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Bramford to Twinstead Reinforcement

Volume 6: Environmental Information

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1. Introduction

1.1 Overview

- 1.1.1 National Grid Electricity Transmission plc (here on referred to as National Grid) is making an 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 (18 miles), the majority of which would follow the general alignment of the existing overhead line network.
- 1.1.2 This appendix has been produced to support the application for development consent and the accompanying Environmental Statement (ES) under the Planning Act 2008. It summarises the consultation and engagement relevant to the environmental impact assessment (EIA) and how this has been considered on the project.

1.2 General Approach to Environmental Consultation and Engagement

- 1.2.1 The Planning Inspectorate consulted statutory organisations on the Scoping Report (**application document 6.5**) in May 2021. These responses were presented within the Scoping Opinion (**application document 6.6**), which was issued in June 2021. Since the project recommenced in 2020, there have also been three main stages of public consultation:
- Non-statutory consultation – This was undertaken by National Grid in spring 2021. It provided an opportunity for National Grid to engage organisations and local communities on the project including the proposed designs and timetable for construction;
 - Statutory consultation – This was undertaken by National Grid between 25 January and 22 March 2022. It provided an opportunity for National Grid to engage organisations and local communities on the project including the draft Order Limits, proposed designs and timetable for construction. A Preliminary Environmental Information (PEI) Report (National Grid, 2022b) was published alongside other project documentation on the project website; and
 - Targeted consultation – This was undertaken by National Grid between 8 September to 19 October 2022. It provided an opportunity for National Grid to engage organisations and local communities on the proposed changes that had been identified following the statutory consultation, particularly in relation to Section G: Stour Valley. Consultation material was published including a review of the changes with regards to what was published in the PEI Report (National Grid, 2022b). The review concluded that there were no new or different significant effects as a result of the proposed changes compared to those presented within the original PEI Report (National Grid, 2022b).

1.3 Content and Structure of this Appendix

Content of this Appendix

- 1.3.1 This appendix presents a summary of the feedback received and discussions held on the project that are relevant to the EIA and how these have been considered within the assessment. By focusing on the EIA related responses, the appendix does not seek to duplicate the information presented in the Consultation Report (**application document 5.1**), which presents detailed responses to all of the feedback received at the consultation stages.
- 1.3.2 This appendix includes a summary of all of the responses received on the Scoping Report (**application document 6.5**), which is not covered within the Consultation Report (**application document 5.1**). It also includes a summary of the feedback from the main environmental bodies received during the statutory and targeted consultation. This appendix does not include a summary of the non-statutory consultation, as this was held shortly before the Scoping Report (**application document 6.5**) was submitted to the Planning Inspectorate and therefore the responses are broadly the same as those received in the Scoping Opinion (**application document 6.6**).
- 1.3.3 In addition to the consultation stages outlined above, National Grid has held a number of thematic and stakeholder specific meetings with interested parties to discuss aspects of the EIA and to develop the various statements of common ground (SoCG). This appendix also summarises the main themes discussed within these meetings.

Structure of this Appendix

- 1.3.4 This appendix is structured around the topic headings used within the main ES (Table 1.1). National Grid recognises that in some cases, there are matters that span more than one topic area, and in such cases the most appropriate topic, given where any equivalent assessment is located, has been chosen. The responses are summarised and grouped into themes / similar comments, therefore the wording is not verbatim from the original responses.

Table 1.1 – Structure of this Appendix

Chapter	Content
1: Introduction	This chapter provides an overview of the project, general approach to environmental consultation and engagement, the structure of the document, and abbreviations used in the document.
2: Planning Considerations	This chapter covers the responses received in relation to planning matters such as legislation, policy and guidance documents.

Chapter	Content
3: Alternatives Considered	This chapter covers feedback on alternatives to the project, whether different strategic options, alternative corridors, cases for a greater amount of undergrounding and different locations for project components such as the cable sealing end (CSE) compounds.
4. Consultation	This chapter covers the responses received around the consultation activities undertaken.
5. General Environment	This chapter covers the responses received in relation to the general EIA matters or the project as a whole.
6. Landscape and Visual	These chapters cover the responses received in relation to the respective environmental topics.
7. Biodiversity	
8. Historic Environment	
9. Water Environment	
10. Geology and Hydrogeology	
11. Agriculture and Soils	
12. Traffic and Transport	
13. Air Quality	
14. Noise and Vibration	
15. Cumulative Effects	
16. Net Gain	This chapter covers the responses received in relation to net gain including discussions on the policy and legislation around this topic and also suggestions as to how net gain can be delivered on the project.
17. Other Topics	This chapter covers the responses received in relation to other topics not covered in the preceding chapters including: major accidents; climate change and adaptation; health and wellbeing; and socio-economics and tourism.

1.4 Abbreviations used in this Appendix

1.4.1 Table 1.2 presents the acronyms that are used in this appendix to simplify the consultation feedback tables.

Table 1.2 – Acronyms Used in This Appendix

Acronym	Definition
Consultation abbreviations	<ul style="list-style-type: none">• SC – Statutory consultation;• SR – Scoping Report; and• TC – Targeted consultation.
Environmental bodies	<ul style="list-style-type: none">• DVSVP – Dedham Vale AONB and Stour Valley Partnership;• EA – Environment Agency;• ESIDB – East Suffolk Internal Drainage Board;• EWT – Essex Wildlife Trust• HE – Historic England;• NE – Natural England;• RSPB – Royal Society for the Protection of Birds;• SWT – Suffolk Wildlife Trust; and• WT – Woodland Trust.
Planning authorities	<ul style="list-style-type: none">• BDC – Braintree District Council;• BMSDC – Babergh and Mid Suffolk District Council;• CBC – Colchester Borough Council;• ECC – Essex County Council;• ESC – East Suffolk Council; and• SCC – Suffolk County Council.

Acronym	Definition
Parish councils	<ul style="list-style-type: none"> • ALPC – Alphamstone and Lamarsh Parish Council; • APC – Assington Parish Council; • BurPC – Burstall Parish Council; • BSMPC – Bures St Mary Parish Council; • GPC – Gestingthorpe Parish Council; • GYPC – Great Yeldham Parish Council; • HCPC – Hintlesham and Chattisham Parish Council; • HMTPC – The Hennys, Middleton & Twinstead Parish Council; • LaPC – Layham Parish Council; • LePC – Leavenheath Parish Council; • LCPC – Little Cornard Parish Council; • NwWPC – Nayland with Wissington Parish Council; • PoPC – Polstead Parish Council; • SpPC – Sproughton Parish Council; and • SbNPC – Stoke by Nayland Parish Council.
Other consultees	<ul style="list-style-type: none"> • BHL – Boxford (Suffolk) Holdings Ltd; • CG – Cadent Gas; • HSE – Health and Safety Executive; • NH – National Highways; • NR – Network Rail; • UK HSA – UK Health Security Agency (formerly known as Public Health England); and • SNEE CCG – Suffolk and North East Essex Clinical Commissioning Group.

2. Planning Considerations

2.1 Introduction

2.1.1 This chapter covers the responses received in relation to planning matters such as legislation, policy and guidance documents.

2.2 Thematic and Other Meetings

2.2.1 National Grid has had meetings with the Host Authorities since the recommencement of the project in December 2020. These were originally held once every three months. In June 2021 the local 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. Further details on the meetings and the matters agreed can be found in the Planning Statement (**application document 7.1**).

2.3 General Themes from Consultation Stages

2.3.1 Table 2.1 provides a summary of the feedback responses received in relation to planning policy and how National Grid has had regard to these. This table should be read alongside ES Chapter 2: Regulatory and Planning Policy Context (**application document 6.2.2**) which summarises the planning policy on the project. Further details can also be found in the Planning Statement (**application document 7.1**).

Table 2.1 – Feedback on Planning Considerations

Comment	Consultee	Stage	Project Response
General			
National Grid is intending that some works at Bramford Substation would be carried out under permitted development rights, as opposed to being consent under the DCO. It is requested that further information is provided regarding any reliance on permitted development rights for enabling or other works in this area and how these works will be considered in the EIA for the project.	BMSDC, SCC	TC	National Grid has included additional works at Bramford Substation in the Development Consent Order (DCO) that are directly related to the implementation of the project. These are described in ES Chapter 4: Project Description (application document 6.2.4) and assessed within the ES topic chapters. Other planned activities that form part of the general operation and maintenance at the substation are assessed as part of the cumulative effects assessment (CEA) in ES Chapter 15: CEA (application document 6.2.15).
The Council is concerned that the proposed core working hours for the project will result in construction traffic being present on the local highways seven days a week including bank holidays. Potentially local residents would not enjoy any respite from traffic noise and vibration for the duration of the project.	NwWPC, SCC	SR/SC	The proposed working hours are set out in Requirement 7 of the draft DCO (application document 3.1). National Grid has identified the hours that it requires to deliver the construction programme as efficiently and quickly as possible. The proposed longer working hours mean that the project is anticipated to be constructed over a four-year programme. Shortening the working hours would potentially extend the working programme and put at risk the delivery of the project by 2028.
It is requested that the working hours are reduced to between the hours of 08.00 and 18.00hrs Mondays to Fridays and between the hours of 09.00 and 13.00hrs on Saturday, with no working on Sundays and Bank Holidays or deliveries outside of these hours.	BDC	TC	The proposed working hours are set out in Requirement 7 of the draft DCO (application document 3.1). National Grid has identified the hours that it requires to deliver the construction programme as efficiently and quickly as possible. The proposed longer working hours mean that the project is anticipated to be constructed over a four-year programme. Shortening the working hours would potentially extend the working programme and put at risk the delivery of the project by 2028.

Comment	Consultee	Stage	Project Response
Legislation and National Planning Policy			
Section 85 of the Countryside and Rights of Way (CRoW) Act 2000 places an explicit duty on relevant authorities (such as National Grid) to have regard to the purpose of conserving and enhancing the natural beauty of an AONB when exercising or performing any functions. This 'duty of regard' applies to developments outside the AONB which will nonetheless affect their statutory purpose. National Grid should provide written evidence in the ES and in any other relevant documents to demonstrate how they have met or will meet their Section 85 obligations.	ALPC, DVSVP, NE	SR / SC	National Grid has had regard to conserving and enhancing the natural beauty of the Area of Outstanding Natural Beauty (AONB). Underground cables are proposed within the AONB, which would result in one fewer overhead line being present in the AONB during operation. This would be in line with conserving and enhancing the natural beauty of the AONB. Further details on how National Grid has met its Section 85 obligations can be found in the Planning Statement (application document 7.1).
Schedule 9 of the Electricity Act 1989 imposes specific obligations on electricity companies in respect of the environment. In this duty 'natural beauty' is not restricted to AONB or National Parks. This helps to make a strong case for undergrounding across the Stour Valley.	ALPC, NE	SR / SC	Noted. This is correct and National Grid gave due consideration to the quality of the landscape, not just whether it was designated, amongst other factors when deciding whether to underground sections of the line.
National Grid need to consider the potential revisions to the NPS within the application and also the requirement to adhere to the National Planning Policy Framework (NPPF) in relation to AONB, recognition of the Holford Rules and Horlock Rules.	ALPC, DVSVP, NE	SC	Noted. These have been considered in ES Chapter 2: Regulatory and Planning Policy Context (application document 6.2.2) and also within the Planning Statement (application document 7.1).
There is no reference to the Planning Practice Guidance (PPG) in Chapter 2 of the Scoping Report. This should be a material consideration in terms of what it has to say about development within the setting of nationally designated landscapes.	DVSVP	SR	Reference to this document has been added to ES Chapter 2: Regulatory and Planning Policy Context (application document 6.2.2). The documents listed are those that are considered important and relevant to the decision.
Local Planning Policy			
The Scoping Report references site M5 Layham Quarry and Policy MP10, which is noted.	SCC	SR	Noted. Further details can be found in ES Appendix 2.2: Local Planning Policy (application document 6.3.2.2).

Comment	Consultee	Stage	Project Response
<p>The Scoping Report makes no reference to the Dedham Vale AONB and Stour Valley Management Plan 2016-21, or any subsequent revisions. National Grid should give great weight to all the relevant objectives in the Management Plan when developing proposals for the project.</p>	DVSVP	SR	Reference to this document has been added to ES Chapter 2: Regulatory and Planning Policy Context (application document 6.2.2). The latest version of the Management Plan (Dedham Vale AONB and Stour Valley Project, 2021) is considered further within ES Chapter 6: Landscape and Visual (application document 6.2.6).
<p>The following local plan policies are of relevance to the project:</p> <ul style="list-style-type: none"> • Tendering the Tendring District Local Plan 2013-2033 (adopted on 25th January 2022) – Policy PPL 3: The Rural Landscape; • The emerging Braintree Draft Section 2 Local Plan 2017 (currently in examination) Policy LPP 71: Landscape Character and Features; • The emerging Joint Local Plan document for Babergh and Mid Suffolk districts, which will replace the 2006 Local Plan. Babergh Local Plan Alteration No.2 (adopted 1st June 2006). Policies CR03 and CR04 (CR04 and CR06 in the second deposit draft policy no.) within this plan provide guidance on utilities in protected landscapes; and • Colchester Borough Council are currently updating their Local Plan, which will replace the 2001 – 2021 Local Plan. The draft Colchester Emerging Local Plan 2017 – 2033 policy ENV4: Dedham Vale AONB is of relevance. 	NE	SC	The Planning Statement (application document 7.1) considers the local planning documents that are considered relevant to the project. This focuses on the counties and districts that the Order Limits pass through. Weight is not given within the ES to the Tendring and Colchester planning documents, given the distance between the project and the relevant planning boundary.

Comment	Consultee	Stage	Project Response
<p>Reference has been made to the Dedham Vale AONB and Stour Valley Management Plan, which is welcomed. However, there are also other reference/guidance documents that need to be considered and used as part of the assessment. This includes:</p> <ul style="list-style-type: none"> • Dedham Vale AONB Natural Beauty and Special Qualities and Perceived and Anticipated Risks (July 2016); • Managing a Masterpiece Evaluation Report (Dec 2013); and • Valued Landscape Assessment Stour Valley Project Area (March 2020). 	BMSDC, SCC, DVSVP	SC	<p>The Management Plan and the other listed documents have been considered when undertaking the landscape and visual assessment presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).</p>

3. Alternatives Considered

3.1 Introduction

- 3.1.1 This chapter covers the responses received in relation to alternatives to the proposed project including alternative strategic options, corridors and alignments, balancing underground cables and overhead lines and different locations for CSE compounds and the grid supply point (GSP) substation.

3.2 Thematic and Other Meetings

- 3.2.1 There have been a number of meetings held with Natural England, who requested a review of Corridor 2A in light of the potential effects of the project on Hintlesham Woods Site of Special Scientific Interest (SSSI). The options appraisal process, including a summary of the different environmental effects associated with the different corridors and the reason for selection, is presented in ES Chapter 3: Alternatives Considered (**application document 6.2.3**). This was also covered within their statutory consultation response (see Table 3.1). Further details on the meetings and the matters agreed, can be found in the Natural England SoCG (**application document 7.3.2**).
- 3.2.2 There have also been thematic discussions with Natural England, RSPB and other stakeholders on Option 1 and 2 around Hintlesham and the potential for significant effects on the ancient woodland and SSSI interest features. This feedback, along with the responses received during consultation events and further fieldwork, led to National Grid making a decision to only include Option 1 (to the north and west of the woods) into the application. These matters were also covered within the consultation response (see Table 3.1).

3.3 General Themes from Consultation Stages

- 3.3.1 Table 3.1 provides a summary of the feedback responses received in relation to alternatives and how National Grid has had regard to these. This table should be read alongside ES Chapter 3: Alternatives Considered (**application document 6.2.3**) which compares the environmental effects of the different options considered and summarises why each option was taken forward.

Table 3.1 – Feedback on Alternatives Considered

Comment	Consultee	Stage	Project Response
Options Appraisal Process			
<p>There are ongoing concerns that judgements on alternative options are being made with primary reference to cost. The EIA should primarily be concerned with the relative environmental merits of different options, without making comment on National Grid's statutory duties. This is the requirement of the EIA regulations.</p>	ECC	SR	<p>ES Chapter 3: Alternatives Considered (application document 6.2.3) summarises the environmental effects of the different options considered. The environmental assessment was used alongside technical and cost considerations (including National Grid's duties) when selecting the preferred option at each stage.</p>
<p>Requests further details on the cost calculations to allow for independent assessment to balance the cost of undergrounding compared to the impact on the environment. The costs should be based on whole life costs (quantify the disbenefits of an overhead line) not just the capital expenditure cost of installation.</p>	<p>APC, BSMPC, ECC, LaPC, LCPC, LePC, PoPC, SbNPC</p>	SR / SC	<p>The costs are based on whole life costs of building and maintaining the infrastructure. The whole life cost of underground cables is considerably higher than overhead lines. National Grid has to balance its duties and responsibilities. That includes balancing the need to be economic and efficient and keep costs down, with a duty to preserve amenity. The relevant National Policy Statement (NPS) (EN-5) makes it clear that the government expects overhead lines to be appropriate in most instances.</p> <p>The markets for metals and materials fluctuates and costs depend on a number of different factors. The approximate capital costs for various different overhead and underground configurations were published in 2021 as part of the non-statutory consultation, and the principle remains that the use of overhead line is the cheapest transmission technology for any given route, with underground cable technology being more expensive. This can be used for comparative assessment of technology options.</p>

Comment	Consultee	Stage	Project Response
Strategic Options and Alternative Technology			
National Grid should be considering new techniques such as superconductive cabling, which would be less disruptive on the environment, rather than outdated technology. National Grid should consider such opportunities and discuss their reasoning for chosen technologies with those suggesting alternatives.	ALPC, BSMPC, DVSVP, HCPC, HMTPC, LaPC, LCPC, LePC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) outlines the different technologies considered and the reasons why superconductive cabling and other technology is unsuitable for use on the project.
The Councils believe that greater consideration should be given to offshore transmission to reduce the impact on the communities and environment of East Anglia. They request that the EIA should include full disclosure on the options considered, along with the reasons why offshore transmission is not considered a viable alternative to the emerging proposal.	ALPC, APC, BSMPC, HMTPC, LCPC, LePC, PoPC, SbNPC, SpPC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) outlines the reasons why offshore transmission would not deliver the network improvements needed.
National Grid is running an innovation project in conjunction with SSE, on harnessing waste energy from transformers. This has the potential to save millions of tonnes of carbon dioxide emissions. Will this innovative technology be available for the new substations planned for the project?	ECC	SC	National Grid is constantly looking at innovations but are unable to make any commitments at this time.

Comment	Consultee	Stage	Project Response
Route Corridors			
National Grid should confirm that the route decision taken in 2009 is still justified in the light of the subsequent evolution of planning policy, changes in terms of the actual nature of the project, new technologies or engineering techniques. This should include a review of Corridor 2A, which would likely result in no damage or disturbance to Hintlesham Woods SSSI as the new 400kV overhead line would be a considerable distance from the SSSI. Given the ecological impacts associated with Corridor 2B, Natural England advises that further route options should be reconsidered including Corridor 2A and any other Corridors which may avoid damage to Hintlesham Woods SSSI. Mitigation via undergrounding could be feasible within Corridor 2A even if that may run counter to National Grid's usual criteria for undergrounding.	NE	SC / TC	National Grid has continued to back check the project and is confident that the Corridor 2B is the preferred route when balancing the environmental effects and also technical factors relevant to the project. Further details on the potential effects associated with Corridor 2A and 2B can be found in ES Chapter 3: Alternatives Considered (application document 6.2.3) and the Evolution of the Project (application document 7.2.6).
Natural England consider that Corridor 2A should be submitted as an option in the application for development consent for the planning inspectorate to consider.	NE	TC	Corridor 2A would have greater effects on landscape character and views than Corridor 2B. It would also have technical difficulties with where the reinforcement would tie in with Bramford Substation. Further details on the potential effects associated with Corridor 2A and 2B can be found in ES Chapter 3: Alternatives Considered (application document 6.2.3).
The Connection Options Report (COR) identified that Corridor 2B was more expensive than Corridor 2A. In a recent meeting, National Grid indicated that Corridor 2A would now cost in the region of £5-10 million more than Corridor 2B. It is not clear why the cost of Corridor 2A has increased dramatically more than 2B since 2012.	NE	TC	The markets for metals and materials fluctuate, and costs depend on a number of different factors, including the outcome of the detailed design stages. The outcome of the options appraisal work in the COR (May 2012) (application document 7.2.4) was that Corridor 2B was favoured despite being considered more expensive. The possible implications of changes in cost assumptions is being kept under ongoing review.

Comment	Consultee	Stage	Project Response
Local communities have identified alternative routes that they consider would cause less environmental harm than National Grid's preferred route. National Grid should assess these and provide a rationale to explain any decisions relating to why National Grid do or do not decide to take these forward.	DVSVP	SC	The alternative options suggested in consultation responses have been assessed as part of the options appraisal process. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
In revisiting the previous decisions, National Grid should confirm that the decision gave sufficient weight to the AONB as a statutorily designated landscape, including whether this should have been avoided (e.g. taking forward Corridors 3 and 4).	DVSVP, NE	SC	National Grid has given sufficient weight to the AONB and this has led to a decision to underground the reinforcement within Dedham Vale AONB. In addition, National Grid is also proposing to remove the existing 132kV overhead line as part of the project, which is an embedded measure associated with Corridor 2. This would result in one fewer overhead line within the AONB. Avoiding the AONB completely would introduce new overhead lines in a landscape where there are currently none. Further details can be found in ES Chapter 3: Alternatives Considered (application document 6.2.3).
Underground vs Overhead Line			
Both overground and underground lines will have a major environmental impact and the ES should clearly distinguish between the two different methods. For example, undergrounding would have greater effects on archaeology and ecology. Underground provision should not disproportionately adversely affect designated sites or other protected and Priority species and habitats. It should be ensured that there is an appropriate balance of underground and overground transmission and that this is thoroughly explored within the assessment.	ALPC, BDC, BMSDC, DVSVP, ECC, EWT, SWT	SR/SC	ES Chapter 3: Alternatives Considered (application document 6.2.3) describes the differences between overhead lines and underground cables. It also outlines the landscape and visual reasons why underground cables have been proposed in Section E: Dedham Vale AONB and parts of Section G: Stour Valley. National Grid has carefully balanced the need for overhead lines and underground cables and considers that it has the right balance on the project.

Comment	Consultee	Stage	Project Response
The mitigation, compensation and enhancement required for underground cabling will be considerably greater than that required for overhead lines, as well as making the National Grid commitment to 10% Biodiversity Net Gain more difficult to achieve.	SWT	SC	Noted, National Grid has sought to the balance the effects of the project, including undergrounding, on the environment. ES Chapter 7: Biodiversity (application document 6.2.7) assesses the effects of underground cables on ecology.
It is recommended that the exact alignment of the cables within the route corridor seeks to avoid mature trees and ancient and species rich hedgerows wherever possible.	NE	SC	Noted. The alignment has sought to avoid mature trees where practicable. The Habitats Baseline Report (application document 6.3.7.1) shows that the majority of the hedgerows within the Order Limits are assessed as being important and species rich. It is therefore not practicable to avoid these in many cases. However, the hedgerows would be reinstated following construction and other hedgerows in the area would be enhanced as part of the general reinstatement.
The whole line should be undergrounded.	APC, BHL, BMSDC, CBC, ECC, LaPC, LCPC, PoPC, SbNPC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) outlines the options appraisal that has been undertaken including balancing economic and environmental aspects, in line with National Grid's duties.

Comment	Consultee	Stage	Project Response
The project should seek to mitigate, or offset, the impacts of the overhead lines on the setting of designated landscapes, or heritage assets, such as for example Hintlesham Hall, or those landscapes, such as the Stour Valley including consideration of undergrounding where necessary.	ECC, SCC	SC	The options appraisal has sought to avoid and mitigate the effects of both overhead lines and underground cables on sensitive features and has balanced these alongside technical and economic factors when deciding which option to choose in each area. ES Chapter 3: Alternatives Considered (application document 6.2.3) describes the differences between overhead lines and underground cables. ES Chapter 6: Landscape and Visual (application document 6.2.6) and ES Chapter 8: Historic Environment (application document 6.2.8) assess the effects on designated landscapes and heritage assets respectively and identify mitigation, where required, to offset significant effects.
Undergrounding should be used in Section AB: Bramford Substation / Hintlesham where there is the potential for multiple overhead lines and a cumulative effect in and out of the substation. The Bramford Substation should not be neglected visually just because it already has multiple pylons.	HMTPC, SpPC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) outlines the options appraisal that has been undertaken including balancing economic and environmental aspects, in line with National Grid's duties.
Underground cables should be used in Section C: Brett Valley, designated as a Special Landscape Area, an area of great natural beauty with many historical and listed buildings and has strong connections with artists.	LaPC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) outlines the options appraisal that has been undertaken including balancing economic and environmental aspects, in line with National Grid's duties.

Comment	Consultee	Stage	Project Response
Undergrounding should be considered in the proposed extension area of the Dedham Vale AONB. The proposed extension area should be treated the same as the AONB.	ALPC, BMSDC, BSMPC, DVSVP, NwWPC	SR/SC	At this time, Dedham Vale AONB has not been extended and there is no defined boundary of any potential future extension of the designated AONB. Any potential future extension of the designated AONB would be the responsibility of NE to determine. NE has advised the project that decisions should be based on the effects on the existing Dedham Vale AONB as currently designated and its setting (in line with the current NPS). As the status of the request to extend the AONB remains undecided and based on discussions with NE, National Grid is not proposing to treat any area outside of the existing Dedham Vale AONB boundary as designated within its application for development consent.
Underground cables should be used within Dedham Vale AONB.	DVSVP, HE, NE	SR	Noted, underground cables in Section E: Dedham Vale AONB are included as embedded measures (EM-E01) (see the Register of Environmental Actions and Commitments (REAC) (application document 7.5.2) for further details).
The project should seek undergrounding across the full setting of the AONB, as this will be essential to avoiding significant effects on the designated area and its statutory purpose, accepting that there is still a need to fully define its extent in relation to this scheme and assess the effects of the scheme within it.	BSMPC, NE	SC	National Grid undertook a Setting Study as part of ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). 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 has informed project decisions including the balance of overhead line and underground cables and the location of the CSE compounds. The impacts on the setting of the AONB are presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2).

Comment	Consultee	Stage	Project Response
The route proposed to the south of 'Hill View' leaves this property sandwiched between the two lines which is not acceptable.	APC	SR	National Grid has considered the routing of the new 400kV overhead line in the vicinity of Hill View. The proposed alignment balances the requirements to maintain the safety clearances, avoid environmental constraints and reduce effects on other adjacent properties.
Underground cables should be used in Section F: Leavenheath/ Assington as it is on the edge of the AONB and to reduce visual effects and impacts on the orchards. This would also avoid the need for two CSE compounds.	APC, BHL, BMSDC, BSMPC, DVSVP, LCPC, LePC, NwWPC, NE, PoPC, SbNPC	SR/SC	ES Chapter 3: Alternatives Considered (application document 6.2.3) outlines the options appraisal that has been undertaken including balancing economic and environmental aspects, in line with National Grid's duties. Section F: Leavenheath/ Assington is not designated and therefore there is no policy justification for undergrounding in this section. In addition, there is the existing 400kV overhead line which the proposed 400kV overhead line would parallel through this section and the existing 132kV overhead line would be removed. This would result in a reduced magnitude of change in this section. The visual effects of the project are presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).
Underground cables should be used across the full extent of the Stour Valley.	ALPC, BDC, DVSVP, GPC, LCPC, NE	SR/SC	National Grid is proposing to underground through parts of Section G: Stour Valley. The extent of undergrounding is proposed following careful consideration of consultation feedback, the alternatives available, and other factors which need to be taken into account, including National Grid's duties and obligations.

Comment	Consultee	Stage	Project Response
The underground cables in Section G: Stour Valley pass through an area of relatively unspoilt countryside with ancient hedgerows, small fields and pockets of ancient woodland, fen and species-rich lowland meadow. Many of these habitats are considered irreplaceable according to the NPPF (2021), and their loss cannot be mitigated. Serious consideration should be given as to how irreplaceable habitats can be avoided through considering alternative route options in this section.	EWT, SWT	SC	Following the feedback at statutory consultation, National Grid identified an alternative alignment for the underground cables in Section G: Stour Valley. This includes an additional trenchless crossing which would avoid the sensitive habitats and Local Wildlife Sites (LWS) within the valley. ES Chapter 7: Biodiversity (application document 6.2.7) describes the effects of the project on irreplaceable habitats.
Dollops Wood Options			
The Parish Council prefers the options that lie to the north of Dollops Wood, as this would be quicker and simpler than a drilled option beneath Dollops Wood. The construction time would be less with the consequential benefits to the tranquillity of Polstead.	PoPC	SR	Noted. National Grid has taken forward Dollops Wood Option 2a which goes to the north around Dollops Wood.
We support the revision of proposals so that the works avoid impacts within or next to Dollops Wood, thereby safeguarding the hydrology and sensitive ecology of this area.	EA	SC	Noted.
Hintlesham Woods Option 1 and Option 2			
The benefits of the through the woodland option would be the avoidance of works in bird nesting season. Importantly, it would also reduce the number of residential properties that would be affected by the proposals in comparison to Option 1. However, the Council reserves its judgement at the present time until more detailed information is available in respect of ecological mitigation. Notwithstanding the potential benefits, Option 2 is a major concern due to potential impacts on the SSSI and protected species such as bats.	SCC	SC/ TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).

Comment	Consultee	Stage	Project Response
The Woodland Trust strongly objects to this scheme in its current form on the grounds of potential loss and deterioration of ancient woodland and veteran trees, with particular concern for the potential impacts on Hintlesham Woods SSSI, an RSPB-owned nature reserve. Unless drastic redesigns occur, including the removal of Option 2 as a potential route option, then we will continue to maintain our objection to this scheme.	WT	TC	Noted. This feedback was considered as part of deciding to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
National Grid is a Section 28G Authority under the Wildlife and Countryside Act (WCA) 1981 (as amended) and has a duty to further the conservation and enhancement of SSSI. An outcome that leads to any deterioration in the status of SSSI features is incompatible with National Grid's duty under the WCA 1981. Impacts on Hintlesham Woods SSSI should be given greater weight in decision making than considerations of landscape and views in the local area which has no statutory landscape designation.	NE, SWT	SC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
EN-1 sets out the tests which are intended to ensure that SSSI and ancient woodland are only damaged (i) where there is no alternative location for the development and (ii) where the benefits of development at that site clearly outweigh the impacts. In this case, we consider that i) alternatives to the Option 2 route exist and ii) the benefits of the Option 2 route do not outweigh the impacts on the SSSI or the loss of ancient woodland.	RSPB, SWT	TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
Option 2 through the Hintlesham Woods SSSI, is against National Planning Policy, when there is still a clear alternative route available which would avoid the permanent loss of irreplaceable ancient woodland habitat. Option 2 should be removed from the application prior to the application for development consent.	NE, RSPB, SWT, WT	TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).

Comment	Consultee	Stage	Project Response
<p>Based on the information provided, it is still Natural England's view that Options 1 and 2 are both likely to result in loss of, and/or damage to the interest features of Hintlesham Woods SSSI. Should the planning inspectorate find National Grid's justification for their current preferred route acceptable then based off the limited information available, Option 1 is considered to likely result in less loss/damage to the SSSI interest features than Option 2, which is likely to result in substantial loss/damage to SSSI interest features. Therefore, Option 1 would be preferential to Option 2, however, this should only be viewed in the context of alternative options that avoid the SSSI, such as Corridor 2A, being discounted.</p>	NE	SC/TC	<p>Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).</p>
<p>If there is no alternative route to options that affect Hintlesham Woods SSSI, then National Grid should seek to adequately mitigate, or, as a last resort, compensate for the loss of SSSI interest features. National Grid should also consider the compensation requirements of the site as an ancient woodland, as any compensation for ancient woodland is likely to necessitate a habitat multiplier due the quality and scarcity of this habitat and the fact that it is considered irreplaceable.</p>	NE	SC / TC	<p>Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. ES Chapter 7: Biodiversity (application document 6.2.7) presents the effects of the project on the SSSI.</p>
<p>There are a number of concerns regarding the potential for significant effects from Option 2 during both construction and operation. These included potential for permanent loss of SSSI interest features (ancient woodland and breeding bird habitat) along the new swathe, loss and fragmentation of irreplaceable ancient woodland habitat and the species that this supports (including woodland plants and fungi, bats, dormice), loss or damage to ancient and veteran trees, loss of breeding bird nesting and foraging habitat.</p>	NE, RSPB, SWT, WT	SC / TC	<p>Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).</p>

Comment	Consultee	Stage	Project Response
There are concerns regarding the impact and practicability of appropriate mitigation. More information is needed on the examples elsewhere relied on to show that traversing Ancient Woodland (and SSSI) can be successfully accomplished and that the case studies relied on are comparable. Substantial mitigation and compensation measures would be required if Option 2 in particular, was to be considered further.	BMSDC, NE, RSPB, SCC, SWT	SC / TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
It is our understanding that mitigation on the Richborough project (given as an example by National Grid) involved the coppicing of an area of woodland which was already in coppice management, which is entirely different from how Hintlesham Woods is being managed and is therefore not a suitable comparison to make.	SWT	TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
In terms of mitigation for Option 2, it is also not clear how many ancient or veteran trees would be affected by pruning, coppicing, removal to ground level or removal of stumps. Trees such as oak and ash may not be able to withstand coppicing (or other pruning). We are also concerned that ongoing short-rotation coppicing could result in changes to the species composition within this area of woodland as this form of management is likely to favour scrub species.	RSPB	TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
Given the irreplaceable nature of ancient woodland habitats, RSPB does not agree that mitigation such as woodland and scrub planting can be considered in this case.	RSPB	TC	Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).

