

The Great Grid Upgrade

Grimsby to Walpole

Preliminary Environmental Information Report

Volume 3 Part A Introduction and Overview

Chapter 3 Main Alternatives Considered

Appendix 3A Western Corridor Review

June 2025



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3A. Western Corridor Review

Executive summary

This report provides a summary of work undertaken in reviewing parts of the emerging preferred corridor in proximity to the Lincolnshire Wolds National Landscape (Area of Outstanding National Beauty) following the original appraisal that was reported in the Corridor Preliminary Routeing and Siting Study (CPRSS).

The review considered two different options; the Western Option (which comprises part of the emerging preferred corridor presented in the CPRSS) and the Eastern Option. Both options comprise individual corridor sections, with some common corridor sections between the options.

The review considered additional information obtained by National Grid following the publication of the CPRSS to assess the appropriateness of selecting the Western Option for the Project compared to the alternative Eastern Option in this geographical area (refer to **Image 3.1**).

Specific corridor sections originally appraised as part of the CPRSS were reviewed on the same basis across environmental, socio-economic and engineering topic disciplines taking into account the additional information. Programme implications of a change in corridor were also considered as an additional factor following completion of the review.

The outcome of the review is that the additional information and resulting change to the appraised constraints/impacts in the Western Option in comparison with the Eastern Option does not materially alter the previous conclusions reported in the CPRSS and the preference for the Western Option. Therefore, the review has confirmed the appropriateness of selecting the Western Option, as included in the emerging preferred corridor.

That conclusion is supported by the potential negative programme impact of a change in route corridor at this stage in the development of the Project, with the delivery of the Project on time playing a vital role in achieving the UK Government's ambition of connecting 50GW of offshore wind by 2030.

Having considered the results of the review, National Grid is continuing to progress the design of the Western Option and presenting it at Stage 2 (Statutory) consultation.

3A. Western Corridor Review

3A.1 Introduction

Purpose of report

- 3A.1.1 The Preliminary Environmental Information (PEI) Report outlines the consideration given to alternative options for the Project in **PEI Report Volume 2 Part A Chapter 3 Main Alternatives Considered**.
- 3A.1.2 This report explains the work undertaken in reviewing parts of the emerging preferred corridor in proximity to the Lincolnshire Wolds National Landscape (Area of Outstanding National Beauty) following the original appraisal which was reported in the Corridor Preliminary Routeing and Siting Study (CPRSS) in January 2024 (Ref 1).
- 3A.1.3 Specific corridor sections appraised as part of the CPRSS were reviewed with the benefit of additional information obtained by National Grid following the publication of the CPRSS. It was considered appropriate to assess whether the additional information affected the earlier selection of the emerging preferred corridor for the Project in this geographical area (refer to **Image 3.1**). The review therefore had three principal components:
- The identification of new information that might change a conclusion reached earlier in the Options Identification and Selection stage;
 - The consideration of that new information to understand whether it would change the conclusion reached earlier in the Options Identification and Selection stage; and
 - Identification of any revised outcome of the Options Identification and Selection stage as a result of the new information.

Background

- 3A.1.4 The Options Identification and Selection stage is part of a sequence of stages that define the project development process for major infrastructure projects. This ensures a thorough and consistent approach from initially establishing a strategic need through to construction and operation. Further details of all stages are provided in National Grid's Approach to Consenting (Ref 2) and a key output from the Options Identification and Selection stage is the CPRSS.
- 3A.1.5 The CPRSS for the Project set out the alternative corridors, substation siting zones and substation siting areas appraised and was published in January 2024 as part of the Stage 1 (non-statutory) consultation.
- 3A.1.6 The appraisal methodology within the CPRSS followed the Approach to Consenting (Ref 2) and ensured that the decision making around project options took full consideration, proportionate to the relatively early stage of design development, of all known environmental factors whilst also recognising engineering and economic implications.

- 3A.1.7 The Lincolnshire Wolds National Landscape (AONB) (subsequently referred to as "the AONB" in this report) is located to the west of the Project at its northern extent and extends between the approximate areas of the village of Laceby and the town of Burgh le Marsh. The CPRSS applied a 2 km buffer to the AONB which was used to inform the identification and appraisal of alternative route corridors. Subsequently, more detailed work on the setting of the AONB undertaken as part of the Environmental Impact Assessment (EIA) has identified the setting of the AONB as extending to around 6 km from the eastern boundary of the AONB. This is reported in **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**. This more detailed work on the setting of the AONB has therefore been taken into account as part of the review of the emerging preferred corridor.
- 3A.1.8 In the vicinity of the AONB, the CPRSS considered western, central and eastern corridor options with connecting links at specific locations to enable transfer from one corridor to another. For the purposes of the option appraisal, each corridor was also sub-divided into corridor sections, each with a unique identifier. This allowed combinations of the different corridor sections to be considered. The CPRSS concluded that the emerging preferred corridor in this location would use an overhead line and include a combination of corridor sections from the western, central and eastern corridors, as shown in **Image 3.1** and schematically in **Image 3.2**. This shows how at the Northern extent of the Project, eastern and central corridors are preferred, before the western corridor begins to be preferred at section W7. The CPRSS also identified a 'graduated swathe' within the emerging preferred corridor with darker shading indicating where within the emerging preferred corridor the proposed new infrastructure was more likely to be located (refer to **Image 3.3**). An overlay of the AONB setting against the CPRSS corridors is shown in **Image 3.4**.

Image 3.1 CPRSS corridors, corridor sections and emerging preferred corridor

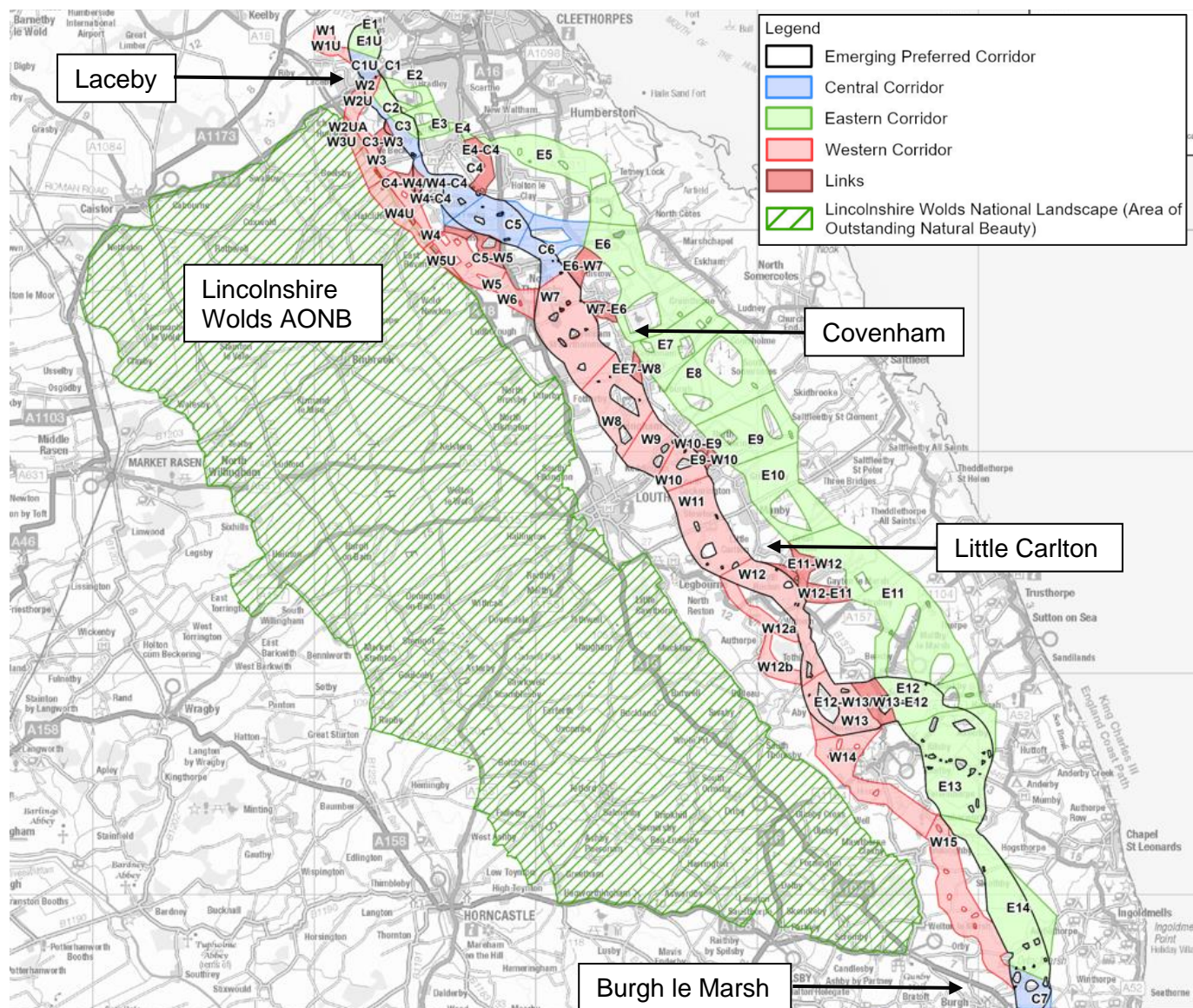


Image 3.2 CPRSS corridors, corridor sections and emerging preferred corridor schematic

	Western	Links	Central	Links	Eastern
	W1		E1		E1
	C1		C1		C1
	W2		C2		E2
	W3	C3-W3	C3		E3
	W4	C4-W4 / W4-C4 W4-C4	C4	E4-C4	E4
	W5	C5-W5	C5		E5
	W6		C6		E6
	W7	E6-W7 W7-E6			
	W8	E7-W8			E7
	W9				E8
	W10	W10-E9 E9-W10			E9
	W11				E10
W12a W12b	W12	E11-W12 W12-E11			E11
	W13	E12-W13 / W13-E12			E12
	W14				E13
	W15				E14
	C7		C7		C7

Image 3.3 Emerging preferred corridor and graduated swathe

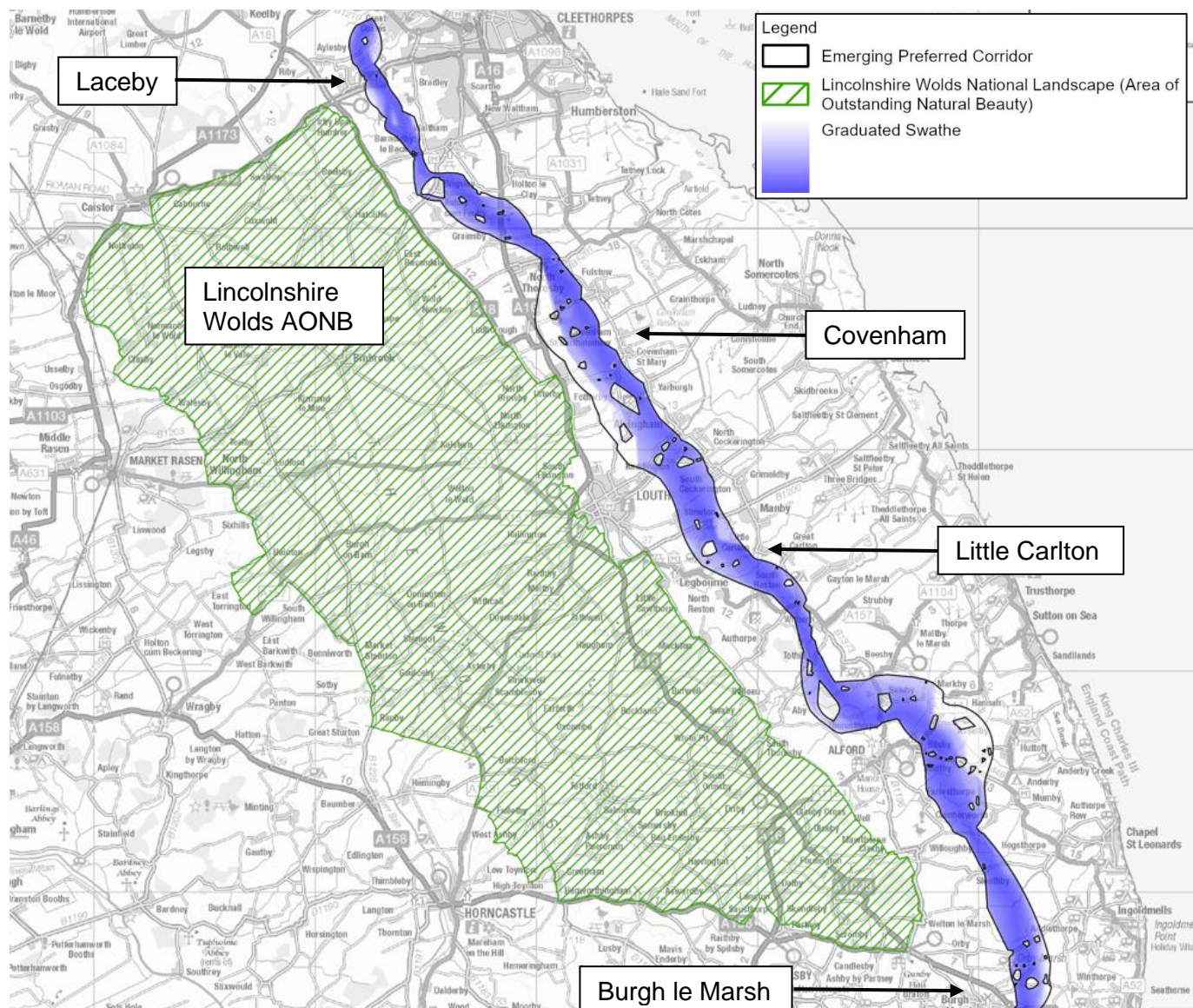
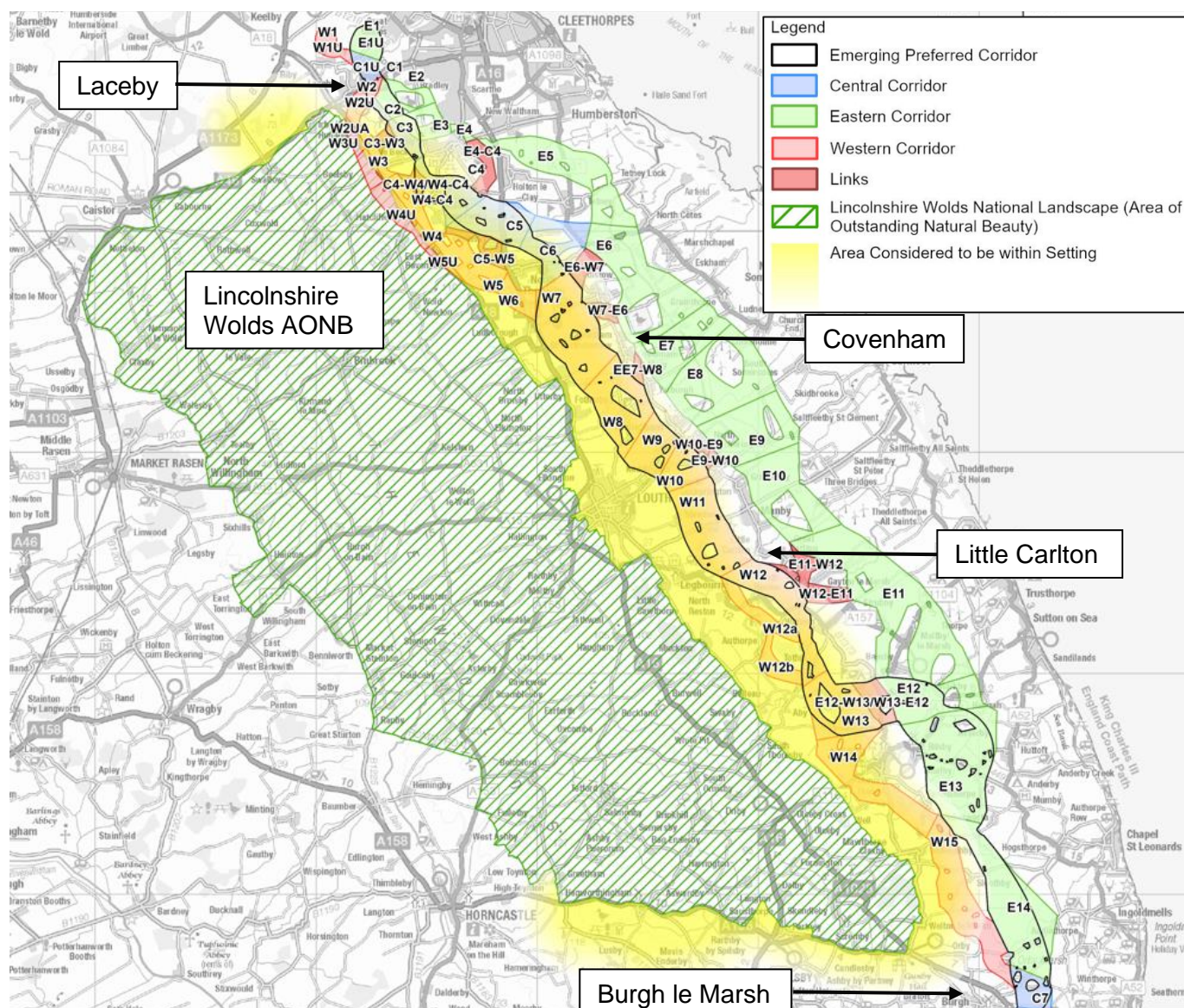


Image 3.4 AONB Setting and CPRSS corridors



- 3A.1.9 Feedback on the emerging preferred corridor in this location was received from Stage 1 Consultation and further details are included in Chapter 3 of the **Stage 1 Consultation Feedback Report**. Natural England raised various queries regarding impacts to the AONB and advised that the potential for an overhead line to be within the setting of the AONB should be explored further within a Landscape and Visual Impact Assessment. The Lincolnshire Wolds Countryside Service, whilst acknowledging the emerging preferred corridor avoids the AONB, similarly raised concern in terms of the potential for impacts on the AONB setting and views from and to the AONB and recommended that alternative solutions (such as extensive undergrounding or further re-routing) be fully explored.
- 3A.1.10 Having regard to this feedback, and to inform the assessment of effects of the Project on the AONB for the purpose of the PEI Report, National Grid has further considered the interaction between the emerging preferred corridor and the setting of the AONB. The full assessment of effects will be reported in the Environmental Statement (ES), but preliminary results compiled by National Grid are reported in **PEI Report Volume 2 Part C Chapter 2 Landscape**. The work undertaken in collating information for the PEI Report concluded that the majority of the western corridor sections of the

emerging preferred corridor were considered to be within the setting of the AONB (as defined in **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**), while the majority of the eastern corridor sections were not.

- 3A.1.11 The purpose of the setting study is to inform the assessment of the effects of the Project on the landscape and natural beauty of the AONB. The report identifies areas of the landscape that are considered part of the 'setting' of the AONB, providing a more robust basis for evaluating potential impacts of the Project on the landscape within the designated area. The setting study involved site survey work, which covered the western and eastern corridors.
- 3A.1.12 The setting study allows for the potential landscape and visual impacts of an overhead line in western and eastern corridor sections to be appraised with the benefit of this additional information, along with other environmental and technical information that was not available for consideration in the CPRSS.
- 3A.1.13 This information and the consultation feedback referred to above prompted the review exercise detailed in this report. The appraisal of the information was used to reconsider the comparative performance of specific eastern and western corridor sections to test the appropriateness of the decisions made in the CPRSS in determining the emerging preferred corridor.
- 3A.1.14 For the purpose of the review a "Western Option" and "Eastern Option" were considered, both of which comprise corridor sections from the western and eastern corridors. The Western Option comprises part of the emerging preferred corridor published in the CPRSS.

Structure of report

- 3A.1.15 This report is structured into the following key sections:
 - i. Section 1 (this section): Introduction and background;
 - ii. Section 2: Approach and methodology for review;
 - iii. Section 3: Western Option review results;
 - iv. Section 4: Eastern Option review results;
 - v. Section 5: Comparative analysis of Western and Eastern Options; and
 - vi. Section 6: Conclusion.

3A.2 Methodology

Information Sources

- 3A.2.1 The review was informed by new information that has either been generated or has become available since publication of the CPRSS, including the identification of the extent of the setting of the AONB in **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**.
- 3A.2.2 In particular, the collation of information for the PEI Report and consideration of the emerging preferred corridor in relation to the AONB setting to inform the initial assessment of effects of the Project on the AONB has enabled potential landscape

and visual impacts of an overhead line in specific western and eastern corridor sections to be further appraised.

3A.2.3 In addition, the below information was considered:

- i. Additional ecological information relevant to the Eastern Option prepared for the purposes of the Viking Carbon Capture Storage (CCS) Pipeline which became publicly available as part of that project's Development Consent Order (DCO) application since the work undertaken for the CPRSS;
- ii. Emerging results of EIA baseline studies within and adjacent to the emerging preferred corridor taken forward including environmental desktop data acquired as part of ongoing design development and ecological site survey data; and
- iii. Further engineering considerations in relation to the emerging preferred corridor as a result of ongoing design development.

Corridor Sections

3A.2.4 As stated in **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**, the AONB setting is considered to extend along its complete eastern edge within the lower-lying landscape, which is adjacent to and in places encompasses the emerging preferred corridor between Laceby and Burgh le Marsh. Consequently, all corridor sections in the emerging preferred corridor within this geographical area except E1 were selected for review. An initial exercise was carried out to determine which corridor sections were within the scope of the review, with a number of corridor sections identified as not requiring to be considered, as explained below. This exercise identified 26 corridor sections for consideration as part of the review exercise as summarised below and illustrated on Image 3.5.

Corridor sections considered (26 total)

- i. All corridor sections in emerging preferred corridor, except E1 (20 total):
 - C1 to C6
 - Connecting links C4-W4 / W4-C4 and W4-C4
 - W7 to W13
 - Connecting link E12-W13 / W13-E12
 - E12 to E14
 - C7
- ii. E6 to E11 (6 total): these provide an alternative corridor parallel to W7 to W13.

Corridor sections not considered (15 total)

- i. E1: This corridor section is outside of the AONB setting. It includes the emerging preference for the siting area for the new Grimsby West Substation, as reported in the CPRSS. Following further design development and consideration of Stage 1 (non-statutory) consultation feedback, no change has been proposed to the siting of the new Grimsby West Substation. Further details are included within Chapter 5 of the **Grimsby to Walpole Design Development Report**.

- ii. W1: As a consequence of E1 not being considered, the alternative corridor section of W1 was also not considered as part of the review exercise because E1 would remain part of the emerging preference.
- iii. W2 to W6 and E2 to E5: The adjacent central corridor sections in the emerging preferred corridor (C1 to C6) are considered the only suitable corridor sections in this location at the northern extremities of the AONB. Corridor section C1 is outside of the AONB setting and corridor sections C2 to C5 are on the edge of the AONB setting, with the southern spur of C6 within the setting. Corridor sections W2 to W6 encroach into, or are in close proximity to, the AONB. Corridor sections E2 to E5 require more complex technical considerations due to narrower sections (and associated alignment changes and angle pylons) and multiple constraints including existing 132 kV lines, ancient woodland, existing pipelines and proposed developments.
- iv. W12a and W12b: These corridor sections are closer to the AONB than W12 (which forms part of the Western Option) and their comparative narrowness reduces the flexibility of routeing an overhead line.
- v. W14 and W15: The adjacent corridor sections in the emerging preferred corridor (W13, E12 and connecting link E12-W13/W13-E12) are considered the only suitable corridor sections in this location at the southern extremities of the AONB. Corridor section W13 is within the AONB setting, corridor section E12-W13/W13-E12 is on the edge of the AONB setting and corridor section E12 is outside of the AONB setting. Corridor sections W14 and W15 are closer to the AONB and the Grade II Well Hall Registered Park and Garden and require greater technical considerations due to crossing the Branch Line LNR, an area of peaty soil and an angled entry into corridor section C7.

Image 3.5 CPRSS corridor sections selected for review

	Western	Links	Central	Links	Eastern	
	W1		E1		E1	No corridor sections reviewed
	C1		C1		C1	
	W2		C2		E2	
	W3	C3-W3	C3		E3	
	W4	C4-W4 / W4-C4 W4-C4	C4	E4-C4	E4	Corridor sections reviewed: - C1 to C5 - C4-W4 / W4-C4 - W4-C4
	W5	C5-W5	C5		E5	
	W6		C6		E6	
	W7	E6-W7 W7-E6				
	W8	E7-W8			E7	Corridor sections reviewed: - W7 to W13 - E12-W13 / W13-E12 - E6 to E11 - E12 to E14 - C7
	W9				E8	
	W10	W10-E9 E9-W10			E9	
	W11				E10	
W12a W12b	W12	E11-W12 W12-E11			E11	
	W13	E12-W13 / W13-E12			E12	
	W14				E13	
	W15				E14	
	C7		C7		C7	

Options Appraisal

- 3A.2.5 Options appraisal is a structured process by which the environmental, socio-economic and technical implications are identified, reported and compared. It is a tool to aid objective and justified decision making, enabling National Grid to document in a transparent manner the information on which judgements have been based. The CPRSS reports the outcomes of this process that resulted in the emerging preferred corridor.
- 3A.2.6 The CPRSS methodology comprises nine steps, of which Step 7 comprises the options appraisal of corridors, siting zones and siting areas. This is further described in Section 4.8 of the CPRSS and the overall objective is to take full consideration of all known environmental factors to minimise the risk of significant adverse impacts on the environment and communities whilst also considering engineering and economic considerations. As highlighted at paragraph 4.8.5 of the CPRSS, the judgements as to impacts that informed the conclusions of the CPRSS options appraisal relate to the potential for residual impacts rather than a consideration of the level of significance.

- 3A.2.7 The review considered the following three topic disciplines, which reflect those considered in the original CPRSS options appraisal, and followed a two-phase approach:
- i. Environmental (comprising six sub-topic disciplines; ecology, geology and soils, historic environment, landscape, visual and water);
 - ii. Socio-economics; and
 - iii. Engineering.
- 3A.2.8 **Review Phase 1:** the outputs of the options appraisal undertaken in the CPRSS for each of the 26 relevant corridor sections identified above were reviewed by each topic discipline. The potential impact of the Project, taking into account relevant features in the corridor section and potential mitigation, was then summarised and, for the purpose of this review, reported on a 3-point semantic scale – Low, Medium or High – by each topic discipline based on professional judgement and expertise.
- 3A.2.9 **Review Phase 2:** Following the completion of Phase 1, each of the 26 relevant corridor sections were further considered and the reporting updated by each topic discipline where necessary to take account of any relevant new information and consider the potential for residual impacts. The outputs of this exercise are referred to in this report as a greater or lesser likelihood of significant effects occurring. As with Phase 1, the potential impact of the Project in each corridor section was then reported on the same 3-point semantic scale to enable comparison with the outputs from Phase 1. The objective in reviewing each corridor section was to consider the new information and whether or not it would change the outcome in terms of emerging corridor preference reported in the CPRSS.

Comparative Analysis

Appraisal outcomes

- 3A.2.10 Following the review, there was no change in appraisal outcome for corridor sections C1 to C5, C4-W4 / W4-C4 and W4-C4. As these are also considered to be the only suitable corridor sections adjacent to the northern extremities of the AONB (as described above under Corridor Sections), they were not considered further as part of the review, thus reducing the number of corridor sections from 26 to 19.
- 3A.2.11 The remaining 19 corridor sections to the south, from C6 to C7, therefore comprise the two alternative options. As introduced in paragraph 3A.1.14, and for the purposes of this report and summarising the review findings, these are called the Western and Eastern Options, with five corridor sections common to both. A breakdown is summarised below:
- i. Western Option:
 - 13 corridor sections
 - 8 unique (W7, W8, W9, W10, W11, W12, W13, W13-E12)
 - 5 common (C6, E12, E13, E14, C7)
 - ii. Eastern Option:
 - 11 corridor sections

- 6 unique (E6, E7, E8, E9, E10, E11)
- 5 common (C6, E12, E13, E14, C7)

3A.2.12 A comparative analysis was undertaken of the review outcomes (Phase 2) against the CPRSS appraisal outcomes (Phase 1) for the identified Western and Eastern Options, including a summary of any key factors that led to a revised appraisal outcome. The five common corridor sections (C6, E12, E13, E14, C7) were not considered further for comparative purposes, however changes in appraisal outcome are summarised for information purposes.

Policy requirements and statutory duties

3A.2.13 Relevant policy requirements and statutory duties were also considered as part of the comparative analysis, as reported at section 5.2. Key points of relevance from National Policy Statement (NPS) EN-1 (Ref 5) and in respect of the duty under Section 85(A1) of the Countryside and Rights of Way Act 2000 (Ref 6), are described below. A more detailed analysis of policy requirements and statutory duties will be undertaken in due course as part of the process of preparing the scheme for DCO application.

Lincolnshire Wolds AONB (Countryside and Rights of Way Act 2000, section 85(A1) and EN-1, paragraphs 5.10.8 and 5.10.34)

3A.2.14 Section 85(A1) of the Countryside and Rights of Way Act 2000 (Ref 6) imposes a duty on relevant authorities to ‘seek to further’ the purpose of conserving and enhancing the natural beauty of the relevant area of outstanding natural beauty when exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty. This requires a consideration as to whether a project is consistent with the purpose of conserving and enhancing the natural beauty of the relevant AONB and, if there is a conflict, a consideration of whether its promotion would be in accordance with the duty. If there is a conflict, consideration needs to be given to whether the project is nevertheless justified in the circumstances, with reference to, for example, the extent and severity of the conflict, any mitigation and any compensation or enhancements. Case law and guidance in respect of the duty is evolving and will be kept under review. Any developments will be taken into account in the wider analysis of policy requirements and statutory duties provided alongside the DCO application. In the meantime, key extracts are highlighted below.

3A.2.15 ‘Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes’ (Guidance) (Ref 7) was published in December 2024 and provides broad principles with respect to complying with the section 85(A1) duty. The Guidance makes clear that the duty applies to functions performed outside of the relevant designation boundary which affect the designated landscape. Similarly, paragraph 5.10.8 of EN-1 confirms that the duty applies to projects which are located outside of the designated area, but which may have impacts within them. As a result, it is clear that the duty is relevant to both Options.

3A.2.16 Paragraph 5.10.8 of EN-1 goes on to state that developments in locations outside nationally designated landscapes but which may have impacts within them should be sensitively designed taking account of various siting, operational and other relevant constraints and also that the Secretary of State should be satisfied that the measures which seek to further the purpose of the designation are sufficient, appropriate and proportionate to the type and scale of development proposed.

- 3A.2.17 Paragraph 5.10.34 of EN-1 reiterates that the duty to seek to further the purposes of nationally designated landscapes applies when considering applications for projects outside of these areas which may have impacts within them and goes on to state that, *“The aim should be to avoid harming the purposes of designation or to minimise adverse effects on designated landscapes, and such projects should be designed sensitively given the various siting, operational, and other relevant constraints.”*
- 3A.2.18 Paragraph 5.10.34 of EN-1 also states that, *“The fact that a proposed project will be visible from within a designated area should not in itself be a reason for the Secretary of State to refuse consent”*, while paragraph 5.10.35 states that *“The scale of energy projects means that they will often be visible across a very wide area. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.”*

Ecological Considerations (EN-1, Section 5.4)

- 3A.2.19 Paragraphs 5.4.4 and 5.4.7 of EN-1 set out that the highest level of biodiversity protection is afforded to sites identified through international conventions such as the Humber Estuary SPA and that this extends to SSSIs which are also designated under such conventions.
- 3A.2.20 Paragraph 5.4.42 of EN-1 makes clear that development should, in line with the mitigation hierarchy, seek to avoid significant harm to biodiversity interests including through the consideration of reasonable alternatives.

Flooding Considerations (EN-1, Section 5.8)

- 3A.2.21 Paragraph 5.8.9 of EN-1 refers to the Sequential Test, which is intended to guide development towards areas of lower flood risk taking into account wider sustainable development objectives.
- 3A.2.22 Paragraph 5.8.10 of EN-1 goes on to set out the Exception Test, which is only applied where the Sequential Test alone cannot deliver an acceptable site (or in this case route). It sets out the circumstances when an acceptable site cannot be delivered as including *“where application of relevant policies would provide a clear reason for refusing development in any alternative locations identified”* and goes on to identify alternative sites that are subject to national designations such as AONBs as an example.
- 3A.2.23 Paragraph 5.8.10 goes on to set out the circumstances in which it would be appropriate to move onto the Exception Test:
- “when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would provide a clear reason for refusing development in any alternative locations identified.”*

Programme implications

- 3A.2.24 Following an assessment of the options by reference to the considerations set out above, wider programme implications for the Project were also considered as an additional confirmatory factor.

3A.3 Western Option

Information Sources

3A.3.1 For the Western Option, the new information comprised the collation of environmental desktop data and site survey data to inform EIA baseline studies, the PEI Report and **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**. No additional technical information was considered relevant for the review of the Western Option.

PEI Report and AONB Setting

3A.3.2 **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study** states that when identifying areas that may be considered to form part of the setting of the AONB, the focus was on lower-lying landscape to the east and south-east of the AONB as this is the area most likely to be affected by landscape and visual change caused by the Project. To the north and south-west, the Project moves away from the designated area and the intervening distance means that there is less likelihood of affecting its natural beauty.

3A.3.3 The extent of the area considered to be within the setting of the AONB broadly follows the transition between the *2C Fen and Marsh Margin Farmlands Landscape Character Type (LCT)* and the *2A Settled Fens and Marshes LCT*, as identified in the East Midlands Regional Landscape Character Assessment (Ref 3). Additionally, ‘setting’ does not have a fixed boundary and cannot be definitively and permanently described as a spatially bounded area; therefore the extent cannot be considered as having a precisely delineated boundary.

3A.3.4 The review considered that from the eight unique corridor sections in the Western Option (W7 to W13 and connecting link W13-E12), one corridor section (connecting link W13-E12) was on the edge of the AONB setting and the remaining seven corridor sections were within the AONB setting.

Additional Environmental Information

3A.3.5 The additional environmental information considered was obtained as part of desktop and site surveys to inform the ongoing EIA baseline studies and PEI Report development. **Table 3.1** provides a summary of the additional data considered as part of the review, along with the relevant PEI Report Chapter where full details of all data informing the PEI Report is contained.

Table 3.1 Additional environmental information summary

Topic	PEI Report, Volume 2 Part B Sections 1 to 4	Additional Data Considered for Review
Landscape	Chapter 2	<ul style="list-style-type: none">• Desktop and site data to inform AONB setting definition
Visual	Chapter 3	<ul style="list-style-type: none">• Desktop and site data to inform AONB setting definition

Topic	PEI Report, Volume 2 Part B Sections 1 to 4	Additional Data Considered for Review
Ecology	Chapter 4	<ul style="list-style-type: none"> • Priority habitat locations from desktop and emerging survey data • Emerging ornithological survey data
Historic Environment	Chapter 5	<ul style="list-style-type: none"> • Updated Lincolnshire Historic Environment Record data
Water	Chapter 6	<ul style="list-style-type: none"> • Further desktop data on Source Protection Zones
Geology and Soils	Chapter 7	<ul style="list-style-type: none"> • Further desktop geological mapping • Provisional agriculture land classification (ALC) mapping
Socio-economics	Chapter 11	<ul style="list-style-type: none"> • Updated information on planning applications and other projects

Corridor Sections

3A.3.6 From the 19 corridor sections appraised as part of the review, 13 comprise the Western Option, as described in paragraph 3A.2.11, and eight of these are unique.

Results

Overall summary

3A.3.7 The summary outcome of the Western Option review is shown in **Table 3.2** for each corridor section and each topic discipline. Where the review outcome has changed compared to the CPRSS appraisal outcome having taken account of the setting of the AONB in particular, this is shown highlighted and **bold**. **Blue underlined text** shows those corridor sections which are common to both the Western and Eastern Options.

3A.3.8 Four corridor sections within the Western Option have a revised appraisal outcome, where the impact was increased from low to medium for the overall environmental topic. One of these corridor sections (W9) is unique to the Western Option with the remaining three (C6, E14 and C7) common to both the Western and Eastern Options. Corridor sections C6, E14 and C7 therefore do not assist in differentiating between the Western and Eastern Options. There is no change in appraisal outcome for socio-economics and engineering. Overall, this highlights that the Western Option has a greater environmental impact in some corridor sections compared to the CPRSS appraisal, with only one of these being in a unique corridor section for the Western Option.

Table 3.2 Western Option summary

Corridor Section (north to south)	Environmental		Socio-economics		Engineering	
	CPRSS	Review	CPRSS	Review	CPRSS	Review
C6	Low	Medium	Low	Low	Low	Low
W7	Medium	Medium	Low	Low	Low	Low
W8	Medium	Medium	Low	Low	Low	Low
W9	Low	Medium	Low	Low	Low	Low
W10	Low	Low	Low	Low	Low	Low
W11	Low	Low	Low	Low	Low	Low
W12	Medium	Medium	Low	Low	Low	Low
W13	Low	Low	Low	Low	Low	Low
W13-E12	Low	Low	Low	Low	Low	Low
E12	Low	Low	Low	Low	Low	Low
E13	Low	Low	Low	Low	Low	Low
E14	Low	Medium	Low	Low	Low	Low
C7	Low	Medium	Low	Low	Medium	Medium

Summary of revised appraisal outcomes – unique corridor section

- 3A.3.9 The below text summarises the key points for the corridor section unique to the Western Option (W9) that contributed to the revised environmental appraisal outcome from low to medium. This only considers those factors that are different to those originally considered in the CPRSS and therefore does not discuss all factors within the relevant corridor section.
- 3A.3.10 For corridor section W9, the revised environmental appraisal outcome was driven by landscape considerations and the AONB setting. There were no other changes from environmental sub-topics that contributed to the revised outcome.

Corridor Section W9

- 3A.3.11 The review identified that the full width of the corridor section is within the setting of the AONB and lies approximately 2.4km from the boundary of the designated landscape. The work undertaken to inform the review, as reported in **PEI Report Volume 2 Part C Chapter 2 Landscape**, concluded that there are likely to be significant effects on the views in and out of the AONB which may affect its Special Qualities as defined in the AONB Management Plan.

Summary of revised appraisal outcomes – common corridor sections

- 3A.3.12 The below text summarises the key points for each of the three corridor sections which are common to both the Western and Eastern Options (C6, E14 and C7). While the revised environmental appraisal outcome for these corridor sections increased from low to medium, because they are common to both options, the

change in impacts appraised is not a differentiating factor between the Western and Eastern Options.

- 3A.3.13 For all three common corridor sections, a consistent factor in the revised environmental appraisal outcome was ecology which reported a greater risk of potential effects on designated habitats. Landscape considerations and the AONB setting also contributed to the revised environmental appraisal outcome for two of the common corridor sections (C6 and E14), and water considerations also contributed to the revised environmental appraisal outcome for one corridor section (C6). There were no other changes from environmental sub-topics that contributed to the revised outcome.

Corridor Section C6

- 3A.3.14 More recent data from field surveys and desk studies identified birds within or close to this corridor section which are qualifying species of the Humber Estuary Special Protection Area (SPA). As a result of this, the review concluded that the risk of potential effects has increased but that this is subject to further and ongoing survey.
- 3A.3.15 The review considered that the southern spur of the corridor section is within the setting of the AONB. As for other corridor sections within the setting of the AONB, the review concluded that while being within the setting does not necessarily mean an effect on the designation itself, it does indicate that effects on the AONB are more likely than previously reported in the CPRSS.
- 3A.3.16 The corridor section is located within Source Protection Zone (SPZ) II and two areas of SPZ I. The CPRSS originally noted this as a minor constraint. The review concluded that construction within SPZ II should not give rise to significant effects nor require onerous construction or mitigation, however, the sensitivity of SPZ I is such that the two areas should avoid having pylons located within them but could be oversailed.

Corridor Section E14

- 3A.3.17 More recent data from field surveys and desk studies identified birds within or close to this corridor section which are qualifying species of the Humber Estuary SPA. As a result of this, the review concluded that the risk of potential effects has increased but that this is subject to further and ongoing survey.

Corridor Section C7

- 3A.3.18 More recent data from field surveys and desk studies identified birds within or close to this corridor section which are qualifying species of the Humber Estuary SPA. As a result of this, the review concluded that the risk of potential effects has increased but that this is subject to further and ongoing survey.

Other corridor sections

- 3A.3.19 The below text summarises the key points for those corridor sections that did not have a revised appraisal outcome, but were considered to be within the setting of the AONB.
- 3A.3.20 Corridor sections W7 and W8 are considered to be within the setting of the AONB. The CPRSS appraisal outcome was originally reported as medium and there were no notable differences for other environmental sub-topics.

- 3A.3.21 Corridor section W10 is considered to be within the setting of the AONB, however it is located to the east of Louth where the landscape and views to/from the AONB are already affected by the proximity to the built-up area.
- 3A.3.22 Corridor sections W11 and W13 are considered to be within the setting of the AONB, however screening is provided by the undulating landform and by the high tree and woodland cover south of Louth.
- 3A.3.23 Corridor section W12 is considered to be within the setting of the AONB. The CPRSS appraisal outcome was originally reported as medium and there were no notable differences for other environmental sub-topics.

3A.4 Eastern Option

Information Sources

- 3A.4.1 For the Eastern Option, the new information comprised the collation of environmental desktop data and site survey data to inform EIA baseline studies, the PEI Report and **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**. Additionally, it included ecological data available from the Viking CCS DCO application.

PEI Report and AONB Setting

- 3A.4.2 Information relation to the AONB setting was as described in Section 3A.3.
- 3A.4.3 The review considered that from the six unique corridor sections in the Eastern Option (E6 to E11), the westernmost part of the Eastern Option is close to the AONB setting, particularly corridor sections E6 to E9.

Additional Environmental Information

- 3A.4.4 The additional environmental information considered was as described in **Table 3.1**, with the exception of ecology site survey data which was only collated as part of ongoing design development for the emerging preferred corridor.

Corridor Sections

- 3A.4.5 From the 19 corridor sections appraised as part of the review, 11 comprise the Eastern Option, as described in paragraph 3A.2.11, and six of these are unique.

Results

Overall summary

- 3A.4.6 The summary outcome of the Eastern Option review is shown in **Table 3.3** for each corridor section and each topic discipline. Where the appraisal outcome has changed since the position presented at CPRSS the outcome is highlighted and **bold**. Blue underlined text shows those corridor sections which are common to both the Western and Eastern Options.

3A.4.7 Four corridor sections within the Eastern Option have a revised appraisal outcome where the impact was increased from low to medium; three for environmental and one for engineering discipline topics respectively. With the exception of corridor section E10 which is unique to the Eastern Option, the remaining three corridor sections in which the impact was increased (C6, E14 and C7) are common to the Western and Eastern Options. There is no change in appraisal outcome for socio-economics. Overall, this highlights an increase in the engineering impacts within part of the Eastern Option, however, the impacts within the rest of the corridor sections which are unique to the Eastern Option (E6, E7, E8, E9, E10 and E11) have not increased nor decreased from those in the CPRSS appraisal.

Table 3.3 Eastern Option summary

Corridor Section (north to south)	Environmental		Socio-economics		Engineering	
	CPRSS	Review	CPRSS	Review	CPRSS	Review
<u>C6</u>	Low	Medium	Low	Low	Low	Low
<u>E6</u>	Medium	Medium	Low	Low	Low	Low
<u>E7</u>	Medium	Medium	Low	Low	Low	Low
<u>E8</u>	Medium	Medium	Low	Low	Low	Low
<u>E9</u>	Low	Low	Low	Low	Low	Low
<u>E10</u>	Low	Low	Medium	Medium	Low	Medium
<u>E11</u>	Medium	Medium	Medium	Medium	Low	Low
<u>E12</u>	Low	Low	Low	Low	Low	Low
<u>E13</u>	Low	Low	Low	Low	Low	Low
<u>E14</u>	Low	Medium	Low	Low	Low	Low
<u>C7</u>	Low	Medium	Low	Low	Medium	Medium

Summary of revised appraisal outcomes – unique corridor sections

3A.4.8 The below text summarises the key points for corridor section E10 that contributed to the revised appraisal outcome.

Corridor Section E10

3A.4.9 Manby (Eastfield Farm) Airfield is located within the corridor and has two grass strip runways. The ‘cut outs’ in the corridor section result in narrow overhead line routing options to avoid the airfield, meaning an impact on the airfield operation is likely and may affect existing flightpaths and aircraft movements due to the proximity of an overhead line. The change in outcome has been driven by the review process itself, rather than any new information at this location.

Common corridor sections

3A.4.10 Corridor sections C6, E14 and C7 are as described in Section 3A.3 and, as these corridor sections are common to the Western and Eastern Options, that text applies equally to the Eastern Option.

Other corridor sections

3A.4.11 While the overall environmental appraisal outcomes were not affected, the ecological appraisal of corridor sections E10 and E11 noted additional information had become available since the CPRSS was published. The Viking CCS pipeline intersects with, and is close to, corridor sections E10 and E11. Bird survey information collected for the CCS pipeline identified the presence of qualifying species of the Humber Estuary SPA within these corridor sections. Additional bird species records also indicate the presence of whooper swan, a schedule 1 listed species which would also be more susceptible to collision risk impacts as a result of the presence of overhead line within the corridor sections E6, E7, E9, E10 and E11.

3A.5 Comparative Analysis

Key Factors

Overview

- 3A.5.1 The review has highlighted a small number of changes in the appraisal of potential impacts from the CPRSS for both the Western and Eastern Options as a result of new information. This has largely been in relation to consideration of impacts on the AONB as a result of further work undertaken on ‘setting’ but also in relation to ecological data collated from baseline studies including site surveys and information which has become publicly available since the CPRSS was published. Additionally, engineering considerations informed a change in the appraisal of potential impacts from the Eastern Option. An overall summary of the environmental outcomes following the review is shown in **Table 3.4**, where the colours represent the corridor sections as shown in **Image 3.1** and **Image 3.2** and unique corridor sections are in bold with a border.
- 3A.5.2 Whilst the environmental review outcome for corridor section W9 increased to medium for environmental, it is noted that both the Western and Eastern Options result overall in four medium and two low environmental outcomes for comparative unique corridor sections. As the only other change in outcome was related to engineering, in corridor Section E10 only, this is not shown in **Table 3.4**.

Table 3.4 Summary of review outcomes

Western Option	Review Outcome - Environmental	Eastern Option	Review Outcome - Environmental
C6	Medium	C6	Medium
W7	Medium	E6	Medium
W8	Medium	E7	Medium
W9	Medium	E8	Medium
W10	Low	E9	Low
W11	Low	E10	Low
W12	Medium	E11	Medium

Western Option	Review Outcome - Environmental	Eastern Option	Review Outcome - Environmental
W13	Low		
E12-W13 / W13-E12	Low		
E12	Low	E12	Low
E13	Low	E13	Low
E14	Low	E14	Low
C7	Medium	C7	Medium

- 3A.5.3 While all environmental, socio-economic and engineering factors have been considered as part of the review only the following topics and environmental sub-topics indicated a preference for one Option, as summarised below.
- The landscape and visual appraisal expressed a preference for the Eastern Option due to the lesser potential for significant effects on the AONB and wider landscape and visual receptors in respect of the Eastern Option compared to the Western Option.
 - The water environment appraisal expressed a preference for the Western Option due to the crossing of Flood Zones 2 and 3 in the Eastern Option.
 - The ecology appraisal expressed a preference for the Western Option due to the presence of qualifying bird species in the Eastern Option.
 - The engineering appraisal expressed a preference for the Western Option due to the flood risk issues within the Eastern Option and the risk of delay as a result of flooding during construction. A significant section of the Eastern Option would be routed through Flood Zones 2 and 3 which could otherwise be avoided by routeing within the Western Option.
- 3A.5.4 The following paragraphs provide a comparative summary of the Western and Eastern Options as a whole but where relevant identify specific corridor sections where the review has identified a change in impact scoring or resulted in a particular preference being expressed for either Option.

Landscape and Visual Considerations

AONB

- 3A.5.5 There is a difference between the position at the time of the CPRSS and the review in relation to the setting of the AONB. The CPRSS applied a 2 km buffer to the AONB which was used to inform the identification and appraisal of alternative route corridors. In identifying the preferred option, it placed greater emphasis on landscape and visual impacts in the Eastern Option (compared to the Western Option) due to the flat topography extending to the coast compared to the rising topography to the west towards the AONB which would act as a backdrop to west-facing views within nearby settlements. For the western corridor, the CPRSS concluded that there was the potential for adverse visual effects on the AONB due to its proximity to the corridor in certain corridor sections. However, it considered that given the reduced

sensitivity of the landscape at over 2 km away (and with careful routing and siting of infrastructure) significant adverse visual effects were unlikely. Similarly, for the eastern corridor, the CPRSS concluded that there was the potential to adversely impact views to and from the AONB but that due to corridor sections being greater than 2 km away, significant adverse visual effects were considered unlikely.

- 3A.5.6 Work undertaken as part of the EIA, and which has informed this review, identifies the setting of the AONB as extending to around 6 km from the eastern boundary of the designated landscape which therefore incorporates parts of the Western Option.
- 3A.5.7 The Western Option from C6 to E14 largely falls within the setting of the AONB as described in **PEI Report Volume 3 Part C Appendix 2A Lincolnshire Wolds National Landscape (AONB) Setting Study**. This area plays an important role in supporting the AONB's statutory purpose of conserving and enhancing the landscape's natural beauty and the overlap of the Western Option with this area leads to a greater likelihood of significant effects on the AONB. The Western Option is characterised by a coherent, complementary, and predominantly rural landscape that has few vertical built structures.
- 3A.5.8 Following the Phase 2 Review, the impact for one corridor section (W9) was increased from 'low' to 'medium'. The Phase 2 Review in respect of landscape noted that while the Western Option is within the setting of the AONB, the westernmost part of the Eastern Option is close to the AONB setting, particularly corridor sections E6 to E9. Overall, however, the increased distance of the Eastern Option from the AONB reduces the likelihood of significant effects on the AONB.
- 3A.5.9 Site visits undertaken to inform this review and the preparation of the setting study concluded that the Eastern Option would likely result in fewer visual effects on views into and out of the AONB. Specifically, the Eastern Option avoids likely significant impacts on westward views toward the AONB from the line of villages between Covenