grid shares in this ambition.
3.3.70	As all new grid projects have a role in efficiently constructing, operating and connecting low carbon infrastructure to the National Electricity Grid, the scope of networks CNP infrastructure is not limited to those associated specifically with a particular project.	Noted, the project is Critical National Priority and it supports a number of generation projects (not one discreet project), being primarily a network reinforcement.
3.3.71	The historical approach to connecting offshore wind resulted in individual radial connections developed project-by-project. This may continue to be the most appropriate approach for some areas with single offshore wind projects that are not located in the vicinity of other offshore wind and / or offshore infrastructure that is planned or foreseen in the near future. For regions with multiple windfarms or offshore transmission projects it is expected that a more coordinated approach will be delivered. For these areas, this approach is likely to reduce the network infrastructure costs as well as the cumulative environmental impacts and impacts on coastal communities by installing a smaller number of larger connections, each taking power from multiple windfarms instead of individual point-to-point connections for each windfarm.	See response to 3.3.70.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
3.3.72	Connecting the volume of offshore wind capacity targeted by the government will require not only new offshore transmission infrastructure but also reinforcement to the onshore transmission network, to accommodate the increased power flows to regional demand centres.	See response to 3.3.70.
3.3.73	Due to the time required to plan, approve and construct the required new onshore transmission infrastructure, to date the completion of these onshore reinforcements has often taken longer than the completion of the offshore wind farms for which they are being built. This could present a material barrier to the delivery of UK Government ambition to deliver up to 50GW of offshore wind by 2030.	The project is required to be operational by 2028, in order to support the Government objectives for 50GW by 2030, tackling climate change and cleaning up the UK energy system, and reaching net zero carbon emissions by 2050.
3.3.74	The strategic approach to network planning, including the Holistic Network Design (HND) for onshore-offshore transmission, planned HND follow-on exercises and the proposed move to Centralised Strategic Network Planning for the onshore-offshore network, allows for clearer identification of needs and includes upfront consideration of environmental and community impacts. Government recognises the work undertaken in these strategic network planning exercises and these should be an important and relevant consideration in the consenting process. This recognition of the network designs seeks to directly support progress of projects identified within the designs as they are brought forward for consent. Further details are provided in Section 2.8 and 2.13 of EN-5.	The project has been identified as critical in all future energy scenarios as a result of the network design and planning exercises carried out by National Grid ESO.
3.3.75	The final Phase 1 report for National Grid ESO's Offshore Coordination Project (published December 2020)64 found that a more integrated approach to offshore transmission, which included efficient planning of the onshore network, could deliver consumer benefits of up to £6 billion by 2050, depending on how quickly it could be implemented. It also found that the number of new electricity infrastructure assets, including cables and onshore landing points could be reduced by up to 50 per cent over the same period, significantly reducing environmental impacts and impacts on coastal communities.	Noted.
3.3.78	Further to the needs case above, it is recognised that the case for a new connection or network reinforcement is demonstrated if the proposed development represents an efficient and economical means of: • connecting a new generating station or storage facility to the network • reinforcing the network to accommodate such connections, or • reinforcing the network to ensure that it is sufficiently resilient and capacious (per any performance standards set by Ofgem) to reliably supply present and/or anticipated future levels of demand.	The project is Critical National Priority and it supports a number of generation projects (not one discreet project), being primarily a network reinforcement. As such, the project is considered to be a means of all of the following: • connecting a new generating station or storage facility to the network • reinforcing the network to accommodate such connections, and • reinforcing the network to ensure that it is sufficiently resilient and capacious

Paragraph No.	Policy Requirement	How the Project Meets the Policy
	In considering the 'economic and efficient' approach the network project needs to follow good design, avoidance and mitigation principles (and/ or biodiversity compensation where needed for transmission in the marine environment), as referenced in EN-5.	Meanwhile, as well as a statutory duty to be economic and efficient, as a licence holder, National Grid has specific duties to uphold in relation to the desirability of preserving amenity of certain aspects of the environment and to mitigate the effects of its activities on the environment under Section 38 and Schedule 9 of the Electricity Act 1985. It is these key responsibilities and objectives which underpin National Grid's design principles on which the project is based.
3.3.79	Moreover, given the crucial role of networks in connecting all of the other kinds of electricity infrastructure described above it is especially important that the Secretary of State considers network projects as elements of a coherent and strategically necessary system, whether or not they are linked together in specific NSIPs. For instance, when evaluating applications for new electricity networks infrastructure the Secretary of State should have regard to the fact that given, i) the government's strategic commitment to ambitious levels of interconnection capacity and offshore wind generation, and ii) the tightly interdependent infrastructure chain linking interconnection and offshore generation with onshore demand centres, delays in the approval of associated new network developments could cause significant economic waste and set back the strategically vital goals of decarbonisation and energy security.	Noted. The project is required to be operational by 2028, in order to support the Government objectives for 50GW by 2030, tackling climate change and cleaning up the UK energy system, and reaching net zero carbon emissions by 2050.
3.3.81	The importance of accelerating coordination does not, however, militate against the need for standalone electricity networks projects, and these projects are supported by this NPS and should continue to be assessed on their own merits.	Noted.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
4	**Assessment Principles**	
4.1	**General Policies and Considerations**	
4.1.1	This part of EN-1, Assessment Principles, sets out the general policies for the submission and assessment of applications relating to energy infrastructure.	Noted.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
4.1.2	The Energy White Paper and British Energy Security Strategy emphasises the importance of the government's net zero commitment and efforts to fight climate change, as well as the need to maintain a secure and reliable energy system. The Levelling Up White Paper calls on the Government to ensure investment in the transition to Net Zero benefits less well-performing parts of the UK, reducing emissions, facilitating economic development and the creation of jobs.	The project, if granted development consent, would make an important contribution to reducing greenhouse gases and helping the UK reaching the Government's target of net zero by 2050, by supporting the distribution of greener energy. ES Appendix 4.3 Greenhouse Gas Assessment [**APP-092**] presents a summary of the carbon dioxide equivalent emissions that would be released during the construction and operation of the project. The assessment concludes that the total carbon dioxide equivalent numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets.
4.1.3 – 4.1.4	Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the Secretary of State will start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.4 of this NPS.	Section 104 (3) of the Planning Act 2008 sets out that that an application for development consent should be determined in accordance with the relevant NPS except where a limited number of circumstances would apply. It is not considered that any of these limited circumstances would apply, therefore, the application will be against the relevant NPS, any LIR and any other matters the SoS thinks are both important and relevant to the decision. The level and urgency of the need for the project is set out in Planning Statement Chapter 3[**APP-160]** and the Need Case (April 2023) [**APP-161**] Given the Planning Act 2008 requirements set out in Section 104, and the clear statements in respect to a presumption in favour of such types of energy infrastructure, specifically electricity transmission projects (3.7.10 of EN-1), as set out in EN-1; the need for the project has been established. The policy presumptions at Sections 3.7.10 and 4.1.2 of EN-1 in favour of granting development consent is, therefore, engaged.
	Weighing impacts and benefits	
4.1.5	In considering any proposed development, in particular when weighing its adverse impacts against its benefits, the Secretary of State should take into account: • its potential benefits including its contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits • its potential adverse impacts, including on the environment, and including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce, mitigate or compensate for any adverse impacts, following the mitigation hierarchy.	Planning Statement Chapter 7 [**APP-160**] provides an assessment of the project against the three objectives to sustainable development. Planning Statement Chapter 10 [**APP-160**] brings the conclusions of the previous Chapters together, weighing the project's benefits against the project's adverse effects, demonstrating that the planning balance lies overwhelmingly in favour of the grant of development consent for the project; securing the project's benefits for generations to come.

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4.1.6	In this context, the Secretary of State should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels. These may be identified in this NPS, the relevant technology specific NPS, in the application or elsewhere (including in local impact reports, marine plans, and other material considerations as outlined in Section 1.1).	See response to 4.1.5.
4.1.7	Where this NPS or the relevant technology specific NPSs require an applicant to mitigate a particular impact as far as possible, but the Secretary of State considers that there would still be residual adverse effects after the implementation of such mitigation measures, the Secretary of State should weigh those residual effects against the benefits of the proposed development. For projects which qualify as CNP Infrastructure, it is likely that the need case will outweigh the residual effects in all but the most exceptional cases. This presumption, however, does not apply to residual impacts which present an unacceptable risk to, or interference with, human health and public safety, defence, irreplaceable habitats or unacceptable risk to the achievement of net zero. Further, the same exception applies to this presumption for residual impacts which present an unacceptable risk to, or unacceptable interference offshore to navigation, or onshore to flood and coastal erosion risk.	The project is Critical National Policy and the presumption is engaged. The project results in a small number of residual effects. These residual effects do not present an unacceptable risk to human health and public safety; defence; irreplaceable habitats; to the achievement of net zero; risk or interference to offshore to navigation, or onshore to flood and coastal erosion risk.
	Land rights	
4.1.8 -4.1.9	Where the use of land at a specific location is required to facilitate the development by providing for mitigation and landscape enhancement, an applicant may, as part of its application to the Secretary of State, seek the compulsory acquisition of that land, or rights over that land. The Secretary of State will consider any such application under the usual compulsory acquisition principles, taking into account the content of the NPSs.	Table A.3 (i) of the Statement of Reasons Appendix A Details of Purpose for Which Compulsory Acquisition and Temporary Possession Powers are Sought [**APP-039**], details the plots identified for Class 5 - Compulsory Acquisition of Rights for Biodiversity Net Gain. Table A.4 (i) similarly identifies plots for Class 6 – Temporary use for Construction, Mitigation, Maintenance and Dismantling of Redundant Infrastructure.
	Other documents	
4.1.10 – 4.1.15	The policy set out in this NPS and the technology specific energy NPSs is intended to provide greater clarity around existing policy and practice of the Secretary of State in considering applications for nationally significant energy infrastructure, (or therefore the “benchmark” for what is, or is not, an acceptable nationally significant energy development). The energy NPSs have taken account of the National Planning Policy Framework (NPPF), the Planning Practice Guidance for England, and Planning Policy Wales and Technical Advice Notes (TANs) for Wales, where appropriate.	National Grid has identified Development Plan policies that may be considered important or relevant by the SoS. Policies relevant to the assessments contained in the ES are referred to in ES Appendix 2.2: Regulatory and Planning Policy Context [**APP-070**]**.** In relation to the Planning Statement, the assessment of relevant policies is contained in Planning Statement Appendix D [**APP-160**].

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	Other matters that the Secretary of State may consider both important and relevant to their decision-making may include Development Plan documents or other documents in the Local Development Framework. Where the project conflicts with a proposal in a draft Development Plan, the Secretary of State should take account of the stage which the Development Plan document in England or Local Development Plan in Wales has reached in deciding what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented, or precluded. The closer the Development Plan document in England or Local Development Plan in Wales is to being adopted by the LPA, the greater weight which can be attached to it. In the event of a conflict between these documents and an NPS, the NPS prevails for the purpose of Secretary of State decision making given the national significance of the infrastructure.	
	Development consent	
4.1.16 – 4.1.17	The Secretary of State should only impose requirements in relation to a development consent that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. The Secretary of State should consider the guidance in the NPPF, the Planning Practice Guidance: Use of Planning Conditions, and TANs, or any successor documents, where appropriate.	The application for development consent for the project is accompanied by a dDCO (**document 3.1 (F)**) and a dDCO Explanatory Memorandum **document 3.2 (F)**). The dDCO, while may be subject to amendments throughout the examination, sets out the requirements in respect to the construction, operation and maintenance of the project. The Requirements and their suggested reason for imposition are also explained in the dDCO Explanatory Memorandum **document 3.2 (F)**). The proposed Requirements have been considered against the tests for planning conditions (necessary; relevant to planning; relevant to the development to be permitted; enforceable; precise; and reasonable in all other respects) as set out in paragraph 56 of the NPPF.
4.1.18	The Secretary of State may consider any development consent obligations that an applicant agrees with local authorities. These must be relevant to planning, necessary to make the proposed development acceptable in planning terms, directly related to the proposed development, fairly and reasonably related in scale and kind to the proposed development, and reasonable in all other respects.	The application for development consent is not subject to any obligations, such as Section 106 Agreements, as such agreements/obligations were not considered necessary to make the project acceptable in planning terms; the project is acceptable in planning terms on its own merits.
	Early engagement	

Paragraph No.	Policy Requirement	How the Project Meets the Policy
4.1.19 - 4.1.20	Early engagement both before and at the formal pre-application stage between the applicant and key stakeholders, including public regulators, Statutory Consultees (including Statutory Nature Conservation Bodies (SNCBs)), and those likely to have an interest in a proposed energy infrastructure application, is strongly encouraged in line with the Government's pre-application guidance. This means that only applications which are fully prepared and comprehensive can be accepted for examination, enabling them to be properly assessed by the Examining Authority and leading to a clear recommendation report to the Secretary of State. This is particularly so in the case of HRA matters covered in paragraphs 5.4.25 to 5.4.31 below, which explain the onus is on the applicant to submit sufficient information to enable the Secretary of State to conduct an Appropriate Assessment if required.	National Grid has also undertaken a number of environmental and thematic meetings with environmental organisations to gather information about the baseline environment, scope of the assessment and potential effects and mitigation. These have included the following thematic meetings for the following topics: • Landscape and Visual Thematic Meetings: involving the relevant planning authorities, Dedham Vale AONB and Stour Valley Partnership and Natural England; • Biodiversity Thematic Meetings: involving the relevant planning authorities, Natural England, Suffolk and Essex Wildlife Trusts and the RSPB; • Historic Environment Thematic Meetings: involving the relevant planning authorities and Historic England; and • Traffic and Transport Thematic Meetings: involving the relevant planning authorities and National Highways. An overview of this consultation and how this has informed the development of the project is provided in the Consultation Report (application document 5.1). ES Appendix 5.2: Response to Consultation Feedback [**APP-094**] includes a summary of the key responses received from environmental bodies and how National Grid has given due regard to this feedback when undertaking the EIA.
	Financial and technical viability	
4.1.21 – 4.1.22	In deciding to bring forward a proposal for infrastructure development, the applicant will have made a judgement on the financial and technical viability of the proposed development, within the market framework and taking account of government interventions. Where the Secretary of State considers that the financial viability and technical feasibility of the proposal has been properly assessed by the applicant, it is unlikely to be of relevance in Secretary of State decision making (any exceptions to this principle are dealt with where they arise in this or other energy NPSs and the reasons why financial viability or technical feasibility is likely to be of relevance explained).	At multiple stages of the options appraisal process, National Grid has carried out assessments on the financial and technical viability of the project. The Funding Statement [**APP-037**] explains how the acquisition of the land necessary to build the project would be funded as well as how the project generally is to be funded.
4.2	**The critical national priority for low carbon infrastructure**	

Paragraph No.	Policy Requirement	How the Project Meets the Policy
4.2.1	Government has committed to fully decarbonising the power system by 2035, subject to security of supply, to underpin its 2050 net zero ambitions. More than half of final energy demand in 2050 could be met by electricity, as transport and heating in particular shift from fossil fuel to electrical technology.	Noted.
4.2.2	Ensuring the UK is more energy independent, resilient and secure requires the smooth transition to abundant, low-carbon energy. The UK's strategy to increase supply of low carbon energy is dependent on deployment of renewable and nuclear power generation, alongside hydrogen and CCUS. Our energy security and net zero ambitions will only be delivered if we can enable the development of new low carbon sources of energy at speed and scale.	Noted.
4.2.3	With smart and strategic planning, the UK can maintain high environmental standards and minimise impacts while increasing the levels of deployment at the scale and pace needed to meet our energy security and net zero ambitions.	Noted.
4.2.4	Government has therefore concluded that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure.	Noted.
4.2.5	This does not extend the definition of what counts as nationally significant infrastructure: the scope remains as set out in the Planning Act 2008. Low carbon infrastructure for the purposes of this policy means: • for electricity generation, all onshore and offshore generation that does not involve fossil fuel combustion (that is, renewable generation, including anaerobic digestion and other plants that convert residual waste into energy, including combustion, provided they meet existing definitions of low carbon; and nuclear generation), as well as natural gas fired generation which is carbon capture ready • for electricity grid infrastructure, all power lines in scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure such as substations. This is not limited to those associated specifically with a particular generation technology, as all new grid projects will contribute towards greater efficiency in constructing, operating and connecting low carbon infrastructure to the National Electricity Transmission System • for other energy infrastructure, fuels, pipelines and storage infrastructure, which fits within the normal definition of "low carbon", such as hydrogen distribution, and carbon dioxide distribution	The project is Critical National Priority.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
	• for energy infrastructure which is directed into the NSIP regime under section 35 of the Planning Act 2008, and fit within the normal definition of "low carbon", such as interconnectors, Multi-Purpose Interconnectors, or 'bootstraps' to support the onshore network which are routed offshore • Lifetime extensions of nationally significant low carbon infrastructure, and repowering of projects	
4.2.6 - 4.2.7	The overarching need case for each type of energy infrastructure and the substantial weight which should be given to this need in assessing applications, as set out in paragraphs 3.2.6 to 3.2.8 of EN-1, is the starting point for all assessments of energy infrastructure applications. The CNP policy does not create an additional or cumulative need case or weighting to that which is already outlined for each type of energy infrastructure. The policy applies following the normal consideration of the need case, the impacts of the project, and the application of the mitigation hierarchy. As such, it is relevant during Secretary of State decision making and specifically in reference to any residual impacts that have been identified. It should therefore also be given consideration by the Examining Authority when it is making its recommendation to the Secretary of State.	7.2.1 Need Case (April 2023) [**APP-161**] provides an overview of the need case for the project setting out the drivers for change, including the increase in electricity generation and how this affects the National Electricity Transmission System. In summary, the Need Case document demonstrates that, because of the significant growth in offshore wind generation, new nuclear, and interconnectors to Europe in line with the UK government's 2050 net zero target, reinforcement of the NETS in East Anglia is required.
4.2.8	During decision making, the CNP policy will influence how non-HRA and non-MCZ residual impacts are considered in the planning balance. The policy will therefore also influence how the Secretary of State considers whether tests requiring clear outweighing of harm, exceptionality, or very special circumstances have been met by a CNP Infrastructure application. Further detail is provided in paragraphs 4.2.15 to 4.2.17, and Figure 2.	
4.2.9	During decision making, the CNP policy also explains the Secretary of State's approach to HRA derogations and MCZ assessments. Specifically, the policy explains how the alternative solutions and IROPI tests are considered by the Secretary of State. Further detail is provided in paragraphs 4.2.18 to 4.2.22, and Figure 3.	
	Applicant's assessment	
4.2.10	Applicants for CNP infrastructure must continue to show how their application meets the requirements in this NPS and the relevant technology specific NPS, applying the mitigation hierarchy, as well as any other legal and regulatory requirements.	NPS EN-1 (November 2023), like its predecessor recognises that virtually all large infrastructure projects will have significant adverse landscape and visual effects. In this context, the project performs very well in landscape and visual terms; providing 29km of high-capacity transmission network reinforcement and ancillary infrastructure with very limited landscape and visual effects and delivering significant beneficial

Paragraph No.	Policy Requirement	How the Project Meets the Policy
		effects on the most sensitive landscape in the area, the Dedham Vale AONB. The ES only identifies three residual adverse impacts (two of which would not be significant); meanwhile the long-term significant impact identified concerns cumulative impacts of future projects which only one has been consented. The mitigation hierarchy has been applied and the project includes measures that have led to this positive outcome. In this context, National Grid does not consider that any further compensation is required and is of the view that the project complies with policies on the mitigation hierarchy as presented in NPS EN-1 (November 2023). Further details are provided in the Applicant's Comments on other submissions received at Deadline 4, at 6c page 52 [**REP5-025**]. The Habitats Regulations Assessment Report [**REP1-007**] concluded that when good practice measures are taken into account, that there would be no likely significant effects on European sites. The Habitats Regulations Assessment Report [**REP1-007**] has also been provided to Natural England to provide assurance that potential likely significant effects on European sites have been addressed appropriately and in sufficient detail. The application for development consent is accompanied by an ES which meets the requirements of EN-1. National Grid's Schedule 9 Statement (2016) sets out how the company would meet the duty placed upon it by the section 9 of the Electricity Act 1989.
4.2.11	Applicants must apply the mitigation hierarchy and demonstrate that it has been applied. They should also seek the advice of the appropriate SNCB or other relevant statutory body when undertaking this process. Applicants should demonstrate that all residual impacts are those that cannot be avoided, reduced or mitigated.	See response to 4.2.10. In addition, the application for development consent is accompanied by a signed Draft Statement of Common Ground Natural England (**document 7.3.2 (D)**).
4.2.12	Applicants should set out how residual impacts will be compensated for as far as possible. Applicants should also set out how any mitigation or compensation measures will be monitored and reporting agreed to ensure success and that action is taken. Changes to measures may be needed e.g. adaptive management. The cumulative impacts of multiple developments with residual impacts should also be considered.	See response to 4.2.10.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
4.2.13	Where residual impacts relate to HRA or MCZ sites then the Applicant must provide a derogation case, if required, in the normal way in compliance with the relevant legislation and guidance.	The Habitats Regulations Assessment Report [**REP1-007**] has been undertaken and one aspect was taken forward to Appropriate Assessment following advice from Natural England. The Habitats Regulations Assessment Report [**REP1-007**] concluded that when good practice measures are taken into account, that there would be no likely significant effects on European sites. As such no derogation case is required.
	Secretary of State decision making	
4.2.14	The Secretary of State will continue to consider the impacts and benefits of all CNP Infrastructure applications on a case-by-case basis. The Secretary of State must be satisfied that the applicant's assessment demonstrates that the requirements set out above have been met. Where the Secretary of State is satisfied that they have been met the CNP presumptions set out below apply.	National Grid is satisfied that assessment demonstrates that the requirements set out above have been met.
	Non-HRA and non-MCZ residual impacts of CNP Infrastructure	
4.2.15	Where residual non-HRA or non-MCZ impacts remain after the mitigation hierarchy has been applied, these residual impacts are unlikely to outweigh the urgent need for this type of infrastructure. Therefore, in all but the most exceptional circumstances, it is unlikely that consent will be refused on the basis of these residual impacts. The exception to this presumption of consent are residual impacts onshore and offshore which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence, irreplaceable habitats or unacceptable risk to the achievement of net zero. Further, the same exception applies to this presumption for residual impacts which present an unacceptable risk to, or unacceptable interference offshore to navigation, or onshore to flood and coastal erosion risk.	This policy position is welcomed. This presumption in favour of granting development consent is engaged. The project results in a small number of residual effects. These residual effects do not present an unacceptable risk to human health and public safety; defence; irreplaceable habitats; to the achievement of net zero; risk or interference to offshore to navigation, or onshore to flood and coastal erosion risk.
4.2.16	As a result, the Secretary of State will take as the starting point for decision-making that such infrastructure is to be treated as if it has met any tests which are set out within the NPSs, or any other planning policy, which requires a clear outweighing of harm, exceptionality or very special circumstances.	This policy position is welcomed.
4.2.17	This means that the Secretary of State will take as a starting point that CNP Infrastructure will meet the following, non-exhaustive, list of tests: • where development within a Green Belt requires very special circumstances to justify development;	• This policy position is welcomed.In respect to Green Belt, the project does not impact on Green Belt Land. • In respect to SSSI, see response 5.4.7 and 5.4.8.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
	• where development within or outside a Site of Special Scientific Interest (SSSI) requires the benefits (including need) of the development in the location proposed to clearly outweigh both the likely impact on features of the site that make it a SSSI, and any broader impacts on the national network of SSSIs. • where development in nationally designated landscapes requires exceptional circumstances to be demonstrated; and • where substantial harm to or loss of significance to heritage assets should be exceptional or wholly exceptional.	• In respect to Nationally Designated Landscapes, see response to 5.10.20 and 5.10.34. • In respect to loss of significance to heritage assets, see response to 5.9.10 – 5.9.15.
	HRA derogations and MCZ assessments for CNP Infrastructure	
4.2.18	Any HRA or MCZ residual impacts will continue to be considered under the framework set out in the Habitats Regulations and the Marine and Coastal Access Act 2009 respectively.	See response to 4.2.13.
4.2.19	Where, following Appropriate Assessment, CNP Infrastructure has residual adverse impacts on the integrity of sites forming part of the UK national site network, either alone or in combination with other plans or projects, the Secretary of State will consider making a derogation under the Habitats Regulations.	See response to 4.2.13.
4.2.20	Similarly, if during an MCZ assessment, CNP Infrastructure has residual impacts which significantly risk hindering the achievement of the stated conservation objectives for the MCZ, the Secretary of State will consider making a derogation under section 126(7) of the Marine and Coastal Access Act 2009	See response to 4.2.13.
4.2.21	For both derogations, the Secretary of State will consider the particular circumstances of any plan or project, but starting from the position that energy security and decarbonising the power sector to combat climate change: requires a significant number of deliverable locations for CNP Infrastructure and for each location to maximise its capacity. This NPS imposes no limit on the number of CNP infrastructure projects that may be consented. Therefore, the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution. Further, the existence of another way of developing the proposed plan or project which results in a significantly lower generation capacity is unlikely to meet the objectives and therefore be treated as an alternative solution; and	See response to 4.2.13.

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	• are capable of amounting to imperative reasons of overriding public interest (IROPI) for HRAs, and, for MCZ assessments, the benefit to the public is capable of outweighing the risk of environmental damage, for CNP Infrastructure	
4.2.22	For HRAs, where an applicant has shown there are no deliverable alternative solutions, and that there are IROPI, compensatory measures must be secured by the Secretary of State as the competent authority, to offset the adverse effects to site integrity as part of a derogation. For MCZs, where an applicant has shown there are no other means of proceeding which would create a substantially lower risk, and the benefit to the public outweighs the risk of damage to the environment, the Secretary of State must be satisfied that measures of equivalent environmental benefit will be undertaken.	See response to 4.2.13.
4.3	**Environmental Effects/Considerations**	
4.3.1 – 4.3.3	All proposals for projects that are subject to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project. The Regulations specifically refer to effects on population, human health, biodiversity, land, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. The Regulations require an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, short, medium, and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects.	The application for development consent is accompanied by an ES which meets the requirements of EN-1 and EN-5. ES Appendix 5.1: Scope of the Assessment [**APP-093**] outlines the scope of the assessment. This has been informed by the Scoping Opinion [**APP-159**].
4.3.4	To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as employment, equality, biodiversity net gain, community cohesion, health and well-being.	The ES provides an assessment of likely significant environmental effects arising during construction, operation and decommissioning of the project. **EIA Measures** The development of measures to avoid, reduce or compensate for any significant adverse effects of a project is an intrinsic part of the EIA process and, from the outset, the route selection process described in ES Chapter 3: Alternatives Considered [**APP-071**] sought to take into account environmental constraints and to avoid them as far as possible.

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		Generally, there are three types of design measures implemented on the project; embedded, good practice and mitigation. • Embedded measures: Embedded measures are those that are intrinsic to and built into the design of the project. Table 4.2 of ES Chapter 4: Project Description [**APP-072**] outlines the key embedded measures that have been incorporated into the design to date. • Good practice measures: National Grid has identified a number of good practice measures, which generally comprise measures imposed through legislative requirements or represent standard sector good practices. These include measures to reduce nuisance from construction activities. The good practice measures are set out in the CEMP Appendix A: CoCP [**REP3-026**]. • Mitigation measures: The ES has identified locations where additional mitigation is proposed to avoid or reduce likely significant effects following the assessment undertaken in each of the topic chapters. With regards to mitigation and compensation in the context of proposed revised NPS EN-1, National Grid has provided a response under Reference 6c (Mitigation and Compensation) against Responses to Comments on the LIR [**REP4-008**] in the Applicant's Comments on Other Submissions Received at Deadline 4 [**REP5-025**]. **Environmental Gain** National Grid has proposed enhancement planting as part of its Biodiversity Net Gain proposals in the Environmental Gain Report submitted with the application for development consent [**APP-176**]. **Socioeconomic Factors** Many of the contributory factors affecting social and economic effects such as employment, community services and health and well-being were scoped out of the assessment in the Environmental Impact Assessment Scoping Report Main Report [**APP-156**] and this was confirmed in the Scoping Opinion [**APP-159**]. Therefore, no separate reporting is required and a standalone socio-economics chapter has not been included within the ES. Instead, the Socio Economics and Tourism Report [**APP-066**] sets the reasons why significant social and economic effects are not anticipated. This document sits outside the ES and

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		concludes that the project is still unlikely to generate significant effects on these topics.
4.3.5	For the purposes of this NPS and the technology specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project.	The ES provides an assessment of likely significant environmental effects arising during construction, operation and decommissioning of the project. Social and economic effects have been scoped out of the ES (see paragraph 4.2.2 above). The Planning Statement Chapter 7 [**APP-160**] provides an assessment of the environmental, social and economic impacts of the project from a planning perspective.
4.3.6	Where the NPSs use the term 'environment' they are referring to both the natural and historic environments.	Noted.
4.3.7	In the absence of any additional information on additional assessments, the principles set out in this Section will apply to all assessments.	Noted.
4.3.8	In this NPS and the technology specific NPSs, when used in relation to environmental matters the terms 'effects', 'impacts' or 'benefits' should be understood to mean likely significant effects, likely significant impacts, or likely significant benefits.	Noted.
4.3.9	As in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is, in the first instance, a matter of law. This NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective. Although there are specific requirements in relation to compulsory acquisition and habitats sites, the NPS does not change requirements in relation to compulsory acquisition and habitats sites.	National Grid undertakes an options appraisal on each new project. options appraisal is a robust and transparent process that is used to compare options and to assess the positive and negative effects they may have, across a wide range of criteria including environmental, socio-economic, technical and cost factors. The assessment is documented to provide in a transparent manner, the information on which decisions are based. Consultation with the relevant stakeholders and community have been carried out to inform the selection of the preferred options. The Evolution of the Project [**APP-166**] sets out how the project has evolved from a concept, through strategic options, route corridors and indicative alignments to the project presented within the application for development consent. The ES Chapter 3: Alternatives Considered [**APP-071**] includes an assessment of reasonable alternatives, and environmental considerations in choosing a preferred option and route. The Order Limits are subsequently based on a refinement of the preferred route.
	Applicant assessment	

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4.3.10	The applicant must provide information proportionate to the scale of the project, ensuring the information is sufficient to meet the requirements of the EIA Regulations.	The project falls under Paragraph 20 of Schedule 1 of the EIA Regulations 2017, which identifies the following project type: *'Construction of overhead electrical power lines with a voltage of 220kV or more, and a length of more than 15km'.* The project is therefore EIA development. A Scoping Report [**APP-156**] for the project was submitted to the Planning Inspectorate on 10 May 2021. 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 the 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. ES Chapter 1: Introduction [**APP-069**] provides an assessment of the likely significant effects in accordance with the EIA Regulations 2017, which require an ES to discuss only those effects that are likely to be significant. Further details on the EIA process and methodology can be found in ES Chapter 5: EIA Approach and Method [**APP-073**].
4.3.11	In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.	The Order Limits include the LoD, which represent the maximum deviation for permanent infrastructure, such as the overhead line, pylons and underground cable and are shown on the Work Plans [**APP-010**]. The assessment presented within the ES is based on the 'Proposed Alignment', which is shown in ES Figure 4.1: Proposed Project [**PDA-002**]. However, it should be noted that the permanent aspects of the project, including pylon locations are not fixed and could be located anywhere within the LoD as defined on the Works Plans [**APP-010**]. The location and orientation of the CSE compounds and GSP substation may also change within the LoD. The LoD allow for adjustment to the final positioning of project features to avoid localised constraints or unknown or unforeseeable issues that may arise.
4.3.12	Where some details are still to be finalised, the ES should, to the best of the applicant's knowledge, assess the likely worst-case environmental, social and economic effects of the proposed development to ensure that the impacts of the project as it may be constructed have been properly assessed.	Where details are still to be finalised, the ES assess the effects of the project against the maximum extent of the proposed development. Section 11 of the topic chapters covers flexibility in design or construction and sensitivity testing. This outlines any new or different significant effects that may occur through the application of flexibility that is allowed for within the dDCO (**document 3.1 (F)**) compared to the baseline scenario presented in the earlier sections of the topic chapter. The

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		flexibility allows for micro-siting of pylons and the alignment of the 400kV overhead line within the LoD during detailed design and construction, without triggering the need to revise the EIA. Further details regarding what is included within the baseline scenario and within the sensitivity assessment can be found in ES Chapter 4: Project Description [**APP-072**].
4.3.13	To help the Secretary of State consider thoroughly the potential effects of a proposed project in cases where the EIA Regulations do not apply and an ES is not therefore required, the applicant should instead provide information proportionate to the scale of the project on the likely significant environmental, social, and economic effects.	Noted.
4.3.14	References to an ES in this NPS and the technology specific NPSs should be taken as including a statement which provides this information, even if the EIA Regulations do not apply. Where the NPSs require specific information to be provided in the ES, such information should still be provided in this statement.	Noted.
4.3.15 – 4.3.16	Applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility. In some circumstances, the NPSs may impose a policy requirement to consider alternatives.	The Infrastructure Planning (EIA) Regulations requires applicants to document alternative development options considered as part of the application for development consent. Part 1 of Schedule 4 of the EIA Regulations requires that the ES includes '*An outline of the main alternatives studied by National Grid and an indication of the main reasons for National Grid's choice, taking into account the environmental effects*'. It is also noted that the NPS requires the ES to describe how the social, economic and environmental effects have been taken into account when making decisions between alternatives. The ES Chapter 3: Alternatives Considered [**APP-071**] includes an assessment of reasonable alternatives, and environmental considerations in choosing a preferred option and route. Alternatives are also a requirement of the Habitats Regulations Assessment Report [**APP-057**], however, only if adverse effects on the integrity of European sites are identified at the Appropriate Assessment stage (Stage 2). As stated, the Habitats Regulations Assessment Report [**APP-057**] confirms that Stage 2 Appropriate Assessment found no adverse effect on the integrity of the SPA and Ramsar would occur once good practice measures set out in the CEMP Appendix A: CoCP [**REP3-026**] and embedded measures are employed, as supported by the Water Framework Directive Assessment [**REP1-009**]. Hence, the project is not required to consider alternatives under the Habitats Directive, as per paragraph 4.4.2 of EN-1.

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4.3.17	Where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements.	The Infrastructure Planning (EIA) Regulations requires applicants to document alternative development options considered as part of the application for development consent. The ES Chapter 3: Alternatives Considered [**APP-071**] includes an assessment of reasonable alternatives setting out the environmental considerations in choosing a preferred option and route. Chapter 5 of the Planning Statement ([**APP-160**] sets out how planning policy, namely EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have influenced the options appraisal process; demonstrating how such policy objectives have been embedded into the design of the project.
	Secretary of State decision making	
4.3.18	The Secretary of State should consider the worst-case impacts in its consideration of the application and consent, providing some flexibility in the consent to account for uncertainties in specific project details.	The assessment presented within sections 6 to 10 of each ES topic chapter identifies the likely significant effects based on a reasonable worst case. This assessment is based on the construction method described in ES Chapter 4: Project Description [**APP-072**] and the Proposed Alignment that is shown on Figure 4.1: The Project in the ES Figures [**PDA-002**].. However, it should be noted that the permanent aspects of the project, including pylon locations, are not fixed and could be located anywhere within the LoD, as defined on the Work Plans [**APP-010**].
4.3.19	The Secretary of State should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy, or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.	The ES Chapter 15: Cumulative Effects Assessment [**APP-083**] and accompanying appendices details the CEA for the project. This includes an assessment of effects on the environment, local economy and community receptors.
4.3.22	Given the level and urgency of need for new energy infrastructure, the Secretary of State should, subject to any relevant legal requirements (e.g. under the Habitats Regulations) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives: • the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner; and • only alternatives that can meet the objectives of the proposed development need to be considered. The Secretary of State should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same	The Infrastructure Planning (EIA) Regulations requires applicants to document alternative development options considered as part of the application for development consent. The ES Chapter 3: Alternatives Considered [**APP-071**] includes an assessment of reasonable alternatives setting out the environmental considerations in choosing a preferred option and route. Chapter 5 of the Planning Statement [**APP-160**] sets out how planning policy, namely EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have influenced the options appraisal process; demonstrating how such policy objectives have been embedded into the design of the project.

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	infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals. Alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the Secretary of State thinks they are both important and relevant to the decision. As the Secretary of State must assess an application in accordance with the relevant NPS (subject to the exceptions set out in section 104 of the Planning Act 2008), if the Secretary of State concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the Secretary of State's decision. Alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision. Alternative proposals which are vague or immature can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision. It is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the Secretary of State (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant). Therefore, where an alternative is first put forward by a third party after an application has been made, the Secretary of State may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the Secretary of State should not necessarily expect the applicant to have assessed it.	
4.3.20	The Government has set 13 legally binding targets for England under the Environment Act 2021, covering the areas of: biodiversity; air quality; water; resource efficiency and waste reduction; tree and woodland cover; and Marine Protected Areas. Meeting the legally binding targets will be a shared	National Grid considers that the project is compliant with the Act insofar as it is relevant to the project. Where relevant to the project, all these topics are covered in full in the ES. Policy on these topics is provided in

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	endeavour that will require a whole of government approach to delivery. The Secretary of State have regard to the ambitions, goals and targets set out in the Government's Environmental Improvement Plan 2023 for improving the natural environment and heritage. This includes having regard to the achievement of statutory targets set under the Environment Act.	the designated and proposed revised NPS, which provide policy directly relevant to the development of NSIP.
4.4	**Health**	
4.4.1	Energy infrastructure has the potential to impact on the health and well-being ("health") of the population. Access to energy is clearly beneficial to society and to our health as a whole. However, the construction of energy infrastructure and the production, distribution and use of energy may have negative impacts on some people's health.	The Scoping Report [**APP-156**] concluded that in relation to general health and wellbeing, the effects are related to contributory factors already considered by other environmental chapters of the ES, for example, ES Chapter 13: Air Quality [**APP-081**] and Chapter 14: Noise and Vibration [**APP-082**].
4.4.2	The direct impacts on health may include • increased traffic • air or water pollution • dust, odour • hazardous waste and substances • noise • exposure to radiation, and • increases in pests	During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**] to reduce the potential for adverse impacts to health.
4.4.3	New energy infrastructure may also affect the composition and size of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport, or the use of open space for recreation and physical activity.	The Scoping Report [**APP-156**] concluded that the project would be unlikely to result in significant effects for any of the individual aspects within the Socioeconomics, Recreation and Tourism chapter, when taking into account the embedded and good practice measures proposed on the project. The scoping assessment acknowledged that there could be likely significant effects when these aspects are considered cumulatively across EIA chapters (intra-project) and in combination with other proposed developments (inter-project) and noted that these would be considered as part of the cumulative effects assessment presented within the ES. National Grid has also produced a Socio-economics and Tourism Report [**APP-066**] as part of its ongoing back check and review of the potential significant effects of the project. This confirms, following a review of updated baseline information, that the conclusions presented in the Scoping Report [**APP-156**] are robust and that there are unlikely to be

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		significant effects on socio-economics and tourism. Therefore, these aspects remain scoped out of the ES as a standalone chapter. Since the publication of the Scoping Report [**APP-156**] in 2021, National Grid has undertaken additional work. The relevant planning authorities requested that a TA [**APP-061**] and Public Rights of Way Management Plan [**REP3-056**] was produced to support the application for development consent, which should include an assessment of the effects on recreation aspects including the national and regional cycle networks and PRoW.
	Applicant assessment	
4.4.4 – 4.4.5	As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on humans, the ES should assess these effects for each element of the project, identifying any potential adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the applicant should consider the cumulative impact on health in the ES where appropriate.	EIA Scoping Report Main Report [**APP-156**] concluded that there are no likely significant effects to human (health) receptors from the project arising from the operation or construction of the project. The SoS considers that a standalone assessment of health and wellbeing can be scoped out of the ES as detailed in the Scoping Opinion [**APP-159**]. EIA Scoping Report Main Report [**APP-156**] states that impacts of the project on geology and hydrogeology, traffic and transport, air quality and noise and vibration will be assessed as part of separate aspect chapters, and that this will include where relevant assessment of the likely significant effects of those aspects during operation to human (health) receptors. During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**] which has a number of measures that would avoid or reduce effects on health, for example, in accordance with commitment GG10. Cumulative impacts are assessed in ES Chapter 15: Cumulative Effects Assessment [**APP-083**].
4.4.6	Opportunities should be taken to mitigate indirect impacts, by promoting local improvements to encourage health and wellbeing, this includes potential impacts on vulnerable groups within society and impacts on those with protected characteristics under the Equality Act 2010, i.e. those groups which may be differentially impacted by a development compared to wider society as a whole.	The EIA Scoping Report Main Report [**APP-156**] has concluded that there are no likely significant effects to human (health) receptors from the project arising from the operation or construction of the project. Nevertheless, having regard to the cumulative impacts to health, local residents may be affected by temporary PRoW diversions, road restrictions, diversions and closures of the public highway, an increase in traffic, and dust, noise and light spill close to construction working areas (intra-project effects). The combined effects of these could impact on health and amenity of local residents and communities. However, no particular vulnerabilities have been identified within the health of the local population, see baseline review in ES Appendix 15.1: Cumulative Effects

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		Baseline [**APP-140**]. In addition, a number of good practice measures are outlined within the CEMP (**document 7.5 (C)**) and CEMP Appendix A: CoCP [**REP3-026**]. Therefore, it is not anticipated that there would be adverse effects on the health of local residents.
	Secretary of State decision making	
4.4.7 - 4.4.8	Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either by themselves constitute a reason to refuse consent or require specific mitigation under the Planning Act 2008. However, not all potential sources of health impacts will be mitigated in this way and the Secretary of State may want to take account of health concerns when setting requirements relating to a range of impacts such as noise.	See response to 4.4.4 – 4.4.5.
4.6	**Environmental and Biodiversity Net Gain**	
4.6.1 and 4.6.2	Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only avoid, mitigate and compensate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements. Biodiversity net gain is an essential component of environmental net gain. Projects in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain.	The EIA presented within the ES outlines how the project would seek to maintain and enhance the environment, in particular, ES Chapter 8: Historic Environment [**APP-076**], ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) and ES Chapter 6: Landscape and Visual [**APP-074**]. These outcomes are also reported in the Planning Statement [**APP-160**]. National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report [**APP-176**]. This net gain is in addition to any required EIA mitigation to avoid overlap or double counting.
	Applicant assessment	
4.6.6	Energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, and the wider environment where possible.	As detailed in Environmental Gain Report [**APP-176**], the biodiversity metric calculation shows how a positive BNG for Area-based Habitats (by +12.8%) and Hedgerows and Line of Trees (by +13.4%) and Rivers and Streams (+5.0%) can be delivered based on the Proposed Alignment at this stage of the project. In line with both Government requirements and National Grid targets, National Grid is committed to delivering at least a 10% BNG on this project. National Grid will continue to seek ways to reduce impacts and increase gains to ditches to achieve the 10% BNG target.

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		The BNG approach embeds a fundamental principle for spatial hierarchy of habitat delivery, where there is a preference for onsite or local enhancements. The aims therefore on the project are to deliver on-site biodiversity units in preference to off-site by improving habitats and biodiversity local to the site of impact.
4.6.7 and 4.6.8	In England applicants for onshore elements of any development are encouraged to use the latest version of the biodiversity metric to calculate their biodiversity baseline and present planned biodiversity net gain outcomes. This calculation data should be presented in full as part of their application. Where possible, this data should be shared, alongside a completed biodiversity metric calculation, with the Local Authority and Natural England for discussion at the pre-application stage as it can help to highlight biodiversity and wider environmental issues which may later cause delays if not addressed.	Version 3.1 of the Biodiversity Metric was used as this was the latest version available at the time of making the application for development consent. This has been confirmed as the appropriate tool to use through discussions with stakeholders, for example, as recorded within the Statement of Common Ground Natural England (**document 7.3.2 (D)**). The assessment was carried out in accordance with methodology specified within the following guidance: • The Biodiversity Metric 3.1 – Technical Supplement (Natural England, 2022a); and • The Biodiversity Metric 3.1 – User Guide (Natural England, 2022b). The biodiversity metric includes three broad categories of habitats and biodiversity units for assessment: • Area-based habitats; • Hedgerows and lines of trees; and • Rivers and streams. Chapter 3 of Environmental Gain Report [**APP-176**] provides further details about the methodology used for the Biodiversity Metric. Chapter 5 presents the results of the Biodiversity Metric as part of sharing the data with Interested Parties.
4.6.10	Biodiversity net gain should be applied after compliance with the mitigation hierarchy and does not change or replace existing environmental obligations, although compliance with those obligations will be relevant to the question of the baseline for assessing net gain and if they deliver an additional enhancement beyond meeting the existing obligation, that enhancement will count towards net gain.	National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report [**APP-176**]. This net gain is in addition to any required EIA mitigation to avoid overlap or double counting.
4.6.11	Biodiversity net gain can be delivered onsite or wholly or partially off-site. We encourage details of any off-site delivery of biodiversity net gain to be set out within the application for development consent.	An aim of the project is to deliver on-site biodiversity units in preference to off-site by improving habitats and biodiversity local to the site of impact.

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4.6.12	When delivering biodiversity net gain off-site, developments should do this in a manner that best contributes to the achievement of relevant wider strategic outcomes, for example by increasing habitat connectivity, enhancing other ecosystem service outcomes, or considering use of green infrastructure strategies. Reference should be made to relevant national or local plans and strategies, to inform off-site biodiversity net gain delivery. If published, the relevant strategy is the Local Nature Recovery Strategy (LNRS). If an LNRS has not been published, the relevant consenting body or planning authority may specify alternative plans, policies or strategies to use.	See responses to 4.6.11.
4.6.13	In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains and benefits to communities relevant to the local area, and to national policy priorities, such as • reductions in GHG emissions • reduced flood risk • improvements to air or water quality, • climate adaptation, • landscape enhancement • increased access to natural greenspace, or • the enhancement, expansion or provision of trees and woodlands The scope of potential gains will be dependent on the type, scale, and location of specific projects. Applicants should look for a holistic approach to delivering wider environmental gains and benefits through the use of nature-based solutions and Green Infrastructure.	The Need Case (April 2023) [**APP-161**] demonstrates how the project is supporting the UK's transition to net zero and by association climate adaption. Table 6.1: Environmental Benefits within the Environmental Gain Report [**APP-176**] details the environmental areas identified to deliver landscape and visual, biodiversity and recreation amenity enhancements.
4.6.14	The Environment Act 2021 mandated the preparation of Local Nature Recovery Strategies (LNRSs) across England. They are a new system of spatial strategies for nature recovery and will play a major role in providing detail on the best locations to create, enhance and restore nature and deliver wider environmental benefits. LNRSs will also agree priorities for nature recovery and map the most valuable existing areas for nature. They will be critical in delivering new government targets for species abundance and habitat creation commitments, as well as other pressing environmental outcomes for water and flood risk, carbon and tree planting and woodland creations. LNRSs will also drive the creation of a Nature Recovery Network (NRN), a major commitment in the government's 25 Year Environment Plan.	The project falls within the administrative boundaries of Mid Suffolk District Council, Babergh District Council, Braintree District Council, Suffolk County Council and Essex County Council. Partners in Essex have formed The Essex Local Nature Partnership (LNP). The LNP are working closely with Essex County Council and partners to produce the LNRS for Essex. The LNP formed a 'Local Nature Recovery Strategy (LNRS) working group' who will work towards creating the LNRS. Meanwhile, Suffolk County Council has been designated as the responsible authority for developing Suffolk's LNRS.

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		At present, there are no adopted LNRS in place.
4.6.15	Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design (including any relevant operational aspects) of the project.	The project has produced and submitted for examination, an Environmental Gain Report [**APP-176**] which demonstrates how BNG could be achieved on the project.
4.6.16	Applicants should make use of available guidance and tools for measuring natural capital assets and ecosystem services, such as the Natural Capital Committee's 'How to Do it: natural capital workbook', the government's guidance on Enabling a Natural Capital Approach (ENCA), and other tools that aim to enable wider benefits for people and nature.	In the Environmental Action Plan 2021–2026 (National Grid, 2021), National Grid has set key priorities, one of which is related to caring for the natural environment which states: '*We will value nature and will protect and enhance it where possible using 'natural capital' and 'net gain' principles'*. Environmental net gain is a broader approach than BNG as it includes improving the condition of, and ecosystems services that flow from, the natural environment. It is a concept of leaving the environment (not just nature) in a measurably better state compared to the pre-development baseline. As part of its action plan (National Grid, 2021) National Grid has committed that by 2026 it will '*deliver net gain by at least 10% or greater in environmental value (including biodiversity) on all construction projects*.'
4.6.17	Where environmental net gain considerations have featured as part of the strategic options appraisal process to select a project, applicants should reference that information to supplement the site-specific details.	The strategic options appraisal process compared options and to assess the beneficial (positive) and adverse (negative) effects they may have, across a wide range of criteria including environmental, socio-economic, technical and cost factors. Net gain considerations at options appraisal, relevant to biodiversity, have included avoiding sensitive features such as ancient woodland and designated sites where practicable, through the options appraisal process, as described in ES Chapter 3: Alternatives Considered [**APP-071**].
4.6.18	Opportunities for environmental, social, and economic enhancements, protection and mitigation measures are identified in a number of sections in Part 5 of this NPS, which provides guidance on the impacts of new energy infrastructure.	Noted.
	Secretary of State decision making	

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4.6.1 – 4.6.4	Although achieving biodiversity net gain is not currently an obligation on applicants, Schedule 15 of the Environment Act 2021 contains provisions which, when commenced, mean the Secretary of State may not grant an application for Development Consent Order unless satisfied that a biodiversity gain objective is met in relation to the onshore development in England to which the application relates. The biodiversity gain objective will be set out in a biodiversity gain statement (as defined under the Environment Act 2021). Normally these statements would be included within an NPS, but the Act allows for the statement to be published separately where a review of an NPS has begun before the provisions are commenced, as is the case with these energy NPSs. Under the provision of the Environment Act 2021, any such separate biodiversity gain statement will be regarded as being contained within these NPSs. The Secretary of State should give appropriate weight to environmental and biodiversity net gain, although any weight given to gains provided to meet a legal requirement (for example under the Environment Act 2021) is likely to be limited.	National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report [**APP-176**].
4.7	**Criteria for good design for Energy Infrastructure**	
4.7.1 – 4.7.2	The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object – be it a building or other type of infrastructure – including fitness for purpose and sustainability, is equally important. Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.	See response to 4.7.8. ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives Considered [**APP-071**], which explains the different options that were considered during the project development, and also ES Chapter 4: Project Description [**APP-072**], which describes the design submitted within the application. The design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place.
4.7.3	Good design is also a means by which many policy objectives in the NPSs can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies, can help mitigate adverse impacts such as noise. Projects should look to use modern methods of	ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives

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	construction and sustainable design practices such as use of sustainable timber and low carbon concrete. Where possible, projects should include the reuse of material.	Considered [**APP-071**] and also ES Chapter 4: Project Description [**APP-072]**, which describes the design submitted within the application. The design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place. In addition, ES Chapter 14: Noise and Vibration [**APP-082**] identifies measures to reduce noise including engineering measures at point of generation (use of triple araucaria or other BPM for the conductors) and layout (noise enclosures around the transformers at the GSP substation). The CEMP Appendix A: CoCP [**REP3-026**] also contains other measures to reduce noise and vibration from construction activities at noise sensitive receptors.
4.7.4	Given the benefits of good design in mitigating the adverse impacts of a project, applicants should consider how good design can be applied to a project during the early stages of the project lifecycle.	As outlined in ES Chapter 3: Alternatives Considered [**APP-071**], the options appraisal has included many good design principles including the following which are aligned with the steps in the Holford Rules. Further details can be found in in Section 5.8 of the Planning Statement [**APP-160**]: • Avoiding areas of high environmental value such as conservation areas and scheduled monuments; • Avoiding main settlements and built-up areas with large numbers of people; • Proposing underground cables in the areas with the highest landscape sensitivity i.e. the Dedham Vale AONB and parts of the Stour Valley; • Using Corridor 2 (opportunity corridor) which involves removing the existing 132kV overhead line between Burstall Bridge and the diamond crossing at Twinstead Tee to further reduce the visual impact of the project; and Removing a stretch of the 400kV overhead line between Twinstead Tee and the Stour Valley West CSE compound, which would benefit the landscape in the Stour Valley.
	Applicant assessment	
4.7.5	To ensure good design is embedded within the project development, a project board level design champion could be appointed, and a representative design panel used to maximise the value provided by the infrastructure. Design principles should be established from the outset of the project to guide the	• See response to 4.7.8. In addition, ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process.

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	development from conception to operation. Applicants should consider how their design principles can be applied post-consent.	
4.7.6	Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process.	See responses to 4.7.4 and 4.7.8. The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside ES Chapter 4: Project Description [**APP-072**], which describes the design submitted within the application. National Grid has also considered alternative design suggestions made in written representations, during consultation feedback from external stakeholders. The design change process was implemented by National Grid to address relevant design changes which arose from the external stakeholders. This process allowed for each identified change to be effectively assessed by National Grid's specialist teams covering environment, design and construction and land rights. In addition, since the submission of the application for development consent, National Grid has proposed additional wording in respect to Requirement 9 (Reinstatement Planting Plan) of the dDCO (**document 3.1 (F)**), which states: '*Unless otherwise agreed with the relevant planning authority, the reinstatement planting plan submitted under sub-paragraph (1) will include a landscape plan for the cable sealing end compound where relevant for the stage, which will show landscape mounds, planting and proposed finishes for hard landscape features.'*
4.7.7	Applicants must demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.	See response to 4.7.6. The design change process was implemented by National Grid to address relevant design changes which arose from the external stakeholders. This process allowed for each identified change to be effectively assessed by National Grid's specialist teams covering environment, design and construction and land rights. In addition, Planning Statement Chapter 5 [**APP-160**] sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; demonstrating how such

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		policy and legislative objectives have been embedded into the design of the project.
4.7.8	Applicants should consider taking independent professional advice on the design aspects of a proposal. In particular, the Design Council can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service. Applicants should also consider any design guidance developed by the local planning authority.	This is noted and the design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place than govern how it designs and constructs its projects safely. National Grid is already required to ensure that the project is designed in accordance with standards set out within or overseen by, amongst others, the Electricity Supply, Quality and Continuity Regulations, British Standards (BS), European Standards, the 'Conseil International des Grands Réseaux Electriques', the International Electrotechnical Commission, and the Electricity Networks Association. In addition, the project must accord with each of the following: National Grid Design Standards, National Grid Technical Specification, National Grid Transmission Procedures, National Grid Policy Statement (Transmission), National Grid Technical Guidance Notes (Electricity) and National Grid Technical Reports (Electricity).
4.7.9	Further advice on what applicants should demonstrate by way of good design is provided in the technology specific NPSs where relevant.	Noted.
	Secretary of State decision making	
4.7.10 - 4.7.11	In the light of the above and given the importance which the Planning Act 2008 places on good design and sustainability, the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can be. In the light of the above and given the importance which the Planning Act 2008 places on good design and sustainability, the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can be. In doing so, the Secretary of State should be satisfied that the applicant has considered both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it	See response to 4.7.6. The impact of climate change, including the risk of flooding, have been considered during the optioneering and design evolution process. ES Chapter 3: Alternatives Considered [**APP-071**] sets out how the project has been designed to avoid areas of significant flood risk. The GSP substation and CSE compounds would be located in Flood Zone 1, see the FRA [**APP-059**] for further details. The remaining structures, including above ground structures such as pylons and below ground structures such as the underground cables are designed to National Grid technical standards to be resilient to flooding, wind, storms, extreme temperature and earth movement. The permanent drainage design at the GSP substation and the CSE compounds would be designed to provide the storage necessary to achieve discharges at greenfield run-off rates, not significantly altering the groundwater recharge patterns by transferring a significant recharge quantity from one

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	would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible.	catchment to another (see commitment 'W12' in the CEMP Appendix A: CoCP [**REP3-026**]. In addition, extreme climatic events, such as flooding; extreme temperatures (high and low temperatures); ground subsidence; high winds/storm and tree fall are considered within ES Appendix 5.3: Major Accidents and Disasters Scoping [**APP-095**]. The assessment has shown that the existing design measures, legal requirements, codes and standards adequately control the potential risk for major accidents and/or disasters.
4.7.12	In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process.	This is noted and the design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place than govern how it designs and constructs its projects safely. National Grid is already required to ensure that the project is designed in accordance with standards set out within or overseen by, amongst others, the Electricity Supply, Quality and Continuity Regulations, British Standards (BS), European Standards, the 'Conseil International des Grands Réseaux Electriques', the International Electrotechnical Commission, and the Electricity Networks Association. In addition, the project must accord with each of the following: National Grid Design Standards, National Grid Technical Specification, National Grid Transmission Procedures, National Grid Policy Statement (Transmission), National Grid Technical Guidance Notes (Electricity) and National Grid Technical Reports (Electricity). In addition to the comments made above, regard has also been had to the Horlock and Holford rules in respect to the siting of new transmission infrastructure and substations and as described in detail in Planning Statement Chapter 5 [**APP-160**]. Both sets of rules have been deployed by National Grid and have formed an important part of developing the preferred route and design of the project. For example, the route seeks to avoid siting above ground infrastructure in areas with significant amenity value, the most direct route is preferred to avoid the need for additional angle pylons, siting infrastructure in areas benefiting from existing advantageous vegetation screening is preferred and densely populated urban/residential areas should be avoided, where possible. Essentially the Proposed Alignment has been selected because it performed more strongly overall than any other options, having regard to these factors (amongst others).

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4.7.13	The Secretary of State should consider such impacts under the relevant policies in this NPS. Assessment of impacts must be for the stated design life of the scheme rather than a shorter time period.	National Grid has assessed potential impacts of climate change and incorporated adaptation/resilience throughout the lifetime of the project. It also takes into account the impacts of climate change over the development lifetime.
4.7.14	The Secretary of State should consider taking independent professional advice on the design aspects of a proposal. In particular, the Design Council can be asked to provide design review for nationally significant infrastructure projects.	See response to 4.7.8.
4.7.15	Further advice on what the Secretary of State should expect applicants to demonstrate by way of good design is provided in the technology specific NPSs where relevant.	Noted.
4.10	**Climate Change Adaptation and Resilience**	
4.10.1	Whilst we must continue to accelerate efforts to end our contribution to climate change by reaching Net Zero greenhouse gas emissions, adaptation is also necessary to manage the impacts of current and future climate change. If new energy infrastructure is not sufficiently resilient against the possible impacts of climate change, it will not be able to satisfy the energy needs as outlined in Part 3 of this NPS.	National Grid has assessed potential impacts of climate change and incorporated adaptation/resilience throughout the lifetime of the project. It also takes into account the impacts of climate change over the development lifetime.
4.10.2	Climate change is already altering the UK's weather patterns and this will continue to accelerate depending on global carbon emissions. This means it is likely there will be more extreme weather events. As well as climatic and seasonal changes such as hotter, drier summers and warmer, wetter winters, there is also a likelihood of increased flooding, drought, heatwaves, and intense rainfall events, as well as rising sea levels, increased storms and coastal change. Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening.	Climate change has been considered when designing the project. Firstly, the need for the project is summarised in Chapter 3 of the Planning Statement [**APP-160**] and set out in detail in the Need Case (April 2023) [**APP-161**]. The Need Case demonstrates how the project is supporting the UK's transition to net zero. The risk of flooding, effects of greenhouse gas and embedded carbon have also been considered as part of the ES. ES Appendix 4.3: Greenhouse Gas Assessment [**APP-092**] presents a summary of the carbon that would be released during the construction (either embodied within the materials or associated with construction vehicles and machinery). The assessment concludes that the construction and operational carbon dioxide emission numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets. The project is accounting for the latest Environment Agency guidance on climate change, in particular climate change allowances for rainfall intensity. This would inform surface water drainage design for above ground infrastructure. The GSP substation and CSE compounds and all permanent above ground infrastructure would be located in Flood Zone 1, see the FRA [**APP-059**] for further

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		details. During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**] to reduce the risk of flooding or other extreme weather conditions associated with climate change. Finally, the ES Appendix 4.1: Good Design [**APP-090**], presents the different choices made during the design process including reducing use of raw materials and waste generation. It also sets out how the project has been designed to be resilient to climate change.
4.10.3	To support planning decisions, the government produces a set of UK Climate Projections as well as hazard-specific tools and guidance like the Environment Agency's climate change allowances for flood risk assessments. In addition, the government's National Adaptation Programme and Adaptation Reporting Power will ensure that reporting authorities (a defined list of public bodies and statutory undertakers, including energy utilities) assess the risks to their organisation presented by climate change.	The Met Office UK Climate Projections (UKCP18) (Met Office, 2021) provide an assessment of likely climate change trends for the 21st century, with potential changes including wetter winters and drier summers (with higher intensity rainfall), that could affect soil conditions, land grade and farming practices, increase the risk of flooding etc. These factors have been taken into account in the FRA [**APP059**] and the assessments in the topic chapters of the ES such as ES Chapter 11: Agricultural and Soils [**APP-079**]. The GSP substation and the CSE compounds are outside of Flood Zones 2 and 3, as described in the FRA [**APP-059**]. The remaining aspects of the project (typically the pylons and underground cable) are designed to National Grid standards and have a high resilience to flooding.
4.10.4	The generic impacts advice in this NPS and the technology specific advice on impacts in the other energy NPSs provide additional information on climate change adaptation and should be read alongside this section (Section 5.3 on greenhouse gas emissions, Section 5.6 on coastal change and Section 5.8 on flood risk in particular provide relevant guidance for consideration).	Noted.
	Applicant assessment	
.4.10.5 – 4.10.7	In certain circumstances, measures implemented to ensure a scheme can adapt to climate change may give rise to additional impacts, for example as a result of protecting against flood risk, there may be consequential impacts on coastal change. In preparing measures to support climate change adaptation applicants should take reasonable steps to maximise the use of nature-based solutions alongside other conventional techniques. Integrated approaches, such as looking across the water cycle, considering coordinated management of water storage, supply, demand, wastewater, and flood risk can provide further benefits to address multiple infrastructure needs, as well as carbon sequestration benefits.	Consideration of climate change effects on flood risk over the lifetime of the proposed development are assessed within the FRA [**APP-059**] which also documents the embedded and good practice measures included to make the project resilient to climate change. National Grid has assessed potential impacts of climate change and incorporated adaptation/resilience throughout the lifetime of the project. The project has been designed to be resilient to climate change by locating the above ground elements of the project, including the GSP substation and the CSE compounds, outside of Flood Zones 2 and 3 as described in the FRA [**APP-059**].

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	In addition to avoiding further GHG emissions when compared with more traditional adaptation approaches, nature-based solutions can also result in biodiversity benefits and net gain, as well as increasing absorption of carbon dioxide from the atmosphere.	CEMP Appendix A: CoCP [**REP3-026**] also states that where new, permanent areas of impermeable land cover are created, the drainage design will include allowances for climate change in accordance with current Environment Agency requirements. With these measures in place, the project is considered to be resilient to climate change over the project design life.
4.10.8 – 4.10.10	New energy infrastructure will typically need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct (e.g. site flooding, limited water availability, storms, heatwave and wildfire threats to infrastructure and operations) and indirect (e.g. access roads or other critical dependencies impacted by flooding, storms, heatwaves or wildfires) impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change, using government guidance and industry standard benchmarks such as the Climate Change Allowances for Flood Risk Assessments, Climate Impacts Tool and British Standards for climate change adaptation, in accordance with the EIA Regulations. Applicants should assess the impacts on and from their proposed energy project across a range of climate change scenarios, in line with appropriate expert advice and guidance available at the time.	The impact of climate change, including the risk of flooding, have been considered during the optioneering and design evolution process. The ES Chapter 3: Alternatives Considered [**APP-071**] sets out how the project has been designed to avoid area of significant flood risk. The GSP substation and CSE compounds and all permanent above ground infrastructure would be located in Flood Zone 1, see the FRA [**APP-059**] for further details. The remaining structures including above ground structures such as pylons and below ground structures such as the underground cable are designed to National Grid technical standards to be resilient to flooding, wind, storms, extreme temperature and earth movement. The permanent drainage design at the GSP substation and the CSE compounds would be designed to greenfield runoff rates. CEMP Appendix A: CoCP [**REP3-026**] also states that where new, permanent areas of impermeable land cover are created, the drainage design will include allowances for climate change in accordance with current Environment Agency requirements. With these measures in place, the project is considered to be resilient to climate change over the project design life. The Met Office UK Climate Projections (UKCP18) (Met Office, 2021) provide an assessment of likely climate change trends for the 21st century, with potential changes including wetter winters and drier summers (with higher intensity rainfall), that could affect soil conditions, land grade and farming practices, increase the risk of flooding etc. These factors have been taken into account in the FRA [**APP-059**] and the assessments in the topic chapters of the ES such as ES Chapter 11: Agricultural and Soils [**APP-079**].
4.10.11	Applicants should demonstrate that proposals have a high level of climate resilience built-in from the outset and should also demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to a credible maximum climate change scenario. These results should be considered alongside relevant research which is based on the climate change projections.	The project takes account of the latest Met Office UK Climate Projections (UKCP18) (Met Office, 2021) in order that forecasts of long-term changing climatic conditions can be taken into account. UKCP18 has been reviewed to provide an overview of likely climate change scenarios where relevant in the ES.

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4.10.12	Where energy infrastructure has safety critical elements, the applicant should apply a credible maximum climate change scenario. It is appropriate to take a risk-averse approach with elements of infrastructure which are critical to the safety of its operation.	See response to 4.10.9 – 4.10.10.
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4.10.13	The Secretary of State should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections and associated research and expert guidance (such as the EA's Climate Change Allowances for Flood Risk Assessments152 or the Welsh Government's Climate change allowances and flood consequence assessments) available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure, including any decommissioning period) available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure, including any decommissioning period	The Met Office UK Climate Projections (UKCP18) (Met Office, 2021) provide an assessment of likely climate change trends for the 21st century, with potential changes including wetter winters and drier summers (with higher intensity rainfall), that could affect soil conditions, land grade and farming practices, increase the risk of flooding etc. These factors have been taken into account in the FRA [**APP-059**] and the assessments in the topic chapters of the ES such as ES Chapter 11: Agricultural and Soils [**APP-079**].
4.10.14	Should a new set of UK Climate Projections or associated research become available after the preparation of the ES, the Secretary of State (or the Examining Authority during the examination stage) should consider whether they need to request further information from the applicant.	Noted.
4.10.15	The Secretary of State should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.	The project takes account of the latest Met Office UK Climate Projections (UKCP18) (Met Office, 2021). The GSP substation and the CSE compounds are outside of Flood Zones 2 and 3, as described in the FRA [**APP-059**] The remaining aspects of the project (typically the pylons and underground cable) are designed to National Grid standards and have a high resilience to flooding. Consideration of climate change effects on flood risk over the lifetime of the proposed development are assessed within the FRA [**APP-059**] which also documents the embedded and good practice measures included to make the project resilient to climate change. The FRA [**APP-059**] concludes that the project would be safe from flooding over its lifetime and would not cause any detrimental effects on flood risk to land outside the Order Limits.
4.10.16	If any adaptation measures give rise to consequential impacts (for example on flooding, water resources or coastal change) the Secretary of State should consider the impact of the latter in relation to the application as a whole and the impacts guidance set out in Part 5 of this NPS.	It is not considered that any adaptation measures will give rise to consequential impacts.

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4.10.17	Any adaptation measures should be based on the latest set of UK Climate Projections, the government's latest UK Climate Change Risk Assessment, when available and in consultation with the EA's Climate Change Allowances for Flood Risk Assessments or the Welsh Government's Climate change allowances and flood consequence assessments.	Adaptation measures are detailed above at 4.10.8 – 4.10.10. The project is accounting for the latest guidance on climate change (UKCP18). National Grid has held several meetings with relevant organisations, including the Environment Agency and also with Essex County Council and Suffolk County Council in their roles as LLFA. Further details on the consultation undertaken with the Environment Agency, IDB and LLFA can be found in ES Appendix 5.2: Response to Consultation Feedback [**APP-094**] and the relevant Statement of Common Ground prepared with the Consultees; Draft Statement of Common Ground The Environment Agency (**document 7.3.3 (D)**) and Draft Statement of Common Ground Local Authorities (**document 7.3.1 (C)**).
4.10.18	The Secretary of State may take into account reporting authorities' reports (see paragraph 4.10.4 above) to the Secretary of State when considering adaptation measures proposed by an applicant for new energy infrastructure.	Noted.
14.10.19	Adaptation measures should be required to be implemented at the time of construction where necessary and appropriate to do so. However, where they are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (for example coastal processes), the Secretary of State may consider requiring the applicant to keep the need for the adaptation measure and ensure that the measure could be implemented should the need arise, rather than at the outset of the development (for example increasing height of existing, or requiring new, sea walls).	ES Appendix 4.1 Good Design [**APP-090**] makes reference to existing commitments made by National Grid during the design process and these include embedded measures (given an EM prefix). These are measures that are intrinsic to and built into the design of the project. The full set of embedded measures are set out in the REAC, which is Appendix B of the CEMP (**document 7.5.2 (D)**). The CEMP is secured by Requirement 4 in the dDCO (**document 3.1 (F)**). National Grid has also identified a number of good practice measures, which generally comprise measures imposed through legislative requirements or represent standard sector good practices. These include measures to reduce nuisance from construction activities and are typically listed with a GG prefix. The good practice measures are set out in Appendix A of the CEMP: CoCP [**REP3-026**].
4.12	**Pollution Control and Other Environmental Regulatory Regimes**	
4.12.1	Issues relating to discharges or emissions from a proposed project, and which lead to other direct or indirect impacts on terrestrial, freshwater, marine, onshore, and offshore environments, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes, for example local planning consent or marine licences (see paragraph 4.5.6 for more information).	The project will be run in compliance with all relevant legislation, consents and permits in accordance with good practice measure GG01 in the CEMP Appendix A: CoCP [**REP3-026**]. The licences and consents currently identified as being relevant to the project are listed in Table 2.1 of the CEMP (**document 7.5 (C)**) This provides a more detailed list than the generic list of potential consents, licences and permits identified in the Planning Statement [**APP-160**] and expands on this by providing details of the expected locations where the potential consents, licences and permits could reasonably be expected.

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4.12.2	The planning and pollution control systems are separate but complementary. The planning system controls the development and use of land in the public interest. It plays a key role in protecting and improving the natural environment, public health and safety, and amenity, for example by attaching conditions to allow developments which would otherwise not be environmentally acceptable to proceed and preventing harmful development which cannot be made acceptable even through conditions. Pollution control is concerned with preventing pollution through the use of measures to prohibit or limit the releases of substances to the environment from different sources to the lowest practicable level. It also ensures that ambient air, water, and land quality meet standards that guard against impacts to the environment or human health.	A CEMP [**APP-024**] has been submitted as part of the application for development consent. This sets out the actions and measures that would be implemented to reduce the risk of a pollution incident along with pro-active actions that would be taken should any pollution incident occur. Prior to application, the CEMP was shared with the relevant planning authorities, Natural England and the Environment Agency for comment and their comments were considered in the version submitted with the application. In addition, ES Chapter 16: Environmental Management and Mitigation [**APP-084**] sets out the environmental monitoring, management and mitigation measures that would be delivered as part of the project.
4.12.3	Pollution from industrial sources in England and Wales is controlled through the Environmental Permitting (England and Wales) Regulations 2016. The Environmental Permitting Regulations require industrial facilities to have an Environmental Permit and meet limits on allowable emissions to operate.	The text in Table 2.1 of the CEMP [**REP-024**] provides additional definition as to when an environmental permit would be required.
4.12.4	Larger industrial facilities undertaking specific types of activity are required to use Best Available Techniques (BAT) to reduce emissions to air, water, and land. Agreement on what sector specific BAT standards are, will now be determined through a new UK-specific BAT process.162	Noted.
	Applicants assessment	
4.12.5	Applicants should consult the MMO (or NRW in Wales) on energy NSIP projects which would affect, or would be likely to affect, any relevant marine areas as defined in the Planning Act 2008 (as amended by section 23 of the Marine and Coastal Access Act 2009). Applicants are encouraged to consider the relevant marine plans in advance of consulting the MMO for England or the relevant policy teams at the Welsh government.	Consultation has not been undertaken with the MMO as the project does not affect any relevant marine areas as defined in the Planning Act 2008.
4.12.6	Many projects covered by this NPS will be subject to the Environmental Permitting Regulations, which also incorporates operational waste management requirements for certain activities. When an applicant applies for an Environmental Permit, the relevant regulator (usually the EA or NRW but sometimes the local authority) requires that the application demonstrates that processes are in place to meet all relevant Environmental Permitting Regulations requirements.	The project will be run in compliance with all relevant legislation, consents and permits in accordance with good practice measure GG01 in the CEMP Appendix A: CoCP [**REP3-026**] The licences and consents currently identified as being relevant to the project are listed in Table 2.1 of the CEMP [**REP-024**]. This provides a more detailed list than the generic list of potential consents, licences and permits identified in the Planning Statement [**APP-160**] and expands on this by providing details of the expected locations where the potential consents, licences and permits could reasonably be expected including requirements for Environmental Permits. National Grid confirms that, to the best of the

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		Applicant's knowledge the list in Table 2.1 of the CEMP (**document 7.5 (C)**) is correct and reflects the latest position.
4.12.7 -4.12.8	Applicants should make early contact with relevant regulators, including EA or NRW and the MMO, to discuss their requirements for Environmental Permits and other consents, such as marine licences. Wherever possible, applicants should submit applications for Environmental Permits and other necessary consents at the same time as applying to the Secretary of State for development consent.	National Grid has continued to engage with the Environment Agency throughout the design and evolution of the project, through various consultation exercises and through thematic meetings. All engagement is recorded in the Draft Statement of Common Ground Environment Agency (**document 7.3.3 (D)**).
	Secretary of State decision making	
4.12.9	In considering an application for development consent the Secretary of State should focus on whether the development itself is an acceptable use of the land or sea, and the impact of that use, rather than the control of processes, emissions or discharges themselves.	Noted.
4.12.10	The Secretary of State should work on the assumption that the relevant pollution control regime and other environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. The Secretary of State should act to complement but not seek to duplicate them.	The project will be run in compliance with all relevant legislation, consents and permits in accordance with good practice measure GG01 in the CEMP Appendix A: CoCP [**REP3-026**].
4.12.11	The Secretary of State's consent may include a deemed marine licence and the MMO, or NRW, will advise on what conditions should apply to the deemed marine licence.	See response to 4.12.5.
4.12.12	The Secretary of State and the MMO, or NRW, should cooperate closely to ensure that energy NSIPs are licensed in accordance with environmental legislation.	See response to 4.12.10.
4.12.13	In considering the impacts of the project, the Secretary of State may wish to consult the regulator on any management plans that would be included in an Environmental Permit application.	See response to 4.12.10.
4.12.14	The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts.	See response to 4.12.10.
4.12.15	Working in close cooperation with the EA or NRW and/or the pollution control authority, and other relevant bodies, such as the MMO, the SNCB, Drainage Boards, and water and sewerage undertakers, the Secretary of State should be satisfied, before consenting any potentially polluting developments, that:	A CEMP [**REP-024**] has been submitted as part of the application for development consent. This sets out the actions and measures that would be implemented to reduce the risk of a pollution incident along with pro-active actions that would be taken should any pollution incident occur. Prior to application, the CEMP was shared with the relevant planning authorities, Natural England and the Environment Agency for comment

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	• the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.	and their comments were considered in the version submitted with the application. In addition, ES Chapter 16 Environmental Management and Mitigation [**APP-084**] sets out the environmental monitoring, management and mitigation measures that would be delivered as part of the project.
4.12.16	The Secretary of State should not refuse consent on the basis of pollution impacts unless there is good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted. On this basis, it is reasonable for the Secretary of State to consider residual amenity issues only when considering whether the development itself is an acceptable use of the land or sea, and on the impacts of that use.	See response to 4.12.6. Contact has been made and meetings will continue to be held with key stakeholders including the Environment Agency to discuss the requirements moving forward. There have been no comments made to National Grid to date that indicate that licences or consents would not be granted.
4.13	**Safety**	
4.13.1	In addition to its role in the planning system, the HSE is the independent regulator for workplace health and safety and is responsible for enforcing a range of health and safety legislation some of which is relevant to the construction, operation and decommissioning of energy infrastructure.	Noted.
4.13.2	Some technologies, for example major accident hazard pipelines, will be regulated by specific health and safety legislation. The application of these regulations is set out in the technology specific NPSs where relevant.	Noted.
	Applicant assessment	
4.13.5	Applicants should consult with the HSE on matters relating to safety.	The HSE has been consulted throughout the consultation activities on the project. In its response to statutory consultation, the HSE considered matters within its remit and identified that the consultation Order Limits were in the 'consultation area' for two major accident hazard pipelines. However, as the project does not seek to increase the populations in proximity to the pipelines, they did not raise any concerns with the proposals in this respect. The HSE also confirmed that they did not have any concerns in relation to Hazardous Substance Consent, explosives sites or electrical safety (from a planning perspective.

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	Applicant assessment	
4.14.5	Applicants must consult the (HSA) and HSE at pre-application stage if the project is likely to need hazardous substances consent. Hazardous substances consents are a part of the planning regime which contributes to public safety	The CEMP [**REP-024**] and CEMP Appendix A: CoCP **[REP3-026**] set out measures to minimise the risk of a pollution incident occurring including appropriate storage and handling of fuels and other substances hazardous to the environment. The contractor would ensure that any potentially hazardous waste is correctly stored, tested, recorded and disposed of. National Grid continue to engage with HSE with respect to compliance with health and safety legislation.
4.14.6	HSE sets a consultation distance around every site with hazardous substances consent and notifies the relevant local planning authorities. The applicant should therefore consult the local planning authority at pre-application stage to identify whether its proposed site is within the consultation distance of any site with hazardous substances consent and, if so, should consult the HSE for its advice on locating the particular development on that site. Where a hazardous substance consent has been deemed to be granted, the developer is required to send the relevant HSA any information required by them for the purposes of a register.	The HSE has been consulted throughout the consultation activities on the project. In their response to statutory consultation, the HSE considered matters within its remit and identified that the consultation Order Limits were in the 'consultation area' for two major accident hazard pipelines. However, as the project does not seek to increase the populations in proximity to the pipelines, HSE did not raise any concerns with the project in this respect. The HSE also confirmed that it does not have any concerns in relation to Hazardous Substance Consent, explosives sites or electrical safety (from a planning perspective).
4.15	**Common Law Nuisance and Statutory Nuisance**	
4.15.1	Section 158 of the Planning Act 2008 confers statutory authority for carrying out development consented to by, or doing anything else authorised by, a Development Consent Order.	Noted.
4.15.2	Such authority is conferred only for the purpose of providing a defence in any civil or criminal proceedings for nuisance. This would include a defence for proceedings for nuisance under Part III of the Environmental Protection Act 1990 (EPA) (statutory nuisance) but only to the extent that the nuisance is the inevitable consequence of what has been authorised.	Noted.
4.15.3	The defence does not extinguish the local authority's duties under Part III of the EPA 1990 to inspect its area and take reasonable steps to investigate complaints of statutory nuisance and to serve an abatement notice where satisfied of its existence, likely occurrence or recurrence.	Noted.
4.15.4	The defence is not intended to extend to proceedings where the matter is "prejudicial to health" and not a nuisance.	Noted.

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	Applicant Assessment	
4.15.5	At the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the EPA 1990 and how they may be mitigated or limited should be identified by the applicant so that appropriate requirements can be included in any subsequent order granting development consent (see Section 5.7 on dust, odour, artificial light etc. and Section 5.12 on noise and vibration).	To reduce the risk of Statutory Nuisance occurring, the CEMP (**document 7.5 (C)**) includes good practice measures to avoid or reduce the effects of dust, lighting, noise and vibration. These measures would reduce impacts that could otherwise result in nuisance during construction. The development authorised by the DCO must be undertaken in accordance with the CEMP, pursuant to Requirement 5 of the dDCO (**document 3.1 (F)**). National Grid and its contractor would carry out all work in accordance with the CEMP (**document 7.5 (C)**) during the construction of the project unless otherwise agreed with the relevant LPA. The Statement of Statutory Nuisance [**APP-058**] identifies the matters set out in Section 79(1) of the EPA 1990 in respect of statutory nuisance and considers whether the project has the potential to cause nuisance. With the good practice measures in place outlined within the CEMP Appendix A: CoCP [**REP3-026**] no breach of Section 79(1) of the EPA 1990 is expected to occur as a result of the construction and operation of the project.
	Secretary of State decision making	
4.15.6	At the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the EPA 1990 and how they may be mitigated or limited should be considered by the Secretary of State so that appropriate requirements can be included in any subsequent order granting development consent (see Section 5.7 on dust, odour, artificial light etc. and Section 5.12 on noise and vibration).	See response to 4.15.5.
4.15.7	The Secretary of State should note that the defence of statutory authority is subject to any contrary provision made by the Secretary of State in any particular case in a Development Consent Order (section 158(3) of the Planning Act 2008). Therefore, subject to Section 5.7 and Section 5.12, the Secretary of State can disapply the defence of statutory authority, in whole or in part, in any particular case, but in so doing should have regard to whether any particular nuisance is an inevitable consequence of the development.	Noted.
4.16	Security Considerations	

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4.16.1	National security considerations apply across all national infrastructure sectors.	Noted.
4.16.2	DESNZ works closely with government security agencies including the National Protective Security Authority (NPSA) and the National Cyber Security Centre (NCSC) to provide advice to the most critical infrastructure assets on terrorism and other national security threats, as well as on risk mitigation.	Noted.
4.16.3	In the UK's civil nuclear industry, security is also independently regulated by the Office for Nuclear Regulation (ONR).	Noted.
4.16.4	Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.	The project is designed to avoid the risk of damage through sabotage and arson (including terrorism), and the risk of electrocution is also a further deterrent. The materials are resistant to damage and are not at risk of catching fire. During construction, the working area would have security fencing around the site and only authorised personnel would be admitted to the site. Outside of working hours, the site would have a security guard to check for trespassers that could result in sabotage or arson. During operation, the GSP substation, the CSE compounds and pylons would be surrounded by security fencing to prevent trespass. Wilful sabotage of overhead lines is also very rare due to the perceived risk of electrocution that could result from this.
4.16.5	DESNZ will be notified at pre-application stage about every likely future application for energy NSIPs, so that any national security implications can be identified.	Overall responsibility for security of the energy sector lies with the DESNZ which works closely with Government security agencies to reduce the vulnerability of the most 'critical' infrastructure assets in the sector to terrorism and other national security threats. National Grid is a provider of critical infrastructure across the UK. In this role, National Grid maintains regular dialogue with a range of organisations with responsibility for both local and national crime prevention and security. As such, all sites and infrastructure would be designed and operated to the relevant security standards.
	Applicant assessment	
4.16.6	Where national security implications have been identified, the applicant should consult with relevant security experts from NPSA, ONR (for civil nuclear) and/or DESNZ to ensure security measures have been adequately considered in the design process and that adequate consideration has been given to the management of security risks.	See response to 4.16.5.

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4.16.7	The applicant should only include sufficient information in the application as is necessary to enable the Secretary of State to examine the development consent issues and make a properly informed decision on the application.	Noted.
5.1	**Generic Impacts**	
	Introduction	
5.1.2	This Part considers generic impacts that arise from the development of all of the types of energy infrastructure covered by the energy NPSs (such as landscape and visual impacts) or arise in similar ways from the development of energy infrastructure covered in at least two of the energy NPSs. In some cases, the technology specific NPSs provide detail on the way these impacts arise, or are to be considered, in the context of applications specific to the technology in question. Impacts which are limited to one particular technology are only covered in the relevant technology specific NPS.	Noted.
5.1.3	The list of impacts (generic and technology specific) and the relevant policy in this Part and in the impact section of the technology specific NPSs is not exhaustive. The NPSs address those impacts and means of mitigation that are anticipated to arise most frequently. They are not intended to provide a list of all possible effects or ways to mitigate such effects. The Secretary of State should therefore consider other impacts and means of mitigation where it determines that the impact is relevant and important to its decision.	Noted.
5.1.4	The technology specific NPSs may state that certain impacts should be given a particular weight. Where they do not, the Secretary of State should follow any policy on the level of weight to be given to such impact set out in this NPS. Applicants should identify the impacts of their proposals in the ES in terms of those covered in this NPS and any others that may be relevant to their application.	Noted.
5.1.5	Some of the impact sections in this NPS and the technology specific NPSs refer to development consent requirements or obligations, or conditions of a deemed marine licence, as means of securing appropriate mitigation. The fact that the possible use of requirements, obligations or conditions are not mentioned in relation to other impacts does not mean that they may not be relevant.	Noted.
5.1.6	Some of the impact sections in this NPS and the technology specific NPSs also refer to bodies whom the applicant or the Secretary of State should consult. The references to specific bodies are not intended to be exhaustive. The fact that in other impact sections no mention is made of such consultation does not mean that the applicant or the Secretary of State should not, where	Noted.

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	appropriate, engage in it.168 Applicants must also ensure they consult the relevant bodies about their proposed applications in accordance with section 42 to 44 of the Planning Act 2008 and the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.	
5.1.7	Sufficient relevant information is crucial to good decision making, particularly where formal assessments are required. To avoid delay, if in any doubt applicants should discuss what information is needed with the Planning Inspectorate, statutory bodies, and other relevant organisations as early as possible. Any assessment should be based on the most up to date data and guidance.	Noted.
5.2	**Air Quality and Emissions**	
5.2.1	Energy infrastructure development can have adverse effects on air quality. The construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats,169 or on the wider countryside and species. Air emissions include particulate matter (for example dust) up to a diameter of ten microns (PM10) and up to a diameter of 2.5 microns (PM2.5) as well as gases such as sulphur dioxide, carbon monoxide and nitrogen oxides (NOx).	Noted.
5.2.2	Legal limits for pollutants in ambient air are set out in the Air Quality Standards Regulations 2010 and for England, national objectives set out in the Air Quality (England) Regulations 2000 reiterated in the Air Quality Strategy, or for Wales, the Air Quality (Wales) Regulations 2000 and the Clean Air Plan for Wales. In addition, two fine particulate matter (PM2.5) targets were set under the Environment Act 2021 for England – an annual mean concentration target and a population exposure target. Internationally agreed emissions commitments are set in the National Emission Ceilings Regulations 2018 and establish limits for total UK emissions of key pollutants.	Noted.
5.2.3	For many air pollutants there is not a threshold below which there is no health impact so it is important that energy infrastructure schemes consider not just how a scheme may impact statutory air quality limits, objectives or targets but also measures to mitigate all emissions in order to minimise human exposure to air pollution, especially for those who are more susceptible to the impacts of poor air quality.	As described in ES Chapter 13: Air Quality [**APP-081**], during the construction phase, construction machinery and vehicles could generate dust and fine particulate matter, particularly through earthwork and soil stripping activities. Machinery and vehicles would also emit exhaust emissions through the combustion of fossil fuels. There is limited potential for the project to generate dust and emissions during the operational phase, due to the limited activities associated with inspection and maintenance, therefore, this has been scoped out of the assessment. A dust risk assessment has been undertaken and is reported in ES Appendix 13.1: Dust Risk Assessment [**APP-135**].

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5.2.4	In addition, a particular effect of air emissions from some energy infrastructure may be eutrophication, which is the excessive enrichment of nutrients in the environment. Eutrophication from air pollution results mainly from emissions of NOx and ammonia. The main emissions from energy infrastructure are from altering the competitive balance of species and thereby damaging biodiversity. In aquatic ecosystems it can cause changes to algal composition and lead to algal blooms, which remove oxygen from the water, adversely affecting plants and fish. The effects on ecosystems can be short term or irreversible and can have a large impact on ecosystem services such as pollination, aesthetic services and water supply.	No eutrophication effects are anticipated as the project does not result in the increase in new residential accommodation or intensified agricultural uses.
	Applicant assessment	
5.2.8	Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the ES.	An air quality assessment has been undertaken within the ES Chapter 13: Air Quality [**APP-081**].
5.2.9	The ES should describe: existing air quality concentrations and the relative change in air quality from existing levels; any significant air quality effects, mitigation action taken and any residual effects, distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project; the predicted absolute emissions, concentration change and absolute concentrations as a result of the proposed project, after mitigation methods have been applied; and any potential eutrophication impacts.	The air quality assessment presented in ES Chapter 13: Air Quality [**APP-081**] describes the existing baseline levels of air quality and the potential effects from emissions including from generators and construction plant, construction vehicles and dust from earth moving. The assessment has concluded that with the good practice measures in the CEMP Appendix A: CoCP [**REP3-026**] there would be no significant effects on air quality. During the operation, vehicle numbers are expected to be very low and the only anticipated emissions should be from maintenance vehicles; which is likely to be negligible and sporadic with no quantifiable effect on local air quality. No eutrophication effects are anticipated as the project does not result in the increase in new residential accommodation or intensified agricultural uses.
5.2.10	In addition, applicants should consider the Environment Targets (Fine Particulate Matter) (England) Regulations 2022 and associated Defra guidance.	Noted.
5.2.11	Defra publishes future national projections of air quality based on estimates of future levels of emissions, traffic, and vehicle fleet. Projections are updated as the evidence base changes and the applicant should ensure these are current at the point of an application. The applicant's assessment should be consistent with this but may include more detailed modelling and evaluation to demonstrate local and national impacts. If an applicant believes they have robust additional supporting evidence, to the extent they could affect the	The Defra background air quality mapping projections from the 2018-base year dataset were used in the assessment which were current at the point of application. This is referenced in ES Chapter 13 Air Quality [**APP-081**] paragraph 13.4.2 and 13.5.1.

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	conclusions of the assessment, they should include this in their representations to the Examining Authority along with the source.	
5.2.12	Where a proposed development is likely to lead to a breach of any relevant statutory air quality limits, objectives or targets, or affect the ability of a non-compliant area to achieve compliance within the timescales set out in the most recent relevant air quality plan/strategy at the time of the decision, the applicant should work with the relevant authorities to secure appropriate mitigation measures to ensure that those statutory limits, objectives or targets are not breached.	There are no significant emissions resulting from the project that would pose a threat to statutory air quality limits. During the operation of the project, vehicle numbers are expected to be very low and the only anticipated emissions should be from maintenance vehicles; which is likely to be negligible and sporadic with no quantifiable effect on local air quality. As stated in paragraph 5.4.5 of the CTMP (**document 7.6 (C)**) the construction routeing would avoid the AQMA in Sudbury (AQ01 in the CEMP Appendix A: CoCP [**REP3-026**].
5.2.13	The Secretary of State should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage. In doing so the Secretary of State should have regard to the Air Quality Strategy in England, or the Clean Air Plan for Wales in Wales, or any successors to these and should consider relevant advice within Local Air Quality Management guidance and PM2.5 targets guidance.	The CEMP Appendix A: CoCP [**REP3-026**] contains a list of relevant good practice measures relating to air quality. With the good practice measures in place, no significant effects on air quality are anticipated.
5.2.14	The mitigations identified in Section 5.14 on traffic and transport impacts will help mitigate the effects of air emissions from transport.	The CEMP Appendix A: CoCP [**REP-026**] contains a list of relevant good practice measures relating to air quality. With the good practice measures in place, no significant effects on air quality are anticipated.
	Secretary of State decision making	
5.2.15	Many activities involving air emissions are subject to pollution control. The considerations set out in Section 4.12 on the interface between planning and pollution control therefore apply. The SoS must also consider duties under other environmental targets and have regard to policies set out in the Government's Environmental Improvement Plan 2023.	Noted.
5.2.16	The Secretary of State should give air quality considerations substantial weight where a project would lead to a deterioration in air quality. This could for example include where an area breaches any national air quality limits or statutory air quality objectives. However, air quality considerations will also be important where substantial changes in air quality levels are expected, even if this does not lead to any breaches of statutory limits, objectives or targets.	Noted.

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5.2.17	The Secretary of State should give air quality considerations substantial weight where a project is proposed near a sensitive receptor site, such as an education or healthcare facility, residential use or a sensitive or protected habitat.	Noted.
5.2.18	Where a project is proposed near to a sensitive receptor site for air quality, if the applicant cannot provide justification for this location, and a suitable mitigation plan, the Secretary of State should refuse consent.	Noted.
5.2.19	In all cases, the Secretary of State must take account of any relevant statutory air quality limits, objectives and targets. If a project will lead to non-compliance with a statutory limit, objective or target the Secretary of State should refuse consent.	Noted.
5.3	**Greenhouse Gas Emissions**	
5.3.1	Significant levels of energy infrastructure development are vital to ensure the decarbonisation of the UK economy. The construction, operation and decommissioning of that energy infrastructure will in itself, lead to GHG emissions.	Noted.
5.3.2	In considering this section, applicants should also have regard to Part 2 of this NPS, which explains the current policy on climate change and how this NPS interacts with that policy, and Section 4.10 of this NPS, which deals with climate change adaptation.	Noted.
5.3.3	As discussed in Part 2, energy infrastructure plays a vital role in decarbonisation. While all steps should be taken to reduce and mitigate climate change impacts, it is accepted that there will be residual emissions from energy infrastructure, particularly during the economy wide transition to net zero, and potentially beyond.	Noted.
	Applicant assessment	
5.3.4	All proposals for energy infrastructure projects should include a GHG assessment as part of their ES (See Section 4.3). This should include: • A whole life GHG assessment showing construction, operational and decommissioning GHG impacts, including impacts from change of land use. • An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages. • Measurement of embodied GHG impact from the construction stage.	National Grid has undertaken a GHG assessment in ES Appendix 4.3: Greenhouse Gas Assessment [**APP-092**]. This presents an assessment of the carbon that would be released during construction and operation of the project. The assessment concludes that the carbon dioxide emissions from the project are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets.

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	• How reduction in energy demand and consumption during operation has been prioritised in comparison with other measures. • How operational emissions have been reduced as much as possible through the application of best available techniques for that type of technology. • Calculation of operational energy consumption and associated carbon emissions. • Whether and how any residual GHG emissions will be (voluntarily) offset or removed using a recognised framework. • Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other developments at a regional or national level, or sector level, if sectoral targets are developed.	
	Mitigation	
5.3.5	A GHG assessment should be used to drive down GHG emissions at every stage of the proposed development and ensure that emissions are minimised as far as possible for the type of technology, taking into account the overall objectives of ensuring our supply of energy always remains secure, reliable and affordable, as we transition to net zero.	ES Appendix 4.3: Greenhouse Gas Assessment [**APP-092**] describes the use of the Cost Book and Carbon Interface Tool (CIT) at different stages of the proposed development. The CIT submitted by bidders is used at tender stage to inform the evaluation and scoring of the tenders, and the CIT of the successful bidder forms the 'carbon baseline' for the project. The contractor is incentivised to demonstrate a reduction in the carbon footprint against the initial baseline over the duration of construction of the project.
5.3.6	Applicants should look for opportunities within the proposed development to embed nature-based or technological solutions to mitigate or offset the emissions of construction and decommissioning	The contractor would be incentivised to demonstrate a reduction in the carbon footprint against the initial baseline over the duration of construction of the project. This is captured via the use of the CIT.
5.3.7	Steps taken to minimise and offset emissions should be set out in a GHG Reduction Strategy, secured under the Development Consent Order. The GHG Reduction Strategy should consider the creation and preservation of carbon stores and sinks including through woodland creation, hedgerow creation and restoration, peatland restoration and through other natural habitats	National Grid notes that a GHG Reduction Strategy is a new requirement. However, steps taken to reduce and offset emissions are secured in other documents. Steps taken to reduce emissions are referenced within Section 5.4 of the Materials and Waste Management Plan [**REP3-032**] and in particular the use of the CIT to create a 'carbon baseline' for the project and the incentivisation of the contractor to reduce the carbon footprint against the initial baseline. Chapter 13 of the Construction Environmental Management Plan (**document 7.5 (C)**) elaborates on the good practice measures set out in the CoCP [**REP3-026**] by providing additional details in relation to

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		reducing the risk of dust and emissions assessed in the Dust Risk Assessment in ES Appendix 13.1: Dust Risk Assessment [**APP-135**]. The LEMP Appendix B: Vegetation Reinstatement Plan [**APP-184**] details the location of proposed embedded planting, reinstatement planting, landscape softening, habitat compensation and additional planting required to mitigate an environmental effect, which would also provide a small amount of benefit to the provision of carbon stores and sinks. As noted in the Environmental Gain Report [**APP-176**], the planting proposals on several of the environmental areas identified would support enhanced function of the land in relation to biodiversity, soil carbon and soil hydrology. Further responses with regards to GHG are provided under Items 5.3.4 and 5.3.5.
	Secretary of State decision making	
5.3.8	The Secretary of State must be satisfied that the applicant has as far as possible assessed the GHG emissions of all stages of the development	See response to Item 5.3.4.
5.3.9	The Secretary of State should be content that the applicant has taken all reasonable steps to reduce the GHG emissions of the construction and decommissioning stage of the development.	See Item 5.3.5.
5.3.10	The Secretary of State should give appropriate weight to projects that embed nature-based or technological processes to mitigate or offset the emissions of construction and decommissioning within the proposed development. However, in light of the vital role energy infrastructure plays in the process of economy wide decarbonisation, the Secretary of State must accept that there are likely to be some residual emissions from construction and decommissioning of energy infrastructure.	See Item 5.3.6.
5.3.11	Operational GHG emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided (even with full deployment of CCS technology). Given the characteristics of these and other technologies, as noted in Part 3 of this NPS, and the range of non-planning policies that can be used to decarbonise electricity generation, such as the UK ETS (see Section 2.4), government has determined that operational GHG emissions are not reasons to prohibit the consenting of energy projects or to impose more restrictions on them in the planning policy framework than are set out in the energy NPSs (e.g. the CCR requirements). Any carbon assessment will include an assessment of operational GHG emissions, but the	Noted.

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	policies set out in Part 2, including the UK ETS, can be applied to these emissions.	
5.3.12	Operational emissions will be addressed in a managed, economy-wide manner, to ensure consistency with carbon budgets, net zero and our international climate commitments. The Secretary of State does not, therefore need to assess individual applications for planning consent against operational carbon emissions and their contribution to carbon budgets, net zero and our international climate commitments.	Noted.
5.4	**Biodiversity and Geological Conservation**	
5.4.1	Biodiversity is the variety of life in all its forms and encompasses all species of plants, animals and fungi, the genetic diversity they contain and the complex ecosystems of which they are a part. Geological conservation relates to the sites that are designated for their geology and/or their geomorphological importance.	Noted.
5.4.2	In the 25 Year Environment Plan, the government set out its vision for a quarter of-a-century action to help the natural work regain and retain good health. A commitment to review the plan every 5 years was set into law in the Environment Act 2021. The Environmental Improvement Plan was published in 2023, which reinforces the intent of the 25 Year Environment Plan and sets out a plan to deliver on its framework and vision. The government's policy for biodiversity in England is set out in the Environmental Improvement Plan 2023, the National Pollinator Strategy and the UK Marine Strategy. The aim is to halt overall biodiversity loss in England by 2030 and then reverse loss by 2042, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. This aim needs to be viewed in the context of the challenge presented by climate change. Healthy, naturally functioning ecosystems and coherent ecological networks will be more resilient and adaptable to climate change effects. Failure to address this challenge will result in significant adverse impact on biodiversity and the ecosystem services it provides.	National Grid considers that the project is compliant with the Plan insofar as it is relevant to the project. The Plan sets out ten goals which include the achievement of: clean air; clean and plentiful water; thriving plants and wildlife; reduced risk of harm from environmental hazards like flooding and drought; the more sustainable and efficient use of resources from nature; enhanced beauty, heritage and engagement with the natural environment; mitigation and adaption to climate change; minimisation of waste; management of exposure to chemicals; and enhanced biosecurity. Where relevant to the project, all these topics are covered in full in the ES. Policy on these topics is provided in the designated and proposed revised NPS, which provide policy directly relevant to the development of NSIP.
5.4.3	The wide range of legislative provisions at the international and national level that can impact on planning decisions affecting biodiversity and geological conservation issues are set out in a Government Circular. The National Planning Policy Framework and Natural Environment Planning Practice Guidance document sets out good practice in England in relation to planning for biodiversity and geological conservation. In Wales, TAN 5: Nature	Noted.

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	Conservation and Planning sets out how the land use planning system should contribute to biodiversity and geological conservation.	
	Habitats Regulations	
5.4.4 and 5.4.5	The highest level of biodiversity protection is afforded to sites identified through international conventions. The Habitats Regulations set out sites for which an HRA will assess the implications of a plan or project, including Special Areas of Conservation and Special Protection Areas. As a matter of policy, the following should be given the same protection as sites covered by the Habitats Regulations and an HRA will also be required: (a) potential Special Protection Areas and possible Special Areas of Conservation; (b) listed or proposed Ramsar sites; and (c) sites identified, or required, as compensatory measures for adverse effects on any of the other sites covered by this paragraph.	The datasets reviewed to identify relevant sites did not list any potential Special Protection Areas and possible Special Areas of Conservation or listed or proposed Ramsar sites to be considered as part of the Habitats Regulations Assessment [**REP1-007**]. No sites identified, or required, as compensatory measures for adverse effects on any of the other sites covered by the paragraph were raised during consultation with Natural England.
	Sites of Special Scientific Interest (SSSIs)	
5.4.7	Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. Most National Nature Reserves are notified as SSSIs.	ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) concludes that there is no significant effect on any SSSI as a result of the project. Furthermore, ES Appendix 15.5: Inter-Project CEA [**APP-144**] concludes that no significant cumulative effects are anticipated for biodiversity during construction or operation in combination with other developments.
5.4.8	Development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits (including need) of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs.	Chapter 5 of the Planning Statement [**APP-160**] sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; including limiting impacts to SSSI features in the routing and design studies. This is also reported in the ES Chapter 3: Alternatives Considered [**APP-071**] which documents the key environmental factors that were considered in the optioneering and design evolution process. ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) concludes that there is no significant effect on any SSSI as a result of the project. Furthermore, ES Appendix 15.5: Inter-Project CEA [**APP-144**] concludes that no significant cumulative effects are anticipated for biodiversity during construction or operation in combination with other developments. ES Chapter 10: Geology and Hydrogeology [**APP-078**] concludes there are no likely significant effects on SSSI with geological conservation interests.
	Regional and Local Sites	

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5.4.12 and 5.4.13	Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Wildlife Sites, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery. They can also provide wider benefits including public access (where agreed), climate mitigation and helping to tackle air pollution. National planning policy expects plans to identify and map Local Wildlife sites, and to include policies that not only secure their protection from harm or loss but also help to enhance them and their connection to wider ecological networks.	As noted in ES Chapter 10: Geology and Soils [**APP-078**] there are no Regional or Local Geological Sites affected by the project. Potential impacts on sites of regional and local biodiversity interest, such as Local Nature Reserves and Local Wildlife Sites, have been assessed in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**). Through design and embedded measures impacts to these receptors have been reduced. Where impacts are unavoidable, habitat reinstatement would take place post-construction. No likely significant residual effects in relation to biodiversity receptors during construction or operation are anticipated as a result of the project.
	Ancient woodland, ancient trees, veteran trees and other irreplaceable habitats	
5.4.14 and 5.4.15	Irreplaceable habitats are habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Keepers of Time, the government's policy for ancient and native trees and woodlands in England sets out the government's commitment to maintain and enhance the existing area of ancient woodland, maintain and enhance the existing resource of known ancient and veteran trees, excluding natural losses from disease and death, and to increase the percentage of ancient woodland in active. Ancient and veteran trees found outside ancient woodland are also particularly valuable. Other types of irreplaceable habitats include blanket bog, limestone pavement, coastal sand dunes, spartina salt marsh swards, Mediterranean saltmarsh, scrub, and lowland fen.	Commitments specifically put in place to reduce potential effects at Hintlesham Woods are described in Table 3.1 of Annex B of ES Appendix 7.1: Hintlesham Woods SSSI Assessment [**APP-111**]. These measures are contained within the REAC which is Appendix B of the CEMP (**document 7.5.2 (D)**). The commitments to reduce impacts upon the high valued ancient woodland habitat would result in a neutral impact to this habitat once the coppiced vegetation had re-established. As such, as a result of the project, it is not considered that the loss or deterioration of the AWI would occur. Chapter 6 of the LEMP [REP3-034] sets out specific measures and commitments in relation to ancient woodland and veteran trees. Also see response to 5.4.32 in respect to veteran trees.
	Protection and enhancement of habitats and species	
5.4.16	Many individual species receive statutory protection under a range of legislative provisions. Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales, as well as for their continued benefit for climate mitigation and adaptation and thereby requiring conservation action.	Habitats of Principal Importance have been considered in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) and ES Chapter 16: Environmental Management and Mitigation [**APP-084**] applied where required.
	Applicant assessment	

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5.4.17 and 5.4.18	Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including those outside England), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the Secretary of State consider thoroughly the potential effects of a proposed project.	ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) details the likely significant effects of the project with respect to biodiversity, including: internationally, nationally and locally designated sites; protected species and habitats; and other species identified as being of principal importance for the conservation of biodiversity. ES Chapter 10: Geology and Hydrogeology [**APP-078**] details the likely significant effects of the project with respect to geology and hydrogeology. As identified in ES Chapter 10: Geology and Hydrogeology [**APP-078**], there are no statutory designated sites for geological importance and no potential Local Geological Sites or notified Local Geological Sites within the study area.
5.4.19 to 5.4.21	The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests. Applicants should consider wider ecosystem services and benefits of natural capital when designing enhancement measures. As set out in Section 4.7, the design process should embed opportunities for nature inclusive design. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains (see Section 4.6 on Environmental and Biodiversity Net Gain). The scope of potential gains will be dependent on the type, scale, and location of each project.	National Grid has made a commitment to deliver net gain by at least 10% or greater in environmental value, including BNG, on this project. Further details can be found in the Environmental Gain Report [**APP-176**].
5.4.22	The design of Energy NSIP proposals will need to consider the movement of mobile / migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development.	The full assessment of the impacts and related mitigation measures are detailed in the ES submitted as part of this DCO application. The full list of what has been included within the scope of the assessment or justification as to why it is not included, can be found ES Appendix 5.1: Scope of the Assessment [**APP-093**]. Effects on breeding and overwintering birds are assessed in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**). As set out in paragraph 7.4.11 of ES Chapter, this includes impacts on habitats in terms of permanent habitat loss, temporary habitat loss, permanent habitat modification/degradation, and fragmentation (fragmentation impacts are typically described in terms of their impacts on species (rather than the habitats themselves). As stated in paragraph 5.2.5 of the Habitats Regulations Assessment [**REP1-007**], field surveys undertaken for the project (TEP, 2011; 2012) found no evidence that the habitats within the Order Limits provided an

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		important resource for the species of the Stour and Orwell Estuaries SPA and Ramsar. Although occasional records were made of lapwing (part of the wider water bird assemblage qualifying feature), no evidence was found to indicate that any of the qualifying bird species of the European sites regularly or consistently used fields surveyed for roosting or feeding during the winter and migratory periods.
5.4.23	Energy projects will need to ensure vessels used by the project follow existing regulations and guidelines to manage ballast water.	Noted.
	Applicant assessment – Habitats Regulations	
5.4.25	The applicant should seek the advice of the appropriate SNCB and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether an HRA Appropriate Assessment (AA) is required. Applicants can request and agree 'Evidence Plans' with SNCBs, which is a way to record upfront the information the applicant needs to supply with its application, so that the HRA can be efficiently carried out. If an AA is required, the applicant must provide the Secretary of State with such information as may reasonably be required to enable the Secretary of State to conduct the AA. This should include information on any mitigation measures that are proposed to minimise or avoid likely significant effects.	The HRA Report [**REP1-007**] has been undertaken and one aspect was taken forward to Appropriate Assessment following advice from Natural England, in accordance with paragraph 4.3.1 of EN-1. The HRA Report [**REP1-007**] presents the HRA undertaken for the project, which comprises Stage 1: Screening and Stage 2: Appropriate Assessment. It builds on the Draft HRA Screening Report published at the EIA Scoping stage [**APP-156 to APP-158**] and also in the Preliminary Environmental Information Report (National Grid, 2022). It has also been provided to Natural England to provide assurance that potential likely significant effects on European sites have been addressed appropriately and in sufficient detail. The Stage 1 Screening concluded no likely significant effects were identified on the Stour and Orwell Estuaries SPA and Ramsar from the project in relation to habitat loss; habitat or species fragmentation; or disturbance to species (i.e. displacement). However, due to potential impacts upon surface water quality through pollution and sedimentation incidents on watercourses as a result of construction, habitat degradation and subsequent reduction in species density as a result, surface water quality change was taken for Stage 2: Appropriate Assessment. Stage 2 Appropriate Assessment found that no adverse effect on the integrity of the SPA and Ramsar would occur once good practice measures in the CEMP Appendix A: CoCP [**REP3-026**] and embedded measures are employed. These measures are secured through Schedule 3, Requirement 5 of the dDCO (**document 3.1 (F)**). No in-combination effects (both intra- and inter-project) were identified.

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		The HRA Report concludes that it does not need to progress onto Stage 3 of the HRA process (to consider if proposals that would have an adverse effect on integrity of a European site qualify for an exemption) and the project is compliant with the NPS in relation to HRA. It is, therefore, considered that the assessment undertaken by National Grid is in accordance with the requirements of EN-1 in respect to habitats and species regulations.
5.4.27	If the SNCB gives such an indication at a later stage in the development consent process, the applicant must provide this information as soon as is reasonably possible and before the close of the examination. This information must include assessment of alternative solutions, a case for Imperative Reasons of Overriding Public Interest (IROPI) and appropriate environmental compensation.	Noted.
5.4.28	Provision of such information will not be taken as an acceptance of adverse impacts and if an applicant disputes the likelihood of adverse impacts, it can provide this information as part of its application 'without prejudice' to the Secretary of State's final decision on the impacts of the potential development. If, in these circumstances, an applicant does not supply information required for the assessment of a potential derogation, there will be no expectation that the Secretary of State will allow the applicant the opportunity to provide such information following the examination.	Noted.
5.2.29	It is vital that applicants consider the need for compensation as early as possible in the design process as 'retrofitting' compensatory measures will introduce delays and uncertainty to the consenting process.	See response to 5.4.25.
5.4.30	Applicants should work closely at an early stage in the pre-application process with SNCB and Defra/Welsh Government to develop a compensation plan for all protected sites adversely affected by the development. Applicants should engage with the relevant Local Planning Authority at an early stage regarding the proposed location of compensatory measures. Applicants should also take account of any strategic plan level compensation plans in developing project level compensation plans.	See response to 5.4.25.
5.4.31	Before submitting an application, applicants should seek the views of the SNCB and Defra/Welsh Government as to the suitability, securability and effectiveness of the compensation plan to ensure the development will not hinder the achievement of the conservation objectives for the protected site. In cases where such views are provided, the applicant should include a copy	See response to 5.4.25.

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	of this information with the compensation plan in their application for further consideration by the Examining Authority.	
	Applicant assessment – Ancient woodland, ancient trees, veteran trees and other irreplaceable habitats	
5.4.32	Applicants should include measures to mitigate fully the direct and indirect effects of development on ancient woodland, ancient and veteran trees or other irreplaceable habitats during both construction and operational phase.	The project has undertaken an Arboricultural Impact Assessment [**REP1-012**] in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction. This has identified trees that offer significant amenity value, such as veteran trees, which the project has sought to avoid through commitments where practicable. National Grid has held a meeting with Babergh District Council to discuss veteran tree T378 and the proposed compensation strategy. Suitable compensation measures were discussed, and National Grid is drafting up a commitment that will be issued to Babergh District Council for comment. Subject to agreeing the commitment wording, National Grid will include this text within the CEMP Appendix B REAC (**document 7.5.2 (D)**) and in a new commitment box on LEMP Appendix A [**APP-183**]. Commitments specifically put in place to reduce potential effects at Hintlesham Woods are described in Table 3.1 of Annex B of ES Appendix 7.1: Hintlesham Woods SSSI Assessment [**APP-111**]. These measures are contained within the REAC [ADD] which is Appendix B of the CEMP (**document 7.5.2 (D)**). The commitments to reduce impacts upon the high valued ancient woodland habitat would result in a neutral impact to this habitat once the coppiced vegetation had re-established. As such, as a result of the project, it is not considered that the loss or deterioration of the AWI would occur.
	Applicant assessment – Protection and enhancement of habitats and species	
5.4.33 - 5.4.34	Applicants should consider any reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity, and the protection and restoration of the ability of habitats to store or sequester carbon as set out under Section 4.6. Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance. This may include considerations	See response to 4.6.14 and 5.4.2.

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	and opportunities identified through Local Nature Recovery Strategies, and national goals and targets set through the Environment Act 2021 and the Environmental Improvement Plan 2023.	
	Mitigation	
5.4.35	Applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development. In particular, the applicant should demonstrate that: • during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works • the timing of construction has been planned to avoid or limit disturbance during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements • habitats will, where practicable, be restored after construction works have finished • opportunities will be taken to enhance existing habitats rather than replace them, and where practicable, create new habitats of value within the site landscaping proposals. Where habitat creation is required as mitigation, compensation, or enhancement the location and quality will be of key importance. In this regard habitat creation should be focused on areas where the most ecological and ecosystems benefits can be realised. • mitigations required as a result of legal protection of habitats or species will be complied with.	As noted in ES Chapter 1: Introduction [**APP-069**], the project is a NSIP and Order Limits have been defined to encompass the land required temporarily to build the project and permanently to operate the project. The Order Limits include LoD, which represent the maximum locational flexibility for permanent infrastructure, such as the overhead line, pylons, CSE compounds and underground cables. Hintlesham Woods SSSI is designated for its woodland bird assemblage. Therefore, National Grid has made a commitment to limit the works scheduled within bird breeding season to those that need to take place during a planned outage, which would apply to both the baseline construction schedule and the alternative scenario. Temporary features such as site cabins, fencing and scaffolding would generally be removed at the end of construction. Some temporary access routes (including any temporary bridges, culverts and bellmouths) would be in place for the duration of construction (up to four years) to maintain access to the working area and to reduce the number of heavy goods vehicles (HGV) using the local road network. However, temporary access routes would be removed where these are no longer required. Any stripped topsoil would be reinstated, and the temporary working areas would generally be reinstated to their former use as described within the CEMP [**REP-024**]. Land would be reinstated as soon as reasonably practicable and mitigation planting may continue beyond the construction phase, based on seasonal constraints.
5.4.36	Applicants should produce and implement a Biodiversity Management Strategy as part of their development proposals. This could include provision for biodiversity awareness training to employees and contractors so as to avoid unnecessary adverse impacts on biodiversity during the construction and operation stages.	National Grid has identified a number of good practice measures, which generally comprise measures imposed through legislative requirements or represent standard sector good practices. These include GG05 of CEMP Appendix A: CoCP [**REP3-026**], which states: *'Construction workers will undergo training to increase their awareness of environmental issues on the project. Topics will include but not be limited to:* • *Location and protection of sensitive environmental sites and features;*

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		• *Adherence to protected environmental areas around sensitive features;* • *Working hours and noise and vibration reduction measures...'* The CEMP is secured by Requirement 4 in the dDCO (**document 3.1 (F)**).
5.4.38	To further minimise any adverse impacts on geodiversity, where appropriate applicants are encouraged to produce and implement a Geodiversity Management Strategy to preserve and enhance access to geological interest features, as part of relevant development proposals.	Chapter 10 of the CEMP (**document 7.5 (C)**) 'Geology and Hydrogeology' considers the potential impacts on the geology and hydrogeology during construction and operation of the project, and whether those impacts are likely to result in significant effects on groundwater, mineral deposits, designated geological sites, surface water (associated with groundwater impacts) and human health. This also Chapter sets out the good practice measures that will be undertaken during construction activities to reduce the risk to geology and hydrogeology receptors and support the assessment.
	Secretary of State decision making	
5.4.39	The government's 25 Year Environment Plan and the Environment Act 2021 mark a step change in ambition for wildlife and the natural environment. The Secretary of State should have regard to the aims and goals of the government's Environmental Improvement Plan 2023, and in Wales the objectives of the Nature Recovery Plan, and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.	See response to 4.6.14 and 5.4.2.
5.4.41	The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The Secretary of State may take account of any such net benefit in cases where it can be demonstrated.	Noted.
5.4.42 and 5.4.43	As a general principle, and subject to the specific policies below, development should, in line with the mitigation hierarchy, aim to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives (as set out in Section 4.3 above). Where significant harm cannot be avoided, impacts should be mitigated and as a last resort, appropriate compensation measures should be sought. If significant harm to biodiversity resulting from a development cannot be avoided (for example through locating on an alternative site with less harmful	Noted.

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	impacts), adequately mitigated, or, as a last resort, compensated for, then the Secretary of State will give significant weight to any residual harm.	
5.4.44	The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into, in order to ensure that any mitigation or biodiversity net gain measures, if offered, are delivered and maintained. Any habitat creation or enhancement delivered including linkages with existing habitats for compensation or biodiversity net gain should generally be maintained for a minimum period of 30 years, or for the lifetime of the project, if longer.	National Grid has also committed to delivering at least 10% biodiversity net gain on the project, which is secured through Requirement 13 of the dDCO (**document 3.1 (F)**). Areas of planting proposed for biodiversity net gain, as described in the Environmental Gain Report [**APP-176**] would be subject to up to 30-year management. National Grid has also committed to a up to 30-year aftercare period for the mitigation planting MM09 at Hintlesham Woods, which is a priority site for development of mixed broadleaved native woodland planting, scrub planting and species rich grassland.
5.4.45	The Secretary of State will need to take account of what mitigation measures may have been agreed between the applicant and the SNCB and the MMO/NRW (where appropriate). The Secretary of State will also need to consider whether the SNCB or the MMO/NRW has granted or refused, or intends to grant or refuse, any relevant licences, including protected species mitigation licences.	Embedded and good practice measures to avoid significant impacts on biodiversity are found in the CEMP (**document 7.5 (C)**) and CoCP [**REP3-026**]. These have been reviewed by Natural England who has provided comments upon which National Grid are working to address. Draft protected species mitigation licences have been submitted for badger, bat and hazel dormouse in order to secure a Letter of No Impediment (LONI) from Natural England. These have been secured for bats and badger while a revised draft dormouse mitigation licence is under review. Appropriate mitigation measures have been discussed with Natural England. As such, see also the Draft Statement of Common Ground Natural England (**document 7.3.2 (D)**)
5.4.46 and 5.4.47	Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. The Secretary of State should give appropriate weight to environmental and biodiversity enhancements, although any weight given to gains provided to meet a legal requirement (for example under the Environment Act 2021) is likely to be limited. When considering proposals, the Secretary of State should maximise such reasonable opportunities in and around developments, using requirements or planning obligations where appropriate. This can help towards delivering biodiversity net gain as part of or in addition to the approach set out at Section 4.6.	The project secures an environmental net gain (despite not being a mandatory requirement) weighing in its favour. This net gain is in addition and separate to any required EIA mitigation to avoid overlap or double counting. Whilst BNG is not required by the Environment Act 2021 at the present time, the principles of at least 10% BNG are recognised as an integral component of existing and emerging policy and aligns closely with National Grid's own commitments. Turning to Requirement 13, this secures the delivery of at least 10% BNG, in that National Grid must provide written evidence of its compliance, based on the metric, showing how at least 10% will be delivered. That detail must be submitted before the overhead / underground connection comes into first operational use. The Environmental Gain Report [**APP-176**] provides an initial calculation (see paragraph 8.3.1) which would be updated and refined during

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		detailed design. In light of the above, National Grid considers that the commitment to BNG weighs in favour of the granting of development consent.
5.4.48	In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national, and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.	Noted. These are all considered within the application for development consent.
	Secretary of State decision making – Habitats Regulations	
5.4.49	The Secretary of State must consider whether the project is likely to have a significant effect on a protected site which is part of the National Site Network (an habitat site), a protected marine site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects.	Noted.
	Secretary of State decision making – Sites of Special Scientific Interest (SSSIs)	
5.4.50	The Secretary of State should use requirements and/or planning obligations to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest.	Noted.
	Secretary of State decision making – Regional and Local Sites	
5.4.52	The Secretary of State should give due consideration to regional or local designations. However, given the need for new nationally significant infrastructure, these designations should not be used in themselves to refuse development consent.	As noted in ES Chapter 10: Geology and Soils [**APP-078**] there are no Regional or Local Geological Sites affected by the project. Potential impacts on sites of regional and local biodiversity interest have been assessed in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**). Through design and embedded measures impacts to these receptors have been reduced. Where impacts are unavoidable, habitat reinstatement would take place post-construction. No likely significant residual effects in relation to biodiversity receptors during construction or operation are anticipated as a result of the project.
	Secretary of State decision making – Ancient woodland, ancient trees, veteran trees and other irreplaceable habitats	

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5.4.53	The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of any irreplaceable habitats, including ancient woodland, and ancient and veteran trees unless there are wholly exceptional reasons and a suitable compensation strategy exists.	**Ancient Woodland** ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) sets out the assessment of the project on ancient woodland. This is supported by ES Appendix 7.1 Annex B Hintlesham Woods SSSI Assessment [**APP-**111] and the Technical Note on Ancient Woodland and Potential Ancient Woodland [**REP3-046**] which provide further details about the proposed works. National Grid has used the mitigation hierarchy to 'avoid' impacts to the ancient woodland by routeing the reinforcement around Hintlesham Woods SSSI and other ancient woodland. The assessment concludes that there would be no significant effects to the ancient woodland, when taking into account the embedded and good practice measures in the CoCP and the REAC [**APP3-024** and **REP4-018** respectively] **Veteran Trees** Only one veteran tree (T378) will be affected by the project. It is likely that it will need to be felled due to its location within the cable swathe and a commitment (EM-G13) has been added to the REAC (**document 7.5.2 (D)**) to compensate for the loss.
	Secretary of State decision making – Protection and enhancement of habitats and species	
5.4.54	The Secretary of State should ensure that species and habitats identified as being of importance for the conservation of biodiversity are protected from the adverse effects of development by using requirements, planning obligations, or licence conditions where appropriate.	Noted.
5.4.55	The Secretary of State should refuse consent where harm to a protected species and relevant habitat would result, unless there is an overriding public interest and the other relevant legal tests are met. In this context the Secretary of State should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance or the climate resilience and the capacity of habitats to store carbon, which it considers may result from a proposed development.	See response to 5.4.41.
5.7	**Dust, Odour, Artificial Light, Smoke, Steam, and Insect Infestation**	
5.7.1	During the construction, operation and decommissioning of energy infrastructure there is potential for the release of a range of emissions such as odour, dust, steam, smoke, artificial light and infestation of insects. All have	The Statement of Statutory Nuisance [**APP-058**] identifies the matters set out in Section 79(1) of the EPA 1990 in respect of statutory nuisance and considers whether the project has the potential to cause nuisance.

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	the potential to have a detrimental impact on amenity or cause a common law nuisance or statutory nuisance under Part III, Environmental Protection Act 1990. However, they are not regulated by the environmental permitting regime, so mitigation of these impacts will need to be included in the Development Consent Order.	The Statement of Statutory Nuisance concludes that with the good practice measures in place, that there are no likely nuisances, including dust, odour, artificial light, smoke or insect infestation, anticipated on the project. In accordance with paragraph 5.6.6 of EN-1, in relation to the scope of assessment for insect infestation and emissions of odour, dust, steam, smoke and artificial light; National Grid published the EIA Scoping Report Main Report [**APP-156**] in 2021 which set out the proposed scope of the assessment including on air quality (dust) and landscape (artificial light). Further details on the responses received on the Scoping Report can be found in ES Appendix 5.2: Response to Consultation Feedback [**APP-094**].
5.7.2	Note that pollution impacts from some of these emissions (for example dust, smoke) are covered in the Section 5.2 on air emissions.	Noted.
5.7.3	Because of the potential effects of these emissions and infestation, and in view of the availability of the defence of statutory authority against nuisance claims described in Section 4.15, it is important that the potential for these impacts is considered by the applicant and Secretary of State.	Noted.
5.7.4	For energy NSIPs of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. The aim should be to keep impacts to a minimum, and at a level that is acceptable.	Noted.
	Applicant assessment	
5.7.5	The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke, and artificial light to have a detrimental impact on amenity, as part of the ES.	In accordance with paragraph 5.6.6 of EN-1, in relation to the scope of assessment for insect infestation and emissions of odour, dust, steam, smoke and artificial light; National Grid published the EIA Scoping Report Main Report [**APP-156**] in 2021 which set out the proposed scope of the assessment including on air quality (dust) and landscape (artificial light). Further details on the responses received on the Scoping Report can be found in ES Appendix 5.2: Response to Consultation Feedback [**APP-094**]. No significant effects in respect to odour, dust, steam, smoke and artificial light are expected during the operational phase of the project. As described in ES Chapter 13: Air Quality [**APP-081**], during the construction phase, construction machinery and vehicles could generate

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		dust and fine particulate matter, particularly through earthwork and soil stripping activities. Machinery and vehicles would also emit exhaust emissions through the combustion of fossil fuels. There is limited potential for the project to generate dust and emissions during the operational phase, due to the limited activities associated with inspection and maintenance therefore this has been scoped out of the assessment. A dust risk assessment has been undertaken and is reported in ES Appendix 13.1: Dust Risk Assessment [**APP-135**]. The impact of lighting is assessed in ES Chapter 6: Landscape and Visual [**APP-074**] Lighting shall be the lowest average lux levels necessary for safe delivery of each task and shall be positioned and directed to reduce the intrusion into adjacent properties and habitats, where practicable as per the good practice measure in the CEMP Appendix A: CoCP [**REP3-026**]. During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**]. to reduce the potential for adverse impacts due to the release of emissions or insect infestation. For example, in accordance with commitment GG11 within the CEMP Appendix A: CoCP [**REP3-026**]. site layout and housekeeping measures would be implemented by the contractor during the set-up of the temporary compounds preventing pests and vermin control, and treating any infestation promptly, including arrangements for the proper storage and disposal of waste produced on site. In addition, a statement of statutory nuisance has been undertaken. See the Statement of Statutory Nuisance [**APP-058**].
5.7.6	In particular, the assessment provided by the applicant should describe: • the type, quantity and timing of emissions • aspects of the development which may give rise to emissions • premises or locations that may be affected by the emissions • effects of the emission on identified premises or locations • measures to be employed in preventing or mitigating the emissions	No significant effects in respect to emissions during operation of the project are expected. As described in ES Chapter 13: Air Quality [**APP-081**] during the construction phase, construction machinery and vehicles could generate dust and fine particulate matter, particularly through earthwork and soil stripping activities. Machinery and vehicles would also emit exhaust emissions through the combustion of fossil fuels. A dust risk assessment has been undertaken and is reported in ES Appendix 13.1: Dust Risk Assessment [**APP-135**]. During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**] to reduce the potential for adverse impacts due to the release of emissions or infestation. In addition, a statement of statutory nuisance has been undertaken. See the Statement of Statutory Nuisance [**APP-058**].

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5.7.7	The applicant is advised to consult the relevant local planning authority and, where appropriate, the EA about the scope and methodology of the assessment.	National Grid has had regular meetings with the Host Authorities and other relevant consultees, such as Natural England and the Environment Agency, since the project relaunch in December 2020. These have included thematic meetings to discuss survey methodology and results of surveys and the scope and methodology of the EIA assessment. Further details on these meetings can be found in ES Appendix 5.2: Response to Scoping Comments [**APP-094**]. Separate to this, Statement of Common Ground were progressed with the Host Authorities and Statutory Consultees which provided a record of engagement and subject matters which are agreed/not agreed, including the scope of the environmental assessments. Further information can be found in the relevant consultee Draft Statement of Common Ground. Please refer to the Status of Statements of Common Ground (**document 7.3 (F)**).
	Mitigation	
5.7.8	Mitigation measures may include one or more of the following: • engineering: prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated • lay-out: adequate distance between source and sensitive receptors; reduced transport or handling of material • administrative: limiting operating times; restricting activities allowed on the site; implementing management plans	During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**] to reduce the potential for adverse impacts due to the release of emissions or infestation. These include control measures such as turning off machinery when not in use (GG12), layout measures such as locating equipment away from sensitive receptors where practicable (GG10) and the implementation of management plans (GG03).
5.7.9	Construction should be undertaken in a way that reduces emissions, for example the use of low emission mobile plant during the construction, and demolition phases as appropriate, and consideration should be given to making these mandatory in Development Consent Order requirements.	National Grid has identified a number of good practice measures, which generally comprise measures imposed through legislative requirements or represent standard sector good practices. These include GG12 of CEMP Appendix A: CoCP [**REP3-026**], which states: *'Plant and vehicles will conform to relevant standards for the vehicle or plant type as follows:* • *Euro 4 (nitrogen oxides (NOx)) for petrol cars, vans and minibuses;* • *Euro 6 (NOx and particulate matter (PM)) for diesel cars, vans and minibuses;* • *Euro VI (NOx and PM) for lorries, buses, coaches and Heavy Goods Vehicles (excluding specialist abnormal indivisible loads); and*

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		• *Stage V (NOx, PM, hydrocarbons, carbon monoxide (CO) and sulphur dioxide (SO2)) for non-road engines (static plant and non-road mobile machinery).* *Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so.'* The CEMP is secured by Requirement 4 in the dDCO (**document 3.1 (F)**).
5.7.10	Demolition considerations should be embedded into designs at the outset to enable demolition techniques to be adopted that remove the need for explosive demolition.	Not applicable (not expecting any explosive demolition).
5.7.11	A construction management plan may help clarify and secure mitigation	The CEMP (**document 7.5 (C)**) provides the securing mechanism for the embedded measures, good practice measures and additional mitigation. The CoCP [**REP3-026**] forms Appendix A to the CEMP (**document 7.5 (C)**) and the REAC (**document 7.5.2 (D)**) is in Appendix B of the CEMP. The CEMP and its appendices are secured through Requirement 4 of the dDCO (**document 3.1 (F)**).
	Secretary of State decision making	
5.7.12	The Secretary of State should satisfy itself that: an assessment of the potential for artificial light, dust, odour, smoke, steam and insect infestation to have a detrimental impact on amenity has been carried out • that all reasonable steps have been taken, and will be taken, to minimise any such detrimental impacts	See responses to 5.7.7 and 5.7.8.
5.8	**Flood Risk**	
5.8.1	Flooding is a natural process that plays an important role in shaping the natural environment. However, flooding threatens life and causes substantial disruption and damage to property.	Noted.
5.8.2	The effects of weather events on the natural environment, life and property can be increased in severity both as a consequence of decisions about the location, design and nature of settlement and land use, and as a potential	Noted.

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	consequence of future climate change. Having resilient energy infrastructure not only reduces the risk of flood damages to the infrastructure, it also reduces the disruptive impacts of flooding on those homes and businesses that rely on that infrastructure. Although flooding cannot be wholly prevented, its adverse impacts can be avoided or reduced through good planning and management.	
5.8.3	The government's Flood and Coastal Erosion Risk Management Policy Statement[212] sets out our ambition to create a nation more resilient to future flood and coastal erosion risk. It outlines policies and actions which will accelerate progress to better protect and better prepare the country against flooding and coastal erosion. The industry should consider any updates to government policy and apply updated approaches as a matter of priority.	The FRA [**APP-059**] has been submitted as part of the application for development consent focussing on flood risk from fluvial, surface water and groundwater sources. As detailed within the FRA [**APP-059**] flooding from other sources such as tidal, sewers and canals are scoped out of the assessment. National Grid also circulated a draft version of the FRA to the Environment Agency, IDB and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the submission version of the FRA. The Draft Statement of Common Ground Environment Agency (**document 7.3.3 (D)**) confirms the Environment Agency have no outstanding Flood Risk concerns.
5.8.4	All buildings in flood risk areas can improve their preparedness to reduce costs and disruption to key public services when a flood happens. Where infrastructure is not better protected as part of a wider community scale flood defence scheme, those who own and run infrastructure sites – whether in public or private hands – are expected to take action to keep water out, minimise the damage if water gets in through flood-resilient materials, and reduce the disruption caused. This includes effective contingency planning to mitigate the impacts of flooding on the delivery of important services.	No permanent infrastructure would be located in Flood Zone 3. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Measure W14 in the CEMP Appendix A: CoCP [**REP-026**] states that pylons would be located outside of Flood Zones 2 and 3 or where this is not practicable positioned in accordance with the conditions of a FRAP. It is therefore concluded by the FRA [**APP-059**] that the project complies with the ethos of the Sequential Test and as such, application of the Exception Test is not required. The remaining structures including above ground structures such as pylons and below ground structures such as the underground cable are designed to National Grid technical standards to be resilient to flooding, wind, storms, extreme temperature and earth movement. The Environment Agency Written Representation [**REP2-023**] states they have no outstanding Flood Risk concerns.
5.8.5	Climate change is already having an impact and is expected to have an increasing impact on the UK throughout this century. The UK Climate Projections 2018 show an increased chance of milder, wetter winters and hotter, drier summers in the UK, with more intensive rainfall causing flooding. Sea levels will continue to rise beyond the end of the century, increasing risks	See response to 4.10.3.

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	to vulnerable coastal communities. Within the lifetime of energy projects, these factors will lead to increased flood risks in areas susceptible to flooding, and to an increased risk of the occurrence of floods in some areas which are not currently thought of as being at risk. A robust approach to flood risk management is a vital element of climate change adaptation; the applicant and the Secretary of State should take account of the policy on climate change adaptation in Section 4.10.	
5.8.6	The aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to steer new development to areas with the lowest risk of flooding.	Noted. See response to 5.8.4 and 5.8.10 and 5.8.11.
5.8.7	Where new energy infrastructure is, exceptionally, necessary in flood risk areas (for example where there are no reasonably available sites in areas at lower risk), policy aims to make it safe for its lifetime without increasing flood risk elsewhere and, where possible, by reducing flood risk overall. It should also be designed and constructed to remain operational in times of flood.	Noted. See response to 5.8.4.
5.8.9	If, following application of the Sequential Test, it is not possible, (taking into account wider sustainable development objectives), for the project to be located in areas of lower flood risk the Exception Test can be applied as defined in https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2. 215 The test provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.	No permanent infrastructure would be located in Flood Zone 3. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. W14 in the CEMP Appendix A: CoCP [**REP3-026**] states that pylons would be located outside of Flood Zones 2 and 3 or where this is not practicable positioned in accordance with the conditions of a FRAP. It is therefore concluded by the FRA [**APP-059**] that the project complies with the ethos of the Sequential Test and as such, application of the Exception Test is not required. The Environment Agency Written Representation [**REP2-023**] states they have no outstanding Flood Risk concerns.
5.8.10 and 5.8.11	The Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site. It would only be appropriate to move onto the Exception Test when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would provide a clear reason for refusing development in any alternative locations identified. Examples could include alternative site(s) that are subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty	A sequential approach has been taken in siting the project. Due to the linear nature of the project some sections must necessarily be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). Detail on the Sequential and Exception Test are provided in Section 3 of the FRA [**APP-059**] submitted as part of the application for development consent. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1,

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	(AONBs), SSSIs and World Heritage Sites (WHS) which would not usually be considered appropriate. Both elements of the Exception Test will have to be satisfied for development to be consented. To pass the Exception Test it should be demonstrated that: • the project would provide wider sustainability benefits to the community that outweigh flood risk; and • the project 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.	satisfying the Sequential Test. Therefore, the application of the Exception Test is subsequently unnecessary for this project.
5.8.12	Development should be designed to ensure there is no increase in flood risk elsewhere, accounting for the predicted impacts of climate change throughout the lifetime of the development. There should be no net loss of floodplain storage and any deflection or constriction of flood flow routes should be safely managed within the site. Mitigation measures should make as much use as possible of natural flood management techniques.	See response to 5.8.4.
	Applicant assessment	
5.8.13	A site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3 in England or Zones B and C in Wales. In Flood Zone 1 in England or Zone A in Wales, an assessment should accompany all proposals involving: • sites of 1 hectare or more • land which has been identified by the EA or NRW as having critical drainage problems • land identified (for example in a local authority strategic flood risk assessment) as being at increased flood risk in future • land that may be subject to other sources of flooding (for example surface water) • where the EA or NRW, Lead Local Flood Authority, Internal Drainage Board or other body have indicated that there may be drainage problems.	The FRA [**APP-059**] has been submitted as part of the application for development consent focussing on flood risk from fluvial, surface water and groundwater sources. As detailed within the FRA [**APP-059**] flooding from other sources such as tidal, sewers and canals are scoped out of the assessment. National Grid also circulated a draft version of the FRA to the Environment Agency, IDB and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the submission version of the FRA.
5.8.14	This assessment should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.	The project has prepared a proportionate FRA [**APP-059**]. This has been prepared by a competent person and draws on available data including historical information on previous events. The FRA [**APP-059**] assesses all relevant forms of flooding, although flooding from tidal, sewers and canals were scoped out of the assessment. It also takes into account the impacts of climate change over the development lifetime. It assesses the

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		effects of the development on flood risk and of flood risk on the development. The draft FRA was shared with the Environment Agency, IDB and LLFA ahead of the submission for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the application submission version of the FRA, as well as in accordance with the minimum requirements detailed in paragraph 5.7.5. The FRA demonstrates that the project is acceptable with respect to flood risk and the flood risk management measures identified would be secured through the CEMP (**document 7.5 (C)**) and Requirement 5 of the dDCO (**document 3.1 (F)**).
5.8.15	The minimum requirements for Flood Risk Assessments (FRA) are that they should: • be proportionate to the risk and appropriate to the scale, nature and location of the project; • consider the risk of flooding arising from the project in addition to the risk of flooding to the project; take the impacts of climate change into account, across a range of climate scenarios, clearly stating the development lifetime over which the assessment has been made218; • be undertaken by competent people, as early as possible in the process of preparing the proposal; • consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure and exceedance; • consider the vulnerability of those using the site, including arrangements for safe access and escape; • consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and include information on flood likelihood, speed-of-onset, depth, velocity, hazard and duration; • identify and secure opportunities to reduce the causes and impacts of flooding overall, making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management; • consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes;	The project has prepared a proportionate FRA [**APP-059**]. This has been prepared by a competent person and draws on available data including historical information on previous events. The FRA [**APP-059**]. assesses all relevant forms of flooding, although flooding from tidal, sewers and canals were scoped out of the assessment. It also takes into account the impacts of climate change over the development lifetime. It assesses the effects of the development on flood risk and of flood risk on the development. The draft FRA was shared with the Environment Agency, IDB and LLFA ahead of the submission for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the application submission version of the FRA, as well as in accordance with the minimum requirements. The FRA demonstrates that the project is acceptable with respect to flood risk and the flood risk management measures identified would be secured through the CEMP (**document 7.5 (C)**) and Requirement 5 of the dDCO (**document 3.1 (F)**).

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	• include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that these risks can be safely managed, ensuring people will not be exposed to hazardous flooding; • consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems. Information should include: i. Describe the existing surface water drainage arrangements for the site ii. Set out (approximately) the existing rates and volumes of surface water run-off generated by the site. Detail the proposals for restricting discharge rates iii. Set out proposals for managing and discharging surface water from the site using sustainable drainage systems and accounting for the predicted impacts of climate change. If sustainable drainage systems have been rejected, present clear evidence of why their inclusion would be inappropriate. Demonstrate how the hierarchy of drainage options has been followed.219 v. Explain and justify why the types of SuDS220 and method of discharge have been selected and why they are considered appropriate. vi. Explain how sustainable drainage systems have been integrated with other aspects of the development such as open space or green infrastructure, so as to ensure an efficient use of the site vii. Describe the multifunctional benefits the sustainable drainage system will provide viii. Set out which opportunities to reduce the causes and impacts of flooding have been identified and included as part of the proposed sustainable drainage system ix. Explain how run-off from the completed development will be prevented from causing an impact elsewhere x. Explain how the sustainable drainage system been designed to facilitate maintenance and, where relevant, adoption. Set out plans for ensuring an acceptable standard of operation and maintenance throughout the lifetime of the development • detail those measures that will be included to ensure the development will be safe and remain operational during a flooding event throughout the development's lifetime without increasing flood risk elsewhere;	

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	• identify and secure opportunities to reduce the causes and impacts of flooding overall during the period of construction; and • be supported by appropriate data and information, including historical information on previous events.	
5.8.16	Further guidance can be found in the Planning Practice Guidance Flood Risk and Coastal Change section which accompanies the NPPF, TAN15 for Wales or successor documents.	Noted.
5.8.17	Development (including construction works) will need to account for any existing watercourses and flood and coastal erosion risk management structures or features, or any land likely to be needed for future structures or features so as to ensure: - Access, clearances and sufficient land are retained to enable their maintenance, repair, operation, and replacement, as necessary - Their standard of protection is not reduced Their condition or structural integrity is not reduced	The GSP substation and the CSE compounds including their Limits of Deviation have been located outside of areas at medium and high risk of river flooding. A trenchless crossing is proposed at the River Box and the River Stour. The drive pits will be located outside of Flood Zone 3 where practicable or will be managed in accordance with the flood risk action plan (W08 in the CoCP [**REP3-026**]). On receipt of a severe flood warning, the Contractor would deploy suitable flood protection measures to safeguard work site personal and equipment. A trenchless crossing would avoid disturbance to the river habitats and geomorphological features and would also reduce disruption to water-based recreation users such as canoeists. This would also reduce flood risk to construction workers, equipment and materials and reduce the risk of pollution during flood conditions. The Order Limits have been widened at the crossing of the River Stour to accommodate soil storage outside of Flood Zone 3 where practicable or to allow placement of soil leaving gaps to avoid blocking floodplain flow paths. The proposed design and construction methodology for the bridges would be agreed with the Environment Agency as part of an application for the relevant Flood Risk Activity Permit
5.8.18 – 5.8.19	Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions before the official pre-application stage of the NSIP process with the EA or NRW, and, where relevant, other bodies such as Lead Local Flood Authorities, Internal Drainage Boards, sewerage undertakers, navigation authorities, highways authorities and reservoir owners and operators. Such discussions should identify the likelihood and possible extent and nature of the flood risk, help scope the FRA, and identify the information that will be	National Grid has held several meetings with relevant organisations, including the Environment Agency and Essex County Council and Suffolk County Council in their roles as the LLFA to inform the development of the FRA [**APP-059**]. National Grid also circulated a draft version of the FRA to the Environment Agency, IDB and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the submission version of the FRA. Details

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	required by the Secretary of State to reach a decision on the application when it is submitted. The Secretary of State should advise applicants to undertake these steps where they appear necessary but have not yet been addressed.	on the consultation undertaken can be found in Section 1.3 of the FRA [**APP-059**]. Also refer to the relevant Statement of Common Ground prepared with the Consultees; Draft Statement of Common Ground Environment Agency (**document 7.3.3 (D)**); Draft Statement of Common Ground Local Authorities (**document 7.3.1 (C)**); Draft Statement of Common Ground Water Management Alliance [**APP-172**];
5.8.20	If the EA, NRW or another flood risk management authority has reasonable concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the EA or NRW and take all reasonable steps to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the authority's concerns.	National Grid has held a number of meetings with relevant organisations, including the Environment Agency and the LLFA. Discussions have informed the development of the FRA [**APP-059**] Details on the consultation undertaken can be found in ES Appendix 5.2: Response to Consultation Feedback [**APP-094**].
5.8.21 to 5.8.23	The Sequential Test ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should go on to compare reasonably available sites with medium risk areas and then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas The technology specific NPSs set out some exceptions to the application of the Sequential Test. However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test, informed by a strategic flood risk assessment, applicants need not apply the Sequential Test, provided the proposed development is consistent with the use for which the site was allocated and there is no new flood risk information that would have affected the outcome of the test. Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.3 above. All projects should apply the Sequential Test to locating development within the site.	A sequential approach has been taken in siting the project. Due to the linear nature of the project some sections must necessarily be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). Detail on the Sequential and Exception Test are provided in Section 3 of the FRA [**APP-059**] submitted as part of the application for development consent. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Therefore, the application of the Exception Test is subsequently unnecessary for this project.
	Mitigation	
5.8.24	To satisfactorily manage flood risk, arrangements are required to manage surface water and the impact of the natural water cycle on people and property	Drainage would be managed in accordance with the measures outlined in the CoCP [**REP3-026**]. Where new, permanent areas of impermeable land cover are created, the drainage design would be in accordance with the requirements of the Essex County Council SuDS Design Guide (2020) and the Suffolk County Council SuDS Palette (2021) and would include allowances for climate change in accordance with current (May

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		2022) Environment Agency requirements. The drainage infrastructure would provide the storage necessary to achieve discharges at greenfield rates and would not significantly alter groundwater recharge patterns by transferring a significant recharge quantity from one catchment to another. A specialised drainage contractor would review the designs and would provide advice to National Grid and its contractor during relevant construction and reinstatement activities.
5.8.25	In this NPS, the term SuDS refers to the whole range of sustainable approaches to surface water drainage management including, where appropriate: • source control measures including rainwater recycling and drainage • infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities • filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns • filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide storage if needed • basins, ponds and tanks to hold excess water after rain and allow controlled discharge that avoids flooding • flood routes to carry and direct excess water through developments to minimise the impact of severe rainfall flooding	Noted.
5.8.26	Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.	See response to 5.8.24
5.8.27	The surface water drainage arrangements for any project should, accounting for the predicted impacts of climate change throughout the development's lifetime, be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.	See response to 5.8.24
5.8.28	It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration facilities or attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation.	See response to 5.8.24

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5.8.29	The sequential approach should be applied to the layout and design of the project. Vulnerable aspects of the development should be located on parts of the site at lower risk and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.	A sequential approach has been taken in siting the project. Due to the linear nature of the project some sections must necessarily be located in areas with a medium or high likelihood of flooding (Flood Zones 2 and 3). Detail on the Sequential and Exception Test are provided in Section 3 of the FRA [**APP-059**] submitted as part of the application for development consent. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Therefore, the application of the Exception Test is subsequently unnecessary for this project. Surface water runoff from permanent infrastructure would be drained using appropriate SuDS techniques to meet the discharge requirements of the LLFA. National Grid is not seeking compulsory acquisition powers to creating areas of open space or to change the built footprint of previously developed sites as part of the application.
5.8.30	Where a development may result in an increase in flood risk elsewhere through the loss of flood storage, on-site level-for-level compensatory storage, accounting for the predicted impacts of climate change over the lifetime of the development, should be provided.	During operation, the reinforcement would generally be elevated (overhead line) or buried (underground cable). Good practice measure W14 states that pylons would not be constructed within 8m of the top of bank of main rivers, therefore even with the flexibility provided by the Limits of Deviation the GSP substation, CSE compounds and pylons would be situated in Flood Zone 1. Operational flood risk in relation to rivers is therefore concluded to be very low. In line with good practice measures W06 and GG07, detailed in the CoCP [**REP3-026**] there will be no permanent land raising within Flood Zone 3, nor any permanent changes to the channel form of any watercourses, and land will be restored to pre-construction condition and use. The risk of fluvial flooding impacts on third parties as a result of the project during its operation is also very low. During operation of the project, there would be a very low risk of fluvial flooding and there would be no increase in flood risk as a consequence of the project's operation. The FRA [**APP-059**] has concluded that there would not be any increase in surface water flood risk as a consequence of the project during construction or operation.

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5.8.33 – 5.8.34	The receipt of and response to warnings of floods is an essential element in the management of the residual risk of flooding. Flood Warning and evacuation plans should be in place for those areas at an identified risk of flooding. The applicant should take advice from the local authority emergency planning team, emergency services and, where appropriate, from the local resilience forum when producing an evacuation plan for a manned energy project as part of the FRA. Any emergency planning documents, flood warning and evacuation procedures that are required should be identified in the FRA.	Good practice commitment W08 in the CoCP [**REP3-026**], states that the contractor would subscribe to the Environment Agency's Floodline service, which provides advance warning of potential local flooding events, and subscribe to the Met Office's Weather Warnings email alerts system and any other relevant flood warning information. The contractor would implement a suitable flood risk action plan, which would include appropriate evacuation procedures should a flood occur or be forecast. This and other flood risk measures in the CoCP would be secured through the CEMP (**document 7.5 (C)**) and Requirement 5 of the dDCO (**document 3.1 (F)**). No flood warning and evacuation plan is required for operation of the project as the permanent above ground infrastructure is unmanned during operation.
	Secretary of State decision making	
5.8.36	In determining an application for development consent, the Secretary of State should be satisfied that where relevant: • the application is supported by an appropriate FRA • the Sequential Test has been applied and satisfied as part of site selection • a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk • the proposal is in line with any relevant national and local flood risk management strategy227 • SuDS (as required in the next paragraph on National Standards) have been used unless there is clear evidence that their use would be inappropriate. • in flood risk areas the project is designed and constructed to remain safe and operational during its lifetime, without increasing flood risk elsewhere (subject to the exceptions set out in paragraph 5.8.42) • the project includes safe access and escape routes where required, as part of an agreed emergency plan, and that any residual risk can be safely managed over the lifetime of the development land that is likely to be needed for present or future flood risk management infrastructure has been appropriately safeguarded from development to the extent that development would not prevent or hinder its construction, operation or maintenance	The FRA [**APP-059**] has been undertaken in line with relevant guidance and planning policy requirements as summarised in the document. Flood risk and land drainage effects during operation have been avoided through design. The project is classified as 'essential infrastructure' with respect to flooding vulnerability in the NPPF. The GSP substation and CSE compounds, which represent the parts of the project that are most vulnerable to flooding, are situated in Flood Zone 1, satisfying the Sequential Test. Further details can be found in the FRA [**APP-059**]. During construction, the project would comply with the good practice measures outlined within the CEMP Appendix A: CoCP [**REP3-026**] to reduce the risk of flooding. Section 4 of the FRA describes the embedded and good practice measures included to make the project resilient to climate change. These include surface water runoff from the GSP substation being drained using appropriate SuDS techniques to meet the discharge requirements of the LLFA.

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5.8.37	For energy projects which have drainage implications, approval for the project's drainage system, including during the construction period, will form part of the development consent issued by the Secretary of State. The Secretary of State will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010.	The construction phase drainage would be managed in accordance with the measures outlined in commitment W16 of the CoCP [**REP3-026**]. Surface water runoff from the GSP substation would be drained using appropriate SuDS techniques to meet the discharge requirements of the Essex LLFA.
5.8.38	In addition, the Development Consent Order, or any associated planning obligations, will need to make provision for appropriate operation and maintenance of any SuDS throughout the project's lifetime. Where this is secured through the adoption of any SuDS features, any necessary access rights to property will need to be granted.	Requirement 5 (Approval and implementation of Drainage Management Plan) of the dDCO (**document 3.1 (F)**) prevents any stage of the authorised development from being brought into operational use (as defined in Article 2(1) until a Drainage Management Plan (DMP), addressing matters related to the management of operational surface water and foul water drainage, has been approved by the relevant planning authority. Thereafter, the operational use of each stage of the authorised development must be in accordance with the DMP as approved or as otherwise amended with the approval of the relevant planning authority. GG07 in the CoCP [**REP3-026**] states that land used temporarily will be reinstated where practicable (bearing in mind any restrictions on planting and land use) to its pre-construction condition and use. This would include reinstating field drainage affected by the project. Paragraph 9.3.36 of the CEMP (**document 7.5 (C)**) states that post-construction drainage plans will be created when it has been necessary to install new or diverted permanent drainage and that underdrainage (a system of pipes made of plastic or clay that are laid under agricultural land typically at a depth of 0.75 to 1.5m) may need to be installed on land currently supporting arable agriculture, where poor drainage areas resulting from construction are identified.
5.8.39	Where relevant, the Secretary of State should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. Responsible bodies could include, for example the landowner, the relevant lead local flood authority or water and sewerage company (through the Ofwat approved Sewerage Sector Guidance), or another body, such as an Internal Drainage Board.	Were permanent drainage is installed, it will be inspected and maintained by the Applicant, as required, so that it can continue to operate the project to the design standard, safeguarding surface and groundwater quality.

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5.8.40	If the EA, NRW or another flood risk management authority continues to have concerns and objects to the grant of development consent on the grounds of flood risk, the Secretary of State can grant consent, but would need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the authority to try to resolve the concerns.	Noted.
5.8.41	Energy projects should not normally be consented within Flood Zone 3b, or Zone C2 in Wales, or on land expected to fall within these zones within its predicted lifetime. This may also apply where land is subject to other sources of flooding (for example surface water). However, where essential energy infrastructure has to be located in such areas, for operational reasons, they should only be consented if the development will not result in a net loss of floodplain storage, and will not impede water flows.	See response to 5.8.36
5.8.42	Exceptionally, where an increase in flood risk elsewhere cannot be avoided or wholly mitigated, the Secretary of State may grant consent if they are satisfied that the increase in present and future flood risk can be mitigated to an acceptable and safe level and taking account of the benefits of, including the need for, nationally significant energy infrastructure as set out in Part 3 above. In any such case the Secretary of State should make clear how, in reaching their decision, they have weighed up the increased flood risk against the benefits of the project, taking account of the nature and degree of the risk, the future impacts on climate change, and advice provided by the EA or NRW and other relevant bodies.	See response to 5.8.30
5.9	**Historic Environment**	
5.9.1	The construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment above, at and below the surface of the ground.	Noted.
5.9.2	The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, landscaped and planted or managed flora.	Noted.
5.9.3	Those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural or artistic interest are called ‘heritage assets’230. Heritage assets may be buildings, monuments, sites, places, areas or landscapes, or any combination of these. The sum of the heritage interests that a heritage asset holds is referred to as	Noted.

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	its significance.231 Significance derives not only from a heritage asset's physical presence, but also from its setting.23	
5.9.4	Some heritage assets have a level of significance that justifies official designation. Categories of designated heritage assets are: • World Heritage Sites233 • Scheduled Monuments • Protected Wreck Sites • Protected Military Remains • Listed Buildings • Registered Parks and Gardens • Registered Battlefields • Conservation Areas234 • Registered Historic Landscapes (Wales only).	Noted.
5.9.5	There are heritage assets that are not currently designated, but which have been demonstrated to be of equivalent significance to designated heritage assets of the highest significance. These are: • those that the Secretary of State has recognised as being capable of being designated as a Scheduled Monument or Protected Wreck Site but has decided not to designate • those that the Secretary of State has recognised as being of equivalent significance to Scheduled Monuments or Protected Wreck Sites but are incapable of being designated by virtue of being outside the scope of the related legislation. • those that have yet to be formally assessed by the Secretary of State, but which have potential to demonstrate equivalent significance to Scheduled Monuments or Protected Wreck Sites.	Noted.
5.9.6	Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments or Protected Wreck Sites should be considered subject to the policies for designated heritage assets235 . The absence of designation for such heritage assets does not indicate lower significance or necessarily imply that it is not of national importance.	Noted.

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5.9.7	The Secretary of State should also consider the impacts on other non-designated heritage assets (as identified either through the development plan making process by plan-making bodies, including 'local listing', or through the application, examination and decision making process). This is on the basis of clear evidence that such heritage assets have a significance that merits consideration in that process, even though those assets are of lesser significance than designated heritage assets.	Noted.
5.9.8	Impacts on heritage assets specific to types of infrastructure are included in the technology specific NPSs.	Noted.
	Applicant assessment	
5.9.9	The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA, and describe these along with how the mitigation hierarchy has been applied in the ES (see Section 4.3). This should include consideration of heritage assets above, at, and below the surface of the ground. Consideration will also need to be given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project.	ES Chapter 8: Historic Environment [**APP-076**] presents the impact of the project on heritage assets. This is supported by the visualisations in ES Appendix 6.4: Viewpoint Assessment [**APP-101 to APP-107**] and photomontages [**PDA-001**]. The desk-based assessment of heritage assets is presented in ES Chapter 8: Historic Environment [**APP-076**]. This has been supplemented by field evaluation, including geophysical survey and trial trenching. Details of these can be found in ES Chapter 8: Historic Environment [**APP-076**]. ES Chapter 8: Historic Environment [**APP-076**] and ES Appendix 8.2: Historic Environment Impact Assessment [**APP-127**] presents the impact of the project on setting of heritage assets and cross references to the visualisations in ES Appendix 6.4: Viewpoint Assessment [**APP-101 to APP-107**] and photomontages [**PDA-001**].
5.9.10 – 5.9.11	As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, Historic England or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact.	The heritage assets are described in ES Appendix 8.1: Historic Environment Baseline [**APP-125**], which in turn is supported by a gazetteer of heritage assets from archaeological remains, historic landscape features and historic buildings, both designated and non-designated. All publicly available historic environment data has been acquired from open data sources and the county HER for Essex and Suffolk. ES Appendix 8.2: Historic Environment Impact Assessment [**APP-127**] presents a proportionate assessment of the impacts of the project on the heritage assets, including their setting.

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	Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, accurate representative visualisations may be necessary to explain the impact.	Section 8.4 of ES Chapter 8: Historic Environment [**APP-076**] describes the methodology and data sources used to establish the baseline environment and the approach to consider and assess the significance of potential effects on the historic environment.
5.9.12	The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents. Studies will be required on those heritage assets affected by noise, vibration, light and indirect impacts, the extent and detail of these studies will be proportionate to the significance of the heritage asset affected.	ES Chapter 8: Historic Environment [**APP-076**] presents the impact of the project on heritage assets. This is supported by the visualisations in ES Appendix 6.4: Viewpoint Assessment [**APP-101 to APP-107**] and photomontages [**PDA-001**].The assessment also considered impacts at the designation locations from noise, vibration or groundwater changes. Paragraph 8.4.37 of ES Chapter 8: Historic Environment sets out the assumptions used when undertaking the assessment presented the chapter with regards to lighting.
5.9.13	The applicant is encouraged, where opportunities exist, to prepare proposals which can make a positive contribution to the historic environment, and to consider how their scheme takes account of the significance of heritage assets affected. This can include, where possible: • enhancing, through a range of measures such a sensitive design, the significance of heritage assets or setting affected • considering where required the development of archive capacity which could deliver significant public benefits • considering how visual or noise impacts can affect heritage assets, and whether there may be opportunities to enhance access to, or interpretation, understanding and appreciation of, the heritage assets affected by the scheme.	The AFS [**APP-186**] and OWSI [**APP-187**] stipulate the need for preservation by record i.e., archaeological hand excavation and recording, of archaeological remains not deemed significant enough to be preserved in place. The OWSI [**APP-187**] outlines the proposed process for publishing, depositing and archiving data. No significant effect has been identified to Hintlesham Hall and, therefore, no additional mitigation is proposed. However, National Grid is proposing to partially restore the original tree lined avenues to the south-west of Hintlesham Hall (Environmental Area ENV02) in the Environmental Gain Report [**APP-176**]. The enhancement proposals balance enhancing the parkland features whilst limiting impacts on the surrounding land use and local farming businesses. This is considered to make a positive contribution to the historic environment.
5.9.14	Careful consideration in preparing the scheme will be required on whether the impacts on the historic environment will be direct or indirect, temporary, or permanent.	Direct, indirect, temporary and permanent effects to heritage assets are presented in ES Chapter 8: Historic Environment [**APP-076**].
5.9.15	Applicants should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably.	The project does not propose any new development in or adjacent to Conservation Areas or World Heritage Sites. See response to 5.9.13 in respect to making a positive contribution to heritage assets.

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	Mitigation	
5.9.16	A documentary record of our past is not as valuable as retaining the heritage asset, and therefore the ability to record evidence of the asset should not be a factor in deciding whether such loss should be permitted, and whether or not consent should be given.	The AFS [**APP-186**] and OWSI [**APP-187**] stipulate the need for preservation by record wherever practicable, particularly for high value assets. Further mitigation, including the recording of evidence of the asset, is only considered where preservation in situ is not proportionate to the value of the asset.
5.9.17	Where the loss of the whole or part of a heritage asset's significance is justified, the Secretary of State will require the applicant to record and advance understanding of the significance of the heritage asset before it is lost (wholly or in part). The extent of the requirement should be proportionate to the asset's importance and significance and the impact. The applicant should be required to publish this evidence and to deposit copies of the reports with the relevant Historic Environmental Record. They should also be required to deposit the archive generated in a local museum or other public repository willing to receive it.	The AFS [**APP-186**] and OWSI [**APP-187**] stipulate the need for preservation by record i.e., archaeological hand excavation and recording, of archaeological remains not deemed significant enough to be preserved in place. The OWSI [**APP-187**] outlines the proposed process for publishing, depositing and archiving data.
5.9.18	Where appropriate, the Secretary of State will impose requirements on the Development Consent Order to ensure that the work is undertaken in a timely manner, in accordance with a written scheme of investigation that complies with the policy in this NPS and which has been agreed in writing with the relevant local authority, and to ensure that the completion of the exercise is properly secured.	The strategy for archaeological mitigation is defined within the AFS [**APP-186**] and further detail regarding specific sites are contained within the OWSI [**APP-187**]. Both these documents have been informed by discussions with historic environment advisers from the respective LPA. The OWSI [**AS-001**] is secured through Requirement 6 of the dDCO (**document 3.1 (F)**) which states that the authorised development must be undertaken in accordance with the AFS and the OWSI.
5.9.19 and 5.9.20	Where the loss of significance of any heritage asset has been justified by the applicant on the merits of the new development and the significance of the asset in question, the Secretary of State should consider: • imposing a requirement in the Development Consent Order • requiring the applicant to enter into an obligation That will prevent the loss occurring until the relevant part of the development has commenced, or it is reasonably certain that the relevant part of the development is to proceed.	ES Appendix 8.2 Annex A Hintlesham Hall Assessment [**APP-128**] presents the assessment of effects on Hintlesham Hall and its ancillary buildings. This concludes that there would be a minor adverse effect, which is not significant. Annex A also notes that although there would be harm to the setting of Hintlesham Hall and its ancillary buildings, this would not be substantial. Having regard to paragraphs 5.9.19 and 5.9.20, the harm would only occur once the 400kV overhead line is constructed in this location. Therefore, by default, such impact would not occur until the relevant part of the development has commenced in this location (i.e. the construction of the 400kV overhead line, which must happen in a sequenced nature and in accordance with commitment EM-AB01 in the REAC (**document 7.5.2 (D)**), as set out in response to 5.9.26 below).

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5.9.21	Where there is a high probability (based on an adequate assessment) that a development site may include, as yet undiscovered heritage assets with archaeological interest, the Secretary of State will consider requirements to ensure appropriate procedures are in place for the identification and treatment of such assets discovered during construction.	The strategy for archaeological mitigation is defined within the AFS [**APP-186**] and further detail regarding specific sites are contained within the OWSI [**APP-187**]. The OWSI [**AS-001**] is secured through Requirement 6 of the dDCO (**document 3.1 (F)**), which states that the authorised development must be undertaken in accordance with the AFS [**APP-186**] and the OWSI [**AS-001**]. Section 2.4 of the OWSI sets out what the DWSI must include. Chapter 8 of the OWSI [**AS-001**] sets out how the results of the archaeology mitigation would see dissemination of the results and references the Post-Excavation Assessment Report and an Updated Project Design.
	Secretary of State decision making	
5.9.22	In determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset (including assets whose setting may be affected by the proposed development), taking account of: • relevant information provided with the application and, where applicable, relevant information submitted during the examination of the application • any designation records, including those on the National Heritage List for England, or included on Cof Cymru for Wales. • historic landscape character records • the relevant Historic Environment Record(s), and similar sources of information • representations made by interested parties during the examination process • expert advice, where appropriate, and when the need to understand the significance of the heritage asset demands it	Section 8.4 of ES Chapter 8: Historic Environment [**APP-076**] describes the methodology and data sources used to establish the baseline environment and the approach to consider and assess the significance of potential effects on the historic environment. Heritage assets have been identified within the study area through the desk study and through the site surveys. This information has been used to assign receptors a value (sensitivity) as defined in ES Appendix 5.4: Assessment Criteria [**APP-096**]. The effects on the setting of heritage assets is assessed in ES Chapter 8: Historic Environment [**APP-076**]. Paragraph 8.9.1 states that (bearing in mind the good practice and embedded measures) the assessment has concluded that there are no likely significant effects in relation to the historic environment during operation. Therefore, no additional mitigation measures have been identified. Further details in relation to the setting of specific assets is presented in ES Appendix 8.2: Historic Environment Impact Assessment [**APP-127**].
5.9.23	The Secretary of State must also comply with the requirements on listed buildings, conservation areas and scheduled monuments, set out in Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010.	***The Legislation states:*** ***3.***—*(1) When deciding an application which affects a listed building or its setting, the decision-maker(**1**) must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses.* 1. *(2) When deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area.*

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		2. *(3) When deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision-maker must have regard to the desirability of preserving the scheduled monument or its setting.* This reflects National Grid's duty under Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended). National Grid complies with the Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended) which provides special protection to buildings and areas of special architectural or historic interest. It makes provision for the listing of buildings of special architectural or historic interest, designation of Conservation Areas, and the exercise of planning functions in relation to them. It requires relevant planning authorities to have special regard to the desirability of preserving a listed building or its setting or any features of special architectural or historic interest which it possesses (Sections 16 and 66) and to pay special attention to the desirability of preserving or enhancing the character or appearance of Conservation Areas (Section 72). ES Chapter 8: Historic Environment [**APP-076**] presents the results of the assessment on listed buildings. No listed buildings would be demolished as a result of the project, therefore the assessment presented in ES Chapter 8: Historic Environment [**APP-076**] focuses on the effects on the setting. There are no conservation areas within the 250m study area. One scheduled monument is located within 250m of the Order Limits, which would benefit from the 132kV overhead line removal and would result in a permanent minor beneficial effect, which is not significant.
5.9.24	In considering the impact of a proposed development on any heritage assets, the Secretary of State should consider the particular nature of the significance of the heritage assets and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.	ES Appendix 8.2: Historic Environment Impact Assessment [**APP-127**] sets out in Chapter 2 how the sensitivity (value) of the assets is identified, how the magnitude of impact is assigned and how the significance of effect is then determined taking both sensitivity and impact magnitude into account.
5.9.25	The Secretary of State should consider the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities, including to their quality of life, their economic vitality, and to the public's enjoyment of these assets.	National Grid has assessed the effects on the setting of heritage assets in ES Chapter 8: Historic Environment [**APP-076**]. Paragraph 8.9.1 states that (bearing in mind the good practice and embedded measures) the assessment has concluded that there are no likely significant effects in relation to the historic environment during operation. Therefore, no additional mitigation measures have been identified. Further details in

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		relation to the setting of specific assets is presented in ES Appendix 8.2: Historic Environment Impact Assessment [**APP-127**].
5.9.26	The Secretary of State should also consider the desirability of the new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).	See response to 5.9.13 in respect to making a positive contribution to the historic environment.
5.9.27	When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. This is irrespective of whether any potential harm amounts to substantial harm, total loss, or less than substantial harm to its significance.	See response to 5.9.25.
5.9.28 to 5.9.30	The Secretary of State should give considerable importance and weight to the desirability of preserving all heritage assets. Any harm or loss of significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification. Substantial harm to or loss of significance of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of significance of assets of the highest significance, including Scheduled Monuments; Protected Wreck Sites; Registered Battlefields; grade I and II* Listed Buildings; grade I and II* Registered Parks and Gardens; and World Heritage Sites, should be wholly exceptional.	See response to 5.9.25. No physical impact (i.e. impact to historic fabric) is anticipated to identified built heritage assets, with no works occurring to their fabric. The project would have minor adverse effects on the setting of some listed buildings. However, the assessment has concluded that there would be harm but that this would not be substantial harm (or loss of significance of assets) to any historic assets as a result of the project.
5.9.31	Where the proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm to, or loss of, significance is necessary to achieve substantial public benefits that outweigh that harm or loss, or all the following apply: • the nature of the heritage asset prevents all reasonable uses of the site • no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation • conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible	See response to 5.9.25.

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	• the harm or loss is outweighed by the benefit of bringing the site back into use	
5.9.32	Where the proposed development will lead to less than substantial harm to the significance of the designated heritage asset, this harm should be weighed against the public benefits of the proposal, including, where appropriate securing its optimum viable use.	ES Appendix 8.2 Annex A: Hintlesham Hall Assessment [**APP-128**] sets out the assessment of setting effects on Hintlesham Hall. In conclusion, the assessment has shown that the project would result in a loss of heritage significance. However, this is not considered to be so serious that it would lead to an inability to appreciate or understand the Hall or its relationship to its setting. This would not result in substantial harm; it falls below the levels 'a serious impact on the significance of the asset that its significance was either vitiated altogether or very much reduced' and it is considered that the project would not seriously affect a key element of its special architectural or historic interest. The report concludes that the degree of change to the historic assets would not result in substantial harm to Hintlesham Hall or its ancillary buildings. As set out in this report, minor non-significant effects constitute 'harm', and this degree of harm would be justified by the public benefit gained as a result of the project. In addition, the Technical Note on Cultural Associations [**REP5-028**] notes that neither of the effects on Benton End House or Overbury Hall are considered to be so serious that it would lead to an inability to appreciate or understand them or their relationships to their settings or their historic associations with historic artists or works of art. Neither of the effects on these heritage assets are considered to result in substantial harm. The project effects fall below the levels of a serious impact on the significance of these heritage assets and would not seriously affect any key elements of their special architectural or historic interest.
5.9.33	In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.	Noted.
5.9.36	When considering applications for development affecting the setting of a designated heritage asset, the Secretary of State should give appropriate weight to the desirability of preserving the setting such assets and treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the Secretary of State should give	See response to 5.9.32. Overall, the need for the project is set out in the Need Case (April 2023) [**APP-161**] to which significant weight should be afforded. 'Need' is also clearly established by the NPS, which considers the need for new electricity transmission and distribution infrastructure as urgent as it

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	great weight to any negative effects, when weighing them against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.	supports the transition of the economy to net zero. The project is also now considered Critical National Priority as per this NPS.
5.10	**Landscape and Visual**	
5.10.1	The landscape and visual effects of energy projects will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. In this context, references to landscape should be taken as covering seascape and townscape where appropriate.	Noted.
5.10.4	Landscape effects arise not only from the sensitivity of the landscape but also the nature and magnitude of change proposed by the development, whose specific siting and design make the assessment a case-by-case judgement.	Noted.
5.10.5	Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation.	Noted.
5.10.6	Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	Noted.
5.10.7	National Parks, the Broads and AONBs have been confirmed by the government as having the highest status of protection in relation to landscape and natural beauty. Each of these designated areas has specific statutory purposes. Projects should be designed sensitively given the various siting, operational, and other relevant constraints. For development proposals located within designated landscapes the Secretary of State should be satisfied that measures which seek to further purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development.	Noted.
5.10.8	The duty to seek to further the purposes of nationally designated landscapes also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. In these locations, projects should be sensitively given the various siting, operational, and other	Noted.

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	relevant constraints. The Secretary of State should be satisfied that measures which seek to further the purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development.	
5.10.9	The Secretary of State has a duty of to have regard to the statutory purposes of National Parks and AONBs in Wales when making decisions about development schemes within England which affect designated landscapes in Wales. Similar regard should also be had in relation to schemes in England which have impacts on National Parks and National Scenic Areas in Scotland.	Noted.
5.10.12	Outside nationally designated areas, there are local landscapes that may be highly valued locally. Where a local development document in England or a local development plan in Wales has policies based on landscape or waterscape character assessment, these should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.	Noted.
5.10.13 and 5.10.14	All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.	Noted.
	Applicant assessment	
5.10.16 – 5.10.17	The applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects (see Section 4.3). Several guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.	ES Chapter 6 Landscape and Visual [**APP-074**] presents the landscape and visual assessment. Reference to landscape character assessments has been made in ES Chapter 6 Landscape and Visual [**APP-074**] and ES Appendix 6.3 Assessment of effects on Landscape Character [**APP-100**]. Information on landscape character has been used to inform the visual assessment. Local planning policies taken into account in the assessment are reported in ES Appendix 2.2 [**APP-089**]. Cumulative landscape and visual effects are also assessed in ES Chapter 15: CEA [**APP-083**] and accompanying appendices).
5.10.19	The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how negative effects have been minimised and opportunities for creating positive	Chapter 5 of the Planning Statement [**APP-160**] sets out how planning policy, namely EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have

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	benefits or enhancement have been recognised incorporated into the design, delivery and operation of the scheme.	influenced the options appraisal process; demonstrating how such policy objectives have been embedded into the design of the project. These policies require National Grid to consider landscape and visual matters in the early stages of siting and design. For example, Corridor 2 was identified as an 'opportunity corridor' as it used the existing overhead line routes which already passes through Dedham Vale AONB. As informed by the supplementary note to Holford Rule 6, '*arrange wherever practicable, parallel or closely related routes with tower [pylon] types, spans and conductors forming a coherent appearance.'* As stated, regard has been had to the Horlock and Holford rules in respect to the siting of new transmission infrastructure and substations and as described in detail in Chapter 5 of this Planning Statement [**APP-160**].
5.10.20	The assessment should include the effects on landscape components and character during construction and operation. For projects which may affect a National Park, The Broads or an Areas of Outstanding Natural Beauty the assessment should include effects on the natural beauty and special qualities of these areas'.	The project does not affect any National Parks. The project has considered the presence of nationally designated areas, in this case Dedham Vale AONB, throughout the design process. ES Chapter 3: Alternatives Considered [**APP-071**] demonstrates how sensitive landscape features were avoided, where practicable through routeing and design. This is also reported in Chapter 5 of the Planning Statement [**APP-160**]; which sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process, demonstrating how such policy and legislative objectives have been embedded into the design of the project. The assessment presented at ES Chapter 6: Landscape and Visual [**APP-074**] and supporting document ES Appendix 6.2: Assessment of Effects on Designated Landscapes [**APP-098**] considers the natural beauty, character and special qualities of the landscape, as part of the assessment on the Dedham Vale AONB. National Grid also produced an assessment of the impacts of the project on the natural beauty factors and special qualities of the AONB and how this may impact on the AONB's ability to deliver its statutory purpose to conserve and enhance natural beauty. This is presented in the Dedham Vale AONB and Special Qualities and Statutory Purpose [**REP1-032**].
5.10.21	The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light	ES Chapter 6 Landscape and Visual [**APP-074**] and ES Appendix 6.4: Viewpoint Assessment [**APP-101 to APP-107**] present the visual

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	pollution effects, including on dark skies, local amenity, and nature conservation.	assessment including the effects of construction and operation of the project on landscape receptors.
5.10.22	The assessment should also address the landscape and visual effects of noise and light pollution, and other emissions (see Section 5.2 and Section 5.7), from construction and operational activities on residential amenity and on sensitive locations, receptors and views, how these will be minimised.	Corridor 2 would largely occupy a rural area and the routing avoided large residential areas. The largest settlement is Sudbury located to the northwest of Corridor 2, although this was avoided by the route. Smaller settlements including Hadleigh and a number of villages are distributed throughout the corridor area. However, urbanised areas are largely avoided all together with the exception of some rural residential properties. With respect to the route being located near to those residential properties, this is due to the fact the route parallels the existing 400kV overhead line which is already a feature of the setting of those sites. In considering alternative strategic options, potential effects on urban areas and residential and recreational receptors were considered. From a socio-economic perspective, the strategic option taken forward would not affect any major areas of economic activity or tourism assets of national importance.
5.10.24	Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.	National Grid has included embedded measures including removal of the 132kV overhead line and proposing underground cables in Dedham Vale AONB and the Stour Valley. These measures would lead to a significant beneficial effect on both of these landscapes. In addition, National Grid is proposing a number of enhancement measures on the project, as described in the Environmental Gain Report [**APP-176**], which will further contribute to enhancement of the landscape. National Grid has considered how the landscape can be enhanced throughout development of the project.
5.10.25	In considering visual effects it may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on equally sensitive receptors. This may assist the Secretary of State in judging the weight they should give to the assessed visual impacts of the proposed development.	The assessment is presented at ES Chapter 6: Landscape and Visual [**APP-074**]. The landscape baseline includes the existing 400kV overhead line and the existing 132kV overhead line. Embedded measures relevant to the landscape and visual assessment included choosing a corridor that allowed for paralleling with the existing 400kV overhead line to reduce the geographical area affected by overhead line infrastructure. The options appraisal also identified Corridor 2 as an opportunity corridor as it also allowed removal of a section of the 132kV overhead line, to limit the magnitude of change from the project. As such, The existing 400kV overhead line and the existing 132kV overhead line

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		are considered as forming part of the baseline and provides an example of existing permitted infrastructure with a similar magnitude of impact.
	Mitigation	
5.10.27	Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within its development site and wider setting. The careful consideration of colours and materials will support the delivery of a well-designed scheme, as will sympathetic landscaping and management of its immediate surroundings.	See response to 4.7.6.
5.10.28	Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines may mitigate the impact when viewed from a more distant vista.	Planting proposals are set out in the LEMP [**REP3-034**]. ES Chapter 6 Landscape and Visual [**APP-074**] also identifies properties that could benefit from landscape softening which are also identified in the LEMP [**REP3-034**].
	Secretary of State decision making	
5.10.29	The Secretary of State should take into consideration the level of detailed design which the applicant has provided and is secured in the Development Consent Order, and the extent to which design details are subject to future approvals.	The design of the infrastructure will be substantially dictated by the equipment they contain and the function that they need to provide. However, the designs will also be in accordance with the designs presented in the application for development consent and the embedded measures identified in the REAC (**document 7.5.2 (D)**). The detailed designs will be undertaken by a competent contractor with knowledge of designing high voltage transmission lines and will be supported by environmental specialists including landscape architects and ecologists. National Grid considers that the extensive controls already in place in respect of the design of the project negate the need for a further Requirement requiring the authorised development to be carried out in general accordance with the Design and Layout Plans and the embedded measures secured within the Management Plans.
5.10.30	The Secretary of State should be satisfied that local authorities will have sufficient design content secured to ensure future consenting will meet landscape, visual and good design objectives.	See response to 4.7.6 and 5.10.29.

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5.10.32	When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty the conservation and enhancement of the natural beauty should be given substantial weight by the Secretary of State in deciding on applications for development consent in these areas. The Secretary of State may grant development consent in these areas in exceptional circumstances. Such development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of: • the need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy; • the cost of, and scope for, developing all or part of the development elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.3; and • any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.	See response to 5.10.20.
5.10.33	For development proposals located within designated landscapes the Secretary of State should be satisfied that measures which seek to further purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development. The Secretary of State should ensure that any projects consented in these designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary.	See response to 5.10.20.
5.10.34	The duty to seek to further the purposes of nationally designated landscapes also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. In these locations, projects should be sensitively given the various siting, operational, and other relevant constraints. The Secretary of State should be satisfied that measures which seek to further the purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development.	National Grid undertook a Setting Study, which is presented in ES Appendix 6.2 Annex A Dedham Vale AONB Approach and Identification of Setting Study [**APP-099**]. This defines the setting of the AONB in relation to the project and has considered views in and out of the AONB as part of defining the setting. The Setting Study helped inform the design of the project, including the extent of undergrounding. Parts of the Stour Valley, whilst not designated, were identified as contributing to the setting of the AONB and hence were considered as part of the approach to determining the extent of undergrounding proposed in Section G: Stour Valley. In respect to the Statutory Duty, the relevant section, Section 245 'Protected landscapes', of the Levelling-Up and Regeneration Act (2023) states (and where relevant to the project), *'(A1) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a*

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		relevant authority other than a devolved Welsh authority must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty. *(A2) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a devolved Welsh authority must have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.'* The clause expands the duty on certain public authorities, including Statutory Undertakers (including National Grid), when carrying out functions in relation to these landscapes to seek to further the statutory purpose and confers a power to make provision as to how they should do this. The legislation has been expanded from 'having regard' to 'furthering the purpose' of protected landscapes such as AONB. The expanded duty will not come into force until two months from the date on which the Levelling-Up and Regeneration Act (2023) was enacted. Therefore, it may be that further provisions are made to prescribe the redefined statutory duties more closely. In any event, National Grid considers the project is compliant with the new 2023 Act obligation as set out above, as the project: a.) proposes to underground the proposed 400kV overhead line within the AONB and beyond its boundary; and b.) proposes the removal of the existing 132kV overhead line within the AONB, resulting in a net loss of electricity transmission overhead line infrastructure in this designated landscape.
5.10.35	The scale of energy projects means that they will often be visible across a very wide area. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.	ES Chapter 6: Landscape and Visual [**APP-074**] presents the landscape and visual assessment including the effects of the construction and operation of the project on visual receptors. The viewpoints presented in the Landscape and Visual Chapter were agreed with the Host Authorities. The need for the project is set out in the Need Case (April 2023) [**APP-161**] and Planning Statement Chapter 3 [**APP-160**].
5.10.36	In reaching a judgement, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable.	ES Chapter 6 Landscape and Visual [**APP-074**] presents the landscape and visual assessment including the effects of construction of the project on landscape receptors. Significant adverse effects during construction have been identified, however, these should be afforded very little weight in the planning

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		balance. This is because, construction impacts would reduce to a neutral effect once construction is complete, and the working area reinstated. In addition, the project would bring significant benefits to the landscape of Dedham Vale AONB and the Stour Valley during operation due to the proposed underground cables and the removal of the 132kV overhead line. Moreover, extensive mechanisms (both good practice and additional mitigation) have been put in place to mitigate construction and operational effects. Given the proposed mitigation and temporary nature of the construction effects, the need for the project clearly outweighs these effects.
5.10.37	The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation.	Chapter 5 of the Planning Statement [**APP-160**] sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; including the consideration of protected landscapes such as AONB. This is also reported in the ES Chapter 3: Alternatives Considered [**APP-071**] which documents the main environmental alternatives considered by National Grid and the assessment of those alternatives. The landscape and visual effects of the project are described in ES Chapter 6: Landscape and Visual [**APP-074**] along with the proposed mitigation required to reduce any significant effects.
5.10.38	The Secretary of State should consider whether requirements to the consent are needed requiring the incorporation of particular design details that are in keeping with the statutory and technical requirements for landscape and visual impacts.	See response to 4.7.6.
5.11	Land Use, Including Open Space, Green Infrastructure, and Green Belt	
5.11.1	An energy infrastructure project will have a direct effect on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development. Given the likely locations of energy infrastructure projects there may be particular effects on open space247 including green and blue infrastructure.	Noted.

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5.11.3	Although the re-use of previously developed land for new development can make a major contribution to sustainable development by reducing the amount of countryside and undeveloped greenfield land that needs to be used, it may not be possible for many forms of energy infrastructure.	Noted.
5.11.4	Development of land will affect soil resources, including physical loss of and damage to soil resources, through land contamination and structural damage. Indirect impacts may also arise from changes in the local water regime, organic matter content, soil biodiversity and soil process.	Noted.
5.11.5	Where pre-existing land contamination is being considered within a development, the objective is to ensure that the site is suitable for its intended use. Risks would require consideration in accordance with the contaminated land statutory guidance as a minimum.	Noted.
5.11.6	The government's policy is to ensure there is adequate provision of high quality open space and sports and recreation facilities to meet the needs of local communities. Connecting people with open spaces, sports and recreational facilities all help to underpin people's quality of life and have a vital role to play in promoting healthy living.	Noted.
5.11.7	Green and blue infrastructure252 can also enable developments to provide positive environmental, social, health and economic benefits. Green infrastructure includes green space such as parks and woodlands but also other environmental features such as street trees, hedgerows and green walls and roofs. It also includes blue infrastructure such as canals, rivers, streams, ponds lakes and their borders. Well designed and managed green and blue infrastructure provides multiple benefits at a range of scales. It can contribute to biodiversity recovery, sequester carbon, absorb surface water, cleanse pollutants, absorb noise and reduce high temperatures. The Green Infrastructure Framework – Principles and Standards for England can be used to consider green infrastructure in development and plan for good quality and targeted creation or improvement.	Noted. See response to 5.11.24. In addition the Environmental Gain Report [**APP-176**] sets out the proposals to improve local environmental conditions. Although these focus on landscape and biodiversity improvements, secondary benefits would include provision of carbon sinks and improving riparian habitats around watercourses. All of these benefits would also positively contribute to the aims for green and blue infrastructure.
	Applicant assessment	
5.11.8	The ES (see Section 4.3) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate to the scale of the preferred scheme	ES Chapter 11: Agriculture and Soils [**APP-079**] assesses the effects of the project on the existing land use, which is predominantly agricultural within the Order Limits. ES Chapter 15: CEA [**APP-083**] assesses the effects of the project on emerging developments. The project has sought to avoid works within designated open space. An Open Space Assessment is provided in Chapter 9 Planning Statement [**APP-160**]. In

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	and its likely impacts on such receptors. For developments on previously developed land, the applicant should ensure that they have considered the risk posed by land contamination and how it is proposed to address this.	the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project.
5.11.9 – 5.11.10	Applicants will need to consult the local community on their proposals to build on existing open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green and blue infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. When considering proposals for green infrastructure, Applicant's should refer to the Green Infrastructure Framework.	In the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, policies relating to impact on open space provision are not engaged. Subsequently, there is no need to consider whether the open space in question is surplus to requirements or provide compensatory land. As set out in ES Chapter 9: Water Environment [**APP-077**], there are no significant effects to watercourses during construction or operation.
	Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements	
5.11.11	During any pre-application discussions with the applicant the LPA should identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements.	See response to 5.11.9 – 5.11.10.
5.11.12 – 5.11.13	Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5). Applicants should also identify any effects and seek to minimise impacts on soil health and protect and improve soil quality taking into account any mitigation measures proposed.	As reported in ES Chapter 11: Agriculture and Soils [**APP-079**] the potential presence of BMV land has been assessed through reference to published information and surveys of the areas permanently affected. The assessment sets out the total area of each land grade permanently affected and estimates the likely area of land at each grade. Measures have been outlined in the CoCP [**REP3-026**] to reduce the potential negative impacts on soils which are handled and disturbed, such as those to protect the quality of soils when they are stripped, stockpiled and restored and measures to reduce the disruption to agricultural activities, for example AS01 and AS02, with all land required temporarily being returned to its preconstruction condition.
5.11.14	Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination. The sustainable reuse of soils needs to be carefully considered in line with good practice guidance where large quantities of soils are surplus to requirements or are affected by contamination.	ES Chapter 11: Agriculture and Soils [**APP-079**] considers the potential effects of the project on agriculture and soil. Chapter 11 of the CEMP (**document 7.5 (C)**) sets out the measures that will be undertaken in relation to soil. It fulfils the purpose of and contains all of the necessary measures that would be set out in a standalone Soil Management Plan.

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5.11.15	Developments should contribute to and enhance the natural and local environment by preventing new and existing developments from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.	Pollution and erosion management measures are set out in the CEMP (**document 7.5 (C)**).
5.11.16	Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.	Noted. The Environmental Gain Report [**APP-176**] sets out the proposals to improve local environmental conditions. Although these focus on landscape and biodiversity improvements, secondary benefits would include provision of carbon sinks and improving riparian habitats around watercourses.
5.11.17	Applicants should ensure that a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination.	Good practice measures GH06 and GH07 in the CoCP [**REP3-026**] are both measures to reduce risks associated with land instability and contamination. Further measures can also be found in Chapter 10 of the CEMP (**document 7.5 (C)**).
5.11.18	For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination, and where contamination is present, applicants should consider opportunities for remediation where possible. It is important to do this as early as possible as part of engagement with the relevant bodies before the official pre-application stage.	ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment [**APP-130**] describes the known areas where a risk of contamination has been identified based on data provided from relevant bodies. This notes that there is a low risk of contamination within the Order Limits. Further ground investigations are proposed to further understand the risk of contamination. Chapter 10 of the CEMP (**document 7.5 (C)**) sets out the measures that would be taken to deal with unexpected contamination identified during construction.
5.11.19	Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.	An MRA has been undertaken to support the assessment undertaken in ES Chapter 10: Geology and Hydrogeology [**APP-078**]. This concludes that the quantity of mineral sterilised by the project is considered to be insignificant in the context of the extensive occurrence of sand and gravel within the counties of Essex and Suffolk and the national need/significance of the project.
5.11.20	The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and if it is, whether their proposal may be inappropriate development within the meaning of Green Belt policy (see paragraph 5.11.36 below).	The project does not impact Green Belt land.

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5.11.21	However, infilling or redevelopment of major developed sites in the Green Belt, if identified as such by the local planning authority, may be suitable for energy infrastructure. It may help to secure jobs and prosperity without further prejudicing the Green Belt or offer the opportunity for environmental improvement. Applicants should refer to relevant criteria257 on such developments in Green Belts.	The project does not impact Green Belt land.
5.11.22	Moreover an applicant may be able to demonstrate that particular energy infrastructure, such as an underground pipeline, may be considered an "engineering operation" and regarded as not inappropriate in Green Belt. This is provided it preserves the openness of the Green Belt and does not conflict with the purposes of Green Belt designation. It may also be possible for an applicant to show that the physical characteristics of a proposed overhead line in a particular location would not have so harmful an impact as to conflict with the purposes of Green Belt designation, or with other protections of rural landscape.	The project does not impact Green Belt land.
	Mitigation	
5.11.23	Although in the case of most energy infrastructure there may be little that can be done to mitigate the direct effects of an energy project on the existing use of the proposed site (assuming that some of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project and the protection of soils during construction.	The project design is the result of an iterative process which has sought to avoid, reduce and mitigate potential environmental effects. The Evolution of the Project [**APP-166**] sets out how the project has evolved from a concept, through strategic options, route corridors and indicative alignments to the project presented within the application for development consent. ES Chapter 4: Project Description [**APP-072**] outlines how the project has continued to avoid sensitive features through embedded measures within the design, and ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. Paragraph 11.12.2 of ES Chapter 11: Agriculture and Soils [**APP-079**] states although there is a small permanent loss of BMV land as a result of the construction of the CSE compounds and the GSP substation, this is not considered to be significant in the context of the available BMV land within the region. In addition, National Grid has included appropriate soil handling measures within the CEMP (**document 7.5 (C)**) which is secured through Requirement 4 of the dDCO (**document 3.1 (F)**).
5.11.24	Where green infrastructure is affected, the Secretary of State should consider imposing requirements to ensure the functionality and connectivity of the green infrastructure network is maintained in the vicinity of the development	Green infrastructure is a generic and all-encompassing term for many of the aspects already covered within the application for development consent. For example, habitats are considered within ES Chapter 7:

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	and that any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space including appropriate access to National Trails and other public rights of way and new coastal access routes.	Biodiversity (**document 6.2.7 (B)**), designated sites in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**), PRoW in ES Chapter 12: Traffic and Transport [**APP-080**], and open space, parks and gardens, amenity green space, playgrounds and cemeteries (etc) in Chapter 9 Planning Statement [**APP-160**]. Therefore, a standalone assessment of green infrastructure in addition to the specific receptors would cause duplication and confusion in the assessment. In the case of Open Space specifically, the project has taken a precautionary approach to the identification of potential open space. In the case of the project, there will be no material impact or loss to the function or use of the spaces identified. This is evidenced by the assessment presented at Table 9.2 of Chapter 9 Planning Statement [**APP-160**]. As such, no further mitigation is proposed in respect to Open Space. In the case of the other green infrastructure assets which are not likely to fall within the category of Open Space, the project has sought to avoid as far as possible impacts to such green infrastructure assets and the ES has determined that there are no significant long-term effects which are relevant in this respect. In terms of biodiversity, the project has sought to avoid as far as possible the impact on designated and non-designated sites and features from the optioneering stage to development of the LEMP. The project will deliver at least 10% BNG, as secured by Requirement 13 on the dDCO (**document 3.1 (F)**). The project has also sought to avoid as far as possible adverse landscape and visual impacts and will deliver significant beneficial effects to the most sensitive landscape in the area, the Dedham Vale AONB and Stour Valley through undergrounding the proposed transmission line and the removal of sections of 132kV and 400kV overhead line.
5.11.25	The Secretary of State should also consider whether any adverse effect on green infrastructure and other forms of open space is adequately mitigated or compensated by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness and quality, and accessibility.	Not applicable. See responses to 5.11.24 and 5.11.9 – 5.11.10.
5.11.26	Alternatively, where sections 131 and 132 of the Planning Act 2008 apply, replacement land provided under those sections will need to conform to the requirements of those sections	Not applicable. See responses to 5.11.24 and 5.11.9 – 5.11.10.

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5.11.27	Existing trees and woodlands should be retained wherever possible. In the EIP, the Government committed to increase the tree canopy and woodland cover to 16.5% of total land area of England by 2050. The applicant should assess the impacts on, and loss of, all trees and woodlands within the project boundary and develop mitigation measures to minimise adverse impacts and any risk of net deforestation as a result of the scheme. Mitigation may include, but is not limited to, the use of buffers to enhance resilience, improvements to connectivity, and improved woodland management. Where woodland loss is unavoidable, compensation schemes will be required, and the long-term management and maintenance of newly planted trees should be secured.	ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) considers the potential effects of the project on biodiversity. The receptors include woodland areas. This Arboricultural Impact Assessment [**REP1-012**] identifies trees which may be affected by the project, and to provide information on their locations, quantity, and quality. The information on tree constraints informed the design development process and subsequent landscape and ecological management planning. ES Appendix 7.4: Ancient Woodland and Potential Ancient Woodland Report [**APP-114**] sets out baseline information on ancient woodland, PoAWS and veteran and ancient trees within and adjacent to the Order Limits.
5.11.28	Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.	A Minerals Resource Assessment [**APP-132**] has been undertaken and included in ES Appendix 10.3. This concludes that parts of the Order Limits are located within either an MSA or an MCA for sand and gravel. Even if the full extent of the Order Limits within an MSA/MCA were to sterilise mineral of sufficient quality and extent to be economically valuable, the extent of the sterilised area is very small in comparison to the extent of the MSA/MCA. Consideration has also been given to prior extraction of minerals as part of the project construction programme. It is considered that in the context of the additional cost and time required, prior/incidental extraction in these areas is not viable. In addition, the environmental impact associated with extracting the minerals is considered to be disproportionate to the value gained from extracting the minerals.
5.11.29	Where a project has a sterilising effect on land use (for example in some cases under transmission lines) there may be scope for this to be mitigated through, for example, using or incorporating the land for nature conservation or wildlife corridors or for parking and storage in employment areas.	No sterilising effects on land use are anticipated as a result of the project. Unless otherwise identified for embedded or mitigation areas, landowners will still be able to farm beneath the overhead lines and above the underground cable. As reported in ES Chapter 11: Agriculture and Soils [**APP-079**] no likely significant effects on agricultural operations and viability are anticipated during operation. As identified in ES Appendix 10.3: Minerals Resource Assessment [**APP-132**], the quantity of mineral sterilised by the project is considered to be insignificant in the context of the extensive occurrence of sand and gravel within the counties of Essex and Suffolk and the national need/significance of the project.

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		The LEMP [**REP3-034**] sets out how land use would be reinstated following construction, including reinstatement of habitats.
5.11.30	Public Rights of way, National Trails, and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The Secretary of State should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other rights of way and open access land and, where appropriate, to consider what opportunities there may be to improve or create new access. In considering revisions to an existing right of way, consideration should be given to the use, character, attractiveness, and convenience of the right of way. provisions in respect of these measures should be included in any grant of development consent.	No National Trails are affected by the project. Effects on PRoW are presented in ES Chapter 12: Traffic and Transport [**APP-080**] and within the TA [**APP-061**]. There are no operational effects anticipated to PRoW and there are no permanent closures or diversions proposed. There would be temporary closures and diversions during construction. These would be kept as short as possible, subject to safety requirements of users during works. The PRoW affected are shown on the Access, PRoW of Navigation Plans [**APP-012**]. Applicant has also submitted a PRoW Management Plan [**REP3-056**]. This sets out that the impacts on PRoW are short term and temporary. Therefore, no addition mitigation is required beyond the good practice measures such as signage and notices during closures and diversions.
5.11.31	The Secretary of State should consider whether the mitigation measures put forward by an applicant are acceptable and whether requirements or other provisions in respect of these measures should be included in any grant of development consent	It is considered that the mitigation measures proposed in respect to the relevant ES Chapters are acceptable.
	Secretary of State decision making	
5.11.32	The Secretary of State should not grant consent for development on existing open space, sports and recreational buildings and land unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements or the Secretary of State determines that the benefits of the project (including need), outweigh the potential loss of such facilities, taking into account any positive proposals m ade by the applicant to provide new, improved or compensatory land or facilities.	See response to 5.11.9 – 5.11.10.
5.11.34	The Secretary of State should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. Where schemes are to be sited on best and most versatile agricultural land the Secretary of State should take into account the economic and other benefits of that land. Where development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.	See response to 5.11.12 – 5.11.13.

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5.11.38	In England, Local Green Spaces may be designated locally in Local Plans and Neighbourhood Plans. These enjoy the same protection as Green Belt in England and the Secretary of State should adopt a similar approach.	Local Green Space 'Mill Farm Land' (Policy: ASSN10-10) as designated by the Assington Neighbourhood Plan, lies within the Order Limits. The project has sought to avoid works within designated open space. An Open Space Assessment is provided in Chapter 9 of this Planning Statement. In the case of the project, there are no increased demands or impacts on open spaces as a result of the operation of the project and, therefore, the local policies relating to impact on open space provision are not engaged.
5.12	**Noise and Vibration**	
5.12.1	Excessive noise can have wide-ranging impacts on the quality of human life and, health such as annoyance, sleep disturbance, cardiovascular disease and mental ill-health. It can also have an impact on the environment and the use and enjoyment of areas of value such as quiet places and areas with high landscape quality.	Noted.
5.12.2	The Government's policy on noise is set out in the Noise Policy Statement for England. It promotes good health and good quality of life through effective noise management. Similar considerations apply to vibration, which can also cause damage to buildings. In this section, in line with current legislation, references to "noise" below apply equally to the assessment of impacts of vibration.	As set out in ES Appendix 2.1: Legislation Policy and Guidance [**APP-088**], the Noise Policy Statement for England (2010) aims to avoid significant adverse impacts on health and quality of life; to mitigate and lessen adverse impacts on health and quality of life; and, where possible, contribute to the improvement of health and quality of life. An assessment on the effects from noise is included within ES Chapter 14: Noise and Vibration [**APP-082**]. Health as a standalone chapter is scoped out of the assessment. Further details can be found in the Scoping Opinion [**APP-159**].
5.12.4	Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed by the Secretary of State in accordance with the Biodiversity and Geological Conservation section of this NPS at Section 5.4. This should consider underwater noise and vibration especially for marine developments. Underwater noise can be a significant issue in the marine environment, particularly in regard to energy production.	Noted.
5.12.5	Factors that will determine the likely noise impact of a proposed development include: • the inherent operational noise from the proposed development, and its characteristics	Noted.

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	• the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces) • the proximity of the proposed development to quiet places and other areas that are particularly valued for their soundscape or landscape quality • the proximity of the proposed development to sites where noise may have an adverse impact on protected species or other wildlife, including migratory species • the potential presence of unexploded ordnance on the seabed	
	Applicant assessment	
5.12.6 – 5.12.7	Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment: • a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal characteristics, if the noise is impulsive, whether the noise contains particular high or low frequency content or any temporal characteristics of the noise • identification of noise sensitive receptors and noise sensitive areas that may be affected • the characteristics of the existing noise environment • a prediction of how the noise environment will change with the proposed development o in the shorter term, such as during the construction period o in the longer term, during the operating life of the infrastructure o at particular times of the day, evening and night (and weekends) as appropriate, and at different times of year • an assessment of the effect of predicted changes in the noise environment on any noise-sensitive receptors, including an assessment of any likely impact on health and quality of life / well-being where appropriate, particularly among those disadvantaged by other factors who are often disproportionately affected by noise-sensitive areas • if likely to cause disturbance, an assessment of the effect of underwater or subterranean noise • all reasonable steps taken to mitigate and minimise potential adverse effects on health and quality of life The nature and extent of the noise assessment should be proportionate to the likely noise impact.	Operational noise is scoped out in ES Chapter 14: Noise and Vibration [**APP-082**] as significant adverse effects would be avoided by design (e.g., noise enclosure around the transformers at the GSP substation and the use of a low noise conducted system, such as triple-araucaria). However, additional information regarding operational noise impacts from the GSP substation and overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment [**APP-138**] and ES Appendix 14.4: Grid Supply Point Substation Noise Assessment [**APP-139**]. ES Chapter 14: Noise and Vibration [**APP-082**] includes an assessment of the likely significant effects from noise and vibration from the project, including those associated with potential working at night during the construction of the project. This identifies a small number of locations that would require additional mitigation measures to reduce noise. These measures are described in and secured through the CEMP (**document 7.5 (C)**).

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5.12.8	Applicants should consider the noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation.	ES Chapter 14: Noise and Vibration [**APP-082**] includes an assessment of the likely significant effects from noise and vibration from increased traffic movements during construction. Further information is also provided in ES Appendix 14.2: Construction Traffic Noise and Vibration Assessment [**APP-137**].
5.12.9	Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards263 and other guidance. Further information on assessment of particular noise sources may be contained in the technology specific NPSs. In particular, for renewables (EN-3) and electricity networks (EN-5) there is assessment guidance for specific features of those technologies. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards264 and other guidance which also give examples of mitigation strategies.	Operational noise is scoped out in ES Chapter 14: Noise and Vibration [**APP-082**] as significant adverse effects would be avoided by design. However, additional information regarding operational noise impacts from the GSP substation and overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment [**APP-138**] and ES Appendix 14.4: Grid Supply Point Substation Noise Assessment [**APP-139**].
5.12.10	Some noise impacts will be controlled through environmental permits and parallel tracking is encouraged where noise impacts determined by an environmental permit interface with planning issues (i.e. physical design and location of development). The applicant should consult the EA and/or the SNCB, and other relevant bodies, such the MMO or NRW, as necessary, and in particular regarding assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be considered.	There would be no operational noise generated by the project. Construction noise would be reduced through the good practice measures set out in the CoCP [**REP3-026**]. The effects of noise from the project on ecological receptors are considered in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) using supporting data from ES Chapter 14: Noise and Vibration [**APP-082**].
5.12.12	Applicants should submit a detailed impact assessment and mitigation plan as part of any development plan, including the use of noise mitigation and noise abatement technologies during construction and operation.	Operational noise is scoped out in ES Chapter 14: Noise and Vibration [**APP-082**] as significant adverse effects would be avoided by design (e.g., noise enclosure around the transformers at the GSP substation and the use of a low noise conducted system, such as triple-araucaria). ES Chapter 14: Noise and Vibration [**APP-082**] includes an assessment of the likely significant effects from noise and vibration from the project, including those associated with potential working at night during the construction of the project. This identifies a small number of locations that would require additional mitigation measures to reduce noise. These measures are described in and secured through the CEMP (**document 7.5 (C)**).
	Mitigation	

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5.12.13	The Secretary of State should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. In doing so the Secretary of State may wish to impose mitigation measures. Any such mitigation measures should take account of the NPPF or any successor to it and the Planning Practice Guidance on Noise.	See response to 5.12.12. Noise mitigation measures are described in and secured through the CEMP (**document 7.5 (C)**).
5.12.14	Mitigation measures may include one or more of the following: • engineering: reducing the noise generated at source and/or containing the noise generated • lay-out: where possible, optimising the distance between the source and noise sensitive receptors and/or incorporating good design to minimise noise transmission through the use of screening by natural or purpose-built barriers, or other buildings • administrative: using planning conditions/obligations to restrict activities allowed on the site at certain times and/or specifying permissible noise limits/ noise levels, differentiating as appropriate between different times of day, such as evenings and late at night, and taking into account seasonality of wildlife in nearby designated sites • insulation: mitigating the impact on areas likely to be affected by noise including through noise insulation when the impact is on a building.	ES Chapter 14: Noise and Vibration [**APP-082**] identifies measures to reduce noise included engineering measures at point of generation (use of triple araucaria or other BPM for the conductors) and layout (noise enclosure around the transformers at the GSP substation). The CoCP [**REP3-026**] contains other measures to reduce noise at source and to increase the distance between source and noise sensitive receptors during construction.
5.12.15	The project should demonstrate good design through selection of the quietest or most acceptable cost-effective plant available; containment of noise within buildings wherever possible, taking into account any other adverse impacts that such containment might cause (e.g. on landscape and visual impacts; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission).	Operational noise is scoped out in ES Chapter 14: Noise and Vibration [**APP-082**] as significant adverse effects would be avoided by design (e.g., noise enclosure around the transformers at the GSP substation and the use of a low noise conducted system, such as triple-araucaria). Additional information regarding operational noise impacts from the GSP substation and overhead lines is provided for information in ES Appendix 14.3: Overhead Line Noise Assessment [**APP-138**] and ES Appendix 14.4: Grid Supply Point Substation Noise Assessment [**APP-139**].
5.12.16	A development must be undertaken in accordance with statutory requirements for noise. Due regard must be given to the relevant sections of the Noise Policy Statement for England, the NPPF, and the government's associated planning guidance on noise. In Wales the relevant policy will be PPW and the TANs, as well as the Welsh Government's Noise and Soundscape Action Plan.	The assessment of noise and vibration effects describe in ES Chapter 14: Noise and Vibration [**APP-082**] has due regard for the relevant sections of the NPPF and the government's associated planning guidance.
	Secretary of State decision making	

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5.12.17	The Secretary of State should not grant development consent unless they are satisfied that the proposals will meet the following aims, through the effective management and control of noise: • avoid significant adverse impacts on health and quality of life from noise • mitigate and minimise other adverse impacts on health and quality of life from noise • where possible, contribute to improvements to health and quality of life through the effective management and control of noise	ES Chapter 14: Noise and Vibration [**APP-082**] includes an assessment of the likely significant effects from noise and vibration during the construction and operation of the project. This has identified that there would be no residual effects on health and quality of life from noise with the good practice measures and mitigation in place.
5.12.18	When preparing the Development Consent Order, the Secretary of State should consider including measurable requirements or specifying the mitigation measures to be put in place to ensure that noise levels do not exceed any limits specified in the development consent. These requirements or mitigation measures may apply to the construction, operation, and decommissioning of the energy infrastructure development	Operational noise is scoped out in ES Chapter 14: Noise and Vibration [**APP-082**] as significant adverse effects would be avoided by design (e.g., noise enclosure around the transformers at the GSP substation and the use of a low noise conducted system, such as triple-araucaria). ES Chapter 14: Noise and Vibration [**APP-082**] includes an assessment of the likely significant effects from noise and vibration from the project, including those associated with potential working at night during the construction of the project. This identifies a small number of locations that would require additional mitigation measures to reduce noise. These measures are described in and secured through the CEMP (**document 7.5 (C)**).
5.13	**Socio-Economic Impacts**	
5.13.1	The construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels. Parts 2 and 3 of this NPS set out some of the national level socio-economic impacts.	Noted.
	Applicant assessment	
5.13.2	Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES (see Section 4.3).	Chapter 15 of the EIA Scoping Report Main Report [**APP-156**] sets out the scoping assessment for socio-economics and concluded that the project would be unlikely to result in significant effects, when taking into account the embedded and good practice measures. The Planning Inspectorate agreed with this decision as confirmed in the Scoping Opinion [**APP-159**].
5.13.3	The applicant is strongly encouraged to engage with relevant local authorities during early stages of project development so that the applicant can gain a better understanding of local or regional issues and opportunities.	National Grid remains engaged with the Local Authorities on the matter of socioeconomics.

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5.13.4	The applicant's assessment should consider all relevant socio-economic impacts, which may include: • the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero • the contribution to the development of low-carbon industries at the local and regional level as well as nationally • the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities • any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains • effects (positive and negative) on tourism and other users of the area impacted • the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development • cumulative effects - if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region	Chapter 15 of the Scoping Report [**APP-156**] sets out the scoping assessment for Socioeconomics, Recreation and Tourism Chapter and considered creation of jobs, local services, effects on tourism and influx of workers. This concluded that the project would be unlikely to result in significant effects in these areas, when taking into account the embedded and good practice measures. The Planning Inspectorate agreed with this decision as confirmed in the Scoping Opinion [**APP-159**]. National Grid has produced a Socio-economics and Tourism Report [**APP-066**] as part of its ongoing back check and to confirm that there are still not anticipated to be any significant effects on socio-economics and tourism as a result of the project. ES Chapter 15: CEA [**APP-083**] considers the in combination with other proposed developments (inter-project) including on availability of construction workers.
5.13.5	Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.	The Socio-economics and Tourism Report [**APP-066**] presents the existing socio-economic conditions in the areas surrounding the proposed development. Chapter 8 of the Planning Statement [**APP-160**] outlines the local planning policy context by identifying the local Development Plans and relevant policies for each local authority within the Order Limits, and then assesses the project against those relevant policies.
5.13.6	Socio-economic impacts may be linked to other impacts, for example visual impacts considered in Section 5.10 but may also have an impact on tourism	Chapter 15 of the EIA Scoping Report Main Report [**APP-156**] sets out the scoping assessment for Socio-economics, Recreation and Tourism Chapter including impacts on tourism and local businesses. This

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	and local businesses. Applicants are encouraged, where possible, to demonstrate that local suppliers have been considered in any supply chain.	concluded that the project would be unlikely to result in significant effects, when taking into account the embedded and good practice measures. The Planning Inspectorate agreed with this decision as confirmed in the Scoping Opinion [**APP-159**]. National Grid has produced a Socio-economics and Tourism Report [**APP-066]** as part of its ongoing back check and to confirm that there are still not anticipated to be any significant effects on tourism and local businesses.
5.13.7	Applicants should consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, that would include the need to provide temporary accommodation for construction workers if required.	National Grid has produced a Socio-economics and Tourism Report [**APP-066]** as part of its ongoing back check and to confirm that there are still not anticipated to be any significant effects on tourism and local businesses. The effect of construction workers on accommodation is considered at a district/county level, as the workers are likely to seek accommodation over a wider area to benefit from wider market availability (for example, the large settlement of Ipswich) and proximity to the wider transport network, including the A12 and A14. Based on the alternative scenario presented in Construction Schedules with Critical Path [**REP5-027**], which is considered to be a worst-case scenario in terms of workforce numbers, the workforce numbers are estimated to be around 350 staff at peak and an average of around 180 workers on site across the whole of the alternative construction schedule (Illustration 4.1). This is not a large number in workforce terms (in comparison with Sizewell C, for example, which is expected to employ an estimated 7,900 construction workers at peak construction). It is, therefore, considered that accommodation strategies would not be required.
	Mitigation	
5.13.8	The Secretary of State should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.	See response to 5.13.6.
	Secretary of State decision making	
5.13.9	The Secretary of State should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the Secretary of State considers to be both relevant and important to its decision.	See response to 5.13.4.

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5.13.10	The Secretary of State may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS).	Noted.
5.13.11 and 5.13.12	The Secretary of State should consider any relevant positive provisions the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts. The Secretary of State may wish to include a requirement that specifies the approval by the local authority of an employment and skills plan detailing arrangements to promote local employment and skills development opportunities, including apprenticeships, education, engagement with local schools and colleges and training programmes to be enacted.	National Grid promotes the use of local supply and small/medium enterprises through main contractors by embedded targets within its framework contracts. National Grid will continue to work with relevant planning authorities and business leaders at a national, regional and local level to identify opportunities to invest in employment networks, including looking for opportunities to work with local businesses. National Grid does not consider that an Employment, Skills and Education Strategy is needed on this project given the low number of jobs that would be created and that many will require trained specialists who are qualified to work on high voltage electricity lines sourced from National Grid's existing pool of approved contractors. However, National Grid is committed to continuing discussions with the Councils and other key stakeholders regarding their aspirations in respect of community benefits. These discussions would be outside of the DCO process.
5.14	**Traffic and Transport**	
5.14.1	The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects.	Noted.
5.14.2	Environmental impacts may result particularly from trips generated on roads which may increase noise and air pollution as well as greenhouse gas emissions.	Noted.
5.14.3	Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal.	Noted.
5.14.4	The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development as set out in Section 2.6 of this NPS.	Noted.
	Applicant assessment	

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5.14.5	If a project is likely to have significant transport implications, the applicant's ES (see Section 4.3) should include a transport appraisal. The DfT's Transport Analysis Guidance (TAG)267 and Welsh Governments WelTAG268 provides guidance on modelling and assessing the impacts of transport schemes.	A TA [**APP-061**] has been produced for the project. The TA [**APP-061**] has been developed in line with DLUHC guidance (Travel Plans, Transport Assessments and Statements) and relevant TAG (formerly WebTAG) principles. The Traffic and Transport assessment reported in ES Chapter 12 [**APP-080**] is developed using a methodology based on both DMRB and GEART guidance. Both National Highways and the relevant highway authorities have been consulted on the scope of the TA and the ES traffic and transport assessment, and their comments have informed both assessments.
5.14.6	National Highways and Highways Authorities are statutory consultees on NSIP applications including energy infrastructure where it is expected to affect the strategic road network and / or have an impact on the local road network. and applicants should consult with National Highways and Highways Authorities as appropriate on the assessment and mitigation to inform the application to be submitted.	National Grid has been engaging with the Local Highways Authorities and National Highways and progress with each is reported in the respective Statement of Common Ground. See the Draft Statement of Common Ground Local Authorities (**document 7.3.1 (C**)) and Draft Statement of Common Ground National Highways [**REP3-022**].
5.14.7	The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to: • reduce the need for parking associated with the proposal; • contribute to decarbonisation of the transport network; and • improve user travel options by offering genuine modal choice.	Chapter 6 of the CTMP (**document 7.6 (C)**) contains the Travel Plan, setting out the good practice measures that will be in place to encourage sustainable transportation for the workforce, in a way that reduces both environmental and social impacts on the local area. The objective of the Travel Plan is to encourage a reduction in the quantity of single-occupancy car journeys and to create a shift towards more sustainable modes of transport.
5.14.8	The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).	Operational effects to the transport network were scoped out of the assessment. The TA [**APP-061**] assesses the potential for disruption to infrastructure during construction. As the road closures and works within roads would be short term and temporary (less than four weeks) the TA concludes that there would be no substantial disruption to services and infrastructure.
5.14.9	If additional transport infrastructure is needed or proposed, it should always include good quality walking, wheeling and cycle routes, and associated facilities (changing/storage etc) needed to enhance active transport provision.	N/A: no new transport infrastructure proposed.
5.14.10	Applicants should discuss with network providers the possibility of co-funding by government for any third-party benefits. Guidance has been issued which explains the circumstances where this may be possible, although the	N/A: no new transport infrastructure proposed.

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	government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time.	
	Mitigation	
5.14.11	Where mitigation is needed, possible demand management measures must be considered. This could include identifying opportunities to: • reduce the need to travel by consolidating trips, • locate development in areas already accessible by active travel and public transport, • provide opportunities for shared mobility, • re-mode by shifting travel to a sustainable mode that is more beneficial to the network, • retime travel outside of the known peak times, • reroute to use parts of the network that are less busy.	The project will not generate any additional traffic during operation, therefore demand management has only been considered in relation to the short term, temporary construction effects. As with all major infrastructure projects, construction of the project will require the use of additional vehicles, although these will be low in any given month and will also be spread across the extent of the Order Limits, to limit the effect in any geographical area. The CTMP (**document 7.6 (C)**) sets out the proposed good practice measures to reduce demand during construction. Measures include the use of crew vans, promoting sustainable travel routes and workers travelling outside of peak hours.
5.14.12	If feasible and operationally reasonable, such mitigation should be required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts. All stages of the project should support and encourage a modal shift of freight from road to more environmentally sustainable alternatives, such as rail, cargo bike, maritime and inland waterways, as well as making appropriate provision for and infrastructure needed to support the use of alternative fuels including charging for electric vehicles.	See response to 5.14.18.
5.14.13	Regard should always be given to the needs of freight at all stages in the construction and operation of the development including the need to provide appropriate facilities for HGV drivers as appropriate.	The project will not generate any additional traffic during operation. The site compounds will provide appropriate facilities for HGV drivers arriving at the site.
5.14.14	The Secretary of State may attach requirements to a consent where there is likely to be substantial HGV traffic that: • control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements • make sufficient provision for HGV parking, and associated high quality drive facilities either on the site or at dedicated facilities elsewhere, to support driver	The CTMP (**document 7.6 (C)**) sets out the proposed measures for monitoring and managing the numbers, routings and timings of heavy goods vehicles (HGV) deliveries to reduce impacts on the local road network.

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	welfare, avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions • ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.	
5.14.15	The Secretary of State should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as the aim to secure more sustainable patterns of transport development when considering mitigation measures.	N/A: no new transport infrastructure proposed.
5.14.16	Applicants should consider the DfT policy guidance "Water Preferred Policy Guidelines for the movement of abnormal indivisible loads" when preparing their application.	Given the number of construction sites proposed and the rural location of the scheme away from any notable waterways and rail stations, it is not possible to rely on waterborne or rail transport for construction of the scheme. The TA [**APP-061**] provides further details on this.
	Secretary of State decision making	
5.14.18	A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the Secretary of State should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility.	The project will not generate any additional traffic during operation. Construction related traffic and transport impacts have been avoided and reduced through the design of the project, proposed access locations and through introduction of good practice measures such as those in the CTMP (**document 7.6 (C)**). These include the construction of a temporary access route off the A131 to reduce the number of vehicles using the narrow, rural roads during the construction period. As a result of all measures introduced, there are not predicted to be any significant adverse traffic and transport effects.
5.14.19	Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the Secretary of State should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below.	See response to 5.14.18
5.14.20	Development consent should not be withheld provided that the applicant is willing to enter into planning obligations for funding new infrastructure or requirements can be imposed to mitigate transport impacts. In this situation the Secretary of State should apply appropriately limited weight to residual effects on the surrounding transport infrastructure.	See response to 5.14.18

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5.14.21	The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.	See response to 5.14.18
5.15	**Resource and Waste Management**	
5.15.1	Government policy on hazardous and non-hazardous waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible. Where this is not possible and disposal is required as a last resort, waste management regulation ensures that waste is disposed of in a way that is least damaging to the environment and to human health.	Noted.
5.15.2	Sustainable waste management is implemented through the waste hierarchy, which sets out the priorities that must be applied when managing waste. These are (in order): • prevention • preparing for reuse • recycling • other recovery, including energy recovery • disposal	Noted.
5.15.3	Disposal of waste should only be considered where other waste management options are not available or where it is the best overall environmental outcome.	Noted
5.15.4	All large infrastructure projects are likely to generate some hazardous and non-hazardous waste. The EA's Environmental Permit regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an Environmental Permit, the EA will require the application to demonstrate that processes are in place to meet all relevant Environmental Permit requirements.	Noted.
	Applicant assessment	
5.15.8 – 5.15.9	The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a report that sets out the	The MWMP [**REP3-031**] sets out the process for managing waste on the project. It also presents a high-level assessment of the waste capacity in

Paragraph No.	Policy Requirement	How the Project Meets the Policy
	sustainable management of waste and use of resources throughout any relevant demolition, excavation and construction activities. The arrangements described and a report setting out the sustainable management of waste and use of resources should include information on how re-use and recycling will be maximised in addition to the proposed waste recovery and disposal system for all waste generated by the development. They should also include an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.	the region. It also sets out how the project intends to implement the waste hierarchy and to reduce waste being sent to landfill.
5.15.10	The applicant is encouraged to refer to the Waste Prevention Programme for England: Maximising Resources Minimising Waste and 'Towards Zero Waste: Our Waste Strategy for Wales' and should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.	The MWMP [**REP3-031**] sets out the process for managing waste on the project. The purpose of the MWMP [**REP3-031**] is to set out how the project will seek to reduce the consumption of primary and raw materials and to encourage the use of secondary or recycled sources. It also sets out how the project intends to follow the waste hierarchy by reducing waste produced in the first place before considering alternatives such as reuse, recycling and repurposing. The contractor will be responsible for implementing the measures outlined within the MWMP [**REP3-031**] and associated management plans.
5.15.12	The UK is committed to moving towards a more 'circular economy'. Where possible, applicants are encouraged to source materials from recycled or reused sources and use low carbon materials, sustainable sources and local suppliers. Construction best practices should be used to ensure that material is reused or recycled onsite where possible.	The MWMP [**REP3-031**] sets out the process for managing waste on the project. The purpose of the MWMP [**REP3-031**] is to set out how the project will seek to reduce the consumption of primary and raw materials and to encourage the use of secondary or recycled sources. It also sets out how the project intends to follow the waste hierarchy by reducing waste produced in the first place before considering alternatives such as reuse, recycling and repurposing. The contractor will be responsible for implementing the measures outlined within the MWMP [**REP3-031**] and associated management plans.
5.15.13	Applicants are also encouraged to use construction best practices in relation to storing materials in an adequate and protected place on site to prevent waste, for example, from damage or vandalism. The use of Building Information Management tools (or similar) to record the materials used in construction can help to reduce waste in future decommissioning of facilities, by identifying materials that can be recycled or reused.	The MWMP [**REP3-031**] sets out the process for managing waste on the project. Section 5.2 of MWMP [**REP3-031**] set out the specific measures for efficient material use during construction.
	Secretary of State decision making	

Paragraph No.	Policy Requirement	How the Project Meets the Policy
5.15.14 – 5.15.15	The Secretary of State should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. The Secretary of State should be satisfied that: • any such waste will be properly managed, both on-site and off-site. • the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent for recovery or disposal, except where that is the best overall environmental outcome.	The HSE has been consulted throughout the consultation activities on the project. In its response to statutory consultation, the HSE considered matters within its remit and confirmed that they did not have any concerns in relation to Hazardous Substance Consent and it is not anticipated that the project would give rise to any hazardous waste. MWMP [**REP3-031**] sets out the process for managing waste, including potentially hazardous waste on the project. It also sets out how the project intends to implement the waste hierarchy and to reduce waste being sent to disposal.
5.15.16	Where necessary, the Secretary of State should use requirements or obligations to ensure that appropriate measures for waste management are applied.	The MWMP [**REP3-031**] sets out the process for managing waste on the project.
5.15.17	The Secretary of State may wish to include a condition on revision of waste management plans at reasonable intervals when giving consent.	The MWMP [**REP3-031**] sets out the process for managing waste on the project. The contractor will be responsible for implementing the measures outlined within the MWMP [**REP3-031**] and associated management plans.
5.15.18	Where the project will be subject to the Environmental Permitting regime, waste management arrangements during operations will be covered by the permit and the considerations set out in Section 4.12 will apply.	The MWMP [**REP3-031**] sets out the process for managing waste on the project The project will be run in compliance with all relevant legislation, consents and permits in accordance with good practice measure GG01. Where required, permits from relevant planning authorities and/or the Environment Agency, will be sought prior to commencement of the relevant works. Consultation will be undertaken by the contractor with the appropriate bodies
5.15.19	The Secretary of State should have regard to any potential impacts on the achievement of resource efficiency and waste reduction targets set under the Environment Act 2021 or wider goals set out in the government's Environmental Improvement Plan 2023.	The MWMP [**REP3-031**] sets out the process for managing waste on the project. Section 2.5 of the MWMP [**REP3-031**] sets out the targets for material management and waste reduction
5.16	**Water Quality and Resources**	

Paragraph No.	Policy Requirement	How the Project Meets the Policy
5.16.1	Infrastructure development can have adverse effects on the water environment, including groundwater, inland surface water, transitional waters coastal and marine waters.	Noted.
5.16.2	During the construction, operation, and decommissioning phases, development can lead to increased demand for water, involve discharges to water, and cause adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants to the water environment. These effects could lead to adverse impacts on health or on protected species and habitats (see Section 4.3) and could result in surface waters, groundwaters or protected areas279 failing to meet environmental objectives established under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and the Marine Strategy Regulations 2010.	Noted.
	Applicant assessment	
5.16.3	Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment, and how this might change due to the impact of climate change on rainfall patterns and consequently water availability across the water environment, as part of the ES or equivalent (see Section 4.3 and 4.10).	ES Chapter 9: Water Environment [**APP-077**] details the likely significant effects of the project on the water environment with respect to surface water. The baseline of the water environment is characterised in this chapter. The assessment has been informed by a WFD Assessment [**APP-060**].
5.16.4	The applicant should make early contact with the relevant regulators, including the local authority, the Environment Agency and Marine Management Organisation, where appropriate, for relevant licensing and environmental permitting requirements.	National Grid has continued to engage with the Environment Agency throughout the design and evolution of the project, through various consultation exercises and through thematic meetings. All engagement is recorded in the Draft Statement of Common Ground Environment Agency (**document 7.3.3 (D)**). In addition, National Grid has continued to engage with the Local Authorities and specifically in this regard in their capacity as the LLFA. Discussions have informed the development of the FRA, amongst other matters. National Grid also circulated a draft version of the FRA to the Environment Agency and LLFA ahead of the submission of the application for development consent for their consideration and comment. Subsequently, the consultees' feedback was taken into consideration whilst preparing the FRA submitted with the application for development consent. Details on the consultation undertaken can be found in section 1.3 of the FRA [**APP-059**].

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5.16.5	Where possible, applicants are encouraged to manage surface water during construction by treating surface water runoff from exposed topsoil prior to discharging and to limit the discharge of suspended solids e.g. from car parks or other areas of hard standing, during operation.	Chapter 9 of the CEMP (**document 7.5 (C)**) sets out the measures that will be implemented to safeguard surface water and groundwater water quality and manage land drainage and flood risk during construction of the project. It fulfils the purpose of and contains all of the necessary measures that would be set out in a standalone Water Management Plan. In accordance with good practice measure W07, the layout of the site compounds will be planned to control potential risks to surface water, groundwater and flooding. The main site compound is assumed to be connected to mains water supply, subject to approvals from the relevant utility provider. Wastewater will undergo suitable treatment measures such as biodigesters or would be taken away by tankers to a suitable disposal unit. No surface water discharges to watercourses or existing drainage systems have been identified to date. However, in accordance with good practice measure GG01, the project will be delivered and operated in compliance with all relevant legislation, consents and permits, therefore any consents would be sought where appropriate. There is a low risk of the project generating significant effects on surface water receptors.
5.16.6	Applicants are encouraged to consider protective measures to control the risk of pollution to groundwater beyond those outlined in River Basin Management Plans and Groundwater Protection Zones – this could include, for example, the use of protective barriers.	Measures to control the risk of pollution to groundwater are included in the CEMP Appendix A: CoCP [**REP3-026**] and ES Chapter 10: Geology and Hydrogeology [**APP-078**]. Impacts on groundwater are limited and have been scoped out of the WFD Assessment [**APP-060**] as agreed with the Environment Agency.
5.16.7	The ES should in particular describe: • the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges • existing water resources281 affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Abstraction Licensing Strategies) and also demonstrate how proposals minimise the use of water resources and water consumption in the first instance	ES Chapter 9: Water Environment [**APP-077**] details the existing baseline (including quality and existing physical characteristics) and the likely significant effects of the project on the water environment with respect to surface water. ES Chapter 10: Geology and Hydrogeology [**APP-078**] describes the existing baseline and the likely significant effects of the project on groundwater receptors (including SPZ and abstractions). The assessment has been informed by a WFD Assessment [**APP-060**]. Section 9.5 of ES Chapter 9: Water [**APP-077**] includes a description of future baseline conditions which takes the likely impacts of climate change into account. The FRA [**APP-059**] also addresses climate change. Cumulative effects are addressed in ES Chapter 15: CEA [**APP-083**].

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	• existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics • any impacts of the proposed project on water bodies or protected areas (including shellfish protected areas) under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and source protection zones (SPZs) around potable groundwater abstractions • how climate change could impact any of the above in the future • any cumulative effects	
	Mitigation	
5.16.8	The Secretary of State should consider whether mitigation measures are needed over and above any which may form part of the project application. A construction management plan may help codify mitigation at that stage.	The assessment presented in ES Chapter 9: Water Environment [**APP-077**] has concluded that there are no likely significant residual effects in relation to water environment receptors during the construction or operation of the project. The good practice measures for reducing effects on the water environment are set out in the CEMP Appendix A: CoCP [**REP3-026**].
5.16.9	The risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice. For example, designated areas for storage and unloading, with appropriate drainage facilities, should be clearly marked.	Embedded measures relevant to the water environment are summarised in Section 9.4 of ES Chapter 9: Water Environment [**APP-077**] and good practice measures are set out in the CEMP Appendix A: CoCP [**REP3-026**].
5.16.10	The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling. If a development needs new water infrastructure, significant supplies or impacts other water supplies, the applicant should consult with the local water company and the EA or NRW.	No new consumptive surface water abstractions are anticipated to facilitate the project during construction or operation of the project. Discharges from dewatering of open cut trenches to remove rainwater and minor groundwater seepages would be made to ground. Further details are provided in ES Chapter 10: Geology and Hydrogeology [**APP-078**].
	Secretary of State decision making	
5.16.11	Activities that discharge to the water environment are subject to pollution control. The considerations set out in Section 4.12 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under controlled waters.	In accordance with GH07 in the CoCP [REP3-026], a hydrogeological risk assessment will be undertaken once the trenchless crossing method has been confirmed. This will assess the risks on groundwater or surface water quality associated with the construction method including considering the potential for breakout during drilling and the use of bentonite or other agents proposed. Where the assessment identifies an

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		unacceptable risk to groundwater or surface water quality, then alternative methods and/or additives shall be proposed, assessed and used. The hydrogeological risk assessment will be submitted to the Environment Agency for approval prior to construction.
5.16.12	The Secretary of State will need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.	A WFD Assessment [**REP-009**] has been produced as part of the application for development consent. The WFD Assessment [**REP-009**] concludes that the project is compliant with the objectives of the WFD and would not have an adverse effect on the achievement of the environmental objectives.
5.16.13	The SoS must also consider duties under other legislation including duties under the Environment Act 2021 in relation to environmental targets and have regard to the policies set out in the Government's Environmental Improvement Plan 2023.	Noted.
5.16.14	The Secretary of State should be satisfied that a proposal has regard to current River Basin Management Plans and meets the requirements of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (including regulation 19). The specific objectives for particular river basins are set out in River Basin Management Plans. The Secretary of State must refuse development consent where a project is likely to cause deterioration of a water body or its failure to achieve good status or good potential, unless the requirements set out in Regulation 19 are met. A project may be approved in the absence of a qualifying Overriding Public Interest test only if there is sufficient certainty that it will not cause deterioration or compromise the achievement of good status or good potential.	A WFD Assessment [**REP-009**] has been produced as part of the application for development consent. The WFD Assessment [**REP-009**] includes information on the relevant River Basin Management Plan and concludes that the project is compliant with the objectives of the WFD and would not have an adverse effect on the achievement of the environmental objectives.
5.16.15	The Secretary of State should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline Management Plans.	The project does not interact with the coastline and has a very low consumptive water demand (linked to the construction phase only), therefore has no interactions with those other Plans.
5.16.16	The Secretary of State should consider proposals to mitigate adverse effects on the water environment and any enhancement measures put forward by the applicant and whether appropriate requirements should be attached to any development consent and/or planning obligations are necessary.	The assessment presented in ES Chapter 9: Water Environment [**APP-077**] has concluded that there are no likely significant residual effects in relation to water environment receptors during the construction or operation of the project. The good practice measures for reducing effects on the water environment are set out in the CEMP Appendix A: CoCP [**REP3-26]**.

Appendix G: Signposting for Compliance with EN-5 (November 2023)

Table G1: Signposting for Compliance with EN-5 (November 2023)

Please note, whilst the main body of this Planning Statement refers to the document numbers allocated by National Grid at the submission of the application for development consent in April 2023, Appendix F & G have been inserted at Examination Deadline 6 (20 December 2023) and therefore, instead refer to the Examination Library document numbers (correct as of 20 December 2023).

Also note, paragraphs of the NPS have been deleted from Appendix F and G where National Grid do not consider them relevant to the project; hence, the paragraph numbers may not always be in consecutive order.

Paragraph No.	Policy Requirement	How the Project Meets the Policy
2	**Assessment and Technology Specific Information**	
2.1	**Introduction**	
2.1.1	As set out in Section 1.3, this NPS is additional to EN-1. Therefore, applicants and the Secretary of State should consider this NPS and EN-1 together. Applicants should show how their application meets the requirements in EN-1 and this NPS, applying the mitigation hierarchy, as well as any other legal and regulatory requirements. This includes the assessment principles as set out in Part 4 of EN-1, and the consideration of impacts as set out in Part 5 of EN-1. In addition, for offshore-onshore transmission, applicants and the Secretary of State should consider relevant policy in EN-3, as identified in sections 2.12 – 2.15 below.	Noted.
2.1.2	When evaluating the impacts of electricity networks infrastructure in particular, all of the generic impacts detailed in EN-1 are likely to be in play, even if only during specific phases of the development (such as construction), or at one specific part of the development (such as a substation).	Noted.
2.1.3	This NPS has additional policy on:	Noted.

	• factors influencing site selection and design; • biodiversity and geological conservation; • landscape and visual; • noise and vibration; • Electric and Magnetic Fields; and • Sulphur Hexafluoride.	
2.1.4	Decommissioning of electricity networks is not specifically covered in this NPS. Generally, nationally significant electricity networks are likely to have an ongoing function, but will be subject to maintenance, reinforcement works and for assets to be replaced when they come to the end of their lifespan.	Noted.
2.1.5	As stated in Section 4.2 of EN-1, to support the urgent need for new low carbon infrastructure, all power lines in scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure such as substations, are considered to be CNP infrastructure. This is not limited to those associated specifically with a particular generation technology, as all new grid projects will contribute towards greater efficiency in constructing, operating and connecting low carbon infrastructure to the National Electricity Transmission System.	NPS EN-1 (November 2023) classifies transmission projects such as Bramford to Twinstead as 'Critical National Priority' (CNP) projects. This further reinforces the urgent need for the project.
2.1.6	The assessment principles outlined in Section 4 of EN-1 continue to apply to CNP infrastructure. Applicants must show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. Early application of the mitigation hierarchy is strongly encouraged, as is engagement with key stakeholders including SNCBs, both before and at the formal pre-application stage.	The mitigation hierarchy has been applied and the project includes measures that have led to this positive outcome. In this context, National Grid does not consider that any further compensation is required and is of the view that the project complies with policies on the mitigation hierarchy as presented in NPS EN-1 (November 2023). Further details are provided in the Applicant's Comments on other submissions received at Deadline 4, at 6c page 52 [**REP5-025**].
2.2	**Factors influencing site selection and design**	
2.2.1	The Secretary of State should bear in mind that the initiating and terminating points – or development zone – of new electricity networks infrastructure is not substantially within the control of the applicant.	The need for the project is summarised in Planning Statement Chapter 3 [**APP-160**] and set out in detail in the Need Case (April 2023) [**APP-161**]. The primary location for the project is where the network reinforcement is needed to remedy the existing bottleneck in the network. ES Chapter 3: Alternatives Considered [**APP-071**] includes an environmental assessment of reasonable alternatives in choosing a preferred option and route. In addition, Planning Statement Chapter 5 [**APP-160**] sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process; demonstrating how such policy and legislative objectives have been embedded into the design of the project.

2.2.2	Siting is determined by: • the location of new generating stations or other infrastructure requiring connection to the network, and/or • system capacity and resilience requirements determined by the Electricity System Operator.	The Need Case (April 2023) [**APP-161**] provides an overview of the need for the project setting out the drivers for change, including the increase in electricity generation and how this affects the National Electricity Transmission System.
2.2.3	These twin constraints, coupled with the government's legislative commitment to net zero by 2050, strategic commitment to new interconnectors with neighbouring North Seas countries7 and an ambition of up to 50GW of offshore wind generation by 2030, means that very significant amounts of new electricity networks infrastructure is required, including in areas with comparatively little build-out to date.	As set out in the Need Case (April 2023) [**APP-161**] increased transmission capability is required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its licence obligations, and to allow new sources of electricity generation to connect. This is vital to facilitate the ambitious targets set by the Government, for secure, clean and affordable energy for the long term.
2.2.4	However, a strategic and holistic approach to onshore and offshore network planning, as set out in paragraphs 2.7 – 2.8, will identify the most efficient way of meeting decarbonisation targets and should reduce the overall amount of network infrastructure required.	Noted.
2.2.5	Additionally, applicants retain control in managing the identification of routing and site selection between the identified initiating and terminating points or within the development zone.	Four broad route corridors and two sub-corridors were identified, all of which would be technically feasible, and all would have connection points at Bramford Substation and the existing Tee at Twinstead. The four route corridors, two sub-corridors and the key environmental factors that were considered in the appraisal are summarised at Table 3.3 of ES Chapter 3: Alternatives Considered [**APP-071**]. Planning Statement Chapter 5 [**APP-160**] also sets out how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process, demonstrating how such policy and legislative objectives have been embedded into the design of the project.
2.2.6	Moreover, the locational constraints identified above do not, of course, exempt applicants from their duty to consider and balance the site-selection considerations set out below, much less the policies on good design and impact mitigation detailed in sections 2.4-2.9.	National Grid has sought to develop a well-designed project which responds positively to policy drivers, environmental constraints and comments from stakeholders and the public, providing mitigation where necessary in order to overcome adverse impacts which can be associated with overhead lines.
2.2.7	The connection between the initiating and terminating points of a proposed new electricity line will often not be via the most direct route. Siting constraints, such as engineering, environmental or community considerations will be important in determining a feasible route.	The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be

		read alongside both ES Chapter 3: Alternatives Considered [**APP-071**], which documents the key environmental factors in consideration of the main alternatives, and Planning Statement Chapter 5 [**APP-160**], which explains how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process. The latter demonstrating how such policy and legislative objectives have been embedded into the design of the project.
2.2.8 and 2.2.9	There will usually be a degree of flexibility in the location of the development's associated substations, and applicants should consider carefully their location, as well as their design. In particular, the applicant should consider such characteristics as the local topography, the possibilities for screening of the infrastructure and/or other options to mitigate any impacts. (See Section 2.10 below and Section 5.10 in EN-1.)	Potential sites for a substation were considered, extending from Twinstead Tee to Thaxted, and were focused along the 400kV overhead line. Following an initial desk-based study, eight study areas were identified. After assessing the eight study areas, three were shortlisted for further investigation. A summary of the shortlisted study areas considered and the key environmental factors that were considered in the appraisal is presented in Table 3.12 of ES Chapter 3: Alternatives Considered [**APP-071**]. The Horlock Rules provide guidelines for the siting and design of new substations, or substation extensions and these rules have been an important consideration in the design and siting of the GSP substation which is associated development to the NSIP. The Horlock Rules require National Grid to consider local topography and the possibilities for screening. The GSP substation now benefits from a grant of planning permission from Braintree District Council under the Town and Country Planning Act 1990 and is considered to have an acceptable landscape and visual impact.
2.2.10	As well as having duties under Section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), applicants must take into account Schedule 9 to the Electricity Act 1989, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, 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 …do what [they] 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."9	As a licence holder National Grid has specific duties to uphold in relation to the desirability of preserving amenity of certain aspects of the environment and to mitigate the effects of its activities on the environment under Section 38 and Schedule 9 of the Electricity Act 1985. National Grid's Schedule 9 Statement (2016) sets out how the company would meet the duty placed upon it by the aforementioned legislation.
2.2.11	Depending on the location of the proposed development, statutory duties under Section 85 of the Countryside and Rights of Way Act 2000, Section 11A of the National Parks and Access to the Countryside Act 1949 (as amended by Section	The relevant section, Section 245 'Protected landscapes', of the Levelling-Up and Regeneration Act (2023) states (and where relevant to the project),

	62 of the Environment Act 1995), and Section 17A of the Norfolk and Suffolk Broads Act 1988 may be relevant. Applicants should note amendments to each of these provisions contained in Section 245 of the Levelling Up and Regeneration Act 2023.	*'(A1) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a relevant authority other than a devolved Welsh authority must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.* *(A2) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a devolved Welsh authority must have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.'* The clause expands the duty on certain public authorities, including Statutory Undertakers (including National Grid), when carrying out functions in relation to these landscapes to seek to further the statutory purpose and confers a power to make provision as to how they should do this. The legislation has been expanded from 'having regard' to 'furthering the purpose' of protected landscapes such as AONB. The expanded duty will not come into force until 2 months from the date on which the Levelling-Up and Regeneration Act (2023) was enacted. Therefore, it may be that further provisions are made to prescribe the redefined statutory duties more closely. In any event, National Grid considers the project is compliant with the new 2023 Act obligation as set out above, as the project: a.) proposes to underground the proposed 400kV overhead line within the AONB and beyond its boundary; and b.) proposes the removal of the existing 132kV overhead line within the AONB, resulting in a net loss of electricity transmission overhead line infrastructure in this designated landscape.
2.2.12	Transmission and distribution licence holders are also required under Schedule 9 to the Electricity Act 1989 to produce and publish a statement setting out how they propose to perform this duty generally.	National Grid's Schedule 9 Statement (2016) sets out how the company would meet the duty placed upon it by the aforementioned legislation.
2.3	**Climate change adaptation and resilience**	
2.3.1 to 2.3.2	Section 4.10 of EN-1 sets out the generic considerations that applicants and the Secretary of State should take into account in order to ensure that electricity networks infrastructure is resilient to the effects of climate change. As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out	National Grid has assessed potential impacts of climate change and incorporated adaptation/resilience throughout the lifetime of the project. The project has been designed to be resilient to climate change by locating the above ground elements of the project, including the GSP substation and the CSE compounds, outside of Flood Zones 2 and 3 as described in the FRA [**APP-059**]. This is secured via commitment EM-P07 (embedded design measure).

	to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it has been designed to be resilient to: • flooding, particularly for substations that are vital to the network; and especially in light of changes to groundwater levels resulting from climate change; • the effects of wind and storms on overhead lines; • higher average temperatures leading to increased transmission losses; • earth movement or subsidence caused by flooding or drought (for underground cables); and • coastal erosion – for the landfall of offshore transmission cables and their associated substations in the inshore and coastal locations respectively.	This measure will be secured as part of the CEMP (document 7.5 (C)) alongside the good practice measures set out in the CoCP Appendix A of the CEMP [**REP3-026**]. The residual impact of extreme climatic events, such as flooding; extreme temperatures (high and low temperatures); ground subsidence; high winds/storm and tree fall are considered within ES Appendix 5.3: Major Accidents and Disasters Scoping [**APP-095**]. The assessment has shown that the existing design measures, legal requirements, codes and standards adequately control the potential major accident and/or disaster throughout the project lifetime (construction, operation and decommissioning). In respect to coastal erosion which relates to the landfall of offshore transmission cables and their associated substations; the project does not interface with the coast and, therefore, this section is not relevant. As such, the relevant policies in respect to coastal erosion have not been considered any further.
2.3.3	Section 4.10 of EN-1 advises that the resilience of the project to the effects of climate change must be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment (see Sections 5.8 in EN-1). Consideration should also be given to coastal change (see sections 5.6 in EN1).	See section 2.3.1 to 2.3.2.
2.4	**Consideration of good design for energy infrastructure**	
2.4.1	The Planning Act 2008 requires the Secretary of State to have regard, in designating an NPS, and in determining applications for development consent to the desirability of good design.	Noted.
2.4.2	Applicants should consider the criteria for good design set out in EN-1 Section 4.7 at an early stage when developing projects10	Noted.
2.4.3	However, the Secretary of State should bear in mind that electricity networks infrastructure must in the first instance be safe and secure, and that the functional design constraints of safety and security may limit an applicant's ability to influence the aesthetic appearance of that infrastructure.	This is noted and the design considerations have taken place within the context of meeting National Grid's duty to be economic and efficient and also within the rigorous health and safety processes that National Grid has in place than govern how it designs and constructs its projects safely. National Grid is already required to ensure that the project is designed in accordance with standards set out within or overseen by, amongst others, the Electricity Supply, Quality and Continuity Regulations, British Standards (BS), European Standards, the 'Conseil International des Grands Réseaux Electriques', the International Electrotechnical Commission, and the Electricity Networks Association. In addition, the project must accord with

		each of the following: National Grid Design Standards, National Grid Technical Specification, National Grid Transmission Procedures, National Grid Policy Statement (Transmission), National Grid Technical Guidance Notes (Electricity) and National Grid Technical Reports (Electricity).
2.4.4	While the above principles should govern the design of an electricity networks infrastructure application to the fullest possible extent – including in its avoidance and/or mitigation of potential adverse impacts (particularly those detailed in Sections 2.9 below) – the functional performance of the infrastructure in respect of security of supply and public and occupational safety must not thereby be threatened.	See response to 2.4.3.
2.5	**Environmental and Biodiversity Net Gain**	
2.5.1	When planning and evaluating the proposed development's contribution to environmental and biodiversity net gain, it will be important – for both the applicant and the Secretary of State – to supplement the generic guidance set out in EN-1 (Section 4.6) with recognition that the linear nature of electricity networks infrastructure can allow for excellent opportunities to: i. reconnect important habitats via green corridors, biodiversity stepping zones, and reestablishment of appropriate hedgerows; and/or ii. ii. connect people to the environment, for instance via footpaths and cycleways constructed in tandem with environmental enhancements.	In addition to the biodiversity net gain calculation using Natural England's Biodiversity Metric v.3.1, the Environmental Gain Report **[APP-176]** provides a qualitative overview of the range of environmental benefits (including biodiversity net gain) considered to contribute to wider environmental net gain targets, including for example recreational amenity, in Table 6.1.
2.6	**Land Rights and Land Interests**	
2.6.1	In order to be lawfully able to install, inspect, maintain, repair, adjust, alter, replace or remove an electricity line (above or below ground), its related equipment (such as monopoles, pylons/transmission towers, transformers and cables), and/or its associated mitigation or enhancement schemes, applicants must: i. own the land on, over, or under which the relevant activity is to take place; or ii. ii. hold sufficient rights over or interests in that land (typically in the form of an easement); or iii. have permission for the activity from the present owner or occupier of that land (typically in the form of a wayleave)11 .	In the Book of Reference [**REP4-037**] each land plot is numbered uniquely so that the prefix of the plot number relates to the land plan sheet number on which the plot appears. The Land Plans [**REP1-004**] show the Order Limits and the numbered plots within the Order Limits that are listed in the sections of the Book of Reference [**REP4-037**]. Each plot is coloured. The colouring serves to differentiate the type of rights or powers sought for each given plot within the Order Limits which corresponds to the respective interest, right or power to be acquired or used.
2.6.2	Where the applicant does not own or wish to own the land in question, it should try to reach a voluntary agreement giving it sufficient rights and/or permissions to undertake the relevant work12 .	National Grid will continue to attempt to seek all rights it needs by voluntary agreement, subject to the DCO being made. National Grid has undergone extensive consultation with all persons with an interest in the relevant land in order to try to avoid the need for compulsory acquisition.

		This approach to making the application for the DCO in parallel to conducting negotiations to acquire rights in land by agreement wherever practicable, is in accordance with paragraph 25 of the Planning Act 2008 : Guidance related to procedures for compulsory acquisition produced by the DCLG, as updated September 2013.
2.6.3	As a last resort, where it does not succeed in reaching the agreement that it requires, the network company may, as part of its application to the Secretary of State, seek to acquire rights compulsorily over the land in question by means of a provision in the DCO.	Justification for the use of compulsory acquisition powers is set out in the Statement of Reasons [**APP-038**].
2.6.4	In such cases (i.e. where the compulsory acquisition of rights is sought) permanent arrangements are strongly preferred over voluntary wayleaves (which could, for example, be terminable on notice by the landowner) in virtue of their greater reliability and economic efficiency and reflecting the importance of the relevant infrastructure to the nation's net zero goals.	It is National Grid's policy for all rights for new apparatus – underground cable or overhead line to be secured by easements as opposed to wayleaves. These are granted for a capital sum and a legal interest is created in the affected land which is permanent and not terminable.
2.6.5	The applicant may also seek the compulsory acquisition of land. This will not normally be necessary where lines and cables are installed but may be sought where other forms of electricity networks infrastructure (such as new substations) are required.	The GSP was purchased freehold in a voluntary transaction and it is anticipated that the four CSE compounds will also be purchased freehold. This arrangement allows for permanence and control, particularly where National Grid are looking for areas of land for embedded mitigation measures. Should the negotiations for the voluntary agreements fail, it is important that there is provision for compulsory acquisition. As a fallback position therefore, the DCO does include compulsory acquisition of land for the CSE/GSP.
2.6.6	As detailed in Section 4.1.8 of EN-1, where the use of land at a specific location is required to facilitate the development by providing for mitigation, landscape enhancement and biodiversity net gain, an applicant may, as part of its application to the Secretary of State, seek the compulsory acquisition of that land, or rights over that land. The Secretary of State will consider any such application under the provisions of the Planning Act 2008 and any associated guidance.	As set out in Section 4.10 of the Statement of Reasons [**APP-038**], all land required for embedded measures (for example planting incorporated around the CSE compounds), additional environmental mitigation and environmental net gain is contained within the Order Limits. For embedded measures, National Grid is seeking the acquisition of land and rights for these measures pursuant to the dDCO as described in paragraph 4.10.2 of the Statement of Reasons [**APP-0-38**]. As explained in paragraph 4.10.4 of the Statement of Reasons [**APP-038**], '*all land identified for additional mitigation is contained within the Order Limits and therefore National Grid is seeking powers including rights and land acquisition in order to deliver this mitigation under the draft DCO. Whilst such mitigation is included within the Order Limits, agreement will be sought with landowners on a voluntary basis, with the fallback of compulsory acquisition, if voluntary arrangements are not obtained'.* With regards to environmental net gain, paragraph 4.10.8 of the Statement of Reasons [**APP-038**] sets out that *'to ensure delivery of the*

		enhancements, National Grid is seeking voluntary agreements with landowners in the first instance, with compulsory acquisition powers being exercised, if voluntary arrangements are not obtained'. National Grid has provided further response to its position in respect of biodiversity net gain in reference DC1.6.95 in National Grid's Responses to First Written Questions [**REP3-052**]. This matter is also considered in Applicant's Response to the December Hearing Action Points (**document 8.8.3**).
2.7	**Holistic planning**	
2.7.1	EN-1 explains in Section 4.10 that the Planning Act 2008 aims to create a holistic planning regime, such that the cumulative effects of the same project can be considered together. Co-ordinated applications typically bring economic efficiencies and reduced environmental impact.	National Grid has considered the project effects holistically. It is noted that National Grid obtained planning permission for the GSP substation under the Town and Country Planning Act in October 2022 (Application Reference: 22/01147/FUL) in advance of the application for development consent. However, as a consenting fall-back position, the GSP substation is also included in the application for development consent and the likely significant effects are assessed within ES Chapters 6 to 15 to allow a comprehensive assessment of the project in full.
2.7.2	Accordingly, the government envisages that, wherever reasonably possible, applications for new generating stations and their related infrastructure should be contained in a single application to the Secretary of State14 . However, a consolidated approach of this kind may not always be possible, nor represent the most efficient strategy for delivery of new infrastructure.	See response to 2.7.2.
2.7.3	This could be, for example, due to the differing lengths of time needed to prepare the applications for submission to the Secretary of State, or because a network application relates to multiple generation projects (which could be onshore or offshore), or because the works involved are strategic reinforcements required for a number of reasons.	See response to 2.7.2. The GSP substation was consented separately in advance of making the application for development consent to realise programme savings and allow the removal of the existing 132kV overhead line, which must happen before the new 400kV overhead line can be constructed.
2.7.4	It may also be the case that the networks infrastructure application and the application for a related generating station will of necessity come from different legal entities, or from entities subject to different commercial and regulatory frameworks.	The 132KV overhead line is owned by UKPN, the DNO in this area. Therefore, the provisions of the DCO have effect for the benefit of UKPN in respect of the 'UKPN Works' described in the DCO.
2.7.5	It will also be common for applications to be submitted for the general purpose of reinforcing the network, which will be critical to deliver especially in light of the drive towards net zero, including the ambition for up to 50GW of offshore wind by 2030, and a CNP (see EN-3).	This further reinforces the urgent need for the project.
2.8	**Strategic Network Planning**	

2.8.1	A more strategic approach to network planning will ensure that network development keeps pace with renewable generation and anticipates future system needs. Strategic network planning, such as through the Holistic Network Design and its follow up exercises or through forthcoming Centralised Strategic Network plans, helps reduce the overall impact of infrastructure by identifying opportunities for coordination, where appropriate, and taking a holistic view of both the onshore and offshore network. Network plans will take account of environmental and community impacts, alongside deliverability and economic cost, from the outset.	At the time of making the application for development consent, National Grid ESO launched the OTNR following the publication of the HND report in summer 2022 (National Grid ESO, 2022[2]). The OTNR considered how the transmission network is designed and delivered, to ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way considering the increased ambition for offshore wind to achieve net zero. It considers environmental, social and economic costs. The HND sets out a single integrated transmission network design that supports the large-scale delivery of electricity generated from offshore wind. Following the OTNR and the Ofgem-led ETNPR, which was undertaken by National Grid ESO, the proposed CSNP model is to be managed by the FSO, once established, taking on responsibilities from the ESO. Despite the wider governance changes taking place in the context of the project, these changes do not affect the needs case for the project which is a network reinforcement to remedy an existing bottleneck in the network.
2.8.2	A strategic approach to network planning proposed through the Centralised Strategic Network Planning (CSNP) process15 will identify strategic investments intended to facilitate achieving net zero and decarbonisation targets16 .	See response to 2.8.2 above.
2.8.3	In these cases (i.e. where the application is a reinforcement project in its own right and does not accompany an application for a generating station, or is not underpinned by a contractually-supported agreement to provide an as-yet-unconsented generating station with a connection), the Secretary of State should have regard to the need case for new electricity networks infrastructure set out in Section 3.3 of EN-1.	Primarily, the project is a network reinforcement and without reinforcement the capacity of the East Anglia existing network is insufficient to accommodate the connection of the proposed new power sources. Increased transmission capability is, therefore, required in the East Anglia region, to allow National Grid to maintain a robust network, remain in accordance with its licence obligations and is required to connect a large number of electricity generators.
2.8.4 and 2.8.5	The Secretary of State should also take into account that Transmission Owners (TOs) and Distribution Network Operators (DNOs) are required under Section 9 of the Electricity Act 1989 to bring forward efficient and economical proposals in terms of network design. TOs and DNOs are also required to facilitate competition in the generation and supply of electricity, and electricity distributors have a statutory duty to provide a connection where requested.	See response to 2.2.10. Primarily, paragraph 2.8.5 refers to the role of National Grid ESO.
2.8.6	Given that individual electricity lines are only component parts of a country-spanning network, it may arise that a single application covers works to be undertaken at different geographical locations.	The project falls within the administrative boundaries of Mid Suffolk District Council, Babergh District Council, Braintree District Council, Suffolk County Council and Essex County Council.

2.8.7	Where it can be demonstrated that such a set of works will reinforce the network as a whole, or reinforce the network to accommodate a subset of new connections, the Secretary of State should be willing – in line with the need statement set out in Section 3.3 of EN-1 – to accept an application seeking development consent for the entire set of works.	Noted. Schedule 1 of the dDCO (**document 3.1 (F)**) contains a list of numbered works comprising the project. The project includes works of a description in section 14(1)(b) of the Act (the installation of an electric line above ground), associated development and other matters that are included as ancillary to the project. As an NSIP, the project requires the grant of development consent by the making of a DCO under the Planning Act 2008. A DCO may include a range of consents and powers. The definitions in the Planning Act 2008 are such that only the proposed new above ground electricity line is an NSIP. Other developments, however, may be granted development consent as 'associated development' within the meaning of Section 115 of the Planning Act 2008.
2.8.8	Applicants should ensure that any such applications are kept to a scale which they can manage within the statutory timescales and discuss putative applications of this kind with the Planning Inspectorate before formally submitting an application.	Not considered applicable at this time.
2.9	**Applicant assessment**	
	Impacts	
2.9.1	This section should be read in conjunction with Part 5 (Generic Impacts) of EN-1. The impacts identified in Part 5 of EN-1, and below, are not intended to be exhaustive.	Noted.
2.9.2	Applicants must provide information on relevant impacts as directed by this NPS and the Secretary of State.	Noted.
	Biodiversity and Geological Conservation	
2.9.3	Electricity networks infrastructure pose a particular potential risk to birdlife including large birds, such as swans and geese, and perching birds. These may collide with overhead lines and risk being electrocuted. Large birds may also be electrocuted when landing or taking off by completing an electric circuit between live and ground wires. Even perching birds can be killed as soon as their wings touch energised parts of the infrastructure.	To avoid earthing by design, insulators are of a sufficient size to prevent birds from being able to connect with both the conductor and the earthed pylon at the same time, which could result in electrocution. In addition, vegetation clearance in the permanent easement corridor (associated with statutory safety clearances) would be maintained to a three-year growth to avoid branches interfering with the conductors and subsequently birds perching on branches close to power lines which could result in earthing and electrocution. ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) concludes that there would be negligible impacts on birds at the operational stage of the project. There is unlikely to be any additional risk of collision as the project actually

		results in the spatial extent of features in the landscape being reduced, largely as a result of the removal of the existing 132kV overhead line and the undergrounding of some sections.
2.9.4	Applicants should consider measures to make lines more visible such as bird flappers and diverters which are covered in more detail in paragraphs 2.10.3 and 2.10.4.	ES Chapter 7: Biodiversity (**document 6.2.7 (B)**) concludes that there would be negligible impacts on birds at the operational stage of the project. There is unlikely to be any additional risk of collision as the project actually results in the spatial extent of features in the landscape being reduced, largely as a result of the removal of the existing 132kV overhead line and the undergrounding of some sections.
2.9.5	The applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the ES (see Section 4.3 of EN-1).	See response to 2.9.5.
2.9.6	Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds, where they are functionally linked to sites designated or allocated under the 'national site network' provisions of the Conservation of Habitats and Species Regulations.	The full assessment of the impacts and related mitigation measures are detailed in the ES [**APP-074 to APP-083**] submitted as part of this DCO application. The full list of what has been included within the scope of the assessment or justification as to why it is not included, can be found ES Appendix 5.1: Scope of the Assessment [**APP-093**]. Effects on breeding and overwintering birds are assessed in ES Chapter 7: Biodiversity (**document 6.2.7 (B)**).
	Landscape and Visual Impact	
2.9.7	While the government does not believe that the development of overhead lines is incompatible in principle with applicants' statutory duty under Schedule 9 to the Electricity Act 1989, to have regard to visual and landscape amenity and to reasonably mitigate possible impacts thereon, in practice new overhead lines can give rise to adverse landscape and visual impacts.	The Strategic Options Report (June 2011) [**APP-162**] considered the feasibility of alternative connections such as sub-sea cables. The Connection Option Report (May 2012) [**APP-164**] sets out the justification for why certain sections are overhead line or underground cable. Further details on the environmental effects of the different options can be found in ES Chapter 3: Alternatives Considered [**APP-071**]. The LEMP [**REP3-034**] contains all the planting required to make the project acceptable from a landscape and visual perspective, including the embedded and best practice measures (including planting embedded into the design of the project and reinstatement planting) and additional mitigation as well as biodiversity compensation planting and landscape softening. The remaining residual effects are considered to be acceptable in the overall planning balance without further mitigation or compensation.
2.9.8	These impacts depend on the type (for example, whether lines are supported by towers or monopole structures), scale, siting, and degree of screening of the lines, as well as the characteristics of the landscape and local environment through which they are routed.	ES Chapter 6: Landscape and Visual [**APP-074**] identifies the likely significant effects in relation to landscape and visual impacts.

2.9.9	New substations, sealing end compounds (including terminal towers), and other above-ground installations that serve as connection, switching, and voltage transformation points on the electricity network may also give rise to adverse landscape and visual impacts.	ES Chapter 6: Landscape and Visual [**APP-074**] identifies the likely significant effects in relation to landscape and visual impacts, including the GSP substation and four CSE compounds.
2.9.10	Cumulative adverse landscape, seascape and visual impacts may arise where new overhead lines are required along with other related developments such as substations, wind farms, and/or other new sources of generation.	Landscape and visual impacts are covered in ES Chapter 6: Landscape and Visual [**APP-074**], and cumulative landscape and visual effects are covered in ES Chapter 15: Cumulative Effects Assessment [**APP-083**].
2.9.11	Landscape and visual benefits may arise through the reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure. Though mitigation of the landscape and visual impacts arising from overhead lines and their associated infrastructure is usually possible, it may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for overhead lines.	National Grid considers that the project is well mitigated. In the context of a major infrastructure project, the residual adverse effects are considered to be very limited and should be considered in the context of the significant benefits of the project (contributing to energy security, supporting the transition to net zero and other significant beneficial effects, such as those achieved through the removal of the 132kV overhead line, a form of overhead line rationalisation, the removal of a section of 400kV overhead line and undergrounding of the proposed 400kV overhead line in certain sections of the route). National Grid considers that the remaining residual effects are acceptable without further mitigation or compensation.
2.9.12	However, in nationally designated landscapes (for instance, National Parks, The Broads and Areas of Outstanding Natural Beauty) even residual impacts may well make an overhead line proposal unacceptable in planning terms. (See Section 2.9.20 below for guidance on this case.)	The project would pass through Dedham Vale AONB, the majority of which lies to the south of the Order Limits. Undergrounding was, therefore, considered appropriate in the AONB as it is considered to have a high landscape value. It was also considered that undergrounding was appropriate in the most sensitive parts of the Stour Valley, because of the particular qualities of the landscape and its cultural associations; thus adopting the case-by-case approach to undergrounding.
2.9.13	Where possible, applicants should ensure that the principles detailed in Sections 2.11.16-2.11.19 below are embodied in the design of their proposed overhead line route and its associated infrastructure. Applicants should also offer proposals (for instance those detailed in Section 2.10 below) for additional mitigation.	Chapter 5 of this Planning Statement [**APP-160**] sets out how planning policy, namely EN-1 and EN-5, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules have influenced the options appraisal process; demonstrating how such policy objectives have been embedded into the design of the project. Meanwhile, the REAC (**document 7.5.2 (D)**) records all commitments made by National Grid during the iterative development of the designs on the project. It includes embedded measures, which are typically intrinsic to the design submitted as part of the application for development consent, and good practice measures outlined within the CoCP [**REP3-026**]. It also includes the additional mitigation measures that have been identified through the EIA to avoid or reduce likely significant effects. The REAC forms Appendix B of the CEMP (**document 7.5 (C)**) and compliance with the REAC is secured through Requirement 4 of the dDCO (**document 3.1 (F)**).

2.9.14	Where the nature or proposed route of an overhead line will likely result in particularly significant landscape and visual impacts, as would be assessed through landscape, seascape and visual impact assessment, the applicant should demonstrate that they have given due consideration to the costs and benefits of feasible alternatives to the overhead line. This could include – where appropriate – rerouting, underground or subsea cables and the feasibility e.g. in cost, engineering or environmental terms of these. Applicants should note the position on nationally designated landscapes at section 2.9.20 below.	As part of its options appraisal process, National Grid considered whether the use of underground cables, rather than overhead lines, was an appropriate approach in the context of national policy and National Grid's various statutory duties. Undergrounding was considered appropriate in Section E: Dedham Vale AONB as it has a national landscape designation. Undergrounding was also considered appropriate in Section G: Stour Valley, because of the particular qualities of the landscape and its cultural associations. Whilst not designated, the Stour Valley has similar picturesque landscape qualities to Dedham Vale AONB and parts of the Stour Valley form part of the setting of Dedham Vale AONB; the extent of which has been informed by ES Appendix 6.2 Annex A Dedham Vale AONB Approach and Identification of Setting Study [**APP-099**]. In the case of elsewhere along the alignment where undergrounding is not proposed, it is recognised that the fully underground option would avoid negative landscape and visual effects, however, avoiding the moderate adverse effects of an overhead line on a landscape which carries no national designation, and on local views, could only be achieved at a significant additional cost. Even taking account of the wider benefits which could accrue to the scattered heritage assets throughout the study area the considerable additional cost of a fully underground option, which would ultimately be met by electricity consumers, could not be justified nor would it be economic and efficient.
2.9.15	The ES should set out details of this consideration, including the applicant's rationale for eschewing feasible alternatives to the overhead line, and the mitigation cost-calculation methodology that this rationale may rely upon.	The Strategic Options Report (June 2011) [**APP-162**] considered the feasibility of alternative connections such as sub-sea cables. Meanwhile, the Connection Option Report (May 2012) [**APP-164**] sets out the justification for why certain sections are overhead line or underground cable (including a cost comparison exercise, correct at the time of publication). Further details on the environmental effects of the different options can be found in ES Chapter 3: Alternatives Considered [**APP-071**].
2.9.16	The Holford Rules – guidelines for the routing of new overhead lines – were originally set out in 1959. These guidelines, intended as a common-sense approach to overhead line route design, were reviewed and updated by the industry in the 1990s, and they should be embodied in the applicants' proposals for new overhead lines19 .	National Grid recognise that the Holford Rules and their accompanying notes form the basis for the approach to routeing new 400kV overhead lines. The Holford Rules have been used when considering alternatives and the need for any additional mitigation measures. The iterative design and assessment of the project has applied the Holford Rules. Further details on the environmental effects of the different route corridors and alignments can be found in ES Chapter 3: Alternatives Considered [**APP-071**] and an assessment of the project against the Holford Rules is set out in Planning Statement Chapter 5 [**APP-160**].

2.9.17	In brief, the Holford Rules state that applicants should: • avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence; • avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers, i.e. the bigger structures which are used when lines change direction; • other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers; • choose tree and hill backgrounds in preference to sky backgrounds wherever possible. When a line has to cross a ridge, secure this opaque background as long as possible, cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees; • prefer moderately open valleys with medium or moderate levels of tree cover where the apparent height of towers will be reduced, and views of the line will be broken by trees; • where country is flat and sparsely planted, and unless specifically preferred otherwise by relevant stakeholders, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration of lines or 'wirescape'; and • approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, carefully assess the comparative costs of undergrounding.	See response to 2.9.16.
2.9.18	The Horlock Rules – guidelines for the design and siting of substations – were established by National Grid in 2009 in pursuance of its duties under Schedule 9 to the Electricity Act 1989. These principles should be embodied in applicants' proposals for the infrastructure associated with new overhead lines20 .	National Grid devised the Horlock Rules (National Grid, 2009). The Horlock Rules provide guidelines for the siting and design of new substations, or substation extensions, to avoid or reduce the environmental effects of such developments. They also concern the siting of CSE compounds and line entries. In summary, like the Holford Rules, they facilitate the consideration of environmental factors and amenity within the design and siting of new substation infrastructure. The Horlock Rules were considered during the identification of potential locations for a proposed GSP substation and the siting of CSE compounds. Section 5.9 of Chapter 5 of this Planning Statement [**APP-160**] sets out, in turn, the policy wording of the Horlock Rules and how the Horlock Rules have been applied by National Grid and have formed an important part of developing the preferred route and design of the project.

2.9.19	In brief, the Horlock Rules state that applicants should: • consider environmental issues from the earliest stage to balance the technical benefits and capital cost requirements for new developments against the consequential environmental effects in order to keep adverse effects to a reasonably practicable minimum. • seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections21. • protect as far as reasonably practicable areas of local amenity value, important existing habitats and landscape features including ancient woodland, historic hedgerows, surface and ground water sources and nature conservation areas. • take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum. • keep the visual, noise and other environmental effects to a reasonably practicable minimum. • consider the land use effects of the proposal when planning the siting of substations or extensions. • consider the options available for terminal towers, equipment, buildings and ancillary development appropriate to individual locations, seeking to keep effects to a reasonably practicable minimum. • use space effectively to limit the area required for development consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation. • make the design of access roads, perimeter fencing, earth-shaping, planting and ancillary development an integral part of the site layout and design, so as to fit in with the surroundings. • in open landscape especially, high voltage line entries should be kept, as far as possible, visually separate from low voltage lines and other overhead lines so as to avoid a confusing appearance. • study the inter-relationship between towers and substation structures and background and foreground features so as to reduce the prominence of structures from main viewpoints. Where practicable the exposure of terminal towers on prominent ridges should be minimised by siting towers against a background of trees rather than open skylines.	See response to 2.9.18.
	Undergrounding and subsea cables	

2.9.20	Although it is the government's position that overhead lines should be the strong starting presumption for electricity networks developments in general, this presumption is reversed when proposed developments will cross part of a nationally designated landscape (i.e. National Park, The Broads, or Area of Outstanding Natural Beauty).	See response to 2.9.14.
2.9.21	In these areas, and where harm to the landscape, visual amenity and natural beauty of these areas cannot feasibly be avoided by rerouting overhead lines, the strong starting presumption will be that the applicant should underground the relevant section of the line.	See response to 2.9.14.
2.9.22	However, undergrounding will not be required where it is infeasible in engineering terms, or where the harm that it causes (see section 2.11.4) is not outweighed by its corresponding landscape, visual amenity and natural beauty benefits. Regardless of the option, the scheme through its design, delivery, and operation, should seek to further the statutory purposes of the designated landscape. These enhancements may go beyond the mitigation measures needed to minimise the adverse effects of the scheme.	See response to 2.9.14 and 2.2.11.
2.9.23	Additionally, cases will arise where – though no part of the proposed development crosses a designated landscape – a high potential for widespread and significant adverse landscape and/or visual impacts along certain sections of its route may result in recommendations to use undergrounding for relevant segments of the line or alternatively consideration of using a route including subsea cabling.	Undergrounding was also considered appropriate in Section G: Stour Valley, because of the particular qualities of the landscape and its cultural associations. Whilst not designated, the Stour Valley has similar picturesque landscape qualities to Dedham Vale AONB and parts of the Stour Valley form part of the setting of Dedham Vale AONB; the extent of which has been informed by ES Appendix 6.2 Annex A Dedham Vale AONB Approach and Identification of Setting Study [**APP-099**]. Hence, adopting the case-by-case approach to undergrounding and a consistent project approach to undergrounding, the extent of undergrounding proposed in Section G: Stour Valley is considered appropriate, given that the Stour Valley does not benefit from a statutory landscape designation, but has considered the importance of the Stour Valley as part of the setting of the AONB, including the contribution that the Stour Valley makes to this.
2.9.24	In these cases, and taking account of the fact that the government has not laid down any further rule on the circumstances requiring use of underground or subsea cables, the Secretary of State must weigh the feasibility, cost, and any harm of the undergrounding or subsea option against: • the adverse implications of the overhead line proposal; • the cost and feasibility of re-routing overhead lines or mitigation proposals for the relevant line section; and	Overhead lines are normally less disruptive to construct than underground cables, for example they can pass over the top of sensitive features such as rivers, hedgerows and tree belts with relatively little disturbance to habitats. They are also cheaper to install and easier to maintain, whilst allowing the land to be reinstated more quickly than underground cables. Overhead lines require a much smaller footprint (limited to pylon bases, and any temporary construction land such as access routes and construction areas). Therefore, they are typically of lower impact on ground features

	• the cost and feasibility of the reconfiguration, rationalisation, and/or use of underground or subsea cabling of proximate existing or proposed electricity networks infrastructure22.	such as ecology, archaeology, drainage and groundwater flows. Overhead lines are easy to inspect, repair and maintain, as works can be undertaken to the above ground components with little disturbance to land use. However, overhead lines can have a visual impact, particularly in areas of high landscape value. Underground cables by comparison, have higher construction costs compared to overhead lines. In addition, the cost of loss of service and that of repairs is greater for cables because the faulted section of cable needs to be excavated to allow for repairs. Also refer to ES Chapter 3: Alternatives Considered [**APP-071**], which in includes at Table 3.4 a '*Comparison Between Overhead Line and Underground Cables'.* Additionally, National Grid holds the Transmission Licence for England and Wales and is, therefore, regulated by Ofgem, the electricity and gas markets regulator, to ensure value for money for consumers and is required under the Electricity Act to *'develop and maintain an efficient, coordinated and economical electricity transmission system, and to facilitate competition in supply and generation of electricity.*' These duties and obligations mean that National Grid has a responsibility to deliver new electricity transmission infrastructure but also to be responsible for the cost of projects as costs will ultimately be borne by electricity users. Overall, National Grid is confident that the project strikes the appropriate balance of overhead line and underground cables.
2.9.25	In such cases the Secretary of State should only grant development consent for underground or subsea sections of a proposed line over an overhead alternative if they are satisfied that the benefits accruing from the former proposal clearly outweigh any extra economic, social, or environmental impacts that it presents, the mitigation hierarchy has been followed, and that any technical obstacles associated with it are surmountable. In this context it should consider: • the landscape and visual baseline characteristics of the setting of the proposed route, in particular, the impact on high sensitivity visual receptors (as defined in the current edition of the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment), residential areas, designated landscapes, valued landscapes, designated heritage assets and Heritage Coasts (including, where relevant, impacts on the setting of designated features and areas), noting the policy in EN-1 section 5.4.53 on regional and local designations; • the additional cost of the proposed underground or sub-sea alternatives, including their significantly higher lifetime cost of repair and later uprating; • the potentially very disruptive effects of undergrounding on local communities, habitats, archaeological and heritage assets, marine environments, soil (including	**Benefits** The project results in clear and significant economic, social and environmental benefits, as identified at Section 10.3 of this Planning Statement [**APP-160**]. The ES only identifies three residual adverse impacts (two of which would not be significant); meanwhile the long-term significant impact identified concerns cumulative impacts of future projects which only one has been consented. The planning balance is, therefore, very clearly in favour of granting consent as the benefits of the project clearly and significantly outweigh the adverse impacts. **Mitigation Hierarchy** NPS EN-1 (November 2023), like its predecessor recognises that virtually all large infrastructure projects will have significant adverse landscape and visual effects. In this context, the project performs very well in landscape and visual terms; providing 29km of high-capacity transmission network reinforcement and ancillary infrastructure with very limited landscape and visual effects and delivering significant beneficial effects on the most

peat soils), hydrology, geology, and, for a substantial time after construction, landscape and visual amenity. (Undergrounding an overhead line will mean digging a trench along the length of the route, and so such works will often be disruptive – albeit temporarily – to the receptors listed above than would an overhead line of equivalent rating);

• the potentially very disruptive effects of subsea cables on the seabed and the species that live in and on it, including physical damage to and full loss of seabed habitats23. Cable protection can also be required where cables cross each other, or where they cannot be buried deep enough to protect

them from becoming exposed. Such protection causes additional impacts that are often greater than those of the cable itself due to the large areas covered. There can also be issues where subsea cables make landfall, as much coastal land is protected habitat with environmental and heritage designations and landfall connections could cause additional disruption to coastal communities and the environment;

• the applicant's commitment, as set out in their ES, to mitigate the potential detrimental effects of undergrounding works on any relevant agricultural land and soils (including peat soils), particularly regarding Best and Most Versatile land, including development and implementation of a Soil Resources and Management Plan. Such a commitment must guarantee appropriate handling of soil, backfilling, and return of the land to the baseline Agricultural Land Classification (ALC), thus ensuring no loss or degradation of agricultural land. Such a commitment should be based on soil and ALC surveys in line with the 1988 ALC criteria and due consideration of the Defra Construction Code of Practice for Sustainable Use of Soils on Construction Sites.

sensitive landscape in the area, the Dedham Vale AONB. The mitigation hierarchy has been applied and the project includes measures that have led to this positive outcome. In this context, National Grid does not consider that any further compensation is required and is of the view that the project complies with policies on the mitigation hierarchy as presented in NPS EN-1 (November 2023). Further details are provided in National Grid's Comments on Other Submissions Received at Deadline 4, at 6c page 52 [**REP5-025**].

Landscape and Visual

National Grid has set out its approach to landscape mitigation in ES Chapter 6: Landscape and Visual [**APP-074**] and its landscape strategy is set out in the LEMP [**REP3-034**].

Heritage

Adverse impacts to the historic environment are assessed in ES Chapter 8: Historic Environment **APP-076**] and ES Appendix 8.2: Historic Environment Impact Assessment [**APP-127**].

Cost

See response to 2.9.15.

Disruptive Effects of Undergrounding

See response to 2.9.24.

Subsea Cables

See response to 2.9.15.

Soils

Paragraph 11.12.2 of ES Chapter 11: Agriculture and Soils [**APP-079**] states although there is a small permanent loss of BMV land as a result of the construction of the CSE compounds and the GSP substation, this is not considered to be significant in the context of the available BMV land within the region. In addition, National Grid has included appropriate soil handling measures within the CEMP (document 7.5 (C)), which is secured through Requirement 4 of the dDCO [**REP5-005**].

Noise and Vibration

2.9.26	All high voltage transmission lines have the potential to generate noise under certain conditions.	Operational noise from overhead lines has been scoped out of the ES, but details are provided in ES Appendix 14.3 Overhead Line Noise Assessment [**APP-138**].
2.9.27	Line noise is most commonly caused by corona noise when the conductor surface electric stress exceeds the inception level for corona discharge24 activity which is released as acoustic energy and radiates into the air as sound. Transmission line conductors are normally designed to operate below this threshold.	See response to 2.9.26.
2.9.28	Surface contamination on a conductor or accidental damage during transport or installation can cause local enhancement of electric stress and initiate discharge activity leading to the generation of additional noise.	See response to 2.9.26.
2.9.29	The highest noise levels generated by a line generally occur during rain.	See response to 2.9.26.
2.9.30	Water droplets may collect on the surface of the conductor and initiate corona discharges with noise levels being dependent on the level of rainfall. Fog may also give rise to increased noise levels, although these levels are lower than those during rain.	See response to 2.9.26.
2.9.31	After a prolonged spell of dry weather without rain to wash the conductors, contamination may accumulate at sufficient levels to result in increased noise. After heavy rain, these discharge sources are washed away and the line will resume normal quieter operating sound.	See response to 2.9.26.
2.9.32	Surface grease on conductors can also give rise to audible noise effects as grease is able to move slowly under the influence of an electric field, tending to form points which then initiate discharge activity. Surface grease is likely to occur along the entire length of a conductor. Hence there may be many potential discharge sources and, consequently, a higher noise level.	See response to 2.9.26.
2.9.33	This will only occur if substandard grease has been used during manufacture or if the conductor has been overheated by carrying excessive electrical load. This can be mitigated through good design or by replacement.	See response to 2.9.26.
2.9.34	Transmission line audible noise is generally categorised as ‘crackle’ or ‘hum’, according to its tonal content.	See response to 2.9.26.
2.9.35	Crackle may occur alone, but hum will usually occur only in conjunction with crackle. Crackle is a sound containing a random mixture of frequencies over a wide range, typically 1kHz to 10kHz. No individual pure tone can be identified for any significant duration. Crackle has a generally similar spectral content to the	See response to 2.9.26.

	sound of rainfall. Hum is only likely to occur during rain when rates of rainfall exceed 1mm/hr. Hum is a sound consisting of a single pure tone or tones.	
2.9.36	Noise may also arise from discharges on overhead line fittings such as spacers, insulators and clamps. Such noise should be mitigated through good design.	See response to 2.9.26.
2.9.37 and 2.9.38	Audible noise effects can also arise from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors. Transformers are installed at many substations, and generate low frequency hum. Whether the noise can be heard outside a substation depends on a number of factors, including transformer type and the level of noise attenuation present (either engineered intentionally or provided by other structures).	Operational noise from the proposed GSP substation has been scoped out of the ES, but details are provided in ES Appendix 14.4 Grid Supply Point Substation Noise Assessment [**APP-139**].
2.9.39	For the assessment of noise from substations, standard methods of assessment and interpretation using the principles of the relevant British Standards25 are satisfactory.	As per response to 2.9.37 and 2.9.38.
2.9.40	For the assessment of noise from overhead lines, the applicant must use an appropriate method to determine the sound level produced by the line in both dry and wet weather conditions, in addition to assessing the impact on noise-sensitive receptors.	See response to 2.9.26.
2.9.41	For instance, the applicant may use an appropriate noise modelling tool or tools for the prediction of overhead line noise and its propagation over distance, such as an ISO 9613-2 or Technical Report TR(T)94.	Technical Report TR(T)94 has been withdrawn by National Grid and is superseded by National Grid document PS(T)134 Operational Audible Noise Policy for Overhead Lines (new build, reconductoring, diversion and uprating). The assessment in Appendix 14.3 Overhead Line Noise Assessment [**APP-138**] follows the guidance presented in PS(T)134 and the overhead line noise prediction model in EFC-400 follows ISO 9613-2.
2.9.42	When assessing the impact of noise generated by overhead lines in wet weather relative to existing background sound levels, the applicant should consider the effect of varying background sound levels due to rainfall.	See response to 2.9.26.
2.9.43	The Secretary of State is likely to regard it as acceptable for the applicant to use a methodology that demonstrably addresses these criteria.	See response to 2.9.26.
	Electric and Magnetic Fields (EMFs)	

2.9.44	Power frequency EMFs arise from generation, transmission, distribution and use of electricity and will occur around power lines and electric cables and around domestic, office or industrial equipment that uses electricity.	Noted.
2.9.45	EMFs comprise electric and magnetic fields. Electric fields are the result of voltages applied to electrical conductors and equipment. Fences, shrubs and buildings easily block electric fields. Magnetic fields are produced by the flow of electric current; however, unlike electric fields, most materials do not readily block magnetic fields. The intensity of both electric fields and magnetic fields diminishes with increasing distance from the source.	Noted.
2.9.46	All overhead power lines produce EMFs. These tend to be highest directly under a line and decrease to the sides at increasing distance. Although putting cables underground eliminates the electric field, they still produce magnetic fields, which are highest directly above the cable. EMFs can have both direct and indirect effects on human health, aquatic and terrestrial organisms.	Noted and discussed in Section 1 and 2 of Electric and Magnetic Field Compliance Report [**APP-056**].
2.9.47	The direct effects occur in terms of impacts on the central nervous system resulting in its normal functioning being affected. Indirect effects occur through electric charges building up on the surface of the body producing a microshock on contact with a grounded object, or vice versa, which, depending on the field strength and other exposure factors, can range from barely perceptible to being an annoyance or even painful.	Both direct and indirect EMF effects of the project have been assessed in Electric and Magnetic Field Compliance Report [**APP-056**].
2.9.48	To prevent these known effects, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) developed health protection guidelines in 1998 for both public and occupational exposure. These are expressed in terms of the induced current density in affected tissues of the body, 'basic restrictions', and in terms of measurable 'reference levels' of electric field strength (for electric fields), and magnetic flux density (for magnetic fields). The relationship between the (measurable) electric field strength or magnetic flux density and induced current density in body tissues requires complex dosimetric modelling.	The ICNIRP 1998 guidelines form the basis of the assessment of EMF for the project. The project is compliant with the ICNIRP 1998 guidelines as demonstrated in Electric and Magnetic Field Compliance Report [**APP-056**].
2.9.49	The reference levels are such that compliance with them will ensure that the basic restrictions are not reached or exceeded. Exceeding the reference levels does not necessarily mean that the basic restrictions will not be met; this would be a trigger for further investigation into the specific circumstances.	Noted and this forms the basis of the EMF compliance assessment applied to the project in Electric and Magnetic Field Compliance Report [**APP-056**].
2.9.50	For protecting against indirect effects, the ICNIRP 2020 guidelines give an electric field reference of 5kV m-1 for the general public and keeping electric fields below this level would reduce the occurrence of adverse indirect effects for most individuals to acceptable levels. When this level is exceeded, there is a suite of measures that may be called upon in particular situations, including provision of	The ICNIRP 2020 guidelines cover radio-frequency EMFs in the range of 100 kHz to 300 GHz. These provide no electric field reference levels at 50 Hz.

	information, earthing and screening, alongside limiting the field. In some situations, there may be no reasonable way of eliminating indirect effects.	National Grid is unclear on the application of ICNIRP 2020 to EMF for electricity assets and are aiming to clarify this point with DESNZ.
23.9.51	The levels of EMFs produced by power lines in normal operation are usually considerably lower than the ICNIRP 2020reference levels. For electricity substations, the EMFs close to the sites tend to be dictated by the overhead lines and cables entering the installation, not the equipment within the site.	The ICNIRP 2020 guidelines cover the frequency ranges 100 kHz to 300 GHz and are not applicable to 50 Hz power-frequencies. National Grid is unclear on the application of ICNIRP 2020 guidelines to EMF for electricity assets and are aiming to clarify this point with DESNZ.
2.9.52	The Stakeholder Advisory Group on extremely low frequency electric and magnetic fields (ELF EMFs) (SAGE) was set up to provide advice to government on possible precautionary measures that might be needed to limit public exposure to electric and magnetic fields associated with electricity supply. The government response to recommendations made in SAGE's first interim assessment sets out those measures that will be taken as a result of the recommendations26 .	Noted.
2.9.53	The National Institute for Health Protection's (NIHP) Centre for Radiation, Chemical and Environmental Hazards (CRCE) provides advice on standards of protection for exposure to non-ionizing radiation, including the ELF EMFs arising from the transmission and use of electricity.	Noted.
2.9.54	In March 2004, the National Radiological Protection Board (now part of NIHP CRCE), published advice on limiting public exposure to electromagnetic fields. The advice recommended the adoption in the UK of the EMF exposure guidelines published by ICNIRP in 2020.	Noted- In March 2004 the National Radiological Protection Board recommended the adoption of guidelines published by ICNIRP in 1998. It is the ICNIRP 1998 guidelines that have been applied to the Electric and Magnetic Field Compliance Report [**APP-056**]. The ICNIRP 2020 guidelines cover the frequency ranges 100 kHz to 300 GHz and are not applicable to 50 Hz power-frequencies. National Grid is unclear on the application of ICNIRP 2020 guidelines to EMF for electricity assets and are aiming to clarify this point with DESNZ.
2.9.55	These guidelines also form the basis of the Control of Electromagnetic Fields at Work Regulations 2016. Resulting from these recommendations, government policy is that exposure of the public should comply with the ICNIRP (2020) guidelines. The electricity industry has agreed to follow this policy. Applications should show evidence of this compliance as specified in 2.10.11.	The ICNIRP 2010 guidelines form the basis of 50 Hz component of the Control of Electromagnetic Fields at Work Regulations 2016. ICNIRP 2020 guidelines cover radio-frequency exposures, which are not applicable to electricity infrastructure projects of this nature. National Grid is unclear on the application of the ICNIRP 2020 guidelines to EMF for electricity assets and are aiming to clarify this point with DESNZ.
2.9.56	The balance of scientific evidence over several decades of research has not proven a causal link between EMFs and cancer or any other disease. The NIHP CRCE keeps under review emerging scientific research and/or studies that may link EMF exposure with various health problems and provides advice to the	Noted.

	Department of Health and Social Care on the possible need for introducing further precautionary measures.	
2.9.57	The Department of Health and Social Care's Medicines and Healthcare Products Regulatory Agency does not consider that transmission line EMFs constitute a significant hazard to the operation of pacemakers.	This presents no change to current policy and was considered in section 2.10 of the Electric and Magnetic Field Compliance Report [**APP-056**].
2.9.58	There is little evidence that exposure of crops, farm animals or natural ecosystems to transmission line EMFs has any agriculturally significant consequences.	Noted and presents no change to current policy.
	Sulphur Hexafluoride	
2.9.59	Sulphur Hexafluoride (SF6) is an insulating and arc-suppressant gas used in high-voltage switchgear for electricity networks.	Noted.
2.6.60	It is also an extraordinarily potent greenhouse gas, and fugitive emissions from electricity networks infrastructure are an object of increasing environmental concern, especially in light of the UK's commitment to net zero by 2050.	Noted.
2.9.61	Applicants should at the design phase of the process consider carefully whether the proposed development could be reconceived to avoid the use of SF6-reliant assets.	Section 2.6 of the Good Design document [**APP-090**] discusses the design considerations in relation to the use of SF6 and notes that this is required at Bramford substation and the GSP substation.
2.9.62	Where the development cannot be so conceived, the applicant must provide evidence of their reasoning on this point. Such evidence will include, for instance, an explanation of the alternatives considered, and a case why these alternatives are technically infeasible or require bespoke components that are grossly disproportionate in terms of cost.	Section 2.6 of the ES Appendix 4.1 Good Design [**APP-090**] notes that SF6 circuit breakers are required at Bramford substation and the GSP substation as no alternative technology is available.
2.9.63	In particular, an accounting of the cost differential between the SF6- reliant asset and the appropriate SF6-free alternative should be provided.	No cost differential has been provided as no SF6-free alternative is available.
2.9.64	Where applicants, having followed the above procedure, do propose to put new SF6-reliant assets onto the electricity system, they should design a plan for the monitoring and control of fugitive SF6 emissions consistent with the Fluorinated gas (F-gas) Regulation and its successors.	Section 2.6 of ES Appendix 4.1 Good Design [**APP-090**] confirms that emissions monitoring and control measures in compliance with F-gas Regulation and/or it's successors would be undertaken. This is in accordance with National Grids existing fleet of SF6-filled assets.
2.10	**Mitigation**	
2.10.1	The applicant should consider and address routing and avoidance/minimisation of environmental impacts both onshore and offshore at an early stage in the development process27 .	The development of measures to avoid, reduce or compensate for any significant adverse effects of a project is an intrinsic part of the EIA process and, from the outset, the route selection process described in ES Chapter

		3: Alternatives Considered [**APP-071**] sought to take into account environmental constraints and to avoid them as far as possible. This has continued throughout the evolution and design of the project.
	Biodiversity and Geological conservation	
2.10.2	Careful siting of a line away from, or parallel to, but not across, known flight paths can reduce the numbers of birds colliding with overhead lines considerably.	See response to 2.9.3.
2.10.3	Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird vision can also reduce the number of deaths. The design and colour of the diverters will be specific to the conditions – the line and pylon/transmission tower specifications and the species at risk.	See response to 2.9.3.
2.10.4	Electrocution risks can be reduced through the design of lattice steel tower crossarms, insulators and the construction of other parts of high voltage power lines so that birds find no opportunity to perch near energised power lines on which they might electrocute themselves.	See response to 2.9.3.
	Landscape and Visual	
2.10.5	In addition to good design in accordance with the Holford and Horlock rules (please see paragraphs 2.9.16 - 2.9.19), and the consideration of undergrounding or rerouting the line where possible, the principal opportunities for mitigating adverse landscape and visual impacts of electricity networks infrastructure are: • consideration of network reinforcement options (where alternatives exist) which may allow improvements and/or extensions to an existing line rather than the building of an entirely new line; • selection of the most suitable type and design of support structure in order to minimise the overall visual impact on the landscape. In particular, ensuring that towers are of the smallest possible footprint and internal volume; and • the rationalisation, reconfiguration, and/or undergrounding of existing electricity networks infrastructure in the vicinity of the proposed development.	The Need Case (April 2023) [**APP-161**] provides an overview of the need for the project setting out the drivers for change, including the increase in electricity generation and how this affects the National Electricity Transmission System. The Strategic Options Report (June 2011) [**APP-162**] covers National Grid's duty to supply, its obligations around connection agreements, wider reinforcement requirements in East Anglia and the South East, and then examines the strategic options; recommending the option from Bramford to Twinstead. An assessment of pylon design was undertaken which considered different designs of pylons that could be used on the project and the potential effects of each. The assessment concluded that the standard steel lattice pylon would be the preferred pylon design and this remained the preferred pylon design throughout the project. In this connection, ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. Corridor 2 was identified as the preferred route corridor and was also considered an 'opportunity corridor', as it would result in the least scale of change to the existing environment and would benefit from the removal of a section of the existing 132kV overhead line, a form of overhead line

		rationalisation (enabled by the GSP substation). Overall, the project actually results in the spatial extent of features in the landscape being reduced, largely as a result of the removal of the existing 132kV overhead line and the undergrounding of some sections.
2.10.6	Additionally, there are more specific measures that might be taken, and which the Secretary of State could mandate through DCO requirements if appropriate, as follows: • landscape schemes, comprising off-site tree and hedgerow planting, are sometimes used for larger new overhead line projects to mitigate potential landscape and visual impacts, softening the effect of a new above ground line whilst providing some screening from important visual receptors. These may be implemented with the agreement of the relevant landowner(s), or the developer may compulsorily acquire the land or land rights in question. Advice from the relevant statutory authority may also be needed; and • screening, comprising localised planting in the immediate vicinity of residential properties and principal viewpoints can also help to screen or soften the effect of the line, reducing the visual impact from a particular receptor.	ES Chapter 6: Landscape and Visual [**APP-074**] identifies the significant effects and the mitigation proposed. It is acknowledged that during operation, there would be long term significant adverse effects on LCA2: Suffolk Ancient Plateau Claylands, Burstall and Hintlesham community areas as the benefits of removing the existing 132kV overhead line would be outweighed by the presence of the new 400kV overhead line. As the effects are from the introduction of the 400kV overhead line, these cannot be fully mitigated. As described in paragraph 6.11.7 of ES Chapter 6: Landscape and Visual [**APP-074**], areas of planting have been proposed in these community areas in the vicinity of residential properties to soften the effects of the overhead line; it is considered that additional mitigation would not reduce the effects of the project in these areas. No other adverse significant effects have been identified during operation and, therefore, there is no requirement for additional mitigation of effects. All other long term significant effects are identified as beneficial. No off-site planting has been proposed as National Grid does not consider this is needed to make the project acceptable.
2.10.7	As set out in the paragraphs above, where landscape schemes and/or screening mitigation of the kind described above is required, rights over the land necessary for such measures may be compulsorily acquired as part of the DCO.	As set out in paragraph 8.4.9 of the LEMP [**REP3-034**], the Vegetation Reinstatement Plan [**REP3-036**], which is secured through Requirement 9 (reinstatement planting plan) of the dDCO (**document 3.1 (F)**) identifies areas for potential 'landscape softening' which would provide screening from visual receptors. The landscape softening would be discussed with the relevant landowners, who may choose to decline the landscape softening proposals. As stated in paragraph 9.1.2 of the LEMP [**REP3-034**] where vegetation including woodland, hedgerows and trees have been planted as part of the reinstatement, these will have a five-year aftercare period in accordance with good practice measure LV03 in the CoCP [**REP3-026**] and Requirement 10(3) of the dDCO (**document 3.1 (F)**).
2.10.8	Furthermore, since long-term management of the selected mitigation schemes is essential to their mitigating function, a management plan, developed at least in outline at the conclusion of the examination, and which sets out proposals within a realistic timescale, should secure the integrity and benefit of these schemes.	Areas of planting proposed for biodiversity net gain, as described in the Environmental Gain Report [**APP-176**] would be subject to a 30-year management plan. National Grid has also committed to a up to 30-year aftercare period for the mitigation planting MM09 at Hintlesham Woods, which is a priority site for development of mixed broadleaved native

	This should also uphold the landscape commitments made to achieve consent, alongside any pertinent commitments to environmental and biodiversity net gain.	woodland planting, scrub planting and species rich grassland. The 30- year aftercare period for MM09 is considered necessary to enable the woodland planting to achieve the growth rates predicted and secure its long-term viability. Wording has been added to Section 9.1 of the LEMP[**REP3-034**] to show the clear commitment from National Grid in relation to this site.
	Noise and vibration	
2.10.9	Applicants must consider the following measures: • the positioning of lines to help mitigate noise; • ensuring that the appropriately sized conductor arrangement is used to minimise potential noise; • quality assurance through manufacturing and transportation to avoid damage to overhead line conductors which can increase potential noise effects; • ensuring that conductors are kept clean and free of surface contaminants during stringing/installation; and • the selection of quieter cost-effective plants.	As per response to 2.9.27.
2.10.10	In addition, the ES should include information on planned maintenance arrangements. Where detail is not included, the Secretary of State should consider stipulating appropriate maintenance arrangements by way of requirements attached to any grant of development consent.	No material change to policy requirement.
	Electric and Magnetic Fields (EMFs)	
2.10.11	The applicant should consider the following factors: • height, position, insulation and protection (electrical or mechanical as appropriate) measures subject to ensuring compliance with the Electricity Safety, Quality and Continuity Regulations 2002; • that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise EMFs; and • any new advice emerging from the Department of Health and Social Care relating to government policy for EMF exposure guidelines.	Sections 2.12 and 6.2 of the Electric and Magnetic Field Compliance Report [**APP-056**] demonstrate that the Project has been designed to comply with the statutory requirements of the Electricity Safety, Quality and Continuity Regulations 2002 (SQSS, 2002) and that optimal phasing has been applied in accordance with the Codes of Practice. National Grid are committed to following government policy on EMF exposure guidelines applying new advice when where appropriate.
2.10.12	Where it can be shown that the line will comply with the current public exposure guidelines and the policy on phasing, no further mitigation should be necessary.	The overhead line has been designed in compliance with the policy on optimum phasing as specified in the Code of Practice on Optimum Phasing, as demonstrated in the Electric and Magnetic Field Compliance Report [**APP-056**].

2.10.13	Where EMF exposure is within the relevant public exposure guidelines, re-routeing a proposed overhead line purely on the basis of EMF exposure or undergrounding a line solely to further reduce the level of EMF exposure are unlikely to be proportionate mitigation measures.	The project has been designed and assessed in line with the Code of Practice - Power Lines: Demonstrating compliance with EMF exposure guidelines. All the EMF produced comply with relevant public exposure guidelines provided by ICNIRP 1998 as demonstrated in the Electric and Magnetic Field Compliance Report [**APP-056**]. National Grid considered these as the relevant public exposure guidelines as they cover power-frequency EMF exposures rather than radio frequencies EMFs covered by the ICNIRP 2020 guidance. No additional EMF mitigation has been applied.
	Sulphur Hexafluoride	
2.10.14	The climate-warming potential of SF6 is such that applicants should, as a rule, avoid the use of SF6 in new developments.	See the response to Item 2.9.62.
2.10.15	Where no proven SF6-free alternative is commercially available, and where the cost of procuring a bespoke alternative is grossly disproportionate, the continued use of SF6 is acceptable, provided that emissions monitoring and control measures compliant with the F-gas Regulation and/or its successors are in place.	See the response to Item 2.9.64.
2.11	**Secretary of State decision making**	
	Impacts Biodiversity and Geological conservation	
2.11.1	Where biodiversity impacts are identified, including those associated with bird collision with overhead lines, the Secretary of State should be satisfied that all feasible options for mitigation have been considered and evaluated appropriately.28	See response to 2.9.3.
	Landscape and Visual	
2.11.2	The Secretary of State should be satisfied that the development, so far as is reasonably possible, complies with the Holford and Horlock Rules (please see paragraphs 2.9.16 - 2.9.19) or any updates to them.	Chapter 5 of this Planning Statement [**APP-160**] sets out how the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process, demonstrating how such policy and legislative objectives have been embedded into the design of the project. Both sets of rules have been deployed by National Grid and have formed an important part of developing the preferred route and design of the project. For example; the route seeks to avoid siting infrastructure in areas with significant amenity value; the most direct route is preferred to avoid the need for additional angle pylons; siting infrastructure in areas benefiting from existing advantageous vegetation screening is preferred; and densely populated urban/residential areas are avoided, where possible.

2.11.3	The Secretary of State should also be satisfied that all feasible options for mitigation – including the rationalisation, reconfiguration, or undergrounding of existing electricity networks infrastructure, have been considered and evaluated appropriately.	Once the need for the project was established, National Grid considered the different ways in which this need could be met, to generate a preferred strategic proposal. The alternatives considered at this stage comprised different technologies, different geographical connection points, or a combination of the two. The Strategic Options Report (June 2011) [**APP-162**] considered a short list of four options drawn from a long list of 18 strategic options. Subsequently, The design evolution of the project has been an iterative process. National Grid has considered ways to achieve good design through the careful consideration of route corridors and the application of design principles. ES Appendix 4.1: Good Design [**APP-090**] presents the different choices made during the design process. This Appendix sets out the design aspects that have been considered during the development of the project and should be read alongside both ES Chapter 3: Alternatives Considered [**APP-071**], which documents the key environmental factors in consideration of the main alternatives, and Chapter 5 of this Planning Statement [**APP-160**], which explains how planning policy, as well as the requirements of the Electricity Act and the principles of the Holford and Horlock Rules, have influenced the optioneering and design evolution process. The latter demonstrating how such policy and legislative objectives have been embedded into the design of the project.
2.11.14	In circumstances where it can be demonstrated that a mitigation measure and/ or technological approach is appropriate and/ or necessary for a project, including to limit landscape and visual impact as set out above, the Secretary of State should take this into account in decision making.	See response to 2.9.11.
2.11.5	Nationally designated landscapes have specific statutory purposes which help ensure their continued protection. The Secretary of State should have special regard to nationally designated landscapes, where the general presumption in favour of overhead lines should be reversed to favour undergrounding.	See response to 2.9.12.
2.11.6	Away from these protected landscapes and in locations where there is a high potential for widespread and significant adverse landscape and/or visual impacts, the Secretary of State should be satisfied that the applicant has provided evidence to support a decision on whether undergrounding is or is not appropriate, having considered this on a case-by-case basis, weighing the considerations in paragraph 2.9.24 above.	See response to 2.9.23.
	Noise and vibration	

2.11.7	The Secretary of State should ensure that appropriate assessment methodologies have been used in the evidence presented to it, and that the appropriate mitigation options have been considered and adopted. Where the applicant can demonstrate that appropriate mitigation measures will be put in place, the residual noise impacts are unlikely to be significant.	No material change to policy requirement. The assessment of noise and vibration effects is provided in ES Chapter 14: Noise and Vibration [**APP-082**].
2.11.8	Consequently, noise from overhead lines is unlikely to lead to the Secretary of State refusing an application, but it may need to consider the use of appropriate requirements in the DCO to ensure noise is minimised as far as is practicable.	As per response to 2.9.27.
	Electric and Magnetic Fields (EMFs)	
2.11.9	This NPS does not repeat the detail of the ICNIRP 2020 guidelines on restrictions or reference levels. The government has developed with the electricity industry a Code of Practice, 'Power Lines: Demonstrating compliance with EMF public exposure guidelines – a voluntary Code of Practice', published in February 2011 that specifies the evidence acceptable to show compliance with ICNIRP (2020) guidelines and is also in line with the terms of the 1999 EU Council Recommendation on EMF exposure.	The Code of Practice provides a practical way to demonstrate compliance with the ICNIRP 1998 guidelines applicable to 50 Hz power-frequency EMFs. This Code of Practice provides no guidance on how to assess compliance of power lines with the ICNIRP 2020 guidelines. National Grid is unclear on the application of ICNIRP 2020 guidelines to EMF for electricity assets and are aiming to clarify this point with DESNZ.
2.11.10	Before granting consent to an overhead line application, the Secretary of State should be satisfied that the proposal is in accordance with the guidelines, considering the evidence provided by the applicant and any other relevant evidence. It may also need to take expert advice from the Department of Health and Social Care.	Noted.
2.11.11	Industry currently applies optimal phasing29 to 275kV and 400kV overhead lines voluntarily wherever operationally possible, which helps to minimise the effects of EMF. The government has developed with industry a voluntary Code of Practice, 'Optimum Phasing of high voltage double-circuit Power Lines – A Voluntary Code of Practice'30, published in March 2012, that defines the circumstances where industry can and will optimally phase lines with a voltage of 132kV and above.	The code of practice on optimum phasing has been applied to the project as detailed in section 6.2.7 to 6.2.13 in the Electric and Magnetic Field Compliance Report [**APP-056**].
2.11.12	Where the applicant cannot demonstrate that the line will be compliant with the Electricity Safety, Quality and Continuity Regulations 2002, with the exposure guidelines as specified in the Code of Practice on compliance, and with the policy on phasing as specified in the Code of Practice on optimal phasing then the Secretary of State should not grant consent.	See response to 2.10.11.
2.11.13	Undergrounding of a line would reduce the level of EMFs experienced, but high magnetic field levels may still occur immediately above the cable. It is the government's policy that power lines should not be undergrounded solely for the purpose of reducing exposure to EMFs.	Noted. Undergrounding on the project has not been undertaken on EMF grounds.

2.11.14	In order to avoid unacceptable adverse impacts of EMFs from electricity network infrastructure on aviation, the Secretary of State will take account of statutory technical safeguarding zones defined in accordance with Planning Circular 01/0331, or any successor, when considering recommendations for DCO applications. More detail on this issue can be found in Section 5.5 of EN-1.	Noted.
2.11.15	Where a statutory consultee on the safeguarding of technical facilities identifies a risk that the EMF effect of electricity network infrastructure would compromise the effective and safe operation of such facilities, the potential impact and siting and design alternatives will need to have been fully considered as part of the application.	The development of measures to avoid, reduce or compensate for any significant adverse effects of a project is an intrinsic part of the Option Appraisals process and, from the outset, the route selection process described in ES Chapter 3: Alternatives Considered [**APP-071**]. Where a statutory consultee raises issues, National Grid are committed to mitigating any significant risks associated with EMF from our assets.
2.11.16	The diagram below shows a basic decision tree for dealing with EMFs from overhead power lines.	This decision tree has formed the basis for the assessment of EMF from the project, as demonstrated in the Electric and Magnetic Field Compliance Report [**APP-056**].
	Sulphur Hexafluoride	
2.11.17	The Secretary of State should grant consent for an electricity networks development only if the applicant has demonstrated either: i. that the development will not use SF6; or ii. (a) that there is no proven commercially available alternative to the use of SF6; and (b) that a bespoke SF6-free alternative would be grossly disproportionate in terms of cost; and (c) that emissions monitoring and control measures compliant with the F-gas Regulation and/or its successors are in place.	See the response to Item 2.9.62 and 2.9.64.
2.12	**Special assessment principles for offshore-onshore transmission**	
2.12.1	Details in this section are in addition to those set out in EN-3 on the network connections for offshore wind including different types of offshore transmission. These include EN-3 sections 2.8.24 – 2.8.33 and 2.8.49 – 2.8.56 on network connections, 2.8.66 -2.8.69 on micrositing and 2.8.80-2.8.82 on Offshore Wind Environmental Standards which include offshore transmission and should be considered together with the details below.	It is National Grid's case that NPS EN-3 is relevant insofar as it provides strong support for the delivery of renewable energy developments supported by the project. National Grid further acknowledges that the proposed revised EN-3 (November 2023) gives express support for '*onshore and offshore network infrastructure and related network reinforcements*' (paragraph 3.8.12), which are described in the context of the 'critical national priority'. However, as set out in the Planning Statement [**APP-160**] the assessment of the application for development consent should be made primarily against the extant (2011) NPS (EN-1) and EN-5),

		albeit National Grid acknowledges that the proposed revised NPSs (November 2023) are likely to be important and relevant matters.
2.12.2	The scale of offshore transmission infrastructure required to support the government's 50GW offshore wind development ambition has significant implications for the onshore network.	Noted.
2.12.3	A substantial amount of new onshore network infrastructure, including network reinforcements, is required to enable transmission of the domestic and international offshore power flows coming onshore or power being exported to neighbouring North Seas countries.	Noted.
2.12.4	As identified in EN-1, it is important that the network planning for offshore transmission is much more closely co-ordinated with the planning and development of the onshore transmission network than previously. This includes all types of offshore transmission including interconnectors, multi-purpose interconnectors (MPIs) and subsea 'onshore' transmission or 'bootstraps' reinforcing the onshore transmission network. 32 Further details on the different types of offshore transmission are provided in the Glossary.	Noted.
2.12.5	The above offshore-onshore transmission co-ordination work is undertaken through a process of ongoing reform with the key outcomes including the Holistic Network Design and its subsequent follow up exercises for offshore-onshore transmission and subsequent strategic network planning exercises such as the Centralised Strategic Network Plan led by National Grid Electricity System 33 and/or the Future Systems (once established).	Noted.
2.12.6	In addition, a more co-ordinated approach to designing offshore transmission is expected to be adopted compared with the previous standard approach of radial routes to shore. This applies to spatially close groups of offshore windfarms, subsea 'onshore' transmission or bootstraps, interconnectors and multi-purpose interconnectors.	Noted.
	Critical National Priority	
2.12.7	As highlighted in EN-1 government has concluded that there is a CNP for the provision of nationally significant low carbon infrastructure. This includes for electricity grid infrastructure, all power lines in scope of EN-5 including network reinforcement and upgrade works, and associated infrastructure such as substations. This is not limited to those associated specifically with a particular generation technology, as all new grid projects will contribute towards greater efficiency in constructing, operating and connecting low carbon infrastructure to	The project is Critical National Priority.

	the National Electricity Transmission System. This includes infrastructure identified in the Holistic Network Design and subsequent strategic network design exercises, see Section 2.13 below.	
2.13	**Offshore-onshore transmission: Applicant assessment**	
	Consideration of strategic network design	
2.13.1	The strategic network designs such as those led or enabled by National Grid Electricity System Operator (ESO) will usually form the basis for identifying proposals for co-ordinated transmission. This includes the Holistic Network Design (HND) for offshore-onshore transmission prepared by ESO34 .	Noted.
2.13.2	The HND and subsequent network design and planning exercises35 identify and establish the transmission capabilities needed, both onshore and offshore, to support offshore wind developments. These include the onshore connection points for offshore transmission and potential future Multi-Purpose Interconnector opportunities. Government recognises the work undertaken in the HND; the HND and subsequent network design exercises are likely to contain information that is important and relevant in the consideration of applications for infrastructure resulting from those exercises36 .	The project has been identified as critical in all future energy scenarios as a result of the network design and planning exercises carried out by National Grid ESO.

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