Comment	Consultee	Stage	Project Response
<p>National Grid has asked whether Option 2 would be likely to meet the No Satisfactory Alternative test. In order to receive a licence, NE must be satisfied that three legal tests are met, one of which is that there is no satisfactory alternative way to address the problem with lesser impacts to species. At this stage, given there are two route options, with one going through a SSSI and known bat habitat, and the other with a notably lesser effect on species, NE advised it would be very unlikely to pass the no satisfactory alternative test with the information provided.</p>	NE	TC	<p>Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).</p>
<p>National Grid asked, should the NSA hypothetically be passable, what an acceptable mitigation plan might look like in this area. NE is unable to design schemes, but generally speaking, schemes designed to retain favourable conservation status of a species bring in a number of factors. In this case, Natural England advised that bat habitat connectivity would likely be an important element of this application, and there did not currently appear to be any viable approaches proposed to retaining bat habitat connectivity under Option 2.</p>	NE	TC	<p>Noted. This feedback was considered as part of the decision to not progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).</p>
<p>The councils have a preference for Option 2 (from the perspective of Historic Environment only) as Option 1 would have a greater effect on the setting of Grade II listed Old Hall House. Further assessment of this impact must be provided, should Option 1 be taken forward.</p>	BMSDC, SCC	SC	<p>Noted. ES Chapter 8: Historic Environment (application document 6.2.8) assesses the effects of the project on listed buildings and concludes no significant effects on the setting of Old Hall House.</p>

Comment	Consultee	Stage	Project Response
Stour Valley Options			
The proposed new cable alignment would still cross the valley to the north of Alphamstone, however part of this would now be a trenchless crossing which would reduce vegetation loss and is therefore a welcomed amendment. The proposed new cable alignment to the south of Ansell's Grove is located further away from receptors at Alphamstone. There is still however potential for short term significant effects on the landscape during construction, albeit these impacts are similar to those previously considered.	BDC, ECC	TC	Noted.
CSE Compound Locations			
It is important that the CSE compound are appropriately sited to minimise any wider landscape impacts by way of screening and planting.	BMSDC, ECC	SC	Noted. The options appraisal of the CSE compounds considered the local landform and existing screening when determining the preferred location. The environmental effects associated with the different CSE compound locations are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
CSE compounds should not be sited within the area very likely to be defined as constituting 'the setting' of the AONB, unless the compounds can take advantage of topography or dense planting to largely screen their visibility. However, if this is not possible then the undergrounded section of the route across the AONB should be extended into the adjacent countryside so that the compounds can be visually removed from the AONB and its setting (or reduced visually to a below significant level) either by distance and/or allowing better topographical screening to be used.	NE	SC	Noted. The options appraisal of the CSE compounds considered the local landform and existing screening when determining the preferred location. The environmental effects associated with the different CSE compound locations are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).

Comment	Consultee	Stage	Project Response
We acknowledge that, in their proposals for the siting of the CSE compounds, that National Grid has sought to address the impact of visibility off the CSE compounds from the AONB or the Stour Valley, so that although there would be some visibility from these areas there would potentially not be a significant detrimental impact.	NE, SCC	SC/TC	Noted.
National Grid proposed the use of full line tension gantries which the Council welcomes in principle as they would offer less of an impact than a more traditional pylon type arrangement.	SCC	SC	Noted.
Based on the information provided at this stage of the process we do not contest the judgements made on visual effects from CSE compounds and welcome the opportunity to explore the potential for additional off-site planting.	ECC, SCC	SC	Noted. The proposed planting is set out in Appendix C of the Landscape and Ecological Management Plan (LEMP) (application document 7.8).
Polstead is designated as a Conservation Area and one of the locations for the CSE compound would be on the edge of Dollops Wood which borders the conservation area at its southern end. Consideration should be given to the placement of the CSE further away from Polstead Conservation Area.	HE	SR	Noted. This feedback was considered as part of the decision to relocate the CSE compound further to the east by Millfield Wood, which reduces the effects on Polstead Conservation Area. Further details around the choice of location can be found in ES Chapter 3: Alternatives Considered (application document 6.2.3).
The CSE compound is on the very boundary (and setting) of the AONB at Dollops Wood. The terminal pylon, and at least five pylons to its east, would be visible from many viewpoints within the AONB. The Millfield Wood location to the East of Heath Road would be visible from much further away across flat, open countryside, and is therefore an even less suitable location.	PoPC	SR	The proposed Dedham Vale East CSE compound at Millfield Wood is located approximately 1km from the AONB boundary. This location benefits from existing woodland to the south and north which would be retained and will assist with filtering the views of the CSE compound from the properties in Polstead Heath. In addition, the area around the CSE compound has been identified as an area for embedded planting, which would further soften the effects. On balance the proposed location is considered to be the most suitable.

Comment	Consultee	Stage	Project Response
Layham Quarry would make a much better site for the CSE compound albeit with a consequential extension of the undergrounded line. Layham Quarry is a brownfield site of degraded land, it has good topography for masking a compound and a direct access road to the B1071, purpose built for construction traffic. Whilst the quarry has unexploited mineral reserves, these lie under agricultural land to the south of the quarry and would not be impacted by the siting of the CSEC.	APC, BMSDC, BSMPC, LCPC, LePC, PoPC, SbNPC	SR/SC/TC	National Grid has considered the potential relocation of the Dedham Vale East CSE compound to Layham Quarry. Whilst this would move the CSE compound further away from the AONB boundary, the extra length and cost associated with the extra underground cabling would not be justified in terms of policy or National Grid's statutory duties. Further details around the choice of location can be found in ES Chapter 3: Alternatives Considered (application document 6.2.3).
The Dedham Vale West CSE is proposed to the west of Boxford Fruit Farms. This landscape is undulating and although placed on a piece of flat land it has the potential to be visible within a wider area. Mitigation could be necessary to screen the compound in long views to the north and to the south.	HE	SR	Noted. National Grid has reviewed this location and considers that this site would be well screened based on existing topography and proposed planting. Further details around the choice of location can be found in ES Chapter 3: Alternatives Considered (application document 6.2.3).
Further details are requested on the option appraisal for the Stour Valley East CSE as Option 5 and Option 4 in particular would seem to cause less harm to this historic environment, including grade II* listed Sawyers Farm, and lie outside of the Stour Valley Project Area (SVPA). It would also remove the CSE compound from what, from historic maps, would seem to indicate, of been one of the main routes to the farmyard from the agricultural lands it farmed.	HE	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) summarises the different options and the likely environmental effects for the CSE compounds including Stour Valley East. ES Chapter 8: Historic Environment (application document 6.2.8) describes the potential effects on Sawyers Farm and concludes that there would be no significant effects on the setting of this property or the associated features.
GSP Substation			
The justification for locating the GSP Substation at Butler's Wood is still unclear. From this plan it's clear that the substation is disconnected from the rest of the development proposal therefore justification for this location, or alternative options need to be explored.	BDC, ECC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) summarises the different options and locations considered for the GSP substation along with the likely environmental effects. National Grid considers that the site adjacent to Butler's Wood is still the best location for the GSP substation.

Comment	Consultee	Stage	Project Response
It is acknowledged that further detail and indicative images have been provided for the proposed GSP substation and for the CSE compounds. However, further information is required to be able to fully assess their impacts. The substation as indicated on the maps, is too close to the road, and should be stepped further back into the site.	BDC	SC	Further details regarding the GSP substation and the CSE compounds can be found in the Design and Layout Plans (application documents 2.11.1 to 2.11.8). An embedded measure (EM-H04) (see the REAC (application document 7.5.2)) includes low mounds to the west of the A131 to help screen the site from the road.
A GSP substation is likely to lead to inexorable pressure to allow solar plant in open farmland and residents should have a chance to comment on the full proposals, not just the part National Grid choose to bring forward in isolation from the rest.	ALPC	SR	The GSP substation would draw power from National Grid's network and step this down from 400kV to 132kV, before feeding the power into the lower voltage network owned by UK Power Networks (UKPN). The specific role of the GSP substation would be to facilitate the removal of approximately 25km of existing 132kV overhead line. It is not being designed for the purpose of connecting tertiary connections. Should any separate applications be brought forward in the future, such as solar farms, these would be considered on their own merit by the appropriate determining authority.
Request that upgrades are made to Braintree Substation instead of the proposed GSP substation.	ALPC, GYPC, GPC	SR	ES Chapter 3: Alternatives Considered (application document 6.2.3) summarises the different options and locations considered for the GSP substation, including reinforcing Braintree Substation, along with the likely environmental effects. National Grid considers that the site adjacent to Butler's Wood is still the best location for the GSP substation.
Substation Study Area C (Butler's Wood) is preferred over Study Area A and B, as this is in a landscape that is less sensitive to change.	GYPC, GPC	SR	Noted. Study Area C was selected as the preferred location for the GSP substation as described in ES Chapter 3: Alternatives Considered (application document 6.2.3).

Comment	Consultee	Stage	Project Response
Construction Methodology			
There are local concerns about the location of the haul route off the A131, suggesting better alternatives. National Grid should listen carefully to alternative options to see what the best possible outcome could be.	BDC	TC	Noted. The suggestions put forward at the targeted consultation have been considered as part of the options appraisal for the temporary access route. The environmental effects associated with the different routes are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
A ducted solution is supported to reduce the length of time that open trenches are required.	SCC	SC	Noted.
Reference is made to the use of full line tension gantries which are welcomed in principle as they would offer less of an impact than a more traditional pylon type arrangement. Further mitigation including some limited additional undergrounding if the CSE compounds need moving might be required.	SCC	TC	Noted. Proposed embedded planting and additional mitigation planting is set out in Appendix C of the LEMP (application document 7.8).
Some landscape features could be avoided by horizontal directional drilling rather than open trenching, subject to geological or other constraints. Whilst this may be technically challenging and incur additional expense its use is fully commensurate with the national importance of the AONB landscape.	NE	SC	Trenchless crossings are only suitable over short distances, as longer crossings require the cables to be deeper and more spread out (greater footprint). Trenchless crossings also have different impacts compared to open cut methods, for example noise and vibration and risks to groundwater and therefore need to be balanced against any benefits that these may achieve. The ES has assumed horizontal directional drilling (HDD), as this is a common technique used for this type of project. However, National Grid is not seeking consent for a specific technique, as it intends to use the most suitable method based on factors such as the local geological conditions.

Comment	Consultee	Stage	Project Response
The underground cabling route around Alphamstone, which is within the setting of the Dedham Vale AONB has been amended from open cut and a trenchless crossing is now proposed. It is understood that a trenchless crossing will result in no surface excavation in this section, except that required to install the drilling equipment and that the technique is at a depth (circa 6m) to avoid tree roots. Consequently, existing trees and other vegetation directly above the cables can be retained. If this is the case, then this would be a positive and welcome amendment.	NE	TC	Yes, this statement is correct. The trenchless crossing has been proposed to avoid vegetation loss and to reduce the effects on landscape character and habitats.
Overhead Line Removal			
Removal of the existing 132kV would directly and beneficially affect the area including the SVPA and the special qualities and setting of the Dedham Vale AONB. Benefits would also arise due to the removal of several spans of the existing 400kV overhead line from Twinstead Tee southwards.	ECC, GPC, SCC	SC	Noted.
Where the existing 400kV overhead line is to be removed, there would be a requirement to cut back vegetation within a 20m swathe along the alignment of the existing 400kV overhead line to facilitate removal. However, it would be helpful to confirm whether the vegetation cut back along this swathe would be allowed to grow back once the existing 400kV line has been removed.	NE	SC	Yes, where the overhead line is removed and not replaced, then vegetation would be allowed to grow in these areas subject to existing land use.
The existing 132 kV overhead line should be removed between the diamond crossing and the GSP substation as this will become redundant and removing it would have positive landscape and environmental impacts.	ALPC, BDC, ECC, GPC	SR/SC	The stretch of existing 132kV overhead line between the diamond crossing and the GSP substation is not owned or controlled by National Grid. It is owned and operated by UKPN. The removal of this section of overhead line is not required for the route of the new 400kV overhead line.

Comment	Consultee	Stage	Project Response
The 'Twinstead Tee' is shown to be removed on the consultation maps, as well as the 132 kV and 400 kV line which form it. Further clarity is required on what 'removal' means for the purposes of the proposals. For example, is just the conductors (line part) and would the pylons remain?	BDC	SC	In locations where the overhead line is to be removed, this would include the removal of both the pylons and the conductors.
National Grid should also consider undergrounding the existing 400kV overhead line in Dedham Vale AONB, and the Stour Valley, whilst undergrounding the new line.	ECC	SR	The needs case and funding for the project is to deliver the new network reinforcement needed, rather than to work on existing overhead lines (other than where this is required to facilitate the project). Therefore, while two stretches of underground cable are proposed at Dedham Vale AONB and parts of the Stour Valley, no stretches of existing 400kV line would be put underground (although approximately 25km of existing 132kV line and 2km of existing 400kV line would be removed). This is because undergrounding existing lines is not required to mitigate the impacts of the proposed new line, and therefore the substantial cost to bill payers, as well as the environmental impacts of construction, would not be justified.

4. Consultation

4.1 Introduction

4.1.1 This chapter covers the responses received in relation to consultation on the Scoping Report. It does not address any comments raised in relation to the consultation process on the non-statutory, statutory or targeted consultations which are set out within the Consultation Report (**application document 5.1**).

4.2 Thematic and Other Meetings

4.2.1 No specific meetings have been held in relation to the EIA.

4.3 General Themes from Consultation Stages

4.3.1 Table 4.1 provides a summary of the feedback response received in relation to EIA consultation and how National Grid has had regard to this. This table should be read alongside the Consultation Report (**application document 5.1**) which summarises the consultation undertaken on the project and provides a comprehensive list of the feedback received and National Grid's responses to these.

Table 4.1 – Feedback on Consultation

Comment	Consultee	Stage	Project Response
Scoping Consultation			
The consultation period closed on 6 May and on 11 May the Planning Inspectorate issued notification of the Scoping Report. The report therefore takes no account of initial consultation responses from statutory consultees or other representative bodies and individuals. The Scoping Report does not show how comments received at the non-statutory consultation were considered.	BurPC, ECC, HCPC, SbNPC, SCC, SpPC	SR	The Scoping Report (application document 6.5) was based on the same information as presented at the non-statutory consultation. By its nature, which is around scope of the EIA, it was not dependent on the outcomes of the consultation. The Consultation Report (application document 5.1) sets out how consultation responses have been considered on the project.

5. General Environment

5.1 Introduction

5.1.1 This chapter covers the responses received in relation to the EIA as a whole.

5.2 Thematic and Other Meetings

5.2.1 National Grid has had meetings with the Host Authorities since the recommencement of the project in December 2020. In addition, National Grid has held meetings with environmental bodies, including Natural England, Historic England and the Environment Agency and broader thematic meetings with a range of different interested organisations. These meetings have provided a forum to discuss to data requirements and reports that would need to be reviewed as part of the baseline data gathering; methods and scope of the proposed surveys; and the results and findings of the assessment work.

5.3 General Themes from Consultation Stages

5.3.1 Table 5.1 provides a summary of the feedback responses received in relation to the overall EIA and how National Grid has had regard to these. This table should be read alongside ES Chapter 5: EIA Approach and Method (**application document 6.2.5**) which summarises the overall approach taken with regards to gathering baseline data, assessing sensitivity and magnitude and combining these to identify likely significant effects, and consideration of mitigation to inform the residual effects.

Table 5.1 – Feedback on General Environment

Comment	Consultee	Stage	Project Response
General			
Raised concerns (particularly at the Scoping Stage) that there was an absence of up to-date local information and that the report was incomplete. It was recommended that additional studies and data collection were necessary to inform and supplement the eventual EIA submission and anticipated that the development proposals would be refined and change as a result.	ALPC, ECC, HCPC, HMTPC, LePC,	SR/SC/TC	The Scoping Report (application document 6.5) was prepared at an early stage in the project when not all surveys had been completed. Substantially more up to date survey data was available at the Statutory Consultation and further data is provided within the relevant chapters in the ES (Volume 6). The baseline surveys have informed decisions on the project, particularly regarding sensitive environmental feature to avoid.
Raised concerns about noise, light and air quality; noting noise not only from the construction activities but also from the buzzing of overhead lines; noting that lighting during construction and subsequent security issues has a negative impact on the dark skies area, biodiversity and environment.	SpPC	SR	The ES covers these matters in ES Chapter 6: Landscape and Visual (application document 6.2.6), ES Chapter 13: Air Quality (application document 6.2.13) and ES Chapter 14: Noise and Vibration (application document 6.2.14). The Statement of Statutory Nuisance also covers nuisance matters (application document 5.4).
There are currently no plans to decommission the project and that although the design life of the project is 40 years, in reality, this is likely to be significantly extended. It would be useful to clarify whether at the point of decommissioning, the undergrounded cables could be removed without opening the trenches again and whether the CSE compounds would be removed and the sites fully restored.	NE	SR/SC/TC	A high-level assessment of decommissioning is presented in ES Chapter 4: Project Description (application document 6.2.4). Operational effects are considered within each ES topic chapter (Volume 6). It is assumed that the underground cables would be left in situ to avoid disturbing land use. Above ground features, including the CSE compounds, would be removed at the end of their required life and the land reinstated.
National Grid should ensure the details of the proposed methods underpinning each EIA topic are agreed prior to the final submission of the ES with the relevant consultees, which would include for example, agreeing baseline survey locations and study areas, agreeing viewpoint locations, magnitude etc.	BDC, ECC	SR	National Grid produced a Scoping Report (application document 6.5) which set out the proposed scope of each environmental topic that would be included within the ES. National Grid has held a number of thematic meetings to discuss the scope of the assessment, including the location and choice viewpoints to be assessed.

Comment	Consultee	Stage	Project Response
<p>In the Scoping Report, flora is considered separately to landscape but it contributes to the landscape people love to visit. Likewise, the settings of Historic Buildings are considered separately, but the buildings and their setting are but part of the landscape residents and visitors enjoy. The principal consideration must be the lives of the local residents and the enjoyment of the countryside by those who come to visit it. The bulk of material on flora, fauna, buried architecture etc. is of much less significance, but interrupts the more important consideration of landscape and noise.</p>	GPC	SR	<p>The chapters set out within the ES (Volume 6) are based on the standard EIA approach taken by other major developments. The EIA Regulations require an assessment of biodiversity, cultural heritage and other aspects where there are likely to be significant effects.</p>
<p>The council does not think the adoption of Highways England's The Design Manual for Roads and Bridges (DMRB) Value and Sensitivity Criteria and Magnitude Criteria is relevant to the continuous provision of infrastructure elevated 50m above the natural ground.</p>	SbNPC	SR	<p>There is no specific EIA technical appraisal methodology for the electricity industry and it is a case for each project to justify the methods that it uses for the assessment. The DMRB is an independent document setting out assessment criteria that are used on a range of EIA developments, not just road schemes. It provides a consistent approach to assessing sensitivity and magnitude across different projects. Each topic chapter in the ES (Volume 6) sets out the methodology used and whether this is based on DMRB or another independent source.</p>

Comment	Consultee	Stage	Project Response
<p>It is noted that the Indicative Alignment has the potential to change and that the Scoping Report has been prepared based on a Scoping Boundary. It is questioned whether the request for a Scoping Opinion is premature and should be delayed until such time as the precise parameters of the project are fully known.</p>	BMSDC	SR	<p>The Scoping Report is prepared at an early stage in order to gather feedback on proposed survey methods and scope of the assessment. It is based on a broad definition of the project, known as the Rochdale Envelope. The project is a Nationally Significant Infrastructure Project (NSIP) which means that the applicant applies for Order Limits and Limits of Deviation within the application rather than precise parameters. The statutory consultation and engagement with relevant consultees also help shape the project, including the alignment, between Scoping and application. Further details can be found in the Consultation Report (application document 5.1) and ES Chapter 3: Alternatives Considered (application document 6.2.3).</p>
<p>The transboundary implications of the grid with continental interconnectors has not been considered and therefore the project could have indirect effects on other countries.</p>	BMSDC, SCC	SR	<p>ES Chapter 15: CEA (application document 6.2.15) assesses the cumulative effects with other developments, such as continental interconnectors.</p> <p>The Planning Inspectorate undertook a transboundary screening on behalf of the Secretary of State for the purposes of Regulation 32 of the EIA Regulations (Planning Inspectorate, 2021b). This concluded that the project <i>'is unlikely to have a significant effect either alone or cumulatively on the environment in a European Economic Area State'</i>.</p> <p>The Transboundary Supporting Information (application document 6.3.1.1) provides updated information in the application for the Planning Inspectorate to confirm whether there is a need to engage with European Economic Area states.</p>

Comment	Consultee	Stage	Project Response
There has been recent growth of large-scale energy developments within the region and National Grid should enter into a dialogue to discuss coordination of project delivery, as well as the exploration of opportunities for the sharing of assets / infrastructure so as to minimise the physical impacts of growth on the communities.	BMSDC	SC	<p>National Grid has engaged with third parties who are progressing various energy developments in the vicinity of Bramford Substation, and Statements of Common Ground are being progressed where useful. Opportunities to share construction-phase infrastructure however are limited due to factors including construction programmes and health and safety requirements.</p> <p>In terms of operational-phase coordination, National Grid has worked with UKPN to rationalise the 132kV network, and is proposing to remove an existing 132kV overhead line and largely using this route for the proposed 400kV overhead line. This is a key embedded measure which reduces the scale of change in the landscape, and results in betterments in areas where undergrounding of the 400kV electric line is proposed (i.e. Dedham Vale AONB and parts of the Stour Valley).</p>
Consideration should be given to opportunities to identify those construction phase works that may be retained rather than reinstated where they provide a benefit to the public or a socio-economic benefit to the landowner without unacceptable environmental effects.	BMSDC	SR	<p>The assessment assumes that temporary works would be removed at the end of construction, as leaving in temporary access routes, culverts and compound areas could have long term effects on the environment and there is no project need to retain these features. If a need was identified to retain a structure, discussions would be held with the relevant bodies to understand what additional consents or permissions may be required.</p>
The consultation material makes reference to compounds for the trenchless crossing being located near Ansell's Grove. However, it is unclear whether this is referring to the CSE compounds, or whether there are additional compounds that have not been shown on the accompanying plans.	BDC, ECC	TC	<p>These are small temporary compounds required to undertake the trenchless crossings. The indicative location of these, based on the assumed construction methods and Proposed Alignment, are shown on ES Figure 4.1: The Project (application document 6.4).</p>

Comment	Consultee	Stage	Project Response
Mitigation and Management			
<p>The mitigation hierarchy of Avoid – Mitigate – Compensate – Enhance should be employed. Any mitigation should be kept as close to the area affected. Mitigation proposals must be robust and likely to be effective. It is expected that detailed mitigation proposals will be secured through appropriate planning conditions, e.g. a Construction Environmental Management Plan and the long-term management secured by way of a Landscape and Ecological Management Plan (LEMP).</p>	ECC, SCC, SpPC	SR/ SC	<p>The mitigation hierarchy has been followed, which has included; avoiding sites through routing as described in ES Chapter 3: Alternatives Considered (application document 6.2.3); embedding measures into the design such as trenchless crossings and then compensating for example the provision of additional habitats set out in ES Chapter 7: Biodiversity (application document 6.2.7). A CEMP (application document 7.5) and a LEMP (application document 7.8) have been produced in conjunction with the ES to secure the embedded and mitigation measures.</p>
<p>National Grid should consider the character and distinctiveness of the area, with the siting and design of the project reflecting local design characteristics and, wherever possible, using local materials. The EIA process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.</p>	NE	SR	<p>ES Chapter 3: Alternatives Considered (application document 6.2.3) describes the alternative options that were considered during the routing of the project. ES Appendix 4.1: Good Design (application document 6.3.4.1) describes the different designs considered on the project, for example T Pylons. The technical requirements of electricity projects in many instances dictate the materials that need to be used during construction and therefore it is not always suitable to use local materials. The Material and Waste Management Plan (MWMP) (application document 7.7) describes the how materials would be selected on the project.</p>

Comment	Consultee	Stage	Project Response
<p>No development shall commence until an updated CEMP has been submitted to and approved in writing by the Local Planning Authority which shall include details of operating hours, scheduled timing/phasing of the works and overall construction period, means of access, traffic routes, lighting, location and nature of compounds, dust management measures and noise and vibration management. The approved plan shall be fully implemented and adhered to during the works, unless otherwise agreed in writing by the Local Planning Authority.</p>	BMSDC	TC	<p>The draft DCO (application document 3.1) defines many of the project parameters, including the broad description of the work, the working hours and nature of compounds. The phasing would be set out within the phasing plan in accordance with Requirement 4 of the draft DCO. The CEMP (application document 7.5) provides details of the good practice measures that would be employed in relation to lighting, dust management and noise and vibration. The CEMP describes how the measures would be implemented and adhered to during the works.</p>
<p>Residual adverse impacts that cannot be dealt with within the Order Limits, should be addressed through a Section 106 (s106) agreement, and if required, relevant landowners should be party to that agreement.</p>	SCC	SC	<p>National Grid has not identified the need for any s106 agreements for the project. Separate discussions are being held with the councils regarding opportunities for community benefits which would sit outside of the DCO.</p>

6. Landscape and Visual

6.1 Introduction

6.1.1 This chapter covers the responses received in relation to landscape and visual including: discussions on assessment of designated landscape and how to treat non-designated landscapes such as the Stour Valley Project Area (SVPA); consideration of Dedham Vale AONB, including its purpose and special qualities; and consideration of viewpoint locations and methodology for producing visualisations.

6.2 Thematic and Other Meetings

6.2.1 Meetings have been held individual and landscape thematic meetings with the relevant planning authorities, Dedham Vale AONB and Stour Valley Partnership, and Natural England. National Grid to discuss landscape matters. This has included sharing the locations of the proposed representative viewpoints and photomontage locations and representative viewpoints have been discussed with the relevant planning authorities. There have also been discussions on how to undertake the community assessment and it was agreed that this should follow parish boundaries. Consultees have also expressed concerns about the number of developments proposed around Bramford Substation and how the cumulative landscape and visual effect of these will be considered within the ES. Cumulative landscape and visual effects are presented in ES Chapter 15: CEA (**application document 6.2.15**).

6.3 General Themes from Consultation Stages

6.3.1 Table 6.1 provides a summary of the feedback responses received in relation to landscape and visual and National Grid has had regard to these. This table should be read alongside ES Chapter 6: Landscape and Visual (**application document 6.2.6**) and its various appendices (**application documents 6.3.6.1 to 6.3.5**) which describe the baseline environment, methodology and the results of the impact assessment for landscape and visual.

Table 6.1 – Feedback on Landscape and Visual

Comment	Consultee	Stage	Project Response
General			
The councils accept the categories of landscape and visual receptors to be included in the assessment as set out in the methodology section of the PEI Report and the categories of landscape and visual receptors to be included in the assessment.	BDC, BMSDC	SC	Noted, these have been used within the assessment presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).
The AONB team concur with the landscape designated information, landscape character descriptions and the information presented for each of the sections defined within the Scoping Report and broadly concur with the issues identified to be scoped in and out of the EIA.	DVSVP	SR	Noted, this information has been used within the assessment presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).
The councils note that there is potential for short-term significant effects on landscape character from the presence of construction activities associated with the new alignment proposed to the north of Alphamstone. These landscape effects would be of a similar scale to those presented in the original PEI Report.	BDC, BMSDC, ECC, SCC	TC	Noted. 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) present the results of the assessment on landscape character.
The councils note that there is potential for short-term significant effects on views from a smaller number (but potentially different) receptors during the construction phase, compared to the original PEI Report and advise that further viewpoint locations may need to be explored to ensure all impacts on community visual amenity have been taken into consideration.	BDC, BMSDC, ECC, SCC	TC	Noted. National Grid undertook a review of the viewpoints following the Targeted Consultation and confirmed that these would be suitable for application. ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) present the results of the assessment on views.

Comment	Consultee	Stage	Project Response
The landscape and visual impacts are not fully assessed within the PEI Report and therefore important information is still needed to draw definitive conclusions about the effects of the project and their significance for the AONB.	NE	SC	Noted. The PEI Report is published as part of the Statutory Consultation and by its nature is preliminary in order to gather feedback on the designs. As the designs at this stage are still evolving, it is not possible to present the full landscape and visual assessment (LVIA) within the PEI Report. The full LVIA is presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).
Study Area and Methodology			
The LVIA will need to identify the landscape and visual effects of the whole project. It appears that National Grid will establish an area around the project that is likely to experience significant effects and is not intending to explore landscape and visual effects over an unreasonably wide area. This would be acceptable to NE, however, if National Grid intends to focus only on certain locations, then they will need to discuss that with all the relevant consultees.	NE	SR	The assessment presented in ES Chapter 6: Landscape and Visual (application document 6.2.6) considers the full length of the project and does not focus on certain locations.
The General Study Area and Area of Emphasis should be increased to 10Km and 5Km respectively in order to fully capture the long distance visual impacts from within the AONB.	SbNPC	SR	ES Chapter 6: Landscape and Visual (application document 6.2.6) considers a study area of 5km to focus on the areas most likely to have significant effects. The assessment results show that effects of the removal of the existing 132kV overhead line and presence of the new 400kV overhead line are limited to areas in close proximity and within the 3km 'area of focus' for the assessment. The effects on the AONB are fully documented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2).

Comment	Consultee	Stage	Project Response
The proposed 5km and 10km selected respectively for the Study Area and Zone of Theoretical Visibility (ZTV) mapping for the LVIA are considered appropriate to enable landscape and visual impacts to be appropriately considered.	BDC, ECC	SR	Noted. The study area used for the landscape and visual assessment is described and justified within ES Chapter 6: Landscape and Visual (application document 6.2.6) and the supporting appendices (application documents 6.3.6.1-5).
National Grid has applied a ZTV of 10km and a study area of 5km for the LVIA but it did not seek consultation from communities 10km from the project and thus does not have the benefit of local experience on which to base its assumptions. It also states that screening diminishes the impact. In practice, visual impact depends on a number of factors and long range views of the new line and CSE compounds would be evident from the networks of public rights of way (PRoW) and would be hard to conceal.	HCPC, LaPC, LePC, SbNPC	SR	The study area was set at 5km distance from the Order Limits, which is considered to more than adequately cover receptors which could experience significant effects (see ES Chapter 6: Landscape and Visual (application document 6.2.6) for further details). The study area is based on professional experience of overhead lines and field assessment. The latter has shown that although there are circumstances when a steel lattice pylon can be discerned at distances up to 10km, in most instances it is likely to be barely perceptible beyond 5km and therefore unlikely to give rise to significant effects. The field assessment also identified where views would be screened by trees, landform and vegetation.
The council strongly disagrees that 'the most likely significant effects will be within 1km of the line'. Whilst we acknowledge that the power lines through the Dedham Vale AONB and Stour Valley will be placed underground, key elements of the proposed overground section will be visible from within the AONB, particularly crossing Section C: Brett Valley, Section D: Polstead and Section F: Leavenheath/Assington.	SbNPC	SR	The Scoping Report (application document 6.5) noted that the most likely significant effects were expected to lie close to the project based on the apparent height of a 50m pylon at 1km being 3.05cm and that distance can be a strong indicator of the magnitude of visual change. However, the LVIA includes an assessment of all likely significant effects anticipated on the project and is not limited to 1km around the line.

Comment	Consultee	Stage	Project Response
The Scoping Report concludes that lighting will be scoped out on the ES. It is recommended that further details of construction compound/laydown areas and operating hours (including anticipated night and winter working) will need to be provided so that lighting can be scoped out of assessment.	BDC, BMSDC, DVSVP, ECC, NE, SCC	SR/SC	Construction lighting has been assessed within ES Chapter 6: Landscape and Visual (application document 6.2.6). Good practice measure GG20 in the CoCP (application document 7.5.1) states that construction lighting will be of the lowest luminosity necessary to safely perform each task. It will be designed, positioned and directed to reduce the intrusion into adjacent properties, protected species and sensitive habitats. Operational lighting is only proposed at the GSP substation where it would be sensor-based (see ES Chapter 4: Project Description (application document 6.2.4)).
The word 'very' should be removed from the following definition of Medium High Landscape Sensitivity – 'The key characteristics and qualities of the landscape are <i>very</i> susceptible'.	BDC, ECC	SR	The word 'very' is used here to differentiate from the medium landscape sensitivity criteria which states ' <i>the key characteristics and qualities of the landscape are susceptible...</i> '
The LVIA should follow good practice as set out in GLVIA3. GLVIA3 recognises that landscape value is not always signified by designation. In determining landscape value, Technical Guidance Note (TGN) 02-21 'Assessing the Value of Landscapes Outside National Designations' has recently been published and builds on the details within GLVIA3 and the assessment of value. The landscape value assessment should therefore be revised to accord with TGN 02-21 and the inclusion of cultural associations.	BDC, DVSVP, ECC	SR	Relevant guidance from the Landscape Institute has been considered when drafting ES Chapter 6: Landscape and Visual (application document 6.2.6). This includes Technical Guidance Note 02-21, which includes incorporation of cultural associations into consideration of landscape value. Associations (which includes cultural associations) have been considered as part of the assessment of landscape character which is presented in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3).

Comment	Consultee	Stage	Project Response
Given the scale and repetitive nature of this project, combined with varying visibility of pylons, sequential visual effects will need to be identified and assessed. Sequential visual effects should also be assessed.	BDC, BMSDC, ECC, SCC	SR/SC	Effects of the project on linear recreational receptors such as regional trails, for example Stour Valley Way, St Edmunds Trail and the Painters Trail have been considered in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) and conclusions presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).
The visual impacts are to be assessed receptor by receptor (receptor groups). Although this method is supported, receptor groups and their sensitivity will need to be agreed with the relevant consultees prior to the EIA being undertaken. Likewise, the sensitivity of components of the receiving landscape is not systematically set out in the methodology for agreement. It would be preferable for these to also be agreed with relevant consultees.	BDC, ECC, SCC	SR	The sensitivity of receptors are presented in the relevant appendices associated with ES Chapter 6: Landscape and Visual (application document 6.2.6).
The Scoping Report identifies the additional sensitivity and expectations of viewers in the AONB; it is essential that this distinction is carried through to the assessment, although the distinction is not entirely clear in Table 6.2 of the report.	SCC	SR	Noted. Viewpoints located within the AONB have been identified and assessed in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4), the location within the AONB being accounted for in the value judgements.
National Grid pre-judges the difference in impact of the existing 132kV line and the proposed 400 kV line. The difference in theoretical visibility should not be based merely on comparisons between the height of the towers. The cumulative impact of two lines of equal height is quite different to that of one tall and one shorter line. The interaction of larger lines is significantly greater as perspective dictates than towers and cables are rarely in alignment. A high 'steel fence' is thus created. Ample evidence is provided by the transmission lines from Sizewell to Bramford.	HCPC, LaPC, LePC	SR	Noted. The comparative ZTV presented with the Scoping Report (application document 6.5) was to show that the receptors affected would be broadly the same as those currently affected by the two overhead lines and described that the scale of change was not as large as if the existing 132kV overhead line was not present in the landscape. The assessment presented in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) does not just look at height but considers the scale of change for receptors.

Comment	Consultee	Stage	Project Response
It is expected that as well as representative views and receptor groups, that specific viewpoints (vistas/vantage points) are included in the assessment to ensure any concerns regarding impacts can be identified and assessed in isolation to receptor groups.	BDC, DVSVP, ECC, NE	SR	Viewpoint locations were discussed agreed with relevant planning authorities in May 2021. Viewpoints are presented in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4).
Although the Landscape Character Assessment of Braintree District (BDC, 2006) provides a detailed account of the landscape and its key characteristics, this document is now 15 years old, and the landscape has evolved greatly in this time. The council recommends that a localised Landscape Character Assessment (1:25000 scale) is undertaken.	BDC, ECC	SR	As requested by the local authorities, the assessment in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3) draws on the county level assessments with additional detail added from other documentation and recent site visits to provide an update where required.
The Scoping Report proposes assessing the construction and operation landscape effects on the Special Landscape Areas (SLA). Babergh and Braintree planning authorities are moving away from SLA designations and are relying more on Landscape Character Areas (LCA) as evidence. Any assessment of landscape effects on the SLA should draw on evidence from the relevant LCA that cover each of the SLA.	DVSVP	SR	At the time of writing, the SLA were still within local planning policy and have therefore been assessed individually. The assessment is presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). This has also informed the LCA assessment presented in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3).
NE would wish to see details of local landscape character areas mapped at a scale appropriate to the development site. The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment, based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013.	NE	SR	As requested by the local authorities, the assessment in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3) draws on the county level assessments with additional detail added from other documentation and site visits.

Comment	Consultee	Stage	Project Response
In Suffolk, the primary source of information for the landscape baseline is the Suffolk LCA, which has informed the district level BMSDC Landscape Guidance (2015) and the Managing a Masterpiece LCA. It is recommended that the Suffolk LCA provides the overarching framework for the baseline study, with further reference to the BMSDC Guidance and Managing a Masterpiece Study for localised details on local character and cultural heritage within the AONB and the SVPA.	BDC, ECC, SCC	SR	As requested by the local authorities, the assessment in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3) draws on the county level assessments with additional detail added from other documentation and site visits.
The PEI Report judged that landscape and visual effects may arise because trees cannot be planted in the same place where above or close to the underground cables. This will need to be considered in the assessment, especially where the project crosses Alphamstone Meadows.	BDC, ECC	TC	A trenchless crossing is proposed to the south of Ansell's Grove. The underground cable is buried deep enough when using this method, that trees above the crossing do not need to be removed. ES Chapter 6: Landscape and Visual (application document 6.2.6) consider potential tree loss as part of the assessment.
The methodology for the LVIA currently scopes out road users. However, the road network is used not only by car users, but also cyclists and horse riders. Whilst it is accepted that car users generally have a lower sensitivity than other road users, it is suggested that car users within the AONB should be included as a receptor group. Furthermore, the Scoping Report has not taken into consideration whether parts of the road network are also identified as promoted routes, quiet lanes and/or restricted byways, where sensitivity may be greater. For these reasons, it is recommended that road users are scoped into the assessment.	BDC, ECC, SCC	SR	Road users have been scoped out as a separate assessment, but consideration of road users, including cyclists, is taken account in both the viewpoint assessment presented in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) and in ES Appendix 6.5: Assessment of Visual Effects on Communities (application document 6.3.6.5). Many of the viewpoints identified are from roadside locations, showing how the vegetation cover along the road network helps to screen and filters views as people pass through the area, particularly the AONB.
The council strongly disagrees with the contention that the River Box SLA will not be impacted by the project and should be scoped out. The River Box SLA will be severely affected by additional visual impacts.	SbNPC	SR	The Box Valley SLA is now assessed as part of ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2).

Comment	Consultee	Stage	Project Response
<p>In terms of scoping out the rail users of the Sudbury Branch Railway Line, it should be noted that this line is marketed as the Gainsborough Line and promoted by the Community Rail Network as a scenic route, with funding from the UK Government. Therefore, it would not be reasonable to scope rail users out. Furthermore, the proposed approach to road and rail users does not appear to be consistent with para-6.16 of GLVIA 3.</p>	SCC	SR	<p>In accordance with paragraph 6.16 in GLVIA3, a number of viewpoints have been located at publicly accessible locations, including PRow and on the local road network (LRN). Given that the project would be underground in the location of the Sudbury Branch Railway Line and the speed at which receptors on the train would pass-by, it is considered unlikely that there would be significant adverse visual effects on rail users. There are a number of viewpoint locations in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) which represent views along the Stour Valley and show the project would have beneficial effects from the removal of the existing 132kV overhead line.</p>
<p>Protected views, which are deemed fundamental to Assington’s quality and character, must be protected from development that would be detrimental to them (policy ASSN13).</p>	APC	SR	<p>The assessment presented in ES Appendix 6.5: Assessment of Visual Effects on Communities (application document 6.3.6.5) considers the effects on Assington. Eleven viewpoint locations within the Assington community area have been used to support the assessment, some of which are views which are identified in the Assington Neighbourhood Plan. These are presented in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4).</p>
<p>In terms of the new underground route to the north of Alphamstone, there are limited PRow in the local area and it is considered that the previously proposed viewpoint locations (i.e. G-05 and G-07) will be sufficient to assess impacts.</p>	BDC, ECC	TC	Noted.

Comment	Consultee	Stage	Project Response
The arboricultural survey will identify impacts to trees potentially subject to significant arboricultural impacts as a result of the project. The council would like to see any areas where tree removal or significant impact is identified, to have trees surveyed and identified individually as opposed to part of the larger group or woodland categorisation.'	BDC	SR	The arboricultural surveys have been undertaken in accordance with British Standard (BS) 5837:2012 'Trees in Relation to Design, Demolition and Construction', which allows consideration of tree groups. Vegetation affected by the project is shown on the Trees and Hedgerows to be Removed or Managed Plans (application document 2.9) and in the Arboricultural Impact Assessment (application document 5.10), which shows the trees and hedgerows likely to be affected by the Proposed Alignment.
The council welcomes the intention of providing a full BS 5837:2012 'Trees in Relation to Design, Demolition and Construction' survey to identify trees with amenity value and veteran trees so that they can be avoided where practicable. This will also inform root protection areas and mitigation planting proposals as described in the LEMP.	ECC	SC	Noted. Information can be found in the Arboricultural Impact Assessment (application document 5.10) and planting proposals are set out in Appendix C of the LEMP (application document 7.8).
The GSP substation is situated between Butler's Wood and Waldegrave Wood, both of which are ancient woodland and Essex County Wildlife Sites (CWS). Reference is made to enhancement planting that could provide an opportunity to reconnect the two woodlands. This is supported, and it is advised that a review of historical field patterns and local native species is undertaken to inform the landscape designs.	BDC, ECC	SC	Noted. The proposals have been based on historical field patterns and local species are proposed. Further details can be found in the Environmental Gain Report (application document 7.4).
BDC disagree that the landscape effects for the GSP Substation will not be significant and that minor changes would not affect landscape character. This is not agreed with as there will be harm but just not at a significant magnitude. However, reference to enhancement planting which could reconnect Butler's Wood and Waldegrave Wood is supported subject to local native species and a review of historic field patterns.	BDC	SC	Noted. The assessment for the GSP substation is presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).

Comment	Consultee	Stage	Project Response
Photographs for viewpoints/ photomontages will need to be reshot in winter, to ensure the reasonable worst case is illustrated and assessed in the EIA. Statutory bodies should be consulted on the number and location of the viewpoints.	BDC, DVSVP, ECC, NE, SCC	SR	Noted. The photomontages (application document 5.8) include winter images as a worst case.
The use of wireframes and photomontages (Type 4 AVR level 3) as visualisation representation is welcomed. It is advised that an enlargement factor of 150% is used as this provides a better impression of scale for most viewers using two eyes (binocular vision).	BDC, DVSVP, ECC	SR	The photomontages (application document 5.8) have been undertaken to Landscape Institute TGN 06/19 Type 4 AVR Level 3, presented at A1 size with cylindrical panoramas to represent linear infrastructure in line with the guidance. They do not include 150% enlargement sheets due to the linear nature of the views over wide panoramic fields of view requiring a disproportionate amount of A3 sheets to cover the full extents of the proposals.
The conclusions to scope out visual effects at night, impacts on views for all receptors outside the ZTV and visual effects on private views is considered appropriate. While lighting has been scoped out of the EIA, it would be helpful if a couple of night-time images were included just to evidence that light pollution from the development would not be significant or harmful to the AONB and Stour Valley.	DVSVP	SR	Operational lighting is only proposed at the GSP substation where it would be sensor-based (see ES Chapter 4: Project Description (application document 6.2.4)). Since the lighting at the GSP substation would be for very limited durations and the site is over 7km from the AONB boundary, it is not considered necessary to provide night-time images as part of the application.
Further viewpoints may need to be included to cover those residential properties now which would be affected by the proposed haul route, as this could be in place for a substantial period even if temporary.	BDC, NE	TC	National Grid undertook a review of the viewpoints following the Targeted Consultation and confirmed that the existing viewpoints were sufficient for the assessment, including assessment of the proposed temporary access route. ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) present the results of the assessment on views.

Comment	Consultee	Stage	Project Response
National Grid will not be making the LVIA or any further viewpoint photographs or visualisations available for viewing and comment prior to submission of the application for development consent. This is disappointing because NE is lacking the essential information and evidence needed to fully understand the likely effects of this scheme on the AONB. This does run counter to the purpose of the NSIP pre-application phase which is intended to allow all such information to be shared with statutory consultees so that issues and concerns can emerge and be addressed as far as possible before the examination stage.	NE	TC	<p>In total, twenty-one photomontages were presented as part of the statutory consultation, showing what the above ground structures would look like in summer. In relation to the AONB, viewpoints C-08, E-07 were within the AONB along with D-04, F-10 and F-20 within 500m of the AONB boundary. As the targeted consultation focused on a temporary access route and a section of underground cables, there was no need to provide any additional photomontages or visualisations as part of this consultation.</p> <p>Due to the evolution of the designs, project timescales and the cost to undertake updated modelling and visualisations, it is difficult to produce iterative versions of these during the assessment process. This approach is suitable and proportionate and in accordance with the core guidance (Landscape Institute TGN 06/19).</p>
Dedham Vale AONB and Stour Valley			
National Grid should reduce to as near to zero as possible any negative impacts on the AONB and its setting. Significant adverse impacts (residual or those of a temporal nature) should be compensated for. A contribution to the Stour Valley Environment Fund, AONB Sustainable Development Fund and resource for AONB team could provide part of this compensation.	DVSVP, SCC	SR/SC	ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2) presents the effects on Dedham Vale AONB and its setting. This concludes that with removal of the 132kV overhead line and underground cables being proposed for the new line, that there would be no residual adverse effects on the AONB.
Consideration should be given to the AONB statutory purpose when siting any infrastructure e.g. CSE compounds that would be visible from the AONB.	DVSVP, NE	SC	Noted, the AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2).

Comment	Consultee	Stage	Project Response
DVSVP acknowledge the embedded mitigation of undergrounding new cables in the AONB but note the impact the AONB not being able to deliver statutory purpose during construction.	DVSVP	SC	The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). The CEMP (application document 7.5) outlines the good practice measures that would be employed to reduce impacts during construction.
Consideration should be given to the direct and indirect effects upon the AONB including the effect upon its purpose for designation, as well as the content of the Dedham Vale AONB and Stour Valley Management Plan.	BDC, DVSVP, NE, SCC	SR/SC	The AONB and its setting are included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). This includes consideration of its purpose as outlined in the Dedham Vale AONB and Stour Valley Management Plan.
The special qualities of the AONB are summarised in the Dedham Vale AONB and Stour Valley Management Plan and include cultural associations. National Grid should consider and assess the impact of the project on the Natural Beauty and Special Qualities of the AONB and seek to conserve and enhance these qualities.	DVSVP, NE, SCC	SR/SC/TC	The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). This includes consideration of the impacts of the project on the special qualities.
One of the special qualities of the AONB is ' <i>the surprisingly long views from higher ground along the valley in an associated with large skies</i> '. The proposed approach will need to ensure that impacts on the important long views referenced above are appropriately assessed.	DVSVP	SR	The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). This includes consideration of the impacts of the project on the special qualities.
The EIA should include an assessment of the project affecting the setting of the AONB. The LVIA will need to anticipate the extent of the area which constitutes the setting for the AONB if the exercise to definitively map it has not been completed.	DVSVP, SCC	SR/SC	The AONB (and its setting) is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). Annex A considers the approach and identification of the setting in relation to the project.

Comment	Consultee	Stage	Project Response
While it is acknowledged that the SVPA has no statutory protection, parts of it are considered to be a Valued Landscape. The EIA should include an assessment on the SVPA separate to the Stour Valley SLA, as the SVPA has been subject to five-year management plans and has been under careful assessment and scrutiny that has identified the distinct qualities it features and therefore meets criteria beyond that of the SLA designation.	BMSDC, ECC	SC	The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). Annex A considers the approach and identification of the setting of Dedham Vale AONB in the relation to this project which has included consideration of the SVPA. As agreed with NE, the SVPA is not a designated landscape and therefore is not assessed as such. It is however considered in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3) and fed into judgements on landscape value.
The nominated AONB extension area and its setting should be treated the same for the purposes of LVIA and EIA more generally.	DVSVP, SCC	SR	At the time of writing, the proposed extension to the AONB does not form part of the designation and therefore was not included in the assessment of designated landscapes. Natural England is the body that would determine any future changes to the AONB boundary and has advised National Grid that the application and the ES should be based on an assessment of the current Dedham Vale AONB boundary, see the Natural England SoCG (application document 7.3.2).
National Grid has inadvertently misrepresented the discussion of designated landscapes in GLVIA3, which says that ' <i>on the margin of, or adjacent to such a designated area, thought may be given to the extent it represents the characteristics and qualities that have led to the designation of the area</i> '. It is considered that areas at and beyond the margin of the designated area of the AONB do indeed represent the characteristics and qualities of the designated area. This is set out in detail in Special Qualities of the Dedham Vale AONB Evaluation of Area Between Bures and Sudbury 2016.	SCC	SR	National Grid has applied GLVIA3 correctly within the assessment. The effects on the AONB (including its special qualities and setting) are presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2).

Comment	Consultee	Stage	Project Response
The documents appear to acknowledge that the surroundings of AONB can influence the overall character and quality of the landscape, described as the ‘setting’ of the AONB. The Scoping Report appears to acknowledge that, in terms of planning policy, views out of the AONB carry the same weight as views within the AONB. That being the case, it is expected that those same views carry a Value Sensitivity of “Very High” within the designations set out in the assessment.	SbNPC	SR	The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). Viewpoint value judgements are presented in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4).
The approach and methodology used to define the setting to the Dedham Vale AONB within Dedham Vale AONB – Approach to Identification of Setting (application document 6.3.6.1) is broadly accepted.	NE	TC	Noted.
The setting study seeks to define the setting to the AONB only in relation to the Bramford to Twinstead Reinforcement using bespoke parameters for Zone of Theoretical Visibility (ZTV) calculations based upon the proposed height and locations of proposed overhead line pylons. The setting to the AONB defined in this study is therefore only applicable to this particular project and cannot be applied to any other development proposal.	NE	TC	Noted.
In the absence of an existing landscape definition of ‘setting’, National Grid is using the historical definition of ‘setting’. NE considers that The Setting of Heritage Assets report (Historic England, 2017) is applicable to the setting of designated landscapes in this instance and specifically in this case, whether the project would significantly compromise the AONB statutory remit to conserve and enhance natural beauty within the AONB.	NE	TC	The definition of setting in relation to this project is described in Annex A of ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2).

Comment	Consultee	Stage	Project Response
The Dedham Vale AONB Manager has very helpfully undertaken a site visit to 'ground truth' the setting area identified by National Grid in the areas around Assington and Leavenheath. NE strongly recommends that careful consideration is given to these views, and the request made to enlarge the area indicated as 'the setting' to the AONB in Figure 10 of the setting study.	NE	TC	The comments from the AONB manager were reviewed as part of the updates to the application version of the Dedham Vale AONB Approach and Identification of Setting Study (in Annex A of ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2)).
The temporary haul road proposed off the A131 is located approximately 5km outside of the Dedham Vale AONB at its nearest point and outside of the area considered to form the setting to the AONB. The relevant planning authorities are best placed to comment on the local implications of this proposed road, and we advise that their views are sought.	NE	TC	The relevant planning authorities were consulted as part of the Targeted Consultation and their responses have been considered when undertaking the landscape and visual assessment presented in ES Chapter 6: Landscape and Visual (application document 6.2.6).
The western extent of the Stour Valley is in Braintree District and was formerly a SLA. It is noted that the status of this landscape was not downgraded. Instead of using 'Special' as a shorthand for 'highly amenity value', all landscape is now 'special' with the special (low or high value) character of each described in detail.	GPC	SR	Noted. Landscape is considered in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3).
Whilst National Grid has agreed with NE that the Stour Valley will be considered as forming the setting of the AONB and the Stour Valley SLA, this is not supported. The ES should include sensitivity testing treating the SVPA as a separate landscape designation to the Stour Valley SLA.	BDC, BMSDC, ECC, SCC	SC / TC	Natural England is the body that would determine any future changes to the AONB boundary and has advised National Grid that the application and the ES should be based on an assessment of the current Dedham Vale AONB boundary, see the Natural England SoCG (application document 7.3.2).

Comment	Consultee	Stage	Project Response
<p>The SVPA does not benefit from the same level of statutory protection as the Dedham Vale AONB, however as recognised in the Dedham Vale AONB and Stour Valley Management Plan. Parts of it exhibit many of the similar characteristics as the neighbouring nationally designated landscape. The Partnership consider that the SVPA should be considered to be a high value landscape that is given proper weight in the design and delivery of the project.</p>	DVSVP	SR / SC	<p>The AONB is included in the assessment presented in ES Appendix 6.2: Assessment of Effects on Designated Landscapes (application document 6.3.6.2). Annex A considers the approach and identification of the setting of Dedham Vale AONB in the relation to this project which has included consideration of the SVPA. As agreed with Natural England, the SVPA is not a designated landscape and therefore is not assessed as such. It is however considered in ES Appendix 6.3: Assessment of Effects on Landscape Character (application document 6.3.6.3) and fed into judgements on landscape value.</p> <p>The SVPA is recognised as a high value landscape and as forming part of the setting of Dedham Vale AONB. This is part of the reason that has led to underground cables being proposed through parts of Section G: Stour Valley, as described in ES Chapter 3: Alternatives Considered (application document 6.2.3).</p>
Management and Mitigation			
<p>Mitigation should also be informed by opportunities for enhancements included in the Valued Landscape Assessment Report. The project should not undermine and should enhance the work being implemented through the Landscape Enhancement Initiative and through the Colchester Declaration and Nature Recovery Plan for the Dedham Vale AONB.</p>	DVSVP	SR	<p>Underground cables are proposed in parts of Section G: Stour Valley. This embedded measure would reduce impacts on the landscape, so that additional mitigation measures are not required in this location, as described in ES Chapter 6: Landscape and Visual (application document 6.2.6). The project is not anticipated to affect the work being implemented through either the Landscape Enhancement Initiative or the Colchester Declaration and Nature Recovery Plan.</p>

Comment	Consultee	Stage	Project Response
Information is required about the vegetation being removed and the vegetation that can be put back given restrictions of planting over cables and under overhead lines to understand the significance of the landscape and visual effects. Where vegetation is lost and trees cannot be replaced in situ, planting schemes should be sensitive to and seek to restore and strengthen landscape character, whilst simultaneously seeking to maximise biodiversity value.	BDC, ECC, NE, SCC	SR	The LEMP (application document 7.8) includes information on vegetation removal and reinstatement, including what can be planted over / under electricity lines. LEMP Appendix A contains the Vegetation Retention and Removal Plans for the project based on the Proposed Alignment and LEMP Appendix B contains the Reinstatement Plans. The latter includes reinforcement of hedgerows to enhance biodiversity value.
The project proposals will have permanent residual impacts on the local landscape and sense of place. Residual adverse impacts that cannot be dealt with within the Order Limits, should therefore be addressed through a s106 agreement, and if required, relevant landowners should be party to that agreement.	SCC	TC	The landscape and visual assessment is presented in ES Chapter 6: Landscape and Visual (application document 6.2.6). Where mitigation has been proposed to reduce an impact, this has been included within the Order Limits. Long term residual significant effects that cannot be mitigated through mitigation planting have been identified in one landscape character area (LCA 2b Hintlesham) and within two community areas (Burstall and Hintlesham). National Grid does not consider the tests for s106 to have been met on the project.
Additional tree planting should be provided to compensate any potential losses or damage to woodland areas.	ECC	SC	The LEMP (application document 7.8) includes information on reinstatement planting, including the Reinstatement Plans in LEMP Appendix B: Vegetation Reinstatement Plan (application document 7.8.2) which shows the locations of the proposed planting.

Comment	Consultee	Stage	Project Response
If there is no alternative to removal of a mature tree, at least three appropriate (suitable species and provenance) trees must be planted elsewhere, as close as possible to the removed feature, two such trees for an immature specimen and one-for-one for saplings.	SCC	SR/SC	The LEMP (application document 7.8) includes information on reinstatement planting, including the Reinstatement Plans in LEMP Appendix B: Vegetation Reinstatement Plan (application document 7.8.2) which shows the locations of the proposed planting. The planting proposed is based on areas and what is required to offset the effect. It is also tailored to the landscape character rather than commitments to a specific ratio of tree planting.
Woodland planting needs to use locally sourced plant material, so natural regeneration should be the favoured option for creation of new woodland, particularly for areas which buffer existing woodland.	RSPB	SC	Noted. Collection of local seeds is included within the LEMP (application document 7.8).

7. Biodiversity

7.1 Introduction

7.1.1 This chapter covers the responses received in relation to biodiversity including: discussions on assessment of designated sites and habitats; consideration of protected and notable species; field survey; and application of the mitigation hierarchy.

7.2 Thematic and Other Meetings

7.2.1 Meetings have been held with the Environment Agency and Natural England to discuss impacts on aquatic and terrestrial habitats. There have also been discussions with NE regarding the European Protected Species (EPS) licences, the Habitats Regulations Assessment (HRA) and the impacts of the project on SSSI including Hintlesham Woods.

7.2.2 National Grid has set up thematic meetings for biodiversity to seek consistent agreement between the relevant consultees, these meetings included representatives from the relevant planning authorities, RSPB, the Wildlife Trusts and the Woodland Trust. These meetings have included consultees expressing that the project should deliver at least 10% environmental net gain and suggestions of locations and funding streams where this could be provided. It has also included a number of discussions around Hintlesham Woods SSSI, including the potential impacts associated with Hintlesham Option 1 and Option 2 (see ES Chapter 3: Alternatives Considered (**application document 6.2.3**) for more details), the baseline surveys required to understand the potential impacts and the results of these surveys as they have become available.

7.3 General Themes from Consultation Stages

7.3.1 Table 7.1 provides a summary of the feedback responses received in relation to biodiversity and how National Grid has had regard to these. This table should be read alongside ES Chapter 7: Biodiversity (**application document 6.2.7**) and its associated appendices which describes the baseline environment, survey and assessment methodology, results of desk study and site surveys and presentation of the impact assessment for biodiversity.

Table 7.1 – Feedback on Biodiversity

Comment	Consultee	Stage	Project Response
General			
The EIA should set out the potential impact of the proposal upon features of nature conservation interest (including designated sites, on protected species and on habitats and other species of principal importance). Guidelines for Ecological Impact Assessment have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.	NE, ECC	SR	Features of nature conservation interest are detailed in the biodiversity baseline which is presented in ES Chapter 7: Biodiversity (application document 6.2.7) and supporting appendices. The CIEEM guidelines for impact assessment have been referenced and used.
The EIA needs to consider disturbance caused by access to the construction site and associated features including noise, light, dust, air quality, and similar environmental factors. All of these features should be assessed in terms of effects on potential receptor species and habitats and ecological advice should influence the designs.	SCC, NE	SR/SC	The pathways to potential effects (including noise, light, dust and air quality) and subsequent impacts on biodiversity features have been identified, and where necessary, taken through the assessment process. Detail on where potential impacts have been scoped out of assessment are provided in ES Appendix 5.1: Scope of the Assessment (application document 6.3.5.1) with further specific detail provided in Table 7.1 of ES Chapter 7: Biodiversity (application document 6.2.7).
In addition to the ES, it will be necessary to also provide sufficient information on non-significant impacts to protected and Priority species and habitats i.e. those scoped out of the ES, either in a non-EIA chapter or separate documentation, and appropriate mitigation and compensation measures provided. This is necessary for all the LPA and Secretary of State (SoS) to demonstrate their Section 40 (s40) biodiversity duty.	BDC, BMSDC, ECC, SCC	SR/SC/TC	As required by the EIA Regulations 2017, the ES describes the likely significant effects of the project on the environment, including biodiversity. In addition, National Grid would be applying for EPS licences where applicable and draft Licences are included within the application for development consent (application documents 6.3.7.7 to 6.3.7.9). There is no requirement for National Grid to present non-significant effects within the application (and indeed the Scoping Opinion made no reference to the provision of information of this nature).

Comment	Consultee	Stage	Project Response
NE has continued to discuss protected species licencing with National Grid. National Grid is intending to submit draft EPS licences to NE for comment. The intention being that if acceptable, NE can provide a Letter of No Impediment (LONI) which can be submitted with the application for development consent. The draft EPS licences have not been received at the current time.	NE	TC	An initial version of draft EPS licences were submitted to NE in December 2022. Natural England has provided responses on these including provision of the Letter of No Impediment (with caveats) for bats, which is included in the Bat Draft Licence (application document 6.3.7.7.1).
The council has no additional ecological comments to make to this targeted consultation and consider that there are no additional significant effects on ecological features within Suffolk arising from the details of the targeted consultation.	BMSDC	TC	Noted.
The councils consider that there is the potential for short-term significant effects on ecological features particularly hedgerows. It is noted that the temporary construction haul road off the A131 lies within arable fields and generally existing gaps in hedgerows have been used to cross field boundaries.	BDC, ECC, SCC	TC	A hedgerow survey is presented in the biodiversity baseline (ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1)) and an assessment of Important Hedgerows is provided in ES Appendix 7.5: Important Hedgerows Assessment (application document 6.3.7.5). Where hedgerows are crossed by the temporary access route, existing gaps in hedgerows would be used where practicable. The hedgerow would be coppiced to ground level and root protection matting would be used in accordance with good practice measure B14 in the CoCP (application document 7.5.1).
The Scoping Report identifies no likely significant effects to designated sites during the operational phase and proposes scoping this out of the ES. However, it is advised that due to the ongoing requirement from repairs and maintenance, which could potentially impact sites such as Hintlesham Woods SSSI, as well as potential decommissioning impacts, operational phase impacts to statutory designated sites should be scoped in.	NE	SR / SC	Operational impacts have been scoped into the biodiversity assessment presented in ES Chapter 7: Biodiversity (application document 6.2.7).

Comment	Consultee	Stage	Project Response
<p>There appear to be no plans to decommission the majority of the route, and the swathe in Hintlesham Woods would likely be the same size as during construction and operation. It is assumed that this would mean that the expected impacts are consistent with those currently assessed.</p>	NE	SC	<p>The Order Limits within Hintlesham Woods are 45m wide, to generally limit construction working to the existing maintained swathe. Operational effects associated with this part of the overhead line are anticipated to be the same as per the existing maintenance regime through the woodland. This would comprise managing tree canopies to maintain safety clearances around the conductors.</p>
<p>From the information presented it appears a reasonable assumption that the Stour and Orwell Estuaries SPA and Ramsar is not functionally linked to the project study area. However, this will need to be further considered as the desk study and ecological surveys progress.</p>	NE	SR	<p>Noted. The draft HRA Report was submitted to NE for comment and their comments have been addressed in the updated version presented within the HRA Report (application document 5.3) submitted with the application.</p>
<p>The HRA identifies good practice measures (in the CoCP and CEMP) may be required to mitigate a 'likely significant effect' (LSE) on the Stour and Orwell Estuaries SPA and Ramsar site, in order to ensure that the project will not result in an adverse effect on the integrity of these European sites. As such, the HRA should proceed to the Appropriate Assessment stage. Alternatively, National Grid could further assess the 'likely significant effect' without mitigation to determine whether proceeding to the Appropriate Assessment stage is required. NE consider that should suitable measures be secured at the Appropriate Assessment stage through both the CoCP and CEMP, that the project would be unlikely to result in adverse effects on the integrity of any of the sites in question.</p>	NE	SC	<p>National Grid noted NE's response on the draft HRA Report and updated it accordingly to exclude the good practice measures at Stage 1 of the assessment. This meant that Stage 2 information has been included in the HRA Report presented at application (application document 5.3). The HRA Report concludes that with the application of good practice measures secured through the CEMP and CoCP (application documents 7.5 and 7.5.1 respectively), that the project would be unlikely to result in adverse effects on the integrity of any Natura 2000 sites.</p>

Comment	Consultee	Stage	Project Response
The plans should show the location of non-statutory sites e.g. Local Wildlife Sites (LoWS) and Special Roadside Verges in Essex and County Wildlife Sites (CWS) and Roadside Nature Reserves RNR in Suffolk. The inclusion of non-statutory sites would show a greater importance of some areas for wildlife, such as the SVPA. Tiger Hill Meadow CWS should read Tiger Hill <i>Long</i> Meadow CWS which is part of Tiger Hill LNR. The acronym used in Essex is LoWS instead of LWS. Amend all LWS references to LoWS.	BDC, ECC	SR/SC	The non-statutory sites have been added to ES Figure 7.1.2 (application document 6.4). The ES references to these sites and the references to the LoWS acronyms have been amended.
The PEI Report states that scarce chaser dragonfly is restricted to six locations in the UK. This is extremely out of date as this species has expanded its range in England, albeit still being rather localised and it is questioned whether the data used in the reports has been properly updated since the previous work carried out during 2009-2013.	RSPB	SC	The statement was checked and still reported online at the time of publication of the PEI Report. All desk study information has been updated for the ES (see ES Chapter 7: Biodiversity (application document 6.2.7)).
National Grid should undertake the fullest possible searches for information, including contacting local records centres, the local wildlife trusts, local geoconservation group or other recording society.	SCC, NE	SR	Data from records centres have been used to support data gathered during site surveys. Further details of the records used can be found in ES Chapter 7: Biodiversity (application document 6.2.7).
The LBAP for Suffolk and Essex have been archived so this reference should be removed. Update Para 3.6.3	ECC	SR	The reference has been removed from ES Chapter 7: Biodiversity (application document 6.2.7) and supporting appendices.
NE would like to make clear that biodiversity receptors which could experience a LSE as a result of this project should not be identified by arbitrary distances. Instead, LSE (and therefore scope of the ES) should be identified by the consideration of any potential impact pathways, which can occur over larger distances than 2km. Impact Risk Zones (IRZ) provide a useful starting point for identifying potential impact pathways on SSSI, however, IRZs are only indicative and other impact pathways may exist.	NE	SR	Study area buffers are a useful starting point from which to gather baseline data records and when beginning an assessment. However, following on from this impact pathways have been identified and are presented in the ES Chapter 7: Biodiversity (application document 6.2.7). Therefore, the assessment has not been limited to the use of arbitrary distances. An example would be Little Blakenham Pit SSSI which is located beyond the 2km initial study area but where IRZ overlap with part of the project.

Comment	Consultee	Stage	Project Response
<p>Notwithstanding the concerns and issues raised previously, the council has no additional ecological comments to make to this targeted consultation and consider that there are no additional significant effects on ecological features within Suffolk arising from the details of the targeted consultation.</p>	BMSDC	TC	Noted.
Surveys			
<p>Up to date surveys should be undertaken to inform the EIA. These must meet the appropriate guidelines for best practice (e.g. CIEEM website), should be carried out at a suitable time of year and be carried out by suitably qualified and where necessary, licensed consultants.</p>	ECC, NE, SCC	SR	<p>A range of habitat and species field survey has been undertaken at survey areas defined by the potential impacts (see ES Chapter 7: Biodiversity (application document 6.2.7) for an overview of field survey reporting). The field survey methodology has been shared with Natural England and the relevant planning authorities through the Scoping Report and PEI Report and through thematic meetings held on the project.</p>
<p>Wherever National Grid wishes to rely on old data and surveys, they must, in each and every case, give a full rationale and explanation to satisfy the requirements of the CIEEM Guidelines on the validity of reports.</p>	ECC, SCC	SR	<p>National Grid has undertaken a suite of up-to-date surveys on the project, as described in ES Appendices 7.1 to 7.9 (application documents 6.3.7.1 to 6.3.7.9). In some cases, these use old data to evidence how much the baseline has evolved over time. This is explained where this has been used.</p>
<p>Further surveying is being carried out across the watercourses to determine the extent of water vole and otter populations, however the PEI Report only seems to consider the presence of riparian mammals in the main river when presence on ditches must be considered as well.</p>	SWT	SC	<p>An otter and water vole survey was undertaken and is reported in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2). This has included and assessment of potential of the ditch network as well as main rivers.</p>

Comment	Consultee	Stage	Project Response
The PEI Report states that only incidental recording of birds was carried out in 2021. Previous surveys (carried out in 2009-2013) will be out of date for this purpose so should be repeated to ensure that potential impacts are properly identified.	RSPB	SC	Breeding bird surveys were undertaken where the potential for significant effects was identified (i.e. at Hintlesham Woods SSSI) and are reported in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2). A habitat assessment using UKHab survey data, incidental bird records (2021-2022) and desk study is also presented in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2) covering the Order Limits.
Ecological surveys are being undertaken at Hintlesham Woods SSSI (including the existing swathe) to help inform the designs and construction method at this location. This should include the mapping of Ancient Woodland within the SSSI, particularly under the existing overhead line through the woodland and surveys to identify any important habitats present.	BMSDC, NE, SCC	SR/SC	Surveys have been undertaken of the Order Limits through Hintlesham Woods. These have included an Arboricultural Impact Assessment (AIA) (application document 5.10) and a UKHab and National Vegetation Classification survey with the results presented in ES Appendix 7.4: Ancient Woodland and Potential Ancient Woodland Report (application document 6.3.7.4).
All species survey results should be sent to the Suffolk Biological Information Service (SBIS).	SCC	TC	All ecological surveys will be submitted to the relevant local records centre at the end of the current phase of work.
The council would like to see the results of an ecological walkover survey of the temporary construction haul road off the A131 and the new underground cable alignment. This should include farmland bird species such as Yellowhammer, Bullfinch and Skylark which could potentially be impacted by the habitat loss and severance.	BDC, ECC, SCC	TC	Due to seasonal constraints and the timing of the identification of the Order Limits associated with the temporary access route, National Grid will undertake the ecological walkover survey post application and the results will be shared when available. The new underground cable alignment was covered by the previous ecological surveys and the results presented in ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1).

Comment	Consultee	Stage	Project Response
Designated Sites (including Hintlesham Woods) and Non-Designated Sites			
<p>The ES should include a full assessment of the direct and indirect effects of the development on SSSI and the features of special interest within these sites and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects. The assessment should consider changes to the drainage regime or dewatering and over-pumping at pylon foundations, which could result in changes to the water supply to wildlife sites.</p>	NE	SR/SC/TC	<p>ES Chapter 7: Biodiversity (application document 6.2.7) assesses potential direct and indirect effects on SSSI and their interest features. The assessment considers potential changes to water supply during construction and operation.</p>
<p>The PEI Report assigns the value of SSSI as high, along with Ancient Woodland and Priority Habitat lowland fen. NE is concerned that this arbitrary value does not reflect the importance of SSSI to our national biodiversity, by both the Wildlife and Countryside Act 1981 (as amended), the NPPF, NPS or national and local planning policy.</p>	NE	SC	<p>Table 1.1 in ES Appendix 5.4: Assessment Criteria (application document 6.3.5.4) sets out the criteria for valuing biodiversity features. A ‘high’ value feature is defined as having ‘<i>High importance and rarity, national scale, and limited potential for substitution, for example: SSSIs...‘irreplaceable natural habitat’ e.g. ancient and lowland fen....</i>’.</p> <p>This is considered appropriate in the EIA and is comparative to the other topic chapters that value nationally designated sites as high value.</p>

Comment	Consultee	Stage	Project Response
<p>The construction programme of 12-18 months including works undertaken during the nesting bird season (during planned outages), would likely result in considerable disturbance to the breeding bird interest feature of Hintlesham Woods SSSI. It would be advisable that National Grid times works as much as possible after the season concludes in August. National Grid should limit the duration, intensity, peakiness and frequency of noise and visual disturbance within the breeding season as much as possible; limit the number of years works are conducted in close proximity to the SSSI by careful planning, and time vegetation clearance works outside of the breeding bird season. Works should be kept away from Ramsey Wood as much as possible.</p>	NE, RSPB	SC	<p>The proposed construction method and timing at Hintlesham Woods is described in ES Chapter 4: Project Description (application document 6.2.4). This describes the works that need to take place during outages and the works required to the north and west of Ramsey Wood. National Grid has made specific commitments to limit the works in this area to avoid impacts on nesting birds. These are set out in the REAC in Appendix B of the CEMP (application document 7.5.2).</p>
<p>The impacts on the SSSI can be reduced by limiting the work area to within the current swathe, only impacting trees if absolutely required, limiting the amount of vehicles which require access, using trackway and micro-siting this to keep to the least ecologically sensitive areas.</p>	NE	SC	<p>National Grid has made specific commitments to limit the works within the woodland. These include measures to microsite the works to avoid ecological sensitive areas. These measures are set out in the REAC in Appendix B of the CEMP (application document 7.5.2).</p>
<p>The Order Limits and the pylons around the woods (including any future operational requirements), should be positioned outside of the buffer zone to prevent damage, as detailed within our standing advice. 15m is the minimum distance required and a greater distance may be required depending as detailed in our Standing Advice where assessment shows other impacts are likely to extend beyond this distance. For example, the effect of air pollution from development that results in a significant increase in traffic.</p>	NE, WT	SR/SC/TC	<p>National Grid has committed to not undertaking any works within 15m of the SSSI along the north and west of the woodland to avoid the root protection areas. ES Chapter 7: Biodiversity (application document 6.2.7) assesses the likely significant effects on the SSSI, which confirms that 15m is a suitable buffer based on the results of the assessment work. ES Chapter 13: Air Quality (application document 6.2.13) concludes that there would be no significant effects of air pollution from construction traffic on the SSSI.</p>

Comment	Consultee	Stage	Project Response
This development should ensure that suitable buffer zones are provided to all areas of ancient woodland to prevent adverse impacts such as pollution and disturbance and ensure avoidance of root damage. National Grid should look to ensure distances of at least 50m buffers are applied between the works and ancient woodland.	WT	TC	Noted. As the main impacts are likely to result from construction, a 15m buffer has been assumed in general around ancient woodland to protect the trees including the root protection zone. Further details can be found in the LEMP (application document 7.8).
Deer management will likely be required to ensure that the woodland area is able to naturally regenerate.	NE, RSPB	SC	The LEMP (application document 7.8) sets out the need to consider deer management.
The Order Limits extend substantially into Hintlesham Little Wood (SSSI Unit 5), and it is unclear as to why this is necessary. The Order Limits require substantial refining to determine the impact on the SSSI. It is necessary to treat the Limit of Deviation (LoD) with a precautionary principle and assume that the project will have an impact across the Order Limits due to the powers granted within the DCO if granted.	NE	SC	The Order Limits at the statutory consultation included Hintlesham Woods Option 2, which comprised a new swathe through Hintlesham Little Wood. Option 2 has not been taken forward and therefore the Order Limits (which are the same as the LoD at this location) have been reduced and refined at Hintlesham Woods SSSI to the existing maintained swathe. Therefore, the Order Limits now cover a smaller area in Unit 5. ES Chapter 7: Biodiversity (application document 6.2.7) assesses the likely significant effects on the SSSI.
The EIA will need to consider any impacts upon locally designated and non-designated sites of county importance for wildlife or geodiversity, including CWS and LNR. The ES should include an assessment of the likely impacts on the wildlife and geodiversity interests of such sites. Where impacts to these habitats cannot be avoided or mitigated, their loss/damage should feed into net gain calculations.	BDC, DVSVP, NE, SWT	SR	Locally designated sites (for wildlife) are presented in ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1). Where pathways to effect have been identified, the subsequent assessment is presented in ES Chapter 7: Biodiversity (application document 6.2.7). The vegetation loss associated with the Proposed Alignment is included with the net gain calculations presented in the Environmental Gain Report (application document 7.4).
The new underground cable route in Section G will avoid two LoWS (Moat Farm/Burnt House Marsh and Alphamstone Complex), which is a commendable positive change to the routing. It is assumed that the trenchless construction method will cause less damage to vegetation and watercourses, which is also a positive outcome.	NE	TC	Noted. These assumptions are correct.

Comment	Consultee	Stage	Project Response
The Scoping Report states that the value of some Priority habitats is medium because the habitats are of county importance but others are identified as high value. Where this relates to nationally rare species or irreplaceable habitat (e.g. ancient woodland), this should be referenced.	ECC	SR	ES Chapter 7: Biodiversity (application document 6.2.7) explains that where CWS/LoWS comprise ancient woodland, these are valued as high (as an irreplaceable habitat).
Please list Roadside Nature Reserve (RNR) as Suffolk designations and note that RNR 195 and 202 are also designated as CWS.	ECC	SR	RNR are included in the baseline presented in ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1).
The PEI Report states that impacts to CWS will be considered ' <i>where pathways to effects are possible within 1km of the draft Order Limits</i> ', however CWS have largely only been considered if they are located within/immediately adjacent to the draft Order Limits. Further consideration should be given to the potential for impact pathways to occur for CWS due to potential for downstream impacts from the river crossing, such as pollution and sedimentation.	SWT	SC	A baseline of all locally designated sites is provided in ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1). These include sites that lie within 1km of the Order Limits. Where pathways to effect have been identified, including potential water related effects, these are further discussed in ES Chapter 7: Biodiversity (application document 6.2.7).
In some instances, it appears that National Grid has used important biodiversity sites (both statutory and non-statutory) as screening to reduce landscape impacts. However, it is important that potential significant effects on the landscape are not swapped for the degradation of nationally important biodiversity sites and irreplaceable habitats. Furthermore, the environmental impacts of this may also undermine the landscape value of these habitats.	NE	SC	Noted. National Grid has considered woodland areas within the landscape when undertaking the routing and siting studies noted in ES Chapter 3: Alternatives Considered (application document 6.2.3). In some cases, project components have been located near to biodiversity sites and ES Chapter 7: Biodiversity (application document 6.2.7) presents the assessment on these.
The ES should identify the potential impact on biodiversity associated with designated Protected Lanes and the impacts on trees, vegetation and protected hedgerows.	ECC	SR	ES Chapter 8: Historic Environment (application document 6.2.8) presents the general assessment on Protected Lanes. ES Chapter 7: Biodiversity (application document 6.2.7) presents the results of the assessment on important hedgerows.

Comment	Consultee	Stage	Project Response
General Habitats			
The PEI Report identifies that where woodland areas are felled and the roots excavated to allow construction that in some locations these would be left to regenerate naturally and would be routinely maintained by National Grid to keep this as scrub to avoid tree roots interfering with the cables. However, this is not a like-for-like replacement and therefore further compensation planting may be required.	NE	SC	The assessment in ES Chapter 7: Biodiversity (application document 6.2.7) and the outputs of the Biodiversity Metric 3.1 (Natural England, 2022) does not consider this a like-for-like habitat and therefore additional mitigation and compensation has been identified to offset the loss in value.
Notable has a very specific definition which does not match the status of Priority species so the header (other notable species) is considered to be confusing.	ECC, NE	SR / SC	The definition of 'other notable species' is given in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2) where these species are discussed.
The EIA should thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance'.	EA, ECC	SR / SC	Habitats of Principal Importance (HPI) are assessed in ES Chapter 7: Biodiversity (application document 6.2.7), where there is a potential pathway to effect. Further detail of all HPI identified within the study area are discussed in ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1). Where Species of Principal Importance are not treated as individual species, they are discussed in terms of 'other notable species' in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2).

Comment	Consultee	Stage	Project Response
<p>Avoidance of ecological features along the underground cable route should be a priority, in particular for habitats that are considered irreplaceable or of high distinctiveness. The NPPF (2021) states that development resulting in the loss or deterioration of irreplaceable habitats should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists. The NPPF does not give an exhaustive list of irreplaceable habitats and habitats within the Order Limits which fit the NPPF definition should arguably include ancient hedgerows and unimproved species-rich grassland.</p>	<p>EWT, NE, RSPB, SWT, WT</p>	<p>SR/SC/TC</p>	<p>As described in ES Chapter 3: Alternatives Considered (application document 6.2.3), the design of the alignment has been an iterative process which has included the consideration of avoiding ecological features. Further commitments have been made to avoid sensitive ecological features, including irreplaceable habitats, within the Order Limits. These measures are set out in the REAC in Appendix B of the CEMP (application document 7.5.2). ES Chapter 7: Biodiversity (application document 6.2.7) presents the results of the impact assessment on habitats.</p>
<p>Other sensitive biodiversity sites e.g. priority habitats and non-statutory sites, may be affected by the ongoing maintenance of habitats. This may include maintaining swathes through woodlands.</p>	<p>NE</p>	<p>SC</p>	<p>The assessment of the potential impact of operational phase maintenance on biodiversity features is provided in ES Chapter 7: Biodiversity (application document 6.2.7).</p>
<p>The EIA should include an assessment of the potential impact of undergrounding on the hydrology of groundwater dependent terrestrial ecosystems (GWDTE). This should consider potential impacts of the development on springflow, seepages and any changes in local groundwater level. There are a number of springs and seepages in the vicinity of the proposed cable route in the Box Valley.</p>	<p>EA</p>	<p>SR/SC</p>	<p>The potential impact on GWDTE is assessed in ES Chapter 7: Biodiversity (application document 6.2.7), supported by ES Chapter 10: Geology and Hydrogeology (application document 6.2.10).</p>

Comment	Consultee	Stage	Project Response
Ancient Woodland and Ancient and Veteran Trees			
<p>There are numerous blocks of ancient woodland and veteran trees within or adjacent to the draft Order Limits, including Hintlesham Little Wood and Waldegrave Wood. This indicates that the project will likely result in the loss or deterioration of ancient woodland which is contrary to EN-1 which states that <i>'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'</i>.</p>	NE	SC	<p>ES Chapter 7: Biodiversity (application document 6.2.7) presents the results of the assessment on ancient woodland, including Hintlesham Woods and Waldegrave Wood, and veteran trees. The pruning of ancient woodland may be required to maintain safety clearance between the overhead wires and the trees at Waldegrave Wood and Hintlesham Woods, as per the maintenance regime associated with the existing overhead line. The project would not require any permanent loss of ancient woodland or veteran trees.</p>
<p>Both designated Ancient Woodland and potential ancient woodland sites (PoAWS) are given equal protection in the NPPF regardless of the woodland's perceived condition, its size, or features it contains. We recommend that a survey is undertaken to identify any unmapped ancient woodland using historical mapping and surveys detailing their woodland flora and fauna.</p>	WT	TC	<p>Noted. ES Appendix 7.4: Ancient Woodland and Potential Ancient Woodland Report (application document 6.3.7.4) describes the PoAWS identified on the project through a desk study (historical mapping) and site surveys. PoAWS has been treated the same as designated Ancient Woodland in the assessment presented in ES Chapter 7: Biodiversity (application document 6.2.7).</p>
<p>NE maintains the Ancient Woodland Inventory (AWI) which can help identify ancient woodland. National Grid should consider any impacts on ancient woodland and ancient and veteran trees in line with the NPPF. Direct impacts include damaging or destroying all or part of them, compacting soil around the tree roots, polluting the ground around them, changing the water table or drainage and damaging archaeological features or heritage assets. Indirect impacts include breaking up or destroying connections, reducing the amount of adjacent semi-natural habitats, increasing the amount of pollution (dust, air or light), increasing disturbance and changing the landscape character.</p>	NE	SC	<p>Noted. The AWI has been used to identify designated Ancient Woodland. Further details on Ancient Woodland and ancient and veteran trees can be found in ES Appendix 7.4: Ancient Woodland and Potential Ancient Woodland Report (application document 6.3.7.4). The standing advice has been considered when undertaking the assessment.</p>

Comment	Consultee	Stage	Project Response
<p>One of the principle aims of the Commission is the protection of ancient woodland and veteran trees. Having reviewed the relevant documents with particular reference to Hintlesham Wood, which is both an ancient woodland and a SSSI, we are satisfied that the project includes mitigation measures to minimise the negative impact on the ancient woodland. We therefore have no comment to submit.</p>	FC	SC	Noted.
<p>We acknowledge that the proposed GSP substation to be sited between Butler’s Wood and Waldegrave Wood, both of which are ancient woodland and LoWS, is unlikely to impact negatively on these irreplaceable habitats. We support the proposed enhancement woodland planting on arable land adjacent to this, which should increase connectivity for this habitat and species that it supports. We would welcome discussion on design and choice of species, to inform a shared design for new woodland.</p>	ECC	SC	<p>Noted. Appendix C of the LEMP (application document 7.8) provides the proposed species mix.</p>
<p>NE and Forestry Commission have produced guidance on mitigation measures to alleviate impacts to ancient woods and trees within their standing advice. Further measures could include enhancing natural habitats around ancient woodland to improve connectivity and implementing a monitoring plan to ensure measures are effective over the long term. However, the Trust is clear that mitigation through the above measures is not in any way sufficient if loss of ancient woodland is to occur. Where loss would occur, the only mitigation option available is avoidance.</p>	WT	TC	<p>Noted. The standing advice has been used when identifying good practice and mitigation measures for the project. Further details can be found in the LEMP (application document 7.8).</p>

Comment	Consultee	Stage	Project Response
<p>It is important for an arboricultural impact assessment is undertaken early within the design process, to ensure that ancient and veteran trees are identified and accounted for as the route is refined. We ask for clarification as to whether appropriate arboricultural surveys and assessments have been undertaken to date. This needs to happen to ensure that appropriate protection for veteran trees can be incorporated into the scheme design.</p>	WT	TC	<p>An AIA has been undertaken (application document 5.10).</p>
<p>We would also recommend that National Grid reviews the ATI to identify any ancient, veteran and notable trees. The WT consider that not all veteran trees are ancient, but all ancient trees are also veteran trees. We have identified one veteran oak in close proximity to the project, however this is only known from the ATI, which is not comprehensive. Therefore, National Grid must undertake a full arboricultural survey to establish whether any veteran trees would be at risk from the proposals. Many veteran trees occur as individuals outside of ancient woodland, however, some of the woods affected, namely Hintlesham Wood, are of old coppice form and therefore many of the old coppice stools and other trees within are likely to be veteran.</p>	WT	TC	<p>The Ancient Tree Inventory has been consulted. An AIA has been undertaken (application document 5.10).</p>
<p>It is essential that no ancient or veteran trees (including their root zone) are lost or damaged as part of the project proposals. The loss of any ancient or veteran trees can have a significant impact on local wildlife, particularly those which depend on the habitat provided by veteran trees. Any loss of veteran trees can also be highly deleterious where there is a wider population of veteran trees within close proximity, which may harbour rare and important species. Should the project affect ancient or veteran trees, we would consider this a permanent impact.</p>	RSPB, WT	SC/TC	<p>No ancient or veteran trees would be impacted by the project. An AIA has been undertaken (application document 5.10).</p>

Comment	Consultee	Stage	Project Response
<p>While BS5837 2012 states that trees should have a root protection area (RPA) of 12 times the stem diameter (capped at 15m), this guidance recognises that veteran trees need particular care to ensure adequate space is allowed for their long-term retention. The NE and Forestry Commission’s standing advice on RPA for veteran trees states that the buffer zone should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree’s canopy if that area is larger than 15 times the tree’s diameter. This will create a minimum RPA. Larger buffer zones may be required where assessment shows other impacts are likely to extend beyond this distance.</p>	NE, WT	TC	<p>BS5837: 2012 has been referenced when identifying good practice and measures for protecting veteran trees on the project. The list of identified veteran trees and the proposed protection measures are detailed in the LEMP (application document 7.8).</p>
<p>An assessment should be provided to indicate how trees are likely to respond to coppicing (or other pruning) including whether the species present would be able to withstand such management, as oak and ash may not respond well. The assessment should also consider whether the area has been coppiced before and the age of the trees. There are also concerns that ongoing short-rotation coppicing could result in changes to the species composition within this area of woodland as this form of management is likely to favour scrub species. This should also be assessed with reference to the SSSI citation for this site.</p>	RSPB	SC	<p>Where ongoing coppicing would be required to maintain the safety buffer between the overhead lines and the vegetation underneath, a precautionary resultant scrub habitat has been assumed for the assessment in ES Chapter 7: Biodiversity (application document 6.2.7). Aftercare inspections would be undertaken as outlined in the LEMP (application document 7.8) to check that coppiced vegetation is growing back or whether additional measures need to be undertaken so that vegetation re-establishes in these areas.</p>

Comment	Consultee	Stage	Project Response
Hedgerows			
<p>A link to the standing advice on the protection and management of countryside hedgerows is provided. It is noted that the replacement planting of hedgerows above the underground cables will not be like-for-like, as shallow rooting species will be required. Further compensation may therefore be required beyond the baseline, as the diversity of species in hedgerows will likely be reduced across the length of the project.</p>	NE	SC	<p>All hedgerows would be reinstated post works, with the minor exceptions of where permanent new accesses are required. The LEMP includes reinforcement planting of hedgerows within the Order Limits to help compensate the loss, this would include standard trees, as noted in LEMP Appendix C: Planting Schedules (application document 7.8.3).</p>
<p>The councils support measure B07 in the CoCP, to use dead hedging and recommend the use of hazel hurdles is also added - where hedge crossings or removals are necessary to retain connectivity during construction.</p>	BDC, ECC	SR	<p>Noted. Hazel hurdles have been added to B07 in the CoCP (application document 7.5.1).</p>
<p>It is anticipated that there is potential for short term significant effects particularly on hedgerows and wildlife from the temporary construction haul road. Moving this closer / adjacent to existing field boundaries may be a better solution aesthetically / practically, however consideration must be given to the RPA of trees and hedgerows, which would be significantly impacted via compacting from HGV. A sufficient gap would be required to these RPA in order to ensure that the vegetation along the field boundaries are protected.</p>	BDC	TC	<p>The temporary access route has been located close to field boundaries to limit the impact on the landscape and land use. The LEMP (application document 7.8) sets out the requirements to comply with BS5837 2012 in terms of protecting RPA of existing hedgerows and trees.</p>

Comment	Consultee	Stage	Project Response
Aquatic Habitats and Species			
It is premature to conclude that there will be no significant impacts on watercourses, aquatic habitats or species including fish. Mitigation and enhancement measures will be required to address impacts on river hydromorphology as well as habitats and species. For example, If over-pumping is required then the pump intakes will require fine screening to prevent entrainment of eels and other fish species.	EA, RSPB, SWT	SC	Following on from this feedback, an additional measure (B12) has been added to the CoCP (application document 7.5.1) to include screening on pumps. Effects on riverine ecology, including fish populations, are assessed within ES Chapter 7: Biodiversity (application document 6.2.7), which concludes that there would be no significant effects when taking account of embedded and good practice measures.
The proposed open cut crossing of the River Box will need to take account of the presence of brown trout, a Priority Species under Section 41 of the NERC Act.	EA	SC	National Grid has since committed to a trenchless crossing of the River Box (embedded measure EM-E05 in the REAC (application document 7.5.2)) and a bridge for construction traffic. This would avoid impacts on fish within the channel.
The categorisation of European eel populations on the River Box as 'medium' value is questioned, due to their being listed as 'Critically Endangered' globally.	SWT	SC	The valuation of European eel is made in reference to the project location and extent. Although 'critically endangered' globally, in Essex and Suffolk, eel are considered widespread. As a SPI, they are considered of medium value.
The River Box should be crossed by trenchless methods to avoid habitat loss and sedimentation in the channel and impacts on migratory species including eel.	DVSVP, EA, SWT	SC	National Grid has now included a trenchless crossing at the River Box (embedded measure EM-E05 in the REAC (application document 7.5.2)).
Protected Species and Licences			
It is noted that National Grid is intending to submit draft EPS licences to NE for comment, which will be updated based on comments, with the intention that NE can provide a Letter of No Impediment (LONI). This approach aligns with best practice and will reduce uncertainty and risk of delay at the formal application stage.	NE	SR / SC	An initial version of draft EPS licences were submitted to NE in December 2022. Natural England has provided responses on these including provision of the Letter of No Impediment (with caveats) for bats, which is included in the Bat Draft Licence (application document 6.3.7.7.1).

Comment	Consultee	Stage	Project Response
<p>The use of climbing inspection surveys of trees to confirm the presence of likely absence of bat roosts unless trees are not safe to climb is supported. The results of all bat roost surveys will be required to inform the need for any EPS mitigation licences. It is noted that bats may be affected where trees are retained but to be trimmed and may also be disturbed through construction activities (noise, vibration and artificial lightning, particularly from piling activities).</p>	ECC	SR	<p>The results of the bat surveys can be found in ES Appendix 7.7: Bat Survey Report (application document 6.3.7.7) and the Draft Licence can be found in Annex A (application document 6.3.7.7.1).</p>
<p>Surveys should include bat activity surveys. It is noted that existing baseline data will be used to create a Habitat Suitability Model (HSM) based on presence/absence records of bats. It is noted that an absence of records is not a record of absence so the HSM will need scrutiny to deliver an appropriate level of information for route choice and mitigation needed to minimise impacts.</p>	BDC, BMSDC, ECC, SCC	SR	<p>Bat activity surveys have been undertaken at Hintlesham Woods to inform the options appraisal and design. Desk study data, previous and current survey data have fed into the HSM. The 2021/22 UKHab survey shows minimal change in habitat types present to that assessed in 2012 when previous bat activity survey were undertaken. Therefore, updated bat activity survey data for the whole Order Limits is not considered proportional to the value that it would provide on the project.</p>
<p>As the UK Government is no longer bound by the Habitats Directive (and its Annex II species), we recommend that references are amended to Barbastelle being listed as an Appendix II species under both Bonn and Berne conventions instead.</p>	ECC	SR	<p>The conservation of habitats and wildlife species is governed in EU law by the Habitats Directive (Council Directive 92/43) on the conservation of natural habitats and of wild fauna and flora, and the Wild Birds Directive (Directive 2009/147). These Directives are implemented in UK law by secondary legislation, including the Conservation of Habitats and Species Regulations 2017/1012 (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019/579).</p> <p>With effect from 31 December 2020, 'Habitats Directive' is construed with certain amendments which have the effect of transferring responsibilities to UK authorities. Therefore, reference to the Habitats Directive is maintained.</p>

Comment	Consultee	Stage	Project Response
Discussions would be welcomed with regards to the survey methodologies for bats particularly Barbastelle which are known to roost at Hintlesham Woods SSSI.	BMSDC, SCC	SC	National Grid has held a number of meetings with the Councils and NE to discuss the survey methodology and results of the survey work, including of Barbastelle bats at Hintlesham Woods. The results of the surveys can be found in ES Appendix 7.7: Bat Survey Report (application document 6.3.7.7).
National Grid should consider whether increased pylon height might result in increased numbers of bird collisions through flight paths if birds are not used to avoiding higher pylons in the area.	NE	SR	The risk of collision in the operational phase is considered within ES Chapter 7: Biodiversity (application document 6.2.7).
It is recommended that Essex and Suffolk Dormouse Group are consulted to advise on the dormouse survey methodology. Changes to the simple scoring system are now be expected in the revised Dormouse Handbook (pers. comm). Pre-construction dormouse surveys may need to follow alternative methodology to inform the need for EPS licensing. Footprint tunnels are satisfactory alternative to nest tubes. In high canopy woodland with limited understory, both tubes and tunnels should be used in combination to maximise the probability of detection and a minimum of 100 nest tubes.	BDC, BMSDC, ECC, SCC	SR/SC	The dormouse survey methodology was provided to the Essex and Suffolk Dormouse Group for comment, via Suffolk Wildlife Trust, who confirmed they had no comment. An assessment of habitat suitability, nest tube and nut search were undertaken in 2022. The results of the surveys can be found in ES Appendix 7.8: Dormouse Survey Report (application document 6.3.7.8).

Comment	Consultee	Stage	Project Response
The scale and linear nature of the project mean that there is the potential for significant landscape scale impacts to ecological connectivity (i.e. fragmentation), which will in turn impact species which depend on connectivity such as dormouse. The construction programme is up to six years, plus the length of time that woodland, trees and hedgerows will take to re-establish after vegetation removal and coppicing. This timescale is considerably longer than the expected lifespan of a dormouse. Considerable mitigation, compensation and enhancement measures will be required to be in place prior to construction to ensure that hazel dormouse population are not isolated.	RSPB, SWT	SC	A hazel dormouse survey was undertaken in 2022 and the results are reported in Appendix 7.8: Dormouse Survey Report (application document 6.3.7.8). An assessment of potential impacts on dormouse and proposed measures is provided in ES Chapter 7: Biodiversity (application document 6.2.7) and a draft dormouse mitigation licence provided in Annex A of Appendix 7.8: Dormouse Survey Report (application document 6.3.7.8).
The entire construction corridor is important for hazel dormouse. Many suitable habitats have not been surveyed for dormouse in Suffolk since the late 1990s/early 2000s and therefore desk records for these sites are not readily available. These surveys will need repeating in order to fully understand the hazel dormouse population within the Order Limits and it should be assumed at this stage that hazel dormice are present in all suitable habitats with records nearby.	RSPB, SWT	SC	A hazel dormouse survey was undertaken in 2022 and the results are reported in Appendix 7.8: Dormouse Survey Report (application document 6.3.7.8). ES Chapter 7: Biodiversity (application document 6.2.7) assumes that all habitat suitable to support hazel dormouse will have hazel dormouse present.
Clarification is required to understand how impacts to GCN terrestrial habitat will be avoided completely and the need for EPS mitigation licence. Good practice mitigation measures will still be needed during construction to minimise killing and injury of other Priority amphibians and reptiles which may be within the habitat affected. These measures should be included within the CoCP and the impacts should be included within the scope of the ES.	ECC	SR	Natural England confirmed that with the implementation of a District Level Licence (DLL), there was no requirement to include GCN in the impact assessment. The GCN DLL conservation certificate for the project is provided in Annex A of ES Appendix 7.6: Protected and Controlled Species Legislation Compliance Report (application document 6.3.7.6). Good practice measures noted in the CoCP (application document 7.5.1) for other species, such as reptiles, will also help to protect GCN.

Comment	Consultee	Stage	Project Response
Confirmation of the agreement between National Grid and NE to apply to DDL for GCN instead of surveys will be needed to support the DCO. It is acknowledged that GCN are therefore now scoped out from further assessment in the ES.	BDC, BMSDC, ECC, SCC	SC	Noted. ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2) contains details of the approach taken.
The PEI Report suggests that impacts to riparian mammals would be negligible as watercourse crossings can be micro-sited to avoid sensitive features, e.g. otter holts and water vole burrows. As surveys are currently ongoing and due to recent records of water vole and otter along the River Brett (2020, SBIS), there is no certainty at this stage as to whether micro-siting will be able to avoid sensitive features and therefore whether impacts to riparian mammals will be negligible.	SWT	SC	An otter and water vole survey has been completed of watercourses crossing the Order Limits plus 250m up and downstream. Standing water within 250m of the Order Limits have also been surveyed for riparian mammals. The results are presented in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2). An assessment of impact on riparian mammals is provided in ES Chapter 7: Biodiversity (application document 6.2.7).
There have been frequent signs of otter on the River Stour between Sudbury and Bures, and on the Brett downstream of Hadleigh, amongst other local rivers.	EA	SC	Noted. Field survey for otter and water vole has been undertaken and is reported in ES Appendix 7.2: Species Baseline Report (application document 6.3.7.2).
Ponds and other waterbodies should be checked for Australian Swamp Stonecrop (<i>Crassula helmsii</i>) even if dry to avoid spreading the terrestrial form of this invasive plant.	ECC	SR	Invasive and non-native species (INNS) have been recorded as incidentals through the suite of surveys undertaken across the Order Limits. The results are presented in ES Appendix 7.1: Habitats Baseline Report (application document 6.3.7.1) and the management measures are presented in ES Appendix 7.6: Protected and Controlled Species Legislation Compliance Report (application document 6.3.7.6). N.B. <i>Crassula helmsii</i> is also known as New Zealand Pygmyweed.
It is expected that best practice methodology will be used to mitigate for potential impacts on other mobile species, such as Priority amphibians, reptiles and hedgehog, during the construction phase.	ECC	SC	Good practice measures noted in the CoCP (application document 7.5.1) for other species will also benefit other mobile species.

Comment	Consultee	Stage	Project Response
Mitigation and Management			
The planting of native shrub might not be appropriate in all locations. NE considers that it would be most appropriate to plant replacement vegetation which simultaneously reflects the local environment and provides the highest biodiversity value, with consideration that it should also be sympathetic to the local habitat type. Generic shrub planting will not provide the best outcome for biodiversity.	NE	SR	Where planting is proposed, this will be of local provenance and reflect the local environment. Proposed species and planting mixes are provided in LEMP Appendix C: Planting Schedules (application document 7.8.3).
As a first principle, the project should therefore represent no biodiversity net loss. The avoidance-mitigation-compensation hierarchy should also be clearly followed and should have a high degree of certainty for their deliverability in the long term. It is expected that detailed mitigation proposals will be secured through appropriate planning conditions e.g., a CEMP and a LEMP and ecological stakeholders should be fully consulted on such plans.	ECC, NE, SCC	SR/SC/TC	The project has followed the mitigation hierarchy and the project design has been amended to avoid/reduce potential effects on biodiversity. The draft CEMP and LEMP were submitted to the LPA and NE for comment with responses considered when updating these documents to include within the application for development consent (application document 7.5 and 7.8).
The PEI Report notes that only shallow rooted hedgerow species can be replanted over underground cables. More information is required on which species would be used in these areas, as this could considerably reduce the species diversity and therefore value for biodiversity.	SWT	SC	LEMP Appendix C: Planting Schedules (application document 7.8.3) contain the typical species that are proposed on the project.
There is no detail provided on mitigation measures that would be provided to reduce impacts on bats due to hedgerow severance and temporary habitat loss/fragmentation associated with the temporary construction haul route. This could include night-time provision of Heras fencing with camouflage netting. It is essential a mitigation/compensation strategy is produced and that the LPA are consulted when it becomes available.	BDC, BMSDC, ECC, SCC	TC	Commitment B07 in the CoCP (application document 7.5.1) outlines the measures to be taken with regards to reducing impacts on hedgerows.

8. Historic Environment

8.1 Introduction

- 8.1.1 This Chapter covers the responses received in relation to the historic environment including: discussions on the potential impacts on listed buildings and their setting e.g. Hintlesham Hall, proposed scope and extent of archaeological surveys, discussions on the results of the surveys and identification of archaeological mitigation as defined in the Archaeological Framework Strategy (AFS) (**application document 7.9**) and Outline Written Scheme of Investigation (OWSI) (**application document 7.10**).

8.2 Thematic and Other Meetings

- 8.2.1 Meetings have been held with Historic England, which have focused on the potential impacts of the project on listed buildings (in particular the effects on the setting at Hintlesham Hall and whether this would constitute substantial harm). There have also been thematic meetings, which included the archaeological advisers from Suffolk and Essex County Councils. National Grid presented the proposals for archaeological evaluation on the project at a thematic meeting in May 2021 and has continued to discuss the proposed strategy to archaeological evaluation with the archaeological advisers. This has included sharing copies of the AFS (**application document 7.9**) and OWSI (**application document 7.10**) to the archaeological advisers for comment. Their responses were considered when updating these documents to the version submitted with the application for development consent.

8.3 General Themes from Consultation Stages

- 8.3.1 Table 8.1 provides a summary of the feedback responses received in relation to the historic environment and how National Grid has had regard to these. This table should be read alongside ES Chapter 8: Historic Environment (**application document 6.2.8**) which describes the baseline environment, methodology and the results of the impact assessment for historic environment.

Table 8.1 – Feedback on Historic Environment

Comment	Consultee	Stage	Project Response
General			
The ES should contain a thorough assessment of the potential impact of the development on the significance of any heritage assets affected, including any impact caused by development in their setting. This is defined in the Framework as ‘ <i>the surroundings in which a heritage asset is experienced.</i> ’	BDC, BMSDC, ECC, HE, SCC	SR/SC/TC	ES Chapter 8: Historic Environment (application document 6.2.8) and Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2) assess the effect of the project on heritage assets including their setting.
The modified cable route presented at the targeted consultation will affect different heritage assets than those identified in the PEI Report, however the affect will be relatively similar. Whilst the assets affected may have changed, the overall impact on the significance of the designated heritage assets is likely to be no higher than the previously submitted proposals.	BDC, BMSDC, ECC, SCC	TC	ES Chapter 8: Historic Environment (application document 6.2.8) and Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2) assess the effect of the project on the new alignment.
Section drawings, wire diagrams and techniques such as photomontages would help with understanding the impacts of the project and it is expected that these would be provided for specific heritage assets as required. The assessment of setting should also cross-reference with agreed viewpoints within the LVIA. Views and the impact of the increased height of pylons should be explored, perhaps through comparative images.	BDC, BMSDC, ECC, HE, SCC	SR/SC/TC	ES Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2) cross-references the relevant viewpoints and photomontages where applicable. This includes a heritage specific photomontage at Hintlesham Hall.
The assessment should take account of the potential impact which associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area.	HE	SR	ES Chapter 8: Historic Environment (application document 6.2.8) and Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2) assess the impact of activities on heritage assets. This includes consideration of the information that assets give to the understanding of the historic environment, for example how geoenvironmental remains can inform climate and environmental knowledge.

Comment	Consultee	Stage	Project Response
There should be an integrated approach to the historic environment, with the archaeology and historic buildings being considered within the historic landscape, not as separate entities.	BDC, ECC, SCC, SpPC	SR	Whilst acknowledging that the historic environment is a combination of all the elements given, for assessment purposes looking at archaeology, built heritage and historic landscapes in turn provides a pragmatic approach and structures the assessment, to demonstrate that different aspects and assets are included.
<p>The assessment should adhere to the staged approach to decision-making in applications affecting heritage assets, described in the relevant guidance:</p> <ul style="list-style-type: none"> • Statements of Heritage Significance: Analysing Significance in Heritage Assets (Advice Note 12) (Historic England); and • Setting of Heritage Assets Planning Note 3 (Historic England). <p>The assessment should be carried out in accordance with established policy and guidance, including the NPPF. These guidance documents set out the methods for considering the impact of development on setting.</p>	BDC, ECC, HE	SR / SC	The guidance documents have been referenced when developing the approach to assessing heritage assets presented in ES Chapter 8: Historic Environment (application document 6.2.8). The methodology and study area are also described within this chapter.
A desk-based study of the study area has informed the Scoping Report and the information sources are appropriate. However, the non-designated heritage assets are not shown on the figure within the Scoping Report, although they are noted in section 8.4.8 of the report.	BDC, ECC	SR	The non-designated assets have been added to the figures supporting ES Chapter 8: Historic Environment (application document 6.4).
Given the nature of the structures associated with the project and the surrounding landscape character, this development has the potential to be visible across a large area and could, as a result, affect the significance of heritage assets at some distance from this site itself. Historic England would therefore expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and for the assets to be properly assessed.	HE	SR	The study area for setting has been based on the ZTV and was then verified through site visits to heritage assets. In addition, the viewpoints identified in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4), the photomontages (application document 5.8) and aerial imagery were also used to inform the extent of the study area. The study area for the assessment is described in ES Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2).

Comment	Consultee	Stage	Project Response
<p>It is recommended that the study area for non-designated heritage assets is increased from 250m to a minimum of 500m. The normal width considered is 1km. The study area should be based on the where the ZTV indicates there could be an impact or where the scale (height) of an asset or potential for long ranging vistas contribute to its significance.</p>	<p>BDC, ECC, SCC</p>	<p>SR</p>	<p>There is no 'normal width' for deciding EIA study areas. These are defined based on the project characteristics and the potential pathways to effect. The ES focuses on the likelihood of significant effects, which are those likely to be considered material to the decision. On this basis a study area of 250m from the Order Limits is deemed sufficient for non-designated (typically low value) assets, as there would be no physical disturbance outside of the Order Limits and these types of asset typically have a localised setting context (see ES Chapter 8: Historic Environment (application document 6.2.8) for further details).</p>
<p>Confirmation needs to be provided regarding the use of the term '<i>non-designated heritage asset</i>' which largely implies archaeological sites, however this differs from the NPPF. Clarification must also be provided regarding how the 'Impact Magnitude' relates to the NPPF in the ES.</p>	<p>BDC, ECC</p>	<p>SR</p>	<p>ES Chapter 8: Historic Environment (application document 6.2.8) defines non-designated heritage assets as those which do not have a formal statutory or non-statutory designation. The criteria for assigning impact magnitude is drawn from Table 3.4N of LA 104 (Highways England <i>et al.</i>, 2020b) and is then used along with an assets sensitivity/value to determine likely significant effects.</p>
<p>To be consistent with NPPF terminology an assessment of any 'harm' to the significance of the heritage asset should be recorded as either 'substantial' or 'less than substantial'.</p>	<p>DVSVP</p>	<p>SR</p>	<p>ES Chapter 8: Historic Environment (application document 6.2.8) uses impact assessment terminology to describe the likely significant effects of the project on the environment, in accordance with the EIA Regulations 2017. This also provides consistency of language across the ES as a whole.</p> <p>In addition, the chapter also presents the results of the assessment on whether there is likely to be harm (either substantial or less than substantial) in accordance with the NPPF terminology in relation to the setting of designated assets.</p>

Comment	Consultee	Stage	Project Response
Whilst standardised EIA matrices are useful tools, we consider the analysis of setting (and the impact upon it) as a matter of qualitative and expert judgement which cannot be achieved solely by use of systematic matrices or scoring systems. HE therefore recommends that, if used, these matrices should be seen primarily as material supporting a clearly expressed and non-technical narrative argument within the cultural heritage chapter. The EIA should use the ideas of benefit, harm and loss (as set out in the NPPF) to set out 'what matters and why' in terms of the heritage assets' significance and setting, together with the effects (including both positive and negative effects) of the development upon them.	HE	SR	Standard matrices are widely used within EIA and are considered to be a transparent way of determining and presenting likely significant effects. However, as noted in ES Chapter 5: EIA Approach and Method (application document 6.2.5), professional judgement has been used when assigning significance. Where this applies, explanatory text has been provided to explain how professional judgement has determined the significance assigned.
There is concern that the interpretation of the majority of the non-designated assets is defined as negligible to low. Further assessment should be considered on those assets directly impacted by the development, where mitigation of assets identified as of local and regional interest would likely be appropriate.	BMSDC, ECC, SCC	SC	The value of assets in ES Chapter 8: Historic Environment (application document 6.2.8) is based on DMRB LA 106 (Highways England, 2020c) and LA 104 (Highways England, 2020b). The majority of non-designated assets are defined as low because they are of local importance. Where an asset is considered to be of regional importance these have been identified as medium value in accordance with the description provided in ES Appendix 5.4: Assessment Criteria (application document 6.3.5.4).
Heights of buildings or buildings in wide reaching landscape settings with long vistas may have to be considered differently to those in a townscape setting. In the former case, the wider setting would mean that long views would factor into the multitude of determining factors requiring assessment.	ECC	SR	Noted. This has been taken into account in the assessment presented in ES Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2), for example in terms of listed buildings in townscape settings like Hadleigh.
The anticipated emphasis on heritage assets 2km away from the scoping boundary should be considered on a seasonal and diurnal basis, as changes in tree cover, for example can greatly affect the setting of a heritage asset.	ECC	SR	The assessment assumes a worst case of winter views, as supported by the winter photomontages (application document 5.8) and the wirelines in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4).

Comment	Consultee	Stage	Project Response
The present baseline data identified will require updating in some areas. This includes the aerial photographic report being assessed against new aerial coverage from Google earth in the last decade. The use of Lidar has become normal practice, and this should be incorporated with the aerial survey update.	BDC, ECC, SCC	SR	The aerial photographic survey was updated in 2021 based on the broad Scoping Boundary, which covers the majority of the Order Limits, as shown on ES Figure 8.5 (application document 6.4). The updated survey included the addition of Lidar to support the survey conclusions.
The results of the geophysical survey work (magnetometry survey) has identified a number of anomalies, particularly in the areas of river terrace gravels. However, it has been less successful on the areas of alluvium. It is therefore possible that the survey has not identified the archaeological remains that may be present in these areas. Alternative geophysical survey techniques, such as resistivity or electromagnetism should be considered as part of the ongoing evaluation work.	HE	SR	The geophysical survey is only one of a suite of measures that have been used to understand archaeology on the project. The combination of the aerial and lidar survey and trial trenching is considered to give a sufficient coverage to produce a mitigation strategy for the project. Changes to the design has also increased the use of trenchless crossing options and therefore reduced the amount of potential disturbance to buried archaeological remains.
There is concern that the ES will be too reliant on geophysical survey. Trial trenching in the underground section has been recommended to support the ES. Without a considerable proportion of the trial trenching completed for the ES there will not be a full understanding of the significance of the archaeological deposits present or the impact of the scheme and thus will not be able to prepare a detailed mitigation strategy.	BDC, BMSDC, ECC, SCC	SR/SC/TC	A programme of trial trenching has been undertaken to support the ES. This has concentrated on the underground cable sections where there would be a greater area of ground disturbance. Further details on the approach to trial trenching and other methods can be found in the AFS (application document 7.9) and the OWSI (application document 7.10).
An up-to-date field survey will need to be undertaken to ensure that no non-designated heritage assets have been excluded. There is an awareness that additional assets may be recorded as field investigations take place, however it is unclear if this refers to areas of archaeological interest only.	BDC, BMSDC, ECC, SCC	SR/SC	Archaeological walkover surveys were undertaken by a qualified archaeologist in June 2021 and June 2022 to identify additional assets that may not be recorded. No additional non-designated assets were identified through these surveys.

Comment	Consultee	Stage	Project Response
The temporary construction haul road lies within an area previously unassessed as part of the present project and would require appropriate archaeological assessment in advance of the submission to identify its impact on archaeological deposits. The changes to the route (and temporary haul route) would require a programme of trial trenching and assessment.	BDC, ECC	TC	Due to the narrow width of the temporary access route, geophysics is not considered to be an appropriate method for understanding archaeology in this area. Instead, a watching brief is considered to be the most appropriate form, as set out within the OWSI (application document 7.10). Geophysical surveys are planned for the new alignment to the north of Stour Valley West CSE compound.
As the proposed change to the route of underground cables (Section G) between Moat Lane and the Stour Valley West CSE compound uses a trenchless construction method, there will be archaeological implications at each end of the stretch which will need to be assessed, although the area between will be preserved which is beneficial.	BDC, ECC	TC	Noted. The OWSI (application document 7.10) sets out the proposed mitigation strategy for the potential pits at either end of the trenchless crossing.
Archaeological Remains			
The archaeological impacts need to be fully assessed within the ES by adequate prior evaluation. The assessment should consider where appropriate, the likelihood of alterations to drainage patterns and water levels that might lead to in situ decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings/monuments otherwise not directly impacted.	HE, BDC, SCC	SR /SC	ES Chapter 8: Historic Environment (application document 6.2.8) presents the environmental assessment on archaeology. This includes consideration of changes to groundwater and how this could affect archaeology, drawing on the conclusions of ES Chapter 10: Geology and Hydrogeology (application document 6.2.10).
The CoCP needs to link to the AFS and the proposed WSI's from the archaeological contractors working on site. It is recommended that separate sections should be added into the CoCP to deal with this.	BDC, BMSDC, ECC, SCC	SC	Historic Environment commitments H01 and H04 within the CoCP (application document 7.5.1) reference the OWSI (application document 7.10), which complements the AFS (application document 7.9). The AFS and OWSI detail the approach that would be taken regarding archaeology and it is not necessary to duplicate measures in the CoCP too.

Comment	Consultee	Stage	Project Response
The most significant impact to archaeological deposits is likely to be the undergrounding sections and also the pylon bases and GSP substation. The project will have the impact of damaging/destroying previously unknown multi-period archaeological sites and deposits. As such a full assessment of the historic environment impact needs to be presented with the ES including how they how they are to be preserved or recorded.	BDC, BMSDC, ECC, SCC	SR/SC	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) present the results of the impact assessment on the historic environment. The AFS (application document 7.9) and the OWSI (application document 7.10) set out the proposed mitigation strategy for archaeological remains.
Open area excavation is likely to be the most frequent method used to preserve archaeological deposits by record if the project is appropriately assessed. Strip Map and Sample should be used on those areas with widely dispersed features where no defined concentrations of features have been identified. If the evaluation is completed to an appropriate standard the excavation and SMS should be sufficient to mitigate those deposits that are threatened by the project.	BMSDC, ECC, SCC	SC	Noted. These comments have been considered as part of the development of the OWSI (application document 7.10).
If the evaluation has been completed to a good enough standard it should facilitate the majority of areas with no archaeology being signed off prior to construction and allow the creation of a mitigation strategy which will minimise any archaeological work during the construction programme.	BDC, BMSDC, ECC, SCC	SC	Noted. The OWSI (application document 7.10) outlines the proposed mitigation strategy.
Each of the archaeological areas should be signed off by the Local Authority archaeologist prior to construction commencing.	BDC, BMSDC, ECC, SCC	SC	This has been accounted for in the OWSI (application document 7.10) and would be included in the Detailed Written Scheme of Investigations (DWSI) for specific parts of the project where archaeological mitigation would be applied.
Good practice measure HO2 should be off-set by appropriate archaeological evaluation undertaken in advance of construction.	BDC, BMSDC, ECC, SCC	SC	The proposed mitigation approach is set out in the OWSI (application document 7.10).

Comment	Consultee	Stage	Project Response
The good practice measures should extend to known archaeological sites being protected by appropriate fencing, matting, reduction of corridor width etc	BDC, BMSDC, ECC, SCC	SC	The AFS and OWSI (application documents 7.9 and 7.10) detail the approach that would be taken regarding archaeology and it is not necessary to duplicate these measures in the CoCP (application document 7.5.1).
The Eastern region has the East Anglian Archaeology monograph series should be identified as a potential route for publication. There should also be a clear section on the potential for outreach as there will be significant interest in the results.	BMSDC, ECC, SCC	SC	The OWSI (application document 7.10) outlines the proposals that would be considered for publication (including monograph publication) and outreach methods. Further details would be included in the future DWSI.
Geoarchaeological and palaeoenvironmental assessment will need to be undertaken for the whole route (and particularly the river valleys where there will be a high potential of waterlogged deposits being present and as such the deposits are likely to be of medium to high significance). This should be undertaken by a suitably qualified specialist in this area, and they should review the borehole logs to determine the depth of deposits. Deposit models across the two valley floors will be important to define potential locations for waterlogged deposits as well as higher ground suitable for settlement. There should be consideration for targeted boreholes by specialists with the potential for C14 dates to support any future mitigation strategies.	BDC, BMSDC, ECC, SCC	SR/SC/TC	ES Chapter 8: Historic Environment (application document 6.2.8) includes the assessment on geoarchaeological and palaeoenvironmental deposits. The OWSI (application document 7.10) includes a commitment to undertake further mitigation measures at the valley crossings in relation to these deposits.
Historic Buildings			
There are a number of designated heritage assets within the vicinity of the project which could be affected by the development and need to be assessed to understand the effects to the assets. This should include potential damage as the result of vibrations, disruption to surrounding land levels and changes to the water level.	BDC, BMSDC, ECC, HE, SCC	SR/SC	ES Chapter 8: Historic Environment (application document 6.2.8) considers the impacts on designated heritage assets and includes consideration that vibrations or changes to groundwater levels would have on these assets.

Comment	Consultee	Stage	Project Response
The ES should assess the potential impacts on all listed buildings (including their NHLE number) and non-designated features of historic, architectural, archaeological or artistic interest. This should include the possible impact of the project upon their significance caused by harm to their setting and also indirect effects upon these buildings during the works, caused by vibrations, noise or other construction related activities.	BDC, BMSDC, ECC, HE, SCC	SR/SC/TC	A full assessment of the effects on the setting on built heritage assets is included in ES Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2). This includes a consideration of indirect effects such as vibration and noise.
It is noted that no demolition of existing structures or buildings will occur as part of the project. However, this should be clarified, particularly along the underground cable sections.	BDC, BMSDC, ECC, SCC	SC/TC	National Grid can confirm that no existing historic buildings or structures would be demolished as part of the project.
The maps provided as part of the SC are at an insufficient scale to comprehend how any changes will affect the setting of the listed buildings, nor have sufficient visualisations been produced which highlight how the replacement of existing pylons with larger variants would affect the setting of Listed Buildings. It is expected that these will be provided as part of the further consultation phases.	ECC	SC	The plans accompanying the ES (application document 6.4) are at a more detailed scale. Photomontages (application document 5.8) and the wirelines in ES Appendix 6.4: Viewpoint Assessment (application document 6.3.6.4) have also been provided to support the assessment.
Benton End House in Hadleigh dates from the Tudor period and has significant historical, architectural, artistic and horticultural importance. The house and indeed potentially the entire Benton End project are likely to be negatively affected by the project.	LaPC	SR	Noted. Benton End House is included in the assessment in ES Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2).
Removing more of the existing 400kV overhead line would be beneficial, helping to partially reinstate the historic appearance of the landscape. Relocating Stour Valley West CSE Compound would not affect any built heritage assets. The new alignment through the Stour Valley requires more assessment regarding the impact upon the setting of heritage assets.	BMSDC, SCC	SC	Noted. ES Chapter 8: Historic Environment (application document 6.2.8) assesses the effect of the new alignment through the Stour Valley.

Comment	Consultee	Stage	Project Response
Lamarsh Church has a designation of national importance and makes a telling contribution to the landscape, both from the viewpoint on the Bures/Lamarsh C-road, but also from the ridge footpaths to the west of the church. A row of pylons constructed to the south of the 132kV pylons would plainly wreck the setting of this Grade I building. Why has this building been completely overlooked in the Report?	ALPC	SR	The Scoping Report (application document 6.5) only quoted a selection of listed buildings within the study area. A full assessment of all listed buildings potentially affected, including Lamarsh Church, is included in ES Appendix 8.2: Historic Environment Impact Assessment (application document 6.3.8.2).
Mitigation should be considered where there is a visual impact on the significance of the heritage assets. This could include screening or landscaping. Environmental mitigation and enhancement should consider the setting of listed buildings and should seek to maintain wide views across arable landscapes.	BDC	SC	Noted. A heritage advisor has had an input to the design of the proposed planting proposals set out in LEMP Appendix B: Vegetation Reinstatement Plan (application document 7.8.2).
Consideration of key views from the Hall would aid in the best placement of the new pylons to minimise the visual harm. Landscape mitigation measures to screen the pylons from view, should be considered which should work with elements of the known historic landscape and aim to restore these elements where possible. HE would not support the artificial placement of hedges/hard screening where this would cause harm to the setting of the building.	HE	SR	ES Chapter 8: Historic Environment (application document 6.2.8) assesses the effects to Hintlesham Hall (including from temporary works such as the access routes and bellmouth) and concludes that there are no residual significant effects and therefore no mitigation is proposed.
The most notable impact will be to Hintlesham Hall, a Grade I listed building. A site-specific assessment of the interim alignment was produced prior to the project pause (Heritage Collective LLP, 2012), which concluded that an impact to the setting of Hintlesham Hall would occur, but that the effect would be less than significant. In reference to the NPPF, harm to heritage assets is identified as either 'less than substantial' or 'substantial'. Confirmation should be provided of the conclusions.	ECC	SR	Noted. ES Chapter 8: Historic Environment (application document 6.2.8) considers the impact of the project on Hintlesham Hall and concludes that the harm is considered to be less than substantial.

Comment	Consultee	Stage	Project Response
<p>A thorough heritage assessment of the Hintlesham Hall Estate’s setting is required, with design proposals and mitigation strategies forming part of this report, identifying ways in which the buildings’ setting could be enhanced. All proposals for enhancement should be informed by research into the Hall’s former setting, including evidence of any planned or natural features of its estate that once existed but have been removed or eroded over time.</p>	BMSDC, SCC	SR / SC	<p>National Grid is proposing enhancement measures around the Hall. These seek to balance enhancing the parkland features whilst limiting impacts on the surrounding land use and local farming businesses. Further details can be found in the Environmental Gain Report (application document 7.4).</p>
<p>At this stage, it remains unclear how the landscape around Hintlesham Hall will be affected. There is an opportunity to greatly enhance the listed building's setting, including reinstating part of its former parkland. It is unclear if the environmental area includes provision for such a change, nor how the addition of temporary access roads and a bellmouth within the setting of the hall would affect its significance. It is hoped that National Grid engage with the local authorities regarding this element.</p>	BMSDC, SCC	TC	<p>ES Chapter 8: Historic Environment (application document 6.2.8) assesses the effects to Hintlesham Hall (including from temporary works such as the access routes and bellmouth) and concludes that there are no residual significant effects and therefore no mitigation is proposed.</p> <p>National Grid is proposing enhancement measures around the Hall. These seek to balance enhancing the parkland features whilst limiting impacts on the surrounding land use and local farming businesses. Further details can be found in the Environmental Gain Report (application document 7.4).</p>
<p>The mitigation proposed at Hintlesham Hall is incredibly minor and fails to replicate proposals discussed with the local authorities in 2013, in which much larger mitigation was proposed. The mitigation strategy should be pushed further, for example seeking to reinstate more of the parkland surrounding Hintlesham Hall or potential replanting of the now segmented avenue of trees that once led west from the Hall, to Hintlesham Wood. Grassland habitat opportunities should also be explored, which could help improve and enhance the parkland setting of the House.</p>	BMSDC, SCC	SC/TC	<p>No significant effect has been identified to the Hall and therefore no mitigation is proposed (see ES Chapter 8: Historic Environment (application document 6.2.8) for further details).</p> <p>National Grid is proposing enhancement measures around the Hall. These seek to balance enhancing the parkland features whilst limiting impacts on the surrounding land use and local farming businesses. Further details can be found in the Environmental Gain Report (application document 7.4).</p>

Comment	Consultee	Stage	Project Response
Conservation areas are not graded, the inclusion of conservation areas within both the 'high' and 'medium' criterion may prove problematic. Further description of how conservation areas are differentiated in terms of value would be beneficial. Clarification must also be provided regarding how the 'Impact Magnitude' relates to the NPPF.	BDC, ECC	SR	ES Appendix 5.4: Assessment Criteria (application document 6.3.5.4) sets out the criteria used for assigning value. In terms of conservation areas, the medium value reflects their generally mixed status in terms of broad character and varying degrees of modern infill.
Conservation Areas within the wider assessment area should also be considered based on their current appearance. For example, Pebmarsh Conservation Area was appraised in 2012. An assessment of any development which has occurred since Pebmarsh Conservation Area's boundary was appraised would be beneficial.	BDC, ECC	SR	The conservation areas that could experience effects on setting from the project were visited as part of the site visits to listed buildings. Therefore, the assessment presented in ES Chapter 8: Historic Environment (application document 6.2.8) is based on an understanding of their current appearance.
Historic Landscape			
Due to their age and limited disturbance, ancient woodlands are important historically and culturally and may contain archaeological features. For example, the ditch which bounds the western side of Ramsey wood dates back a thousand years; it was the ancient boundary of St Edmundsbury.	RSPB	SC	Noted. Ancient woodlands are considered as part of the historic landscape assessment in ES Chapter 8: Historic Environment (application document 6.2.8).
Hedgerow assessments should be undertaken as part of the ES to identify those important hedges where directional drilling could be considered to minimise impact.	BDC, ECC, SCC	SR	ES Appendix 7.5: Important Hedgerows Assessment (application document 6.3.7.5) contains the Important Hedgerows Assessment, including hedgerows that have a cultural heritage association. It is not practicable to drill under each important hedgerow due to the number present within the Order Limits and the impacts associated with drilling.

Comment	Consultee	Stage	Project Response
Protected Lanes need to be considered and impacts assessed. This needs to include physical changes to the Protected Lane (e.g. realignment or straightening to allow HGV access), impacts to hedgerows along the Protected Lane and increased traffic flows. The ES should establish if directional drilling is necessary to avoid harming heritage impacts. The impacts of future use (increase in traffic or type of traffic during operation) should also be considered.	BDC, BMSDC, ECC, SCC	SR / SC	The assessment of the project on Protected Lanes is included in ES Chapter 8: Historic Environment (application document 6.2.8). This includes direct effects and indirect effects such as additional traffic. The CoCP (application document 7.5.1) includes commitment H05 to undertake a pre-condition survey and to then reinstate the features associated with Protected Lanes following construction.
The construction of the temporary construction haul road may have the benefit of removing the pressure or damage to Protected Lanes in some areas, although work is still proposed to these important assets. Impact on the Protected Lanes would require a programme of careful restoration on ditches, banks etc which should be defined within the final submission.	BDC, ECC	TC	The assessment of the project on Protected Lanes is included in ES Chapter 8: Historic Environment (application document 6.2.8). The CoCP (application document 7.5.1) includes commitment H05 to undertake a pre-condition survey and to then reinstate the features associated with Protected Lanes following construction.
An ancient drove road exists to the east of the existing route, which should be avoided by the route if at all possible. We understand that ground investigations would inform the final route selection.	NE	TC	The proposed trenchless crossing to the south of Ansell's Grove is anticipated to pass beneath the ancient drove road to avoid impacts on this feature. Ground investigations would be used to inform the final route selection.

9. Water Environment

9.1 Introduction

9.1.1 This chapter covers the responses received in relation to the water environment including discussions on watercourse crossing methodologies and subsequent re-instatement of watercourses, pollution control and management of flood risk and land drainage.

9.2 Thematic and Other Meetings

9.2.1 National Grid has held a number of meetings with the Environment Agency, which have included discussions about the crossings of main rivers and these informed the decision taken to undertake a trenchless crossing of the River Box. The draft Water Framework Directive (WFD) Assessment was shared with the Environment Agency for comment and their feedback considered in the application WFD Assessment (**application document 5.6**).

9.2.2 There have also been Water Thematic Meetings held with the relevant planning authorities in their role as Lead Local Flood Authorities (LLFA) and the Environment Agency. These meetings have included discussions on the methodology for assessing flood risk, the commitments made around flood risk and drainage on the project and the results of the assessment. The draft Flood Risk Assessment (FRA) was shared with the Environment Agency and LLFA for comment and their feedback considered in the application version of the FRA (**application document 5.5**).

9.3 General Themes from Consultation Stages

9.3.1 Table 9.1 provides a summary of the feedback responses received in relation to the water environment and how National Grid has had regard to these. This table should be read alongside ES Chapter 9: Water Environment (**application document 6.2.9**) which describes the baseline environment, methodology and the results of the impact assessment for water environment.

Table 9.1 – Feedback on the Water Environment

Comment	Consultee	Stage	Project Response
General			
An appraisal of the construction effects of the project will be required as although the period of activity may be temporary, the period of construction effects may be non-temporary (e.g. increased surface runoff leading to fine sediment inputs and in-stream landform formation).	EA	SR	Noted. ES Chapter 9: Water Environment (application document 6.2.9) assesses the effects of construction activities on water.
The Scoping Report has missed some water environment features/data sets, the data is public open source information: Drinking Water Protected Areas; Drinking Water Safeguard Zones; and Groundwater Vulnerability Map.	SCC	SR	These layers have been added into the baseline presented in ES Chapter 10: Geology and Hydrogeology (application document 6.2.10).
The EA agrees with the high sensitivity given to WFD waterbodies and medium for others.	EA	SC	Noted.
The River Stour supports abstraction for potable use, so is high sensitivity and the value should be amended accordingly. The Brett and Stour catchments are also important sources of water for public water supply.	EA	SC	Noted. The sensitivity of the River Stour has been amended in response to this comment (see ES Chapter 9: Water Environment (application document 6.2.9)).
When considering baseline conditions (of existing water quality) and the assessment and future monitoring of impacts, these should include assessment of potential impacts on human health e.g. potential effects on surface and groundwater used for drinking water abstraction and exposure to water-based recreation users to pollution.	UK HSA	SR	ES Chapter 9: Water Environment (application document 6.2.9) assesses the effects of the project on water quality. This demonstrates that with the good practice measures within the CEMP and CoCP (application documents 7.5 and 7.5.1 respectively) there would be no effect on surface water quality including health.
The open cut crossings could impact on water quality in the rivers. Therefore, it is suggested that the effects should be classified as significant and not minor.	EA	SC	All underground cable crossings of main rivers would be constructed using trenchless techniques. The magnitude of impact takes into account good practice measures in the CoCP (application document 7.5.1) that reduce effects on water quality before assessing significance.

Comment	Consultee	Stage	Project Response
Temporary Crossings			
Single-span bridges are preferred for all watercourses rather than culverts. Given that some of these crossings will be in place for a number of years there is a risk of significant impact on river hydromorphology and ecology. An explanation as to why temporary bridging is not possible should be provided before considering the culverting option. Where it has been robustly demonstrated that the culverting is both necessary and the only reasonable practicable alternative, the length of any culvert should be restricted to the minimum necessary.	EA, ECC, SCC	SC	Temporary bridges are proposed for crossings of main rivers. Where the project crosses smaller watercourse's temporary culverts are proposed as bridges are not in proportion to the scale of potential effects of the crossings. Culvert lengths would be limited to the minimum necessary to undertake the works and would also be subject to Ordinary Water Consent from the LLFA.
The temporary bridges should be clear span with the abutments set back from the river bank. This will minimise disruption and damage to the river banks and riparian habitats, and allow uninterrupted passage of fauna, including otters, along the river banks. The designs should be submitted as part of the Flood Risk Activity Permit (FRAP) application which would need to include details of appropriate mitigation / enhancement measures. Further details are required about the proposed crossings before agreement can be reached that the project will have minor effects that are not significant.	EA	SR/SC	Noted. The design of the bridges has taken this feedback into account as shown on the Design and Layout Plans Temporary Bridge for Access (application document 2.11.13). National Grid will apply for FRAP as part of the pre-construction consenting works, which will contain further details about the designs and reinstatement measures.
In relation to the temporary bridges, the EA guidance states the minimum soffit of a road bridge should be set at 600mm above the design flood level.	EA	SC	Noted. The design of the bridges has taken this feedback into account as shown on the Design and Layout Plans Temporary Bridge for Access (application document 2.11.13). It has also been added as a good practice measure (W17) into the CoCP (application document 7.5.1).

Comment	Consultee	Stage	Project Response
Further detail is required as to how impacts to the River Brett and riparian mammals will be avoided. The PEI Report seems to make contradictory claims as it states that a bridge would mean no direct in-channel impact on the watercourses whilst also stating that it would involve excavating the banks to install the bridge and that these would be reinstated. A bridge should be considered for the crossing of the River Brett in order to avoid unnecessary impacts to the watercourse and riparian mammals.	SWT	SC	The bridge installation would involve earth works to the land away from the rivers edge to get the correct levels for machinery going over the river. However, there would be no effects on the channel and the in-channel habitats. A generic design is shown on the Design and Layout Plans Temporary Bridge for Access (application document 2.11.13). A bridge is included at the River Brett, see commitment W17 in the CoCP (application document 7.5.1).
National Grid will need to provide appropriate assessments to demonstrate that culverting will not increase flood risk elsewhere or reduce capacity and will not result in an unacceptable impact on channel stability.	EA	SC	Good practice measure W03 and W04 in the CoCP (application document 7.5) commit to designing culverts in a way that does not increase flood risk. A generic design is shown on the Design and Layout Plans Temporary Culvert for Access (application document 2.11.14).
The Councils have been involved in the water thematic meetings, where the requirements for watercourse consent have been discussed. The Councils would like further information on the watercourses affected and a full list of crossing points for any temporary or permanent crossings.	ECC, SCC	SC	The proposed crossing points associated with the Proposed Alignment are shown on Figure 2: Watercourse Crossing Plans in the WFD Assessment (application document 5.6).
Under Section 23 of the Land Drainage act (1991) any proposed structure that impacts on the cross-sectional area of a watercourse will require Ordinary Watercourse consent to be sought from the LLFA. Land Drainage Act consent will be required for cables laid through a watercourse and for any culverts (temporary or permanent) in the ordinary watercourse.	ECC, SCC	SC/TC	Crossings (whether temporary or permanent) affecting ordinary watercourses would require Ordinary Water Consent from the LLFA prior to construction.
The project lies partially within the Internal Drainage District of the East Suffolk Internal Drainage Board (IDB) and therefore the Board's Byelaws apply. Any works proposed within 9m of an Adopted Watercourse will normally require consent. Consent may be required from the Board under the Land Drainage Act 1991 (and Byelaw 4) if the project requires works to alter a watercourse.	ESIDB	SR	The only works required within the Internal Drainage District is in relation to the removal of the 132kV overhead line. Therefore, there is very limited effects on the watercourses within the district. However, National Grid is working with the IDB to understand if consent is required for the work.

Comment	Consultee	Stage	Project Response
Good Practice and Mitigation Measures			
The project could have large-scale impacts on watercourses across the draft Order Limits, due to bank excavation on the River Brett and open cut crossings of the River Box and ditches. Significant mitigation and enhancement should be provided as part of the project, as well as long-term monitoring of species impacted by the works. For example, eel passage could be improved on the rivers Brett, Box and Stour by improving weirs and the riparian environment could be enhanced through river restoration techniques up and down stream of the draft Order Limits.	SWT	SC	National Grid has made commitments to cross the River Brett, Box and Stour using bridges for the temporary access route crossings. Trenchless crossings are proposed for the River Box and Stour. The remaining watercourses crossed by the project are generally farm drains and ditches with limited ecological value (see ES Appendix 7.3: Aquatic Ecology Baseline Report (application document 6.3.7.3)). ES Chapter 7: Biodiversity (application document 6.2.7) concludes that there would be short term effects on watercourses but that these would be not significant, therefore no mitigation or monitoring is proposed.
Cables should be laid at least 1m below bed depth in an ordinary watercourse.	SCC	SC	This has been added as a commitment (W11) in the CoCP (application document 7.5.1).
Where trenched (open cut) crossings are made to watercourses we would expect significant river corridor enhancements to be carried out to leave the section of river in a better state after the cable laying. This could include appropriate tree and shrub planting, gravel enrichment, other sympathetic geomorphological enhancement and possibly redundant structure removal.	EA	SR	The overhead line sections would pass over watercourses and avoid effects on the channel and habitats e.g. River Brett and Belstead Brook. National Grid has made commitments to trenchless cross the River Stour and Box in the CEMP (application document 7.5). The remaining minor watercourses within the underground cable sections would be opencut. The effects on these are assessed within ES Chapter 9: Water Environment (application document 6.2.9). The LEMP (application document 7.8) includes measures to restore opencut watercourses including reinstatement of the bank profile and bed levels and replacing any channel substrate that was temporarily removed during the works.

Comment	Consultee	Stage	Project Response
The majority of the construction risks are as detailed in the documents provided. The Outline CoCP contains a list of relevant good practice measures relating to the water environment which will be carried out during construction of the project. National Grid has also committed to producing a CEMP. All of the above is supported.	EA	SR / SC	Noted. The draft CEMP including the CoCP were submitted to the EA for comment. Their comments have been considered when developing the final CEMP and CoCP (application documents 7.5 and 7.5.1 respectively).
There is the potential for the project to impact water quality via pollution incident(s) which could lead to abstraction for public water being temporarily halted. The EA recommended some minor amendments to four of the CoCP commitments.	EA	SC	The CEMP (application document 7.5) sets out the measures for reducing the risk of water pollution. The CEMP and the CoCP (application documents 7.5 and 7.5.1) have been updated to include the EA amendments to the commitments.
Flood Risk and Surface Water Drainage			
A site-specific FRA is to be submitted which should cover fluvial flood risk during construction, as a result of working in the floodplain and a drainage strategy to manage surface water run off from larger flood events.	EA, ECC, SCC	SR / SC	Noted. The Flood Risk Assessment (FRA) (application document 5.5) addresses these matters.
The EA is pleased to see that compounds will be outside the flood zones. Any associated stockpiles of soil should also be removed from the floodplain.	EA	SR / SC	Noted. This has been added as a commitment (W07) to the CoCP (application document 7.5).
The Scoping Report has addressed the provision of good practices to mitigate significant impacts on land drainage, surface water flood risk and water quality.	ECC	SR	Noted.

Comment	Consultee	Stage	Project Response
The Councils request a detail surface water drainage strategy for any permanent above ground structures, including the GSP substation. Surface water runoff from permeant built-up areas should be managed on site using infiltration or runoff should be restricted to 1-year greenfield rates, network modelling should be done for 100 years plus climate change allowance. Unrestricted runoff from the site into any open water body or sewer is not recommended.	ECC, SCC	SC/TC	Requirement 5 in the draft DCO (application document 3.1) states that a Drainage Management Plan, to address operational surface water and foul water drainage management matters, will be submitted to and approved by the relevant planning authority.
It is recommended to propose temporary surface water drainage strategy during construction phase along with provision of water pollution and sediment control management. Settling ponds, and bunds should be incorporated to reduce pollution risk and to manage runoff from construction site. It is required to prepare a temporary drainage strategy to intercept surface runoff from the from the temporary haul road off the A131, which should be permeable wherever possible to mimic existing site drainage.	ECC	TC	Measures to avoid run off and to control sediment are set out within the CEMP (application document 7.5). Therefore, National Grid does not consider there to be a need for a temporary surface water drainage strategy to be produced.
Water Framework Directive			
The PEI Report refers to the summary of WFD status data and this all looks acceptable.	EA	SC	Noted.
Any works affecting watercourses should be subject to a WFD compliance assessment. The EA welcomes that the ES will include a qualitative assessment to determine the proposals compliance with the objectives of the WFD, the issues set out for the watercourses under the Anglian River Basin Management Plan (RBMP) and any WFD mitigation measures to improve the status of locally designated water bodies.	EA	SR/SC	The WFD Assessment (application document 5.6) provides a qualitative assessment on the project compliance with the objectives of the WFD, the issues set out for the watercourses under the Anglian RBMP and any WFD mitigation measures to improve the status of locally designated water bodies.

10. Geology and Hydrogeology

10.1 Introduction

10.1.1 This chapter covers the responses received in relation to geology and hydrogeology including: discussions on the approach to the assessment in particular opencut sections and trenchless crossings.

10.2 Thematic and Other Meetings

10.2.1 National Grid has held a number of meetings with the Environment Agency, which have included discussions about the methodology of the groundwater assessment and the contaminated land assessment. There have also been Water (including groundwater) Thematic Meetings held with the relevant planning authorities in their role as LLFA and the Environment Agency. No specific matters were raised at these in relation to geology and hydrogeology.

10.3 General Themes from Consultation Stages

10.3.1 Table 10.1 provides a summary of the feedback responses received in relation to geology and hydrogeology and how National Grid has had regard to these. This table should be read alongside ES Chapter 10: Geology and Hydrogeology (**application document 6.2.10**) which describes the baseline environment, methodology and the results of the impact assessment for geology and hydrogeology.

Table 10.1 – Feedback on Geology and Hydrogeology

Comment	Consultee	Stage	Project Response
General			
The Council advises that the Local Geological Sites should be shown more clearly on the figures.	BDC	SC	Noted. These have been made clearer on ES Figure 10.2 (application document 6.4).
Further ground investigation (GI) is proposed to be carried out in autumn/winter 2021 – It is not clear if this has been completed or postponed. The PEI Report is dated January 2022, so should have been updated accordingly.	EA	SC	The ES has included a review of the results of the GI up to and including October 2022. This data is considered sufficient for the purposes of the assessment. The GI is ongoing and will inform the detailed design.

Comment	Consultee	Stage	Project Response
The project area does not pass through a Waste Consultation Area and therefore does not impact on waste infrastructure.	ECC	TC	Noted.
Groundwater			
All local abstractions must be identified and a Hydrogeological Impact Assessment (HIA) should be prepared where relevant. The level of assessment should be discussed with the EA.	EA	SR/SC	All groundwater abstractions within 1km of the route have been identified and presented within ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2). The groundwater risk assessment has identified only one abstraction within 500m of a location where a trenchless crossing and potential dewatering may be required for the River Stour crossing. The assessment concludes that the abstraction is outside of the radius of influence for any dewatering and therefore there is no significant risk or potential impact to the abstraction.
The shallow depth of these excavations mean that they are unlikely to have a significant impact on the shallow aquifer, where present at the ground surface. However, there is the potential for changes to flow that could impact shallow wells proximal to the excavations.	EA	SR	ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2) includes an assessment of the project on changes to groundwater flow rate and direction. It also assesses whether there are any shallow wells proximal to the trenchless crossing excavations that could be impacted, as detailed in the point above.
The PEI Report states that, even within low-lying valley areas, a trench depth of c.1m is unlikely to encounter groundwater. However, Appendix 10.1 (Table 2.4) indicates that 4 out of 10 locations tested had a standing groundwater level that was shallower than 1m. These matters should be clarified / considered further, as the assumption that groundwater will be deeper than 1m appears to be relevant to the assessment.	BDC	SC	Groundwater strike information is included within ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2) and this information was used to inform the groundwater risk assessment. Instances where groundwater was identified at less than 1m have been discussed in the assessment.

Comment	Consultee	Stage	Project Response
An abstraction licence will be required if dewatering at rates greater than 20 m ³ /d occur for a period longer than six months. A discharge consent may be required for the dewatering discharge. Dewatering may require an HIA, even if the water table is drawn down for less than 1.5m. The relevant permits and licences will need to be in place for any dewatering and associated discharge for the trenching and excavations.	EA	SR / SC	ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2) includes the Groundwater Risk Assessment for locations where dewatering may be required. Should development consent be granted, National Grid would apply for the necessary consents and permits in accordance with GG01 in the CoCP (application document 7.5.1).
The trenchless crossing of the Stour will run through an environmentally sensitive area, proximal to the SPZ1 of a local public water supply. A trenchless crossing will only be acceptable if it can be undertaken without adverse impact on groundwater quality or flow. Including not changing hydraulic continuity between the river and the underlying aquifer and not creating any significant preferential pathways.	EA	SR	An assessment of the trenchless crossing has been undertaken in ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2). This includes assessment of hydraulic continuity between the river and underlying aquifer units and between aquifer units otherwise separated by aquitards / aquicludes.
It is recommended that the CoCP and CEMP and the measures that will be adopted to adequately control the risk of releases of contamination from horizontal directional drilling (HDD) activities.	BDC	TC	Following this response and other feedback a good practice measure (GH07) has been added to the CoCP (application document 7.5.1). This references the need for further assessment should HDD be taken forward as a technique.
The Stour valley is an area of the chalk aquifer with elevated fracture density and therefore high transmissivity. Should there be a requirement for HDD to extend into the chalk aquifer, this will only be acceptable if drilling can be done without significant loss of drilling fluids and additives into aquifer fractures. Such flow routes within the chalk aquifer must not be blocked and an assessment must be done of whether drilling can be undertaken in these circumstances.	EA	SR	The trenchless crossing design does not currently extend into the Chalk. The groundwater risk assessment in ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2) considers the risk to the Chalk from the crossing within the overlying superficial strata. Good practice measure (GH07) in the CoCP (application document 7.5.1) references the need for further assessment should HDD be taken forward as a technique.

Comment	Consultee	Stage	Project Response
There is the potential for adverse effects from drilling mud break out onto bed of watercourse and the effects of this should be considered. The drilling will need to be deep enough in impermeable layers beneath rivers and vulnerable habitats to avoid creating preferential pathways and potential long term harm to habitats and flow volumes. Bentonite leakage from drilling can cause serious damage to important habitats during cable laying. Drilling mud losses to the environment need a mitigation/ remediation plan and methods considered to minimise breakouts.	EA	SR	Trenchless crossings are proposed at the River Stour and the River Box. ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2) provides the assessment of the project on these waterbodies. Good practice measure (GH07) in the CoCP (application document 7.5.1) references the need for further assessment should HDD be taken forward as a technique.
The landscape surrounding Sroughton, Burstall and Bramford traditionally does not have open ditches, many of the watercourses run beneath ground and the impacts to these should be considered.	SpPC	SR	Noted. This has been considered when undertaking the assessment in ES Chapter 10: Geology and Hydrogeology (application document 6.2.10).
Risk of Contamination			
Whilst no significant effects have been noted, the ES would still need to include information on the landfill site, areas designated as possibly contaminated land and also evidence of a piling risk assessment.	BDC	SC	ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment (application document 6.3.10.1) contains the Preliminary Risk Assessment. Good practice measure GH06 in the CoCP (application document 7.5.1) references the need for a piling risk assessment, which would be undertaken once the piling methodology and specific locations are known.
The ES should assess the risk of hazardous contamination being present on site (including ground gas) in accordance with EA guidance. This should include risks to public health and on other receptors such as water resources and adjacent landowners. Any control and mitigation measures should be outlined in the assessment. Any baseline data reports (e.g. Tier 1 or 2 risk assessments) should also be included within the ES.	BDC, EA, UK HSA	SR / SC	ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment (application document 6.3.10.1) contains the Preliminary Risk Assessment, which has been produced in accordance with guidance including Land Contamination Risk Management (Environment Agency, 2021).

Comment	Consultee	Stage	Project Response
If use is made of data and reporting from 2013, then consideration should be given to the compliance of this with current guidance for contamination assessments.	BDC	SC	ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment (application document 6.3.10.1) outlines the data used. This includes data from 2013 which is supported by more up to date information from public records and ground investigation studies undertaken since.
The PEI Report notes that information on “contaminated land sites” has been provided by the Local Authorities, and these are referred to as “Registered Contaminated Land” sites. On a point of terminology, it is requested that these sites are referred to as ‘land with a potentially contaminative former use’ (or similar), to avoid confusion with statutorily designated Contaminated Land under Part IIA of the Environmental Protection Act 1990.	BDC	SC	Noted. The terminology has been changed in the ES.
National Grid should undertake their own suitable research on potential contaminated land, which should include non-landfill waste sites (e.g. waste treatment sites) and registered historical pollution incidents. Historical mapping should be used to identify potentially contaminative previous land uses is undertaken in support of the ES, and these should be shown on suitable figures.	BDC	SC	ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment (application document 6.3.10.1) contains the Preliminary Risk Assessment. This outlines the methodology undertaken to identify potentially contaminative previous land uses including a review of historical mapping. The locations identified are shown on ES Figure 10.5 (application document 6.4). The baseline assessment contains details of non-landfill waste sites which has been obtained information from open data sources from the EA.
The PEI Report explains that the risks from potential land contamination are at worst low/medium provided good practice is followed, this includes impacts on groundwater. The approach is consistent with current guidance and its conclusions reasonable.	BDC	SC	Noted.

Comment	Consultee	Stage	Project Response
The PEI Report assigns feature ID23 a “Local Authority Risk Rating” of “low”. However, the risk ratings provide by BDC relate to the Local Authority’s site prioritisation under the Environmental Protection Act, so should not be confused with risk assessments that are required for projects under planning. National Grid is advised to consider suitable desk study and (where available) site investigation information regarding feature ID23 to support an assessment of its contamination risk in the context of the project. It is anticipated that this will include reasonable worst case assumptions about the ground conditions.	BDC	SC	Risk ratings have been derived using the methodology described within ES Chapter 10: Geology and Hydrogeology (application document 6.2.10) and associated appendices, and there is no reference to the 'Local Authority Risk Rating' within the ES.
The PEI Report states that the Sudbury Branch Railway Line is underlain by a ‘ <i>granular stratum</i> ’ to up to 5.4m depth, but it is not clear whether this is Made Ground or whether it has been tested for contamination and, if so, what the results were. The potential for mobilisation of contamination around the railway line must be assessed.	BDC, EA	SC	The assessment of contamination potential of the Sudbury Branch Railway Line is included within ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment (application document 6.3.10.1). Contamination samples have not been taken during the ground investigations to date.
It is noted that no significant contaminated land sites are considered to be present in the immediate area of the project. BDC supports a strategy via condition or otherwise in the event of unforeseen contamination during construction works.	BDC	SR	The approach for managing unforeseen contamination is set out within CEMP Chapter 10: Geology and Hydrogeology (application document 7.5).
The assessment should refer to ‘Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination’ National Groundwater & Contaminated Land Centre Project NC/99/73. The selected method, including environmental mitigation measures, should be presented in a ‘Foundation Works Risk Assessment Report’, guidance on producing this can be found in Table 3 of ‘Piling Into Contaminated Sites’.	EA	SR	Good practice measure GH06 in the CoCP (application document 7.5.1) states that a Foundation Works Risk Assessment will be undertaken where required, in areas of piling.

Comment	Consultee	Stage	Project Response
The trenchless crossing method beneath the wooded valley to the south of Ansell's Grove is supported. It is recommended that geotechnical investigations and survey works are undertaken to understand existing ground conditions and any risk associated to trenchless construction method for the proposed land.	ECC	TC	Noted. Site investigations have been undertaken and further investigations would take place to inform the detailed designs.
The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) will probably require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. HSC would be required to store or use any of the Named Hazardous Substances or Categories of Substances at or above the controlled quantities set out in Schedule 1 of these Regulations.	HSE	SR	National Grid is not anticipating using any hazardous substances on the project, but if this were to change National Grid would apply for the necessary consents and permits in accordance with GG01 in the CoCP (application document 7.5.1).
Mineral Risk Assessment			
Policy S8 of the MLP defines Mineral Consultation Areas (MCA) as extending up to 250m from the boundary of a mineral infrastructure site or allocation for the same. The project area does not pass through a MCA and therefore does not impact on mineral infrastructure.	ECC	SC/TC	Noted.
A significant proportion of the project area is located within land which is designated as a Mineral Safeguarding Area (MSA) and therefore would be subject to Policy S8 of the Essex Minerals Local Plan 2014. A Mineral Resource Assessment (MRA) is required to establish the viability of the prior extraction of mineral such that the resource is not sterilised where this can be avoided. Recognising the nature of this scheme, it is considered that only a high-level MRA would be required.	ECC	SR/SC/TC	ES Appendix 10.3: MRA (application document 6.3.10.3) contains the MRA for the project and references the relevant planning policy. The MRA describes the minerals present and presents an assessment of the project on safeguarded extents, including discussion regarding the practicalities and viability of prior extraction.

Comment	Consultee	Stage	Project Response
The PEI Report states that the criteria for determining the importance of the affected mineral resources have been developed from a consideration of the economic importance of minerals to the UK (ODPM, 2004). This approach is not in conformity with the national approach to safeguarding (NPPF Paragraph 210c).	ECC	SC / TC	The sensitivity criteria for minerals has been updated based on these comments and an MRA (written with regard to industry guidance) is included in ES Appendix 10.3: MRA (application document 6.3.10.3).
Geological mapping indicates extensive spreads of sand and gravel (mineral) resources. However, in terms of the relevant importance of these resources they are considered to be at most of regional significance compared to the project which is of national significance. In addition, significant parts of the route are within areas where in reality planning permission would not be granted because of the impact upon statutory landscape areas for example.	SCC	SC	Noted.
The PEI Report sets out that the Government's PPG for Minerals (MHCGL, 2014) and the BGS Minerals Safeguarding in England: Good Practice Advice (BGS, 2011) provide guidance on how to implement national policy with respect to safeguarding of minerals and this will form the basis of the assessment. It is however noted that there also exists joint guidance published by the Mineral Products Association and Planning Officers' Society in 2019 which provides more up-to-date guidance around the approach to mineral safeguarding.	ECC	SC	The joint guidance has been used when producing ES Appendix 10.3: MRA (application document 6.3.10.3).
The project crosses the existing minerals processing area at Layham Quarry which is currently dormant. However, the minerals operator does not object and there are ongoing discussions between National Grid and Brett Aggregates. If the proposals are likely to impact or require changes to the landfill then this may require a variation to the permit. This should be discussed with the operator and the EA at the earliest opportunity.	EA, SCC	SC	Noted.

Comment	Consultee	Stage	Project Response
The PEI Report indicates the presence of a number of private water supplies (PWS) within the study area, involving the abstraction of groundwater. It is recommended that the ES specifically itemises how the assessment has considered the potential effects on PWS, at the level of individual receptors where applicable. This level of detail is absent from the generalised assessments provided in the PEI Report.	BDC	SC	All groundwater abstractions within 1km of the route have been identified and presented within ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2). The groundwater risk assessment has identified only one abstraction that may be affected due to proximity to potential dewatering activities. The assessment concludes that the abstraction is outside of the radius of influence for any dewatering and therefore there is no risk or potential impact to the abstraction.
The ES should clarify that all PWS receptors have been considered, as within the PEI Report there seems to be a variance between the number of PWS listed in Table 4.2 of Appendix 4.1 and those shown on the corresponding on Figure 10.1.	BDC	SC	Figure 10.1 in the PEI Report did not differentiate between what has been classified by the relevant planning authority as ground and surface fed abstractions whereas the table did include this differentiation. ES Appendix 10.2: Groundwater Baseline and Assessment (application document 6.3.10.2) details all abstractions taken into consideration and ES Figure 10.4 (application document 6.4) has been made clearer so that it matches the table.
Management and Mitigation			
The PEI Report assessment relies on general good practice measures. Without sight of the outline CEMP, it is not possible to comment fully on the assessments that are reliant on good practice measures.	BDC	SC	Noted. The draft CEMP was issued to LPA in autumn 2022 for comment and was updated based on the responses. The CEMP (application document 7.5) is included within the application for development consent.
National Grid should prepare a Site Waste Management Plan. Commitment GG21 in the Outline CoCP states that a Materials and Waste Management Plan (MWMP) will be produced and that an outline version will be provided with the application for development consent.	ECC	SC / TC	The MWMP was issued to LPA and EA in autumn 2022 for comment and was updated based on the responses. The comments were considered when developing the MWMP submitted with the application for development consent (application document 7.7).

Comment	Consultee	Stage	Project Response
The assessment should include a materials balance (including minerals) and an understanding and assessment of the likely market areas to supply the necessary aggregates and fill materials. This should also have regard to the potential use of borrow pits and the need to source potential mineral reserves close to the site. ECC would expect the project to quantify the amount of material and minerals required and to explore the likely sources.	ECC	SR	No borrow pits are anticipated as part of the project. National Grid has not yet appointed a Main Works Contractor and therefore sources of minerals and a material balance assessment has not yet been undertaken. The main materials and minerals required on the project are listed in ES Chapter 4: Project Description (application document 6.2.4). This includes aggregates for the temporary access route and the site compounds.
It appears that the matter of waste management has not been progressed in any meaningful detail at this stage of the process and largely leaves the method of waste disposal undecided. There could be significant local impact depending on mode of transport and if disposal sites are in Essex and /or Essex network used for transport of waste.	ECC	SR	The project is not anticipating the generation of significant quantities of waste, as described in ES Chapter 4: Project Description (application document 6.2.4). National Grid has not yet appointed a Main Works Contractor and therefore waste disposal locations have not yet been determined. The MWMP (application document 7.7) sets out the general principles and targets for waste management.
It is not known at this time if an amount of worker accommodation is proposed and therefore the impact on waste collection. The current documentation does not make reference to workers living on site but given the rural location where rented and holiday accommodation is scarce, this is considered likely. ECC can seek contributions towards improvements municipal waste treatment sites, which should be incorporated into any s106 Agreement.	ECC	SR	No worker accommodation is required as part of the project. Workers are generally anticipated to be based in Ipswich and Colchester in temporary accommodation such as hotels or rental properties or in the surrounding areas at campsites. These buildings will already have processes in place for managing waste. Therefore, no additional waste facilities or funding is anticipated by the project.
National Grid should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal). For wastes arising from the development the ES should assess the implications and wider environmental and public health impacts of different waste disposal options and disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated.	UK HSA	SR	The MWMP (application document 7.7) sets out how National Grid proposes to employ the waste hierarchy and how waste arising from the development will be managed. No significant effects have been identified in relation to wastes arising and health has been scoped out of the assessment.

11. Agriculture and Soils

11.1 Introduction

11.1.1 This Chapter covers the responses received in relation to agriculture and soils including: information sources and survey requirements, sensitive land uses potentially affected and mitigation related to soil disturbance and reinstatement.

11.2 Thematic and Other Meetings

11.2.1 National Grid presented the proposals for the agriculture and soils evaluation on the project at a meeting with Natural England in February 2021. No specific matters were raised in relation to agriculture and soils and no further meetings have been held specifically in relation to this topic.

11.3 General Themes from Consultation Stages

11.3.1 Table 11.1 provides a summary of the feedback responses received in relation to agriculture and soils and how National Grid has had regard to these. This table should be read alongside ES Chapter 11: Agriculture and Soils (**application document 6.2.11**) which describes the baseline environment, methodology and the results of the impact assessment for agriculture and soils.

Table 11.1 – Feedback on Agriculture and Soils

Comment	Consultee	Stage	Project Response
General			
The assessment of likely effects should take place prior to consideration of mitigation. The assumption that the temporary nature of disturbance to the soils and land quality is sufficient to avoid long term impacts is false and the significance of the project is consequently grossly underestimated. Correct use of the DMRB LA109 (Highways England <i>et al</i> 2019) assessment of significance instead generates 'very large' and 'large' significance of impact, prior to mitigation. Good practice measures do not override the assessment of likely effects.	NE	SC	The approach taken by the project is to include standard good practice measures, as secured within the CoCP (application document 7.5.1), prior to undertaking the assessment. This is an approach advocated by the IEMA (2017) as part of delivering proportionate EIA. With the good practice measures in place, no significant effects to soil have been identified (see ES Chapter 11: Agriculture and Soils (application document 6.2.11)).

Comment	Consultee	Stage	Project Response
A full soil survey and ALC field assessment of all land included in the project should be undertaken, particularly where BMV agricultural land is affected by trenching associated with underground cables. This should normally be at a detailed level, e.g. one auger boring per hectare, supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres. This will provide a baseline to ensure that land which is temporarily taken for development is returned back to its original grade, particularly where BMV agricultural land is affected.	NE	SR/SC	ES Appendix 11.1: Agricultural Land Classification Survey (application document 6.3.11.1) contains the results of the soil survey, which has been undertaken for the underground cable locations, GSP substation and the CSE compounds based on a borehole per hectare. A survey has not been undertaken for the overhead line sections, as the soil disturbance within these sections would, in general, be limited to the base of the pylon and is considered disproportionate to the impact at this stage, when the pylon locations are not fixed.
A soil resource survey can use the site-specific soil data collected as part of a detailed ALC survey to inform the detail of a soil management plan based for the whole scheme (temporary and permanent disturbances), which should form a part of the CEMP.	NE	SR/SC	ES Appendix 11.1: Agricultural Land Classification Survey (application document 6.3.11.1) contains the results of the soil survey. The soil surveys will inform the restoration of the soil and land following construction.
Businesses and Stewardship			
Information should be provided regarding any sterilisation impact of the project on the agricultural and horticulture industry, particularly having regard to the quality of agricultural land and the significance of fruit farming to the local economy.	BMSDC	SR	The effects of the project on agriculture and soils (and farming businesses) is considered in ES Chapter 11: Agriculture and Soils (application document 6.2.11).
There is also the consideration of the replacement of orchards and businesses elsewhere. Unless the farmland is contiguous, with the necessary water required, an acceptable soil structure, located in a frost free area and close to main roads, it would be virtually impossible to replicate the productivity of the existing intensive plantations. There could be significant compensation cost implications of this.	SCC	SR	No businesses, including orchard plantations, are anticipated to require relocation.

Comment	Consultee	Stage	Project Response
<p>The draft Order Limits contain land parcels which form part of a live Agri-environment scheme which is currently delivering benefits for nature. Consideration must be given to impacts from the project and implications for the agreement holder in terms of any necessary relocation of options, derogations, pay back of grant funding, scheme penalties etc. Any compulsory land purchases which are subject to agri-environment schemes would also need to be repaid.</p>	NE	SC/TC	<p>The effects of the project on agriculture and soils (and farming businesses) are considered in ES Chapter 11: Agriculture and Soils (application document 6.2.11). Matters around payments are addressed through the landowner negotiations.</p>
<p>Land within close proximity to the project is currently under Countryside Stewardship. Loss of this habitat may result in direct land take or damage to land under agreement in addition to SSSI habitat.</p>	NE	SC	<p>The ES considers the effects of the project on environmental aspects. Repayment of subsidies is considered as part of the compensation agreements discussed with the relevant landowners.</p>

12. Traffic and Transport

12.1 Introduction

- 12.1.1 This chapter covers the responses received in relation to traffic and transport including: discussions about the appropriate construction routes, traffic survey types and locations and the type and scope of the traffic assessment to be carried out. It also considers the scope and mitigation with regards to PRow.

12.2 Thematic and Other Meetings

- 12.2.1 Traffic and Transport Thematic Meetings have been held with the relevant highway authorities (RHA), which comprise Suffolk County Council, Essex County Council and National Highways. The meetings have included discussion about the scope and method of the Transport Assessment (TA) and the survey methods and locations. National Grid presented the scope of the TA including the proposals for construction routes and traffic survey locations at the thematic meeting in April 2022. National Grid has developed the TA based on the feedback from this meeting. The draft Construction Traffic Management Plan (CTMP) was shared with the RHA in autumn 2022 and their feedback considered in the application version of the CTMP (**application document 7.6**).

12.3 General Themes from Consultation Stages

- 12.3.1 Table 12.1 provides a summary of the feedback responses received in relation to traffic and transport and how National Grid has had regard to these. This table should be read alongside ES Chapter 12: Traffic and Transport (**application document 6.2.12**) which describes the baseline environment, methodology and the results of the impact assessment for traffic and transport.

Table 12.1 – Feedback on Traffic and Transport

Comment	Consultee	Stage	Project Response
General			
An ES will be required to support any DCO application supported by an appropriate TA. This should be undertaken in accordance with the Department for Transport (DfT) Circular 02/2013. It will need to consider planned movements on existing flows, junction capacity and the wider road network. It will also need to consider temporary road closures/diversions and the impact on road safety and amenity.	ECC, NH, SCC	SR/SC	The ES includes Chapter 12: Traffic and Transport (application document 6.2.12), which has been undertaken in accordance with DfT Circular 02/2013. The application also includes a TA (application document 5.7). The assess the impacts of construction traffic on flows, junction capacity and the wider road network. They also consider the impacts of temporary road closures, diversions, widening and the impact on road safety and amenity.
NH is responsible for the strategic road network and the county councils for the rest of the network. These organisations need to be involved in discussions and to receive information at a sufficient level of detail to understand the impacts on the road network and to agree routing and road crossings.	ECC, NH, SCC	SR/SC	Noted. These organisations have attended thematic meetings as noted in the relevant SoCG (application document 7.3.1 and 7.3.6). The draft CTMP was issued to the RHA in autumn 2022 for comment and included details about proposed routing and road crossings. Their responses have been considered when updating the CTMP for application (application document 7.6).
With regards to NH, it is unlikely that once the project is complete that there will be any impact upon the SRN.	NH	TC	Operational effects on the Strategic Road Network (SRN) were scoped out in the Scoping Report (application document 6.5).
The traffic impacts of operation are proposed to be scoped out; this is not agreed upon until further information and detail on the scale of these impacts is understood.	SCC	SR	National Grid proposed to scope out operational impacts in the Scoping Report (application document 6.5) as operational traffic numbers would be minimal. This was supported by the Scoping Opinion prepared by the Planning Inspectorate (application document 6.6). Further justification for scoping out operational effects is presented in the TA (application document 6.5).

Comment	Consultee	Stage	Project Response
The construction phase is expected to last for six years and is likely to coincide with a number of large projects including the peak year for Sizewell (if consented) and the A12 J19 to 25 Improvements. The TA should include an assessment of the cumulative effects of the combined traffic on the road network. The list of committed developments should be agreed with the RHA, particularly as the area has had some unplanned growth in recent years.	NH, SCC, ECC	SC / TC	Cumulative effects with other proposed developments (including traffic) are considered in ES Chapter 15: CEA (application document 6.2.15). The long list of other developments was issued to the relevant councils in 2021 for comment and a further updated list was presented within the PEI Report at statutory consultation. No additional developments were noted in the responses or in the Host Authority meetings since. The long list of other developments has been updated for the ES to take into account the latest planning applications submitted by the end of January 2023 (see ES Chapter 15: CEA (application document 6.2.15) for further details).
National Grid should commit to a decommissioning management plan to provide details of the impacts of decommissioning prior to it taking place.	SCC	SC	Noted. Requirement 12 of the draft DCO (application document 3.1) states that <i>'In the event that, at some future date, the authorised development, or part of it, is to be decommissioned, a written scheme of decommissioning must be submitted for approval by the relevant planning authority at least six months prior to any decommissioning works.'</i>
The construction of the project will require AIL for delivery of the transformer and cable drums to the site. An AIL Survey will be required to identify the number of AIL movements and to assess the potential impacts on bridges, culverts and junctions along the route. This should include swept path analysis where applicable. Where necessary an Abnormal Load Assessment should be submitted and the RHA consulted.	ECC, NH, SCC	SR/SC	National Grid has been working with the RHA to agree the AIL routing and potential impacts on structures along the routes. Swept path analysis has been undertaken for the proposed AIL routes from potential port to the access points at site, including the SRN.
National Grid should consider the construction vehicle standards being applied and the number of vehicles with regards to climate change.	ECC	TC	Measure GG12 in the CoCP (application document 7.5.1) sets out relevant applicable standards for vehicle types. Measure TT02 in the CoCP (application document 7.5.1) also sets out monitoring commitments associated with construction traffic.

Comment	Consultee	Stage	Project Response
Assessment and Methodology			
It is recommended that the Guidelines for the Environmental Assessment of Road Traffic (GEART) produced by the Institute of Environmental Assessment (IEA) is used for the basis of the TA. Although it is dated and has its limitations, GEART covers a wider range of topics, such as amenity, severance, safety, delay and intimidation, than DMRB LA112 which is designed for new trunk road projects. At the very least, GEART should be used in combination with LA112.	ECC, SCC, UK HSA	SR/SC	The overarching methodology used for the ES is based on DMRB LA 112 (Highways England, 2020f). Following discussions at a thematic meeting in June 2022 it was set out that the only ES matters which are relevant to this project and are not covered in LA 112 were pedestrian amenity and fear and intimidation. For this topic, LA 112 does not provide thresholds for defining the magnitude of impact on fear and intimidation, therefore the assessment references GEART for this and as set out in the thematic meeting in June 2022, both LA 112 and GEART have been used for the assessment.
Essex County are not keen on the use of GEART as the thresholds involved are too rigid and it lacks the nuance of the DMRB.	ECC	TC	DMRB LA 112 (Highways England, 2020f) guidance has been used as part of the ES to determine the magnitude of impacts. However, it does not include quantified thresholds for assessing the magnitude of impact of changes in traffic volumes. The categorisation of impacts has been reviewed qualitatively to check that it is appropriate, accounting for factors such as the length of time that impacts would be expected to occur, the type of construction vehicles causing the impact (with greater emphasis placed on impacts caused specifically by HGV), and the characteristics of the roads affected. Therefore, both sets of guidance have been used to define the magnitude of impacts in the ES. This is set out in Section 12.4 of ES Chapter 12: Traffic and Transport (application document 6.2.12).
The TA should include an assessment of the impacts of the works (including the need for any road closures, diversions or restriction) on the following aspects along with any mitigation measures: <ul style="list-style-type: none"> • Driver delay associated with traffic management, highway capacity and increase in vehicles; 	ECC, NH, SCC	SR/SC	The TA (application document 5.7) and ES Chapter 12: Traffic and Transport (application document 6.2.12) includes consideration of the impacts of the project on all of these aspects.

Comment	Consultee	Stage	Project Response
<ul style="list-style-type: none"> Road safety; Junctions, particularly those where the existing standards are poor and including those with the SRN; Vulnerable road users including public perception on severance, fear and intimidation; and Pedestrian and cycle amenity. 			
<p>Evidence should be provided within the application outlining:</p> <ul style="list-style-type: none"> Peak and average daily number of workforce and vehicle movements during construction and operation; Calculations supporting the assessment; Assumptions about workforce and measures to reduce single-occupancy vehicle trips to the construction site; Consideration of transporting freight by rail; and Embedded mitigation such as restrictions on working hours. 	SCC	SR/SC	<p>The TA (application document 5.7) includes the construction traffic numbers along with details and assumptions as to how this number has been derived. It also includes an estimate of the workforce numbers and the assumptions around car sharing and sustainable transport options. Embedded and good practice measures are also set out in the TA, where applicable.</p>

Comment	Consultee	Stage	Project Response
<p>National Grid should share the programme for individual components of the project (including utility diversions) to show that all peaks occur within three months either side of the forecast peak. Risks such as delays to the programme and consequential impact on the cumulative peak movements needs to be clearly explained so that there is confidence that the values assessed in the ES and TA are indeed a robust maximum. Alternatively, this could be managed through comprehensive monitoring and controls. It should be made clear where any conclusions regarding impacts are based on the length of construction activities and their 'temporary' nature.</p>	SCC	SC	<p>The TA (application document 5.7) and ES Chapter 12: Traffic and Transport (application document 6.2.12) set out that a 'core scenario' has been developed which has been used to determine the significance of the construction traffic. The core scenario uses the peak month of construction traffic which is August 2025. As daily/hourly traffic can vary, a contingency of 12.5% has been applied to allow for daily variations in traffic. Following this, analysis of the three months prior to (May 2025 – July 2025) and after (September 2025 – November 2025) the peak construction month has been undertaken to determine whether there are any routes which exceed the core construction scenario. Where a month preceding or following the peak of August 2025 is higher, the higher figure has been used within the core scenario to take into account the risk of programme slippage.</p>
<p>The Scoping Report sets out the magnitude of impacts to be assessed and states that an increase in traffic flows of less than 30% is to be regarded as negligible. In terms of the traffic capacity or road safety performance of an SRN junction, traffic flow increases of less than 30% can be significant. NH suggests that this approach is discussed prior to any further assessment.</p>	NH	SR	<p>This categorisation of impacts is based on guidance in the DMRB Volume 11, Section 3, Part 8 (Pedestrians, Cyclists, Equestrians and Community Effects) (Highways Agency, 1993), which has now been withdrawn. DMRB LA 112 (Highways England <i>et al.</i>, 2020f) replaced this but does not include quantified thresholds for assessing the magnitude of impact of changes in traffic volumes.</p> <p>This categorisation of impacts has been reviewed qualitatively to check that it is appropriate, accounting for factors such as the length of time that impacts would be expected to occur, the type of construction vehicles causing the impact (with greater emphasis placed on impacts caused specifically by HGV), and the characteristics and baseline traffic of the roads affected.</p>

Comment	Consultee	Stage	Project Response
Confirmation is sought as to whether these are vehicles or movements (i.e. two way) and would request that future documents clearly define what data is being quoted. The PEI Report identifies the conversion of monthly figures to daily figures. Information is sought on the potential for fluctuation of flows across a monthly period or whether the 12.5% uplift is considered appropriate for addressing this issue.	SCC	SC	The TA (application document 5.7) explains the methodology used in the assessment, which uses two-way traffic movements. The core scenario uses the peak month of construction traffic which is August 2025. As daily/hourly traffic can vary, a contingency of 12.5% has been applied to allow for daily variations in traffic. The value of 12.5% is deemed appropriate and has been used on other projects of a similar scale to this. Following this, analysis of the three months prior to (May 2025 – July 2025) and after (September 2025 – November 2025) the peak construction month has been undertaken to determine whether there are any routes which exceed the core construction scenario. Where a month preceding or following the peak of August 2025 is higher, the higher figure has been used within the core scenario. This will allow for any programme slippage and provides a robust assessment of the project impacts.
The assessment needs to identify both the hour of greatest congestion on the highway network for assessment of capacity and the hour of greatest change for assessing environmental effects.	SCC	SR/SC	The TA (application document 5.7) includes an assessment of the baseline traffic in the study area has been undertaken to determine the road network peak hours. The peak hours are: AM peak (0800-0900) and PM peak (1600-1700).
The daily or hourly peak is of greater concern than the monthly peak. The data presented in the PEI Report suggests that the peak flows will very consistent and of at least a month's duration. Averaging construction vehicles over a month is likely to dismiss peaks. Nor is an even profile of construction movement over the working day considered reasonable evidence from other projects (EA1(N), EA2 and Sizewell C) indicate more trips occur in the morning than the afternoon.	SCC	SC	The TA (application document 5.7) provides analysis of the AM and PM peak hours. The core scenario uses the peak month of construction traffic which is August 2025. As daily/hourly traffic can vary, a contingency of 12.5% has been applied to allow for daily variations in traffic. Following this, analysis of the three months prior to and after the peak construction month has been undertaken to determine whether there are any routes which exceed the core construction scenario. This allows for programme slippage and provides a robust assessment of the project impacts.

Comment	Consultee	Stage	Project Response
National Grid's definition of HGV is requested, as recent DCO (Sizewell C, EA1(N) and EA2) have classified all goods vehicles exceeding 3.5T as HGV for assessment purposes.	SCC	SR	Standard vehicle categorisations have been used. Any vehicle exceeding 3.2m and/or exceeding three axles has been classified as an HGV.
The use of 'Professional Judgement' has been a matter of dispute in recent DCO examinations, particularly when used in the absence of evidence, for example, in the determination of the sensitivity of a highway or PRow. The TA should be supported by suitable evidence backing up the conclusions.	ECC, SCC	SC	The TA (application document 5.7) includes the evidence that has been used to underpin the assessment. This has included a series PRow surveys and traffic counts on the LRN.
It is requested that discussions are held concerning the extent of the study area and the sensitivity of routes/links and the method for assessing these. There are a number of highly sensitive locations in the immediate area. On that basis, potentially smaller impacts may have a disproportionate effect.	SCC	SR/SC	The extent of the traffic and transport study area has been set out during thematic meetings in June 2022. Where practicable, key sensitive routes and links that were identified by the RHA in their consultation responses have been avoided as part of the construction routing.
When assessing impacts related to vulnerable road users, consideration should be given to the existing baseline including facilities (e.g. presence and width of footways), the hierarchy of users and the consideration of locations with high sensitive vulnerable users such as schools and care homes.	SCC	SC	The TA (application document 5.7) assesses the impact on vulnerable users. Sensitive receptors have been identified in the baseline environment through a desk study, including the use of AddressBase Plus data which lists land uses such as schools and care homes.
If impacts on vulnerable road users are dismissed based on that they are predicted to occur outside of an hour when vulnerable road users would be utilising the road network; then impacts need to be understood during those hours when vulnerable road users would be utilising the road network.	SCC	SR/SC	The sensitivity of receptors for this assessment has been identified with reference to the DMRB and IEA guidance criteria (IEA, 1993), as described in ES Appendix 5.4: Assessment Criteria (application document 6.3.5.4).

Comment	Consultee	Stage	Project Response
Are non-motorised users covered in the assessment?	ECC	TC	Vulnerable road users have been considered in the assessment of pedestrian amenity, fear and intimidation, walkers, cyclists and horse rider (WCH) journey length during construction and severance. The impact on WCH is set out in Section 12.6 of ES Chapter 12: Traffic and Transport (application document 6.2.12).
Will HGV movements associated with construction of the haul road be considered?	ECC	TC	HGV movements on all temporary access routes, including the temporary access route off the A131, have been considered in ES Chapter 12: Traffic and Transport (application document 6.2.12).
Request for a five-year assessment of traffic collisions.	ECC	TC	Five-year accident data assessment has been included in ES Chapter 12: Traffic and Transport (application document 6.2.12).
Surveys			
Establishing a baseline for existing traffic movements is problematic during pandemic conditions and it could be a significant period of time post-pandemic before traffic patterns return to 'normal' and that 'normal' might be very different to pre-pandemic conditions. The best available information to be used to determine traffic baselines. The councils should be consulted before embarking on surveys.	ECC, SCC	SR	A programme of traffic surveys was undertaken during 2022 to support the assessment presented in the TA (application document 5.7) and ES Chapter 12: Traffic and Transport (application document 6.2.12). The surveys were completed during school term-time, avoiding weeks with public and/or school holidays and outside of any Covid-19 pandemic restrictions. The survey locations and timescales were discussed during thematic meetings in January and June 2022.
The TA should be informed by up-to-date survey data to understand baseline traffic flows. The methodology of the surveys should be discussed with the RHA. The data should be shared with the RHA. If development peaks are before or after 0800 and 1800, as indicated by core hours of 0700 to 1900, then it is strongly recommended that traffic surveys are extended to include both the network peak and development peak hours.	ECC, SCC	SR / SC	The traffic surveys were undertaken over a 12-hour window of 0700 - 1900. The TA (application document 5.7) and ES Chapter 12: Traffic and Transport (application document 6.2.12) contain more details on the survey methodology. The survey methodology was discussed during thematic meetings in January and June 2022.

Comment	Consultee	Stage	Project Response
It may be possible to use the Suffolk County Transport Model in the Transport Assessment to forecast baseline traffic flows and a reasonable trip distribution, as it may be difficult to gather suitable survey data in the current Covid-19 situation; however, this is dependent on the data that is proposed to be used.	SCC	SR	Noted. The TA (application document 5.7) and ES Chapter 12: Traffic and Transport (application document 6.2.12) contain more details on the survey methodology.
The Council has a number of semi-permanent traffic counters that may provide useful information when looking at changes in traffic flows since the original surveys were undertaken.	SCC	SC	The TA (application document 5.7) and ES Chapter 12: Traffic and Transport (application document 6.2.12) contain more details on the survey data that has been used for the assessment.
Care should be taken relying on ordnance survey plans to assess physical constraints on the highway network. Experience has shown that these plans are not of sufficient accuracy for use in swept path analysis and do not show constraints such as vegetation.	SCC	SC	Noted.
Access Points and Construction Routes			
Further details are required on the access points (both new and existing) and bellmouth design to show they are safe to use and comply with current highways standards. This includes an understanding of required visibility and vehicle swept paths and may require speed surveys to understand visibility requirements or potential temporary speed limit changes to reduce impacts on hedgerows etc. Any temporary accesses would need a technical approval by the RHA, potentially using a Minor Works Licence.	ECC, SCC	SR / SC	Details about construction routing and the location of access points have been shared with the RHA in the thematic meetings for Traffic and Transport. A generic design of a bellmouth that would be used on the project can be found in Design and Layout Plans Temporary Bellmouth for Access (application document 2.11.12).
A condition survey should be undertaken for roads should be undertaken prior to commencement of development to ensure any deterioration can be mitigated appropriately.	ECC, SCC	SR/SC/TC	The CTMP (application document 7.6) sets out the proposals for pre-construction surveys.

Comment	Consultee	Stage	Project Response
A plethora of other bellmouth accesses to provide access to individual or groups of pylons. Has consideration been given to reducing the number of access points with the provision of a temporary access route along the pylon corridor to provide vehicle access to the pylons? If not this needs to be considered.	ECC	TC	National Grid has considered this suggestion. However, the current design is considered to be optimum in terms of the number of access points for an efficient construction programme. Therefore, no design change has been made. National Grid will look to rationalise the number of access points once a construction contractor has been appointed and the detailed design undertaken.
The RHA need to be included in discussions on construction routing prior to submission of the application. Noting that the most direct route may not be the most suitable and that many roads are narrow and often single track. This should include discussions on the limitations of the highway network and protection of WCH along the rural road network, which includes Quiet Lanes. Specific roads and junctions of concern have been noted in the responses.	ECC, NH, SCC	SR/SC/TC	The specific roads noted were considered when developing the proposed construction routing shown on ES Figure 12.1 (application document 6.4). The TA (application document 5.7) presents the impacts on routing, access and amenity.
The Councils welcomes early discussions concerning amendments of the existing highway due to the construction routing and access points to understand the full impact. Permanent alterations to the public highway such as the accesses for the CSE compounds must be agreed with the RHA through appropriate agreements (s278).	ECC, SCC	SR/SC/TC	National Grid is proposing to use the RHA Permit Scheme to apply for traffic management on the project, which will involve consultation with the RHA during the application process. Further details are set out in the CTMP (application document 7.6), a draft version of which was issued to the RHA for comment in autumn 2022.
The Councils welcomes the proposal to use of haul roads (including the one off the A131) to reduce HGV on local roads and reduce the necessity to carry out local mitigation schemes significantly on these roads. Details of the connections and crossing points with the LRA will need to be provided to show that they are safe to use.	BDC, ECC, SCC	SR/SC/TC	Temporary access routes have been proposed in some locations, such as in Section G: Stour Valley, where the local road network is unsuitable for construction vehicles. Further details on future engagement with the RHA is set out in the CTMP (application document 7.6), a draft version of which was issued to the RHA for comment in autumn 2022.

Comment	Consultee	Stage	Project Response
National Grid should note that B class roads can be narrow which may prevent the half and half method proposed. National Grid should note SCC requirement for trenchless construction under major (A and B) roads. The RHA will also need to agree to works within the public highway and any traffic management measures.	ECC, SCC	SR/SC/TC	Noted. Details on future engagement with the RHA is set out in the CTMP (application document 7.6), a draft version of which was issued to the RHA for comment in autumn 2022.
National Grid should demonstrate how the routes of ambulances, healthcare workers and patients have been considered, what impacts have been identified and what mitigation is proposed.	SNEE CCG	SC	Construction routes and the increases of vehicles at key junctions are set out in the TA (application document 5.7). This indicates that there is a limited effect on the LRN and therefore there is not anticipated to be an effect on ambulances and healthcare workers.
Assurances are needed that construction vehicles will be prohibited from using B1068 which has an 18t weight restriction between the entrance to Konings Factory and the main crossroads within Stoke by Nayland.	SbNPC	SR	The B1068 does not form one of the construction routes that are proposed on the project. The construction routes are shown on Figure 12.1 (application document 6.4).
Significant road closures and diversions on A roads such as the A131 and A1071 would not be acceptable.	SbNPC, SCC	SR/SC	There are no proposals to close or divert traffic from the A1071. There may be short term closures or diversions on the A131 when constructing bellmouths or installing scaffolding. The TA (application document 5.7) sets out the anticipated impact on the A1071 and A131.
National Grid is proposing to duct local road crossings to avoid a full road closure. However, a number of the roads crossed are narrow and a half and half-width construction will not be possible without temporary widening of the carriageway, potentially requiring removal of hedges or trees. The LHA preference is for the use of trenchless technology where practical to avoid impacts on the highway.	ECC, SCC	SR	Trenchless methods are not proposed beneath any of the highways. Works to larger roads would be completed in two sections using traffic management. Smaller roads would be closed during cable installation and a diversion put in place.

Comment	Consultee	Stage	Project Response
Construction Workers			
The TA needs to include details of construction workers, in terms of the number of workers, assumptions over commuting routes/home locations, assumptions regarding car sharing / sustainable transport. Consideration should be given to minibuses transporting workers to site to reduce impacts on the highway.	NH, SCC	SR/SC	The TA (application document 5.7) includes an assessment of traffic numbers associated with construction works. It sets out the assumptions that have been made regarding source location and car sharing / sustainable transport measures.
It is identified that census travel to work dataset is used to estimate construction staff mode share and to distribute car trips. Information is sought on whether this assessment method is appropriate for a transitory population. If the workforce is transitory it cannot be assumed, without further evidence, that they distribute in the same manner as the resident population.	SCC	SC	It has been assumed that all staff would be travelling to site by either single occupancy car or shared staff minibuses. The details of this are set out in the TA (application document 5.7).
Further information is sought on whether shift patterns are likely to be seasonal, and whether this has resulted in National Grid undertaking an assessment of the hour of greatest change.	SCC	SC	Staff shift patterns will not be seasonal and it has been assumed that they will remain consistent all year around.
A Workplace Travel Plan is requested.	ECC	TC	The CTMP (application document 7.6) sets out the information that would be included in a workplace travel plan including the measures to promote sustainable travel for workers.
Railway			
Construction traffic flow for the project could impact level crossings. Further impact to/at over-bridges, under-bridges and particularly railway level crossings to/from slip roads around the project a from increased levels of traffic flow due to the construction would need to be appropriately supervised.	NR	SC	National Grid is working with NR to agree the method that would be used at the railway crossing and the need for Protective Provisions.

Comment	Consultee	Stage	Project Response
Crossing the railway would require a Basic Asset Protection Agreement with NR to ensure that risks to the railway infrastructure are managed safely during construction. Protective Provisions will need to be agreed.	NR	SR/SC	National Grid is working with NR to agree the method that would be used at the railway crossing and the need for Protective Provisions.
Public Right of Ways			
The project should obtain accurate GIS data detailing the PRow network from the County Council's Definitive Map team to ensure all routes are identified correctly.	ECC, SCC	SR	The definitive PRow data was obtained from SCC and ECC in July 2022.
The EIA should include an assessment of the impacts on PRow, outdoor leisure pursuits, access land, common land and identify mitigation for any adverse impacts. Consideration should also be given to the potential impacts on any nearby National Trails.	ECC, NE, SCC	SR/SC	No common land, National Trails or access land are affected by the project. ES Chapter 12: Traffic and Transport (application document 6.2.12) assesses the effects on PRow. Further details on how PRow will be managed during construction can be found in the CTMP (application document 7.6).
PRow should be kept open using suitable safe operating procedures wherever possible. If closures to PRow are essential, then alternative routes should be provided and should not be of lower amenity than the PRow being replaced. A phased approach should be adopted for any closures with routes only closed for a minimum period when works require it. It is anticipated that this information would be provided in a PRow Management Plan.	BDC, ECC, NE, SCC	SR/SC/TC	ES Chapter 12: Traffic and Transport (application document 6.2.12) assesses the effects on PRow. Further details on how PRow will be managed during construction can be found in the CTMP (application document 7.6) and therefore a separate PRow Management Plan is not considered necessary.
The inclusion of vulnerable travellers in the assessment criteria for determining the sensitivity of receptors is welcomed, and their needs should be taken into account when diversions etc., are put in place.	SCC	SR	Noted.

Comment	Consultee	Stage	Project Response
The council welcomes additional PRow user surveys following initial surveys in 2013, which are considered outdated and as the PRow network has seen an increase in use since the original assessments were undertaken. Clarification is sought on whether the additional surveys carried out cover more than one specific day.	SCC	SR/SC	ES Chapter 12: Traffic and Transport (application document 6.2.12) summarises the results of the PRow surveys. These were undertaken on two separate days (one weekday and one weekend day).
The targeted consultation summary details that the new proposed cable alignment avoids PRow between Henny Back Road and Alphamstone but will impact four new PRow along the proposed temporary construction haul road.	BDC, ECC, NE	TC	Noted. ES Chapter 12: Traffic and Transport (application document 6.2.12) assesses the effects on PRow, including along the proposed temporary access route.
A pre and post condition survey must be carried out; where a PRow is impacted by the works. Any PRow will need to be restored to original condition or to a condition agreed with the Council. Where PRow cross the Order Limits, the surface must be kept in a safe and fit condition at all times for all users. Management measures should be included within the CTMP.	ECC, SCC	SR/SC	The CTMP (application document 7.6) references good practice measure GG06, which states that a full record of condition will be carried out of PRow within the Order Limits and this record will be available for comparison following reinstatement after the works have been completed to demonstrate that the standard of reinstatement at least meets that recorded in the pre-condition survey.
Mitigation and Management			
The application should include a CTMP, which should be developed through engagement with the statutory consultees. The submission should include relevant management documents in the form of an updated CoCP, a Construction Worker Travel Plan and an Access Management Plan.	ECC, NH, SCC	SR/SC	The draft CTMP and CoCP were issued to the RHA in autumn 2022 for comment and their responses were considered when preparing the application versions of the CTMP (application document 7.6) and CoCP (application document 7.5.1). The CTMP covers good practice measures for workers and PRow, therefore National Grid does not consider there is a need for a separate Construction Worker Travel Plan and an Access Management Plan.

Comment	Consultee	Stage	Project Response
Relevant controls, monitoring, and enforcement measures will need to be put in place to ensure that all HGV movements do not exceed those assessed within the application. The reporting system should include appropriate communication with the RHA and should make all reports publicly available. Controls and monitoring will also be needed on the HGV fleet used to ensure that it is compliant with EURO VI standards as indicated in the CoCP.	ECC, SCC	SR/SC	The CTMP (application document 7.6) describes the proposed monitoring and checks that would be undertaken by National Grid and its contractor during construction to check compliance with the CTMP.
Where mitigation, embedded in the project or otherwise is required or proposed by National Grid it is expected that this would be secured through Requirements or within supporting documents so that the authority and local community have confidence in the robustness of such measures.	SCC	SC	Good practice measures are set out in the CoCP (application document 7.5.1) and embedded measures and mitigation are set out in the REAC (application document 7.5.2). These are both appendices to the CEMP (application document 7.5) which is secured through Requirement 4 of the draft DCO (application document 3.1)
Where SCC is the RHA it will look to protect its role to enable it to discharge its legal duties and protect itself against future liabilities. This may be through a legal agreement with National Grid through DCO requirements, specific clauses of the management plans within the DCO or by the inclusion of protective provisions.	SCC	SR	Noted.
The project should seek to enhance the efficiency of the current road network serving rural communities, maintain and possibly improve the current deteriorating road surface and safety.	NwWPC	SR	Improvements and enhancements to the LRN are the responsibility of the RHA, in this case ECC or SCC.
A GG104 risk assessment will be required for any location where there is a significant increase in total traffic or increase in HGV.	NH	TC	It is not anticipated that there will be any significant increases in total traffic or HGVs, therefore a GG104 risk assessment is not required.

Comment	Consultee	Stage	Project Response
A stage one road safety audit and designers' response will be required for each access location. This should be provided prior to or in conjunction with the DCO.	ECC	TC	A generic design of a bellmouth that would be used on the project can be found in Design and Layout Plans Temporary Bellmouth for Access (application document 2.11.12). The access points would be designed to current road standards and a road safety audit would be undertaken by the contractor prior to construction.

13. Air Quality

13.1 Introduction

13.1.1 This chapter covers the responses received in relation to air quality including the assessment methodology and good practice measures and commitments.

13.2 Thematic and Other Meetings

13.2.1 No specific meetings have been held in relation to air quality on the project. The topic was covered in a general meeting with the LPA in March 2021, which outlined the scope of the assessment. No specific issues were raised in relation to air quality.

13.3 General Themes from Consultation Stages

13.3.1 Table 13.1 provides a summary of the feedback responses received in relation to air quality and how National Grid has had regard to these. This table should be read alongside ES Chapter 13: Air Quality (**application document 6.2.13**) which describes the baseline environment, methodology and the results of the impact assessment for air quality.

Table 13.1 – Feedback on Air Quality

Comment	Consultee	Stage	Project Response
General			
The assessment of the risk of air pollution and emissions on all receptors should be included in the ES, including how these are to be managed and reduced. The assessment should describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded.	BMSDC, NE, UK HSA	SR/TC	ES Chapter 13: Air Quality (application document 6.2.13) assesses the effects of the project on air quality. The CoCP (application document 7.5.1) includes good practice measures that would reduce emissions and avoid impacts on health.

Comment	Consultee	Stage	Project Response
Whilst screening of impacts using qualitative methodologies is common practice, where it is possible to undertake a quantitative assessment of impacts then this should be undertaken. Modelling using appropriate meteorological data and modelling taking into account local topography, congestion and acceleration should be undertaken.	UK HSA	SR	National Grid considers modelling to be unnecessary given than the project will not result in any significant air quality effects during operation and the construction effects can be reduced through good practice measures.
The ES should clearly identify the distance between the project and off-site receptors that may be affected by emissions. This should include consideration of any new receptors arising from future development.	UK HSA	SR	ES Chapter 13: Air Quality (application document 6.2.13) follows the Institute of Air Quality Management (IAQM) guidance for the impact assessment and includes the assessment on sensitive receptors within 350m of the project. It does not include the consideration of new receptors from future development as the project would not result in significant sources of emissions during operation.
The Council suggests that the proposed scope of the assessment include the operational vehicle emissions, construction generators and construction dust in order to better inform the cumulative assessment with other projects in the area.	SCC	SR	ES Chapter 13: Air Quality (application document 6.2.13) assesses the effects of the project on air quality. This includes the assessment of air quality from construction vehicles and generators and from dust.
The Council agrees that there would be no significant potential for releases to air at the operational stage and the construction phase will be assessed in accordance with IAQM guidance which is appropriate.	BDC	SR/SC	Noted.
Emissions from Construction Traffic			
There is a potential for construction traffic to cause significant impacts on air quality due to the movement of vehicles to and from site that may add to the cumulative impact in areas where Air Quality Objective levels are exceeded. This includes the Cross Street Air Quality Management Area (AQMA). There should be consideration of impacts on existing areas of poor air quality e.g. AQMA or Clean Air Zones (CAZ).	BMSDC, UK HSA	SR	Good practice measure AQ01 in the CoCP (application document 7.5.1) states that construction traffic will not be routed through Sudbury AQMA. There are no CAZ within the study area (see ES Chapter 13: Air Quality (application document 6.2.13) for further details).

Comment	Consultee	Stage	Project Response
It is noted that no construction traffic will be routed through the Cross Street AQMA in Sudbury. This should be included in the CTMP together with acceptable monitoring, reporting and enforcement.	SCC	SC	Good practice measure AQ01 in the CoCP (application document 7.5.1) states Construction traffic will not be routed through Sudbury AQMA. The CTMP (application document 7.6) sets out the checks and monitoring that would be undertaken in relation to construction traffic during construction.
Dust			
Measures to manage dust and other potential impacts on air quality that have been scoped out of the ES will be covered in the CoCP, CTMP and CEMP. The Council is satisfied that the scoping has been carried out using the appropriate guidance and is satisfied that the proposals are satisfactory.	BMSDC	SR	Noted.
All areas relating to air quality should remain scoped into the EIA until the CEMP has been developed and reviewed. This is particularly important for dust and other matter generated during construction. National Grid should ensure that there are robust mechanisms in place to respond to any complaints made during construction, operation, and decommissioning of the facility.	SCC	SR	The CEMP (application document 7.5) includes the measures proposed to reduce risks of dust and emissions during construction. It also outlines the monitoring that would be undertaken during construction and mechanisms for any complaints.
The CoCP GG10 states, ' <i>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, will be located away from sensitive receptors such as residential properties or ecological sites where practicable</i> '. However, dust and other matter generated during construction can travel significant distances and when combined with current levels could pose a significant risk. Moving the issue away from an area is not a measure to manage it, and this will not be possible in every instance.	SCC	SR	National Grid recognise that there will be instances where GG10 in the CoCP (application document 7.5.1) is not practicable. However, this GG10 is only one of a number of measures to reduce dust e.g. GG17 (wheel washing) and GG18 (water suppression of stockpiles). ES Appendix 13.1: Dust Risk Assessment (application document 6.3.13.1) demonstrates that there would be no significant effects from dust following implementation of the good practice measures in the CoCP.

14. Noise and Vibration

14.1 Introduction

14.1.1 This chapter covers the responses received in relation to noise and vibration including assessment methodology, mitigation, and the GSP substation.

14.2 Thematic and Other Meetings

14.2.1 No specific meetings have been held in relation to noise and vibration on the project. The topic was covered in a general meeting with the LPA in March 2021, which outlined the scope of the assessment. No specific issues were raised in relation to noise and vibration.

14.3 General Themes from Consultation Stages

14.3.1 Table 14.1 provides a summary of the feedback responses received in relation to noise and vibration and how National Grid has had regard to these. This table should be read alongside ES Chapter 14: Noise and Vibration (**application document 6.2.14**) which describes the baseline environment, methodology and the results of the impact assessment for noise and vibration.

Table 14.1 – Feedback on Noise and Vibration

Comment	Consultee	Stage	Project Response
General Process and Method			
Construction noise (including traffic noise) and vibration are scoped into the ES, while all other identified noise and vibration sources are scoped out. The Councils are satisfied that the methodology considers the correct guidance and has scoped in the appropriate matters into the assessment. Having reviewed the methodologies for the assessment and the results we are satisfied with the conclusions of the preliminary assessment that no significant impacts are likely when considering duration of exposure.	BDC, BMSDC	SR/SC	Noted. ES Chapter 14: Noise and Vibration (application document 6.2.14) presents the results of the noise assessment and also the assumptions used.

Comment	Consultee	Stage	Project Response
The EIA should consider impact of construction noise on sensitive receptors and suggested mitigation (including best available techniques (BAT)). The assessment should be focussed on the noisier works, such as percussive piling and trenchless crossings but also should consider other work and whether there is a need for night-time working. Full noise level details will need to be provided and should include maximum noise levels as well as average noise levels and frequency spectrums of the construction plant noise sources.	BDC, SCC	SR/SC	ES Chapter 14: Noise and Vibration (application document 6.2.14) presents the results of the noise assessment and proposed mitigation. BAT in relation to noise are also outlined within the CEMP (application document 7.5).
The Council would normally suggest that baseline data has a shelf life of 2-3 years. However, in this case it is only necessary to establish the construction phase noise limit. BS5228-1:2009+A1:2014 only requires projects to determine if the existing ambient sound level at receptors is below 65dB(A) for the construction phase assessment. It is stated in the PEI Report (and agreed) that most receptors are in a rural area, and therefore, the noise level at receptors is considered to be less than 65dB(A). Therefore, the 2013 baseline data is considered appropriate to support this assessment.	BDC	SC	The use of the 65dB(A) threshold has been used as the basis of the assessment presented in ES Chapter 14: Noise and Vibration (application document 6.2.14). Updated baseline noise surveys have been undertaken around the GSP substation to help inform the assessment of operational noise at this location. The results are presented in ES Appendix 14.4: GSP Substation Noise Assessment (application document 6.3.14.4).
The calculations include fixed and mobile plant. It is noted that fixed plant such as generators have an 'on-time' of 90%. However, typically generators would be left on continuously during construction. Therefore, the calculations should be revised with the on-time set to 100%, to ensure the calculations are robust. Further, a reduction for noise screening has been applied to the majority of fixed plant, however, our experience of construction sites shows that noise screening measures are not typically well installed and maintained.	BDC	SC	Construction noise calculations for activities including plant items such as generators and water pumps have been updated such that their 'on-time' is 100%. Table 15.1 in the CEMP (application document 7.5) notes the list of checks that would be undertaken in relation to noise, which include visual checks of noise barriers to check for damage that could reduce the effectiveness.
Due to the temporary nature of the construction haul road, its construction could be susceptible to potholes and undulations, which could lead to additional noise from the banging of loads and vehicle wheels.	BDC	TC	Noise associated with the temporary access routes is considered as part of the noise assessment presented in ES Chapter 14: Noise and Vibration (application document 6.2.14).

Comment	Consultee	Stage	Project Response
No noise assessment seems to have been done on ecological receptors, however this could be potentially scoped out.	BDC	SC	Noise effects on ecological receptors are considered in ES Chapter 7: Biodiversity (application document 6.2.7).
National Grid should consider Noise Important as some of these locations may be subject to construction traffic originating from this project.	SCC	SC	Noted. These have been considered in ES Chapter 14: Noise and Vibration (application document 6.2.14).
Core working hours are deemed acceptable in general however, where works are to occur close to noise sensitive receptors and adverse impacts are likely to be observed noisy plant and works should not start before 08:00 hours. It is recognised that the nature of the works may lead to the need for noisy works to occur outside of core hours. Where this is anticipated the local authority should be notified. If works are likely to be of long duration, and/or continue into the late evening or night-time hours Section 61 application should be made.	BMSDC	SC	The CEMP (application document 7.5) notes that there may be circumstances where Section 61 applications may be required.
Vibration			
Construction vibration could also affect sensitive biodiversity receptors.	NE	SR	Vibration effects on ecological receptors is considered in ES Chapter 7: Biodiversity (application document 6.2.7).
Vibration during construction needs to be assessed, especially in relation to piling activities e.g. at pylon locations. This has been identified in the PEI Report to not cause a significant adverse effect at receptors. However, the criteria to determine a significant adverse effect is thought to be too high, and a lower threshold should be considered.	BDC	SC	The assessment on vibration is presented in ES Chapter 14: Noise and Vibration (application document 6.2.14). The assessment is based on guidance and criteria provided in BS 5228-2:2009+A1:2014 and has concluded that there are no significant effects in relation to vibration with best practice measures (BPM) in place.

Comment	Consultee	Stage	Project Response
GSP Substation			
Noise effects from the GSP substation during operation (including emergency diesel generators) have not yet been quantified, nor have the noise levels after mitigation been identified either. It is expected that further details will be provided regarding embedded noise mitigation, and a consideration of operational phase noise.	BDC, GPC, NE	SR/SC	Operational noise from the substation is presented in ES Appendix 14.4: GSP Substation Noise Assessment (application document 6.3.14.4). This concludes that there are no significant effects during operation, with the noise enclosure embedded into the design (EM-H01) (see the REAC (application document 7.5.2) for further details).
The noise assessment should consider transformer hum from the GSP substation, particularly in terms of the low thresholds at night in a rural area. No dominant tonal noise should be created.	BDC, GPC	SR	Noted. ES Chapter 14: Noise and Vibration (application document 6.2.14) presents the results of the noise assessment. Additional penalties have been applied, in accordance with BS 4142:2014+A1:2019, to take account of the potential tonal nature of transformers.
The temporary haul road off the A131 could potentially have frequent HGV movements close to existing receptors, which are likely to have low existing ambient and background sound and vibration levels. Therefore, any noise and vibration from the movement of HGV on this road could cause a significant adverse effect. A detailed noise assessment would be required including computer noise modelling, to adequately determine the likely impacts.	BDC	TC	An assessment of noise impacts from construction traffic on temporary access routes is provided in ES Chapter 14: Noise and Vibration (application document 6.2.14) and Appendix 14.2: Construction Traffic Noise and Vibration Assessment (application document 6.3.14.2).
Before the GSP substation comes into operational use, a noise assessment needs to be undertaken including modelling to demonstrate that the rating level of sound emitted shall not exceed background sound levels taken as a 15 minute LA90 at the nearest sound sensitive premises at all times. Where access to the nearest sound sensitive property is not possible, measurements shall be undertaken at an appropriate location and corrected to establish the noise levels at the nearest sound sensitive property.	BDC	TC	ES Appendix 14.4: GSP Substation Noise Assessment (application document 6.3.14.4) presents the results of noise assessment for the GSP substation. This concludes that there are no significant effects during operation, with the noise enclosure embedded into the design (EM-H01) (see the REAC (application document 7.5.2) for further details).

Comment	Consultee	Stage	Project Response
<p>The Scoping Report is almost dismissive of operational noise at the GSP substation, which will be continuous in an area where noise levels are low. There is anecdotal evidence to suggest that the local geology is such as to allow long distance ground propagation of low frequency noise. No geological information is given and there has been no ground transmission testing at the proposed sites.</p>	GPC	SR	<p>ES Appendix 14.4: GSP Substation Noise Assessment (application document 6.3.14.4) presents the results of the noise assessment for the GSP substation. This concludes that there are no significant effects during operation, with the noise enclosure embedded into the design (EM-H01) (see the REAC (application document 7.5.2) for further details).</p>
Mitigation			
<p>Noise and vibration mitigation measures will be included within the CoCP, CEMP and CTMP. This is suitable method of mitigating noise from the construction phase. The Council is satisfied that the guidance, assessment methodologies and mitigation proposals are satisfactory.</p>	BMSDC	SR/SC	<p>Noted. The CEMP (application document 7.5) contains the good practice measures for reducing noise and where additional mitigation may be required.</p>
<p>The PEI Report states that BAT will be employed. However, further details of how the screening will be maintained, moved, and positioned would be beneficial.</p>	BDC	SC	<p>Exact details on the screening proposed, how this would be maintained, moved and positioned would be decided by the future contractor within the parameters set out within the CEMP (application document 7.5).</p>

15. Cumulative Effects

15.1 Introduction

15.1.1 This chapter covers the responses received in relation to cumulative effects including the inclusion/exclusion of specific proposed developments in the CEA and the zone of influence (ZOI) set for the assessment.

15.2 Thematic and Other Meetings

15.2.1 No specific meetings have been held in relation to cumulative effects on the project. National Grid issued a technical note to the relevant planning authorities on the methodology proposed for undertaking the CEA, along with the long list of developments at that time. No specific feedback was received on the technical note.

15.3 General Themes from Consultation Stages

15.3.1 Table 15.1 provides a summary of the feedback responses received in relation to cumulative effects and how National Grid has had regard to these. This table should be read alongside ES Chapter 15: CEA (**application document 6.2.15**) which describes the baseline environment, methodology and the results of the cumulative effects assessment.

Table 15.1 – Feedback on Cumulative Effects

Comment	Consultee	Stage	Project Response
General Comments			
The Scoping Report primarily focuses on assessing inter-project effects with other developments, as the construction phase and operation phase of the project would not overlap. BDC would agree that the ES should focus on inter-project effects. However, the intra-project cumulative impacts of the development on its own must still be considered fully within the ES.	BDC	SR	Both inter and intra-project cumulative effects have been considered and assessed in ES Chapter 15: CEA (application document 6.2.15).

Comment	Consultee	Stage	Project Response
National Grid is encouraged to liaise with the Councils to identify committed developments that should be included in the assessment.	ESC, SCC, BDC	SR	The method for identifying proposed developments in the CEA was set out in the Scoping Report (application document 6.5) and responses on this, including suggestions for additional developments to include, were included in the long and short list presented in the PEI Report at statutory consultation. The engagement and matters agreed in this respect are set out in detail in the LPA SoCG (application document 7.3.1).
The Scoping Report states that Tier 3 development will be excluded from the shortlist due to lack of information. It is considered that a more considered and project specific approach should be taken in relation to NSIP, as there may be sufficient information available for a partial assessment.	ESC, SCC, BDC	SR	ES Chapter 15: CEA (application document 6.2.15) describes the data available for undertaking the CEA including publicly available information on the planning portals. By their nature, Tier 3 projects are very early in their development and are unlikely to have sufficient designs or assessment available on which to base an assessment.
The Council understands that there is a need for a cut off to allow National Grid to finalise the CEA for application. However, consideration should be given to any significant changes in relation to the project list during the examination process, given its typical length.	ESC	SR	ES Chapter 15: CEA (application document 6.2.15) has applied 31 January 2023 as the cut-off date for finalising the list of other developments for the CEA in the application. However, National Grid will continue to monitor proposed developments during Examination and where necessary would update the CEA accordingly.
The Council remains concerned about the cumulative impacts with other development within the area, and the superficial nature of the ‘sifting’ exercise undertaken to identify interproject effects. This has led to major energy projects that are currently being proposed being discounted from further assessment, notwithstanding their scale and their significant socio-economic impacts on large parts of the Suffolk economy and skills base (including tourism).	SCC	SC	The methodology is based on the process set out in Planning Inspectorate Advice Note 17 (Planning Inspectorate, 2019), as described in ES Chapter 15: CEA (application document 6.2.15). The assessment considers a number of major energy projects within the region.

Comment	Consultee	Stage	Project Response
The project needs to consider the cumulative impact of the Bramford to Twinstead Reinforcement in conjunction with other proposed developments, including the proposed East Anglia GREEN (Norwich to Tilbury project), other NSIP and the National Grid works at Bramford Substation.	APC, BDC, BMSDC, BSMPC, BurPC, ECC, ESC, HCPC, HMTPC, LaPC, LePC, NE, NH, UK HSA, PoPC, SCC, SpPC	SR/SC/TC	ES Chapter 15: CEA (application document 6.2.15) considers the cumulative effects of the project with other proposed developments, including other NSIP (including East Anglia GREEN) and the works proposed at Bramford Substation.
It is considered that a full wirescape design review in the Bramford area is essential, involving both this project, East Anglia Green, as well as the UKPN 132kV network in this area. This is necessary to identify further options for mitigation and infrastructure reduction, to minimise adverse impacts on the host communities.	SCC	TC	ES Chapter 15: CEA (application document 6.2.15) considers the cumulative landscape and visual effects of the project with other proposed developments.
There are a number of proposed developments around Bramford Substation, that will have a detrimental impact on the landscape. The principal objective for all parties is to compensate for the landscape impact of the development by providing a long-term legacy of landscape compensation. Collectively National Grid along with other developers should be exploring mitigation measures and enhancements within the wider landscape.	BDC, SCC	TC	ES Chapter 15: CEA (application document 6.2.15) recognises that there is the potential for significant cumulative effects around Bramford Substation.

Comment	Consultee	Stage	Project Response
Consideration needs to be given as to which developments should be treated as committed or in a cumulative impact scenario.	SCC	SR/SC	ES Appendix 15.1: Cumulative Effects Baseline (application document 6.2.15) provides a list of the projects that have been treated as committed (and are therefore assessed in the future baseline within the ES topic chapters).
Zone of Influence			
Projects beyond the 10km Zone of Influence (ZOI) may be relevant in terms of the CEA and therefore all relevant large-scale projects, especially NSIP, within 50km be considered, including Sizewell C and the A12 Improvements.	BDC, BMSDC, ECC, ESC, NE, SCC	SR/SC	The study area for NSIP has been set at 50km in order to identify NSIP within the region. No major developments have been identified in the CEA that warrant consideration beyond 10km for the reasons outlined within ES Chapter 15: CEA (application document 6.2.15).
The councils consider NSIP beyond the ZOI identified have the potential to have cumulative effects in terms of traffic and transport, socio-economics and tourism and these should be fully considered within the ES.	ESC, BDC	SR	The study area for NSIP has been set at 50km in order to identify NSIP within the region. The NSIP identified are included in ES Appendix 15.3: Long List of Other Developments (application document 6.3.15.3). Justification is provided in ES Appendix 15.4: Shortlist of Other Developments (application document 6.3.15.4) as to which of the NSIP have been progressed to Stage 3 and 4 of the CEA.
The Scoping Report highlights that professional judgement will be used to determine whether other proposed developments should be scoped into or out of the assessment. BDC have no objection in principle to this approach, providing that it is undertaken by a competent EIA practitioner and that suitable justification is provided within the ES as to why some developments were discounted in the ZOI.	BDC	SR	The CEA presented in ES Chapter 15: CEA (application document 6.2.15) has been undertaken by a competent EIA practitioner and justification is given for the statements presented in the assessment.

Comment	Consultee	Stage	Project Response
<p>There are concerns about the ZOI set at 1km from biodiversity, socio economics, recreation and tourism and that effects could extend much further than this distance. The CEA should be based on consideration of the effects on receptors rather than applying arbitrary distances. Consideration should be given to using the SLA and other natural features.</p>	<p>ESC, HCPC, LaPC, LePC, NE, SpPC</p>	<p>SR</p>	<p>The ZOI used for the CEA have been set in consultation with the relevant environmental topic specialists. Justification is provided in ES Chapter 15: CEA (application document 6.2.15) for the ZOI used in the CEA. Distances are useful as a starting point for identifying baseline features, however the CEA (e.g. the tables presented in ES Appendix 15.5: Inter-Project CEA (application document 6.3.15.5)) considers pathway to effect and not just arbitrary distances.</p>
<p>For transport effects, major developments outside of the 10km study area can still have cumulative effects, especially at major transport interchanges, such as A14/A12 Copdock.</p>	<p>ESC, SCC</p>	<p>SR</p>	<p>Noted, however the TA (application document 5.7) has demonstrated that the affected road network of the project is relatively contained to the roads up to the A12 and A14. Therefore, the 10km study area is considered appropriate. The A14/A12 Copdock Junction has been considered as part of the assessment.</p>

16. Net Gain

16.1 Introduction

16.1.1 This chapter covers the responses received in relation to net gain including discussions on the policy and legislation around net gain and suggestions as to how net gain can be delivered on the project. National Grid has a target to deliver at least 10% net gain (including biodiversity) on its projects.

16.2 Thematic and Other Meetings

16.2.1 Net gain has been discussed at the thematic meetings for both ecology and landscape, including describing the method to be used for quantifying loss and gain using the Biodiversity Metric 3.1 (Natural England, 2022) and potential locations for delivering on site enhancements. A meeting was held with environmental bodies in November 2021, at which the enhancement locations were presented, and feedback was received about these locations and other suggested areas.

16.3 General Themes from Consultation Stages

16.3.1 Table 16.1 provides a summary of the feedback responses received in relation to net gain and how National Grid has had regard to these. This table should be read alongside the Environmental Gain Report (**application document 7.4**) which outlines how National Grid intends to meet its 10% net gain target on the project. A number of the responses specifically reference biodiversity net gain (BNG) which is calculated by using the Biodiversity Metric (the current version is 3.1) to quantify the habitats lost and gained on the project.

Table 16.1 – Feedback on Net Gain

Comment	Consultee	Stage	Project Response
Policy and Process			
These bodies welcome National Grid's target to seek 10% net gain and the proposed use of Defra Metric v 2.0 or its successor. Although NSIP are not required to provide BNG, National Grid should seek opportunities for local habitat enhancement and creation including, but not limited to, designated sites and wildlife corridors.	BDC, BMSDC, DVSVP, EA, ECC, NE, SCC	SR/SC	National Grid is using the Biodiversity Metric 3.1 (Natural England, 2022) to calculate BNG on the project and to quantify the amount of habitat enhancement required to meet the 10% target. Further details on the methodology can be found in the Environmental Gain Report (application document 7.4).

Comment	Consultee	Stage	Project Response
Delivering BNG is in line with the direction of policy given its reference in documents including NPS EN-1, the Environmental Bill, the upcoming revisions to the NPS, the 25 Year Environment Plan and the NPPF.	ECC, NE, SCC	SR/SC/TC	Noted. National Grid is committed to delivering 10% net gain on the project. Further details on the methodology can be found in the Environmental Gain Report (application document 7.4).
The councils note that there is a requirement included in the Ofgem RIIO-2 determination to deliver net gain and other natural capital benefits. It is welcomed that these targets will be met for this project and note that the Government's biodiversity metric will be used. Would the project use National Grid's own evaluation process or a similar metric?	BDC, ECC	SC	National Grid has committed to delivering at least 10% BNG on the project. The project has used the Biodiversity Metric 3.1 (Natural England, 2022) to evidence this. Further details can be found in the Environmental Gain Report (application document 7.4).
Considering the scale of this project across the landscape, National Grid should commit to a higher percentage of BNG on the project. The Wildlife Trusts is advocating for 20% BNG, which should be considered to help ensure that long-term impacts to biodiversity are avoided.	SWT	SC	National Grid has a duty to be economic and efficient and to keep costs down for its customers. Although delivering net gain is not currently a requirement on NSIP, National Grid has committed to delivering 10% net gain as a corporate target but would not be seeking to deliver more than this amount.
Mitigation and compensation is likely to be considerable due to the impacts to multiple Priority Habitats and protected species and it will make National Grid's commitment to delivering 10% BNG extremely challenging to achieve.	RSPB, SWT	SC	National Grid has avoided a large number of habitats through its routing and through the commitments made on the project. Mitigation proposals regarding habitats are set out in ES Chapter 7: Biodiversity (application document 6.2.7), which is considered separately to any net gain. National Grid is confident that it can deliver 10% net gain on the project. Further details can be found in the Environmental Gain Report (application document 7.4).
The Biodiversity Net Gain Good Practice Principles For Development (CIEEM, CIRIA and IEMA) should be considered.	ECC, NE	SR	This guidance was considered when developing the proposals for net gain on the project as described in the Environmental Gain Report (application document 7.4).

Comment	Consultee	Stage	Project Response
The ecological baseline must be gathered in order to avoid the net gain areas having a negative impact on any protected species and habitats present, or that may use these sites for foraging and/or commuting.	SCC	SR/SC	The net gain sites have been chosen in discussion with ecologists to confirm that the proposals would not have a negative effect on existing habitats and species. The areas chosen are generally arable land with limited existing biodiversity value. Further details can be found in the Environmental Gain Report (application document 7.4).
These bodies welcome inputs to the design and choice of species at enhancement sites, to ensure that habitat creation for this project is successful and that habitats are managed in the long-term to ensure the best outcomes for biodiversity. The site must be surveyed to establish a baseline and a plan provided showing how BNG will be achieved. Such a plan must also show full details of monitoring and maintenance.	BMSDC, SCC, SWT	SR/SC	Environmental surveys have been undertaken as part of the suite of surveys undertaken for the DCO to establish a baseline. The Environmental Gain Report (application document 7.4) sets out the proposed measures including details as to how these would be monitored and maintained.
It is important to highlight that it will not be possible for the project to achieve overall BNG if Option 2 is chosen, due to the loss of irreplaceable habitat.	SWT	TC	This feedback was considered as part of the decision not to progress with Option 2 in the application for development consent. The environmental effects associated with the different options are presented in ES Chapter 3: Alternatives Considered (application document 6.2.3).
Options			
It is noted that the net gain proposals include improved PRoW connectivity with the Hadleigh Railway Walk. This is welcomed and SCC would welcome further discussions regarding the areas highlighted and potential further mitigation.	SCC	SC	Improvements to Hadleigh Railway Walk were considered as part of the long list of options. However, this location was not taken forward to the short list, which includes other locations where National Grid consider the target can be better met.

Comment	Consultee	Stage	Project Response
NE encourages projects to incorporate measures to help encourage people to access the countryside for quiet enjoyment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways are to be encouraged along with improved links to other green networks and wider green infrastructure.	NE	SR	Noted. Site ENV11: The Painters Trail is a location where the enhancements are designed to improve recreational enjoyment of the countryside. Further details can be found in the Environmental Gain Report (application document 7.4).
The AONB has identified four Nature Recovery Zones that fall within or close to the current Scoping Boundary for the project and include Polstead (Zone A), River Brett (Zone B), Arger Fen and Tyger Hill (Zone 3) and River Box (Zone I). Hazel Dormouse has also been chosen as the flagship recovery species for the Dedham Vale AONB.	DVSVP, ECC	SR	Noted. Further details on the proposals at specific sites can be found in the Environmental Gain Report (application document 7.4). These include habitats that would benefit dormouse and also proposals at the River Box.
Significant river corridor enhancements should be implemented where there are open cut crossings of watercourses. There may be opportunities to improve natural river function and riparian habitats and, where appropriate, restore river-floodplain connectivity in order to deliver multiple environmental benefits. The project should use the Defra Metric for rivers in order to fully assess the impact on all watercourses affected.	EA	SC	The main rivers would be crossed by either overhead lines or National Grid has used the Biodiversity Metric 3.1 (Natural England, 2022) to assess the impact of the project on watercourses. Further details can be found in the Environmental Gain Report (application document 7.4).
ENV03 - ENV05 (options surrounding Hintlesham Woods SSSI) are particularly positive, aligning closely with the principles of the Nature Recovery Network and the principles of the Lawton Review.	NE	SC	Noted. Further details on the proposals at specific sites can be found in the Environmental Gain Report (application document 7.4).

Comment	Consultee	Stage	Project Response
The Council notes that the project is relying on works within the Order Limits to achieve net gain, which could be self-limiting in its impacts. Much of this effort would be concentrated around the CSE compounds.	SCC	SC / TC	National Grid has sought to deliver enhancements close to the project, in line with guidance that states environmental value diminishes with distance. National Grid requires the areas to be located in the Order Limits, which are extended to include the net gain areas, in order to gain the required powers to implement the proposals. Efforts have been concentrated around the GSP substation and CSE compounds, on land that National Grid would manage during operation and therefore would secure the benefits of the sites in the long term. Further details can be found in the Environmental Gain Report (application document 7.4).
A large part of the draft Order Limits is identified as having important farmland bird assemblages including red listed Birds of Conservation Concern. The scale of this project across the arable landscape of south Suffolk means there is huge potential to improve the fortunes of these declining farmland bird species, including turtle dove. Enhancements should be targeted to support these key species.	RSPB, SWT	SR / SC	Further details on the proposals at specific sites can be found in the Environmental Gain Report (application document 7.4) including which species the habitats are targeting.
Mitigation planting is welcomed at Hintlesham Hall but further consideration should be given to grassland and tree planting in order to recreate Priority habitat wood pasture and parkland as part of BNG target for the project.	BMSDC, SCC	SC	The enhancement proposals at Hintlesham Hall are designed to complement the existing parkland character and enhance key views. National Grid has sought to balance the enhancement proposals against the loss of farmland and impacts to businesses that would result from more extensive enhancement proposals in this area. Further details can be found in the Environmental Gain Report (application document 7.4).

Comment	Consultee	Stage	Project Response
Funding for Net Gain or Other Initiatives			
National Grid could contribute financial support to the local communities/initiatives or an Environmental Improvement Fund for providing community woodlands, tree and hedgerow planting, the establishment of traditional orchards and the enhancement of wildlife habitats. Community groups, parish councils and voluntary sector organisations would be encouraged to make applications to this fund.	BMSDC, SpPC	SR/SC/TC	The DCO process requires National Grid to deliver mitigation that is required to offset significant effects on the project. National Grid also has a target to deliver 10% net gain. National Grid has a community grant programme where local communities can apply for funding for local projects. Further details can be found on the Community Grant Programme page of the National Grid website here: www.nationalgrid.com/responsibility/community/community-grant-programme
The Council would normally anticipate, in addition to a s106 mitigation strategy, funding by the project promoter of a community benefit scheme. However, it is understood that as a business regulated by Ofgem, National Grid's community benefits are included as part of the current RII02 settlement 2021 – 2026 and delivered through National Grid's corporate Community Grant Programme. Notwithstanding this scheme, the Council considers that an additional community benefit scheme for this project should be provided.	SCC	SC /TC	National Grid has not identified the need for any s106 agreements for the project. Separate discussions are being held with the councils regarding opportunities for community benefits which would sit outside of the DCO.
The Stour Valley Environment Fund supports charities and voluntary groups working to enhance the environment in the Stour Valley and the Dedham Vale AONB Sustainable Development Fund distributes grants for projects that benefit the environmental, economic and social wellbeing of the AONB. National Grid should consider making a contribution to these funds to compensate for impacts on the AONB.	DVSVP	SC	As set out in ES Chapter 6: Landscape and Visual (application document 6.2.6), no residual significant effects have been identified in relation to the AONB, its purpose or special qualities and therefore no compensation (funding or otherwise) would be required.

Comment	Consultee	Stage	Project Response
<p>In 2012, SCC asked for an Environmental Improvement Fund from National Grid to deliver planting and wildlife habitat enhancements alongside the project proposals. Since the adoption of its Biodiversity Motion in December 2020, the Council requires projects to deliver measurable enhancements to habitats.</p>	SCC	SR	<p>As set out in the Environmental Gain Report (application document 7.4), National Grid is intending to deliver enhancements as part of meeting its 10% net gain target, which would be in line with the Biodiversity Motion.</p>

17. Other Topics

17.1 Introduction

17.1.1 This chapter covers the responses received in relation to other environmental topics including: major accidents; climate change and adaptation; health and wellbeing; and socio-economics and tourism.

17.2 Thematic and Other Meetings

17.2.1 No specific meetings have been held in relation to these topics on the project. General environmental matters were covered in a meeting with the LPA in March 2021. Climate change, in relation to resilience and adaptation to flooding, has been discussed through the meetings with the EA and the LLFA. No other meetings have been held in relation to these topics.

17.3 General Themes from Consultation Stages

17.3.1 Table 17.1 provides a summary of the feedback responses received in relation to the other topics listed in paragraph 17.1.1 and how National Grid has had regard to these.

Table 17.1 – Feedback on Other Topics

Comment	Consultee	Stage	Project Response
Major Accidents			
The Infrastructure Planning (EIA) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed project's vulnerability to major accidents.	HSE	SR	ES Appendix 5.3: Major Accidents and Disasters Scoping (application document 6.3.5.3) presents the assessment of the project's vulnerability to major accidents.
The company set out the safety requirements that need to be complied with to protect the gas and electricity transmission networks. The response included references to relevant guidance in relation to working safely near to existing overhead lines.	NG (Gas division)	SR	The project has been designed in accordance with National Grid guidance. Risk assessments have been undertaken on the design and further risk assessments would be undertaken by the contractor on the project.

Comment	Consultee	Stage	Project Response
The application should include information about how National Grid would respond to accidents with potential off-site emissions (e.g. flooding or fires, spills, leaks or releases off-site). The assessment of accidents should identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.	UK HSA	SR	ES Appendix 5.3: Major Accidents and Disasters Scoping (application document 6.3.5.3) assesses the risk of accidents. The CEMP (application document 7.5) outlines the measures that would be in place during construction to reduce the risk of an accident during construction. Existing National Grid processes cover risks of accidents during operation and decommissioning.
National Grid should consider the Control of Major Accident Hazards (COMAH) Regulations and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations both in terms of their applicability to the project itself, and the project's potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations.	UK HSA	SR	ES Appendix 5.3: Major Accidents and Disasters Scoping (application document 6.3.5.3) notes that the nearest COMAH site is located approximately 6.1km from the project, and would not be affected by the project.
Parts of the project area lie within the consultation zones of two Major Accident Hazard Pipelines which are both operated by Cadent Gas: <ul style="list-style-type: none"> • Bramford/Langham (HSE reference 7424); and • Great Carnard/Fordham (HSE reference 7429). 	CG, HSE	SR	Noted. These have been included in the assessment presented in ES Appendix 5.3: Major Accidents and Disasters Scoping (application document 6.3.5.3).
Cadent Gas has no objection to the project. Cadent Gas has a number of pipelines, including a high pressure gas pipeline, within the Order limits and will require appropriate protection including compliance with relevant standards for works proposed within close proximity of its apparatus. Where diversions of apparatus are required to facilitate the scheme, discussions between parties should be started at the earliest opportunity.	CG	SR	Noted. Protective Provisions are being agreed with Cadent Gas Limited.
Climate Change and Adaptation			
It is acknowledged that the project will help achieve climate targets by enabling a greater proportion of new renewable energy to Braintree District and beyond.	BDC	SC	Noted.

Comment	Consultee	Stage	Project Response
The changes to the EIA Regs in 2017 require a description of the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. It is also backed up by case law which states this is now a consideration for NSIP.	ECC	SR	A main driver for the project is to facilitate green energy connections in line with the Government targets for 50GW by 2030. ES Appendix 4.3: Greenhouse Gas Assessment (application document 6.3.4.3) presents the results of the greenhouse gas assessment (impacts on climate). The assessment of the vulnerability of the project to climate change is considered in the FRA (application document 5.5) and ES Appendix 5.3: Major Accidents and Disasters Scoping (application document 6.3.5.3).
The ES should describe and assess the adaptive capacity that has been incorporated into the design of the project. This may include, for example, alternative measures such as changes in the use of materials or construction and design techniques, that will be more resilient to risks from climate change.	ECC	SR	ES Appendix 4.1: Good Design (application document 6.3.4.1) sets out the good design measures that have been identified through the design process. The components proposed (pylons and underground cables) have a high resilience to climate change.
The project should show how it can achieve zero carbon during its lifetime from construction to implementation and contribute to net carbon gain. Measures to avoid, prevent, mitigate and to seek to offset significant carbon impact must be ensured, including the adaption to its effects, such as protecting communities from water shortages, flooding and heatwaves. National Grid should have knowledge of the Essex Climate Action Commission, their values and objectives and the implications for the future aspirations of the development.	ECC	SR	A main driver for the project is to facilitate green energy connections in line with the Government targets for 50GW by 2030. ES Appendix 4.3: Greenhouse Gas Assessment (application document 6.3.4.3) presents the results of the greenhouse gas assessment (impacts on climate). The MWMP (application document 7.7) sets out additional measures that would be undertaken by the contractor to reduce carbon emissions during construction.
Further details are requested regarding the lifecycle carbon footprint for construction and delivery of the project, including further details on how the assessment will be conducted and the methodology and the verification process of the study.	ECC	SC	The estimated carbon for both construction and operation is provided in ES Appendix 4.3: Greenhouse Gas Assessment (application document 6.3.4.3) along with the methodology that has been used to calculate this.

Comment	Consultee	Stage	Project Response
The Council is concerned that the question of microclimates around lines has not been explored. The waste of heat from transmission lines, when energy efficiency is central to any proposal, cannot be ignored. An explanation of how generated heat in underground schemes could be potentially stored and used would also be helpful.	LCPC	SR	Underground cables are larger than overhead conductors, which is to reduce the electrical resistance and therefore the amount of heat produced. Furthermore, special insulation is used to maintain the cable rating. Substantial engineering measures are taken to reduce as much as possible the loss of heat energy from buried cables.
Health and Wellbeing			
The 2017 EIA Regulations clarify that the likely significant effects of a project on population and human health must be assessed. It is expected that the ES would include a chapter on human health in addition to an assessment on the impact on human health for each of the other topic chapters within the ES.	SCC, UK HSA	SR	Health was scoped out of the ES as a standalone chapter at the Scoping Stage as it was considered that there were unlikely to be significant effects during construction or operation. This was confirmed in the Scoping Opinion received from the Planning Inspectorate (application document 6.6).
All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. There is a need to ensure a proportionate assessment focused on an application's significant effects. The submitted documentation has been reviewed and UK HSE can confirm that it is satisfied with the approach taken in preparing the EIA and the conclusions drawn.	UK HSA	SC	Noted.
The information provided indicates that Environmental Health related impacts will be duly considered during the design process. There is a logical approach and recognition of the high sensitivity of receptors to noise, air quality, and light nuisance.	BDC	SR	Noted. These aspects are covered in ES Chapter 14: Noise and Vibration (application document 6.2.14), ES Chapter 13: Air Quality (application document 6.2.13), and ES Chapter 6: Landscape and Visual (application document 6.2.6), respectively.

Comment	Consultee	Stage	Project Response
Equality Impact Assessments (EqIA) are used to identify disproportionate effects on Protected Groups (defined by the Equality Act, 2010), including health effects. The assessments and findings of the ES and the EqIA should be cross referenced between the two documents, particularly to ensure the assessment of potential impacts for health and inequalities and that resulting mitigation measures are mutually supportive.	UK HSA	SR	An EqIA is not required as part of the DCO process and has not been produced for the project as National Grid does not consider one to be necessary to support the application.
There are concerns regarding the potential dangers of electromagnetic forces (EMF) on people from the project. An EMF assessment should be undertaken in accordance with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines on Limiting Exposure to Electromagnetic Fields Guidelines with reference to current guidelines and Codes of Practice.	APC, BDC, BMSDC, BSMPC, ECC, LaPC, LCPC, LePC, PoPC, SbNPC, UK HSA	SR/SC/TC	All of the equipment which forms part of this project, would be fully compliant with the ICNIRP guidelines and relevant codes of practice. Further details can be found in the Electric and Magnetic Field Compliance Report (application document 5.2) .
UK HSA expects applicants to carry out the necessary radiological impact assessments to demonstrate compliance with UK legislation and the principles of radiation protection. This should be set out clearly in a separate section or report. In particular, the important principles of justification, optimisation and radiation dose limitation should be addressed. In addition compliance with the Euratom BSS and UK legislation should be clear.	UK HSA	SR	All of the equipment which forms part of this project, would be fully compliant with the ICNIRP guidelines and relevant codes of practice. Further details can be found in the Electric and Magnetic Field Compliance Report (application document 5.2) .

Comment	Consultee	Stage	Project Response
NSIP schemes have the potential to negatively impact health through the relocation or loss of local businesses. NSIP schemes can also involve the compulsory acquisition of property from land take, which can affect health and wellbeing, including mental health. Compensation and support can be an important element of mitigation, but developers should consider opportunities to work through partners and local Voluntary, Community and Social Enterprise (VCSE) organisations in order to help support local communities.	UK HSA	SR	National Grid is and will continue to work with landowners and businesses who may be affected by the project to understand the impacts on their operations. Compensation claims are considered on a case-by-case basis if negative impact on operations can be established. National Grid also engages with local communities in areas affected by its operations or activities outside of the planning process, including running a community grant programme for charities and community organisations which provides various social, economic and environmental benefits.
It is welcome that the ES will include an assessment of the impact on views for both local residents and visitors to the area. It is suggested that a reference to health and wellbeing is included in the landscape chapter of the ES, including an assessment of any disruption to residents and visitors accessing viewpoints and the AONB.	SCC	SR	ES Chapter 6: Landscape and Visual (application document 6.2.6) assesses the impact of the project on views. Amenity (enjoyment of the area), which crosses over a number of topics, is considered in ES Chapter 15: CEA (application document 6.2.15).
The replacement of community assets provides opportunity for positive impacts and the design, location and operation of the replacement asset should be considered in consultation with user, the local community and agencies.	UK HSA	SR	No community assets are expected to be impacted as a result of the project.
There is a lack of information about the numbers, location and timing of workers and the impact of these on healthcare services. National Grid should provide information about the number of workers needed through the different phases of construction of the project, the location of these people at work and their residences, the impact of this in isolation and in combination with other major construction projects.	SNEE CCG	SC	The estimated worker numbers are presented in ES Appendix 15.1: Cumulative Effects Baseline (application document 6.3.15.1). As stated within this appendix, National Grid has not yet appointed a contractor, and therefore estimates of location and type of residency are based on knowledge of similar projects. The impact of workers on accommodation is considered within ES Chapter 15: CEA (application document 6.2.15).

Comment	Consultee	Stage	Project Response
Socio-economics and Tourism			
The Councils wish to see socio economic and tourism scoped into the ES. This should include consideration of current and future skills development, impact on labour markets, job creation potential, workforce requirements, impact on tourism and recreation (and local businesses associated with these).	ALPC, APC, BDC, BMSDC, BSMPC, BurPC, ECC, HCPC, HMTPC, LePC, SCC, SpPC	SR/SC/TC	The Scoping Report (application document 6.5) concluded that the project was unlikely to have significant effects on socio-economics and tourism and it was scoped out from being required as a standalone topic in the ES. The Planning Inspectorate agreed with this position in the Scoping Opinion (application document 6.6). National Grid has updated the baseline assessment regarding these topics within the Socio-economics and Tourism Report (application document 5.9), which confirms the conclusions presented in the Scoping Report regarding these topics. ES Chapter 15: CEA (application document 6.2.15) assesses the intra-project and inter-project cumulative effects on socio-economics and tourism.
Whilst we recognise the limited job creation potential on site, the councils seek to maximise the use of local and regional supply chains as a priority, for example securing local job opportunities and materials during the construction phase of the project. The council wish to agree an Employment and Skills Plan, and/or a Memorandum of Understanding to include training and apprenticeships during construction and financial contribution and commitment to help support improving skills levels over the lifetime of the project. This could be under Section 106 agreements.	BDC, BMSDC, ECC, SCC	SR/SC/TC	National Grid has not yet appointed a contractor for the project so is unable to make commitments regarding workers and supply chains at this stage. National Grid has not identified the need for any s106 agreements for the project. Separate discussions are being held with the councils regarding opportunities for community benefits which would sit outside of the DCO.

Comment	Consultee	Stage	Project Response
<p>Consideration needs to be given to the potential impact of any reliance on a mobile workforce for the availability of tourist accommodation. The spending patterns of a transitory labour force would be quite different to those of tourists, thus this might jeopardise trade for other related tourist businesses, such as restaurants and visitor attractions and need to be considered alongside other major developments in the area.</p>	SCC	SR/SC	<p>ES Chapter 15: CEA (application document 6.2.15) considered impacts of the project on available bedspace. National Grid has also submitted a Socio-economics and Tourism Report (application document 5.9), which also considers available bedspace.</p>
<p>The council has additional concerns about the construction of the temporary haul road off the A131 and additional undergrounding which were not factored into the original economic assessments on the project and could substantially affect the communities and the economy of this part of south Suffolk.</p>	BDC	TC	<p>The inclusion of the proposed temporary access route would not change the conclusions made in the Scoping Report about likely significant effects on socio-economic factors. Further details on the updated baseline can be found in the Socio-economics and Tourism Report (application document 5.9).</p>

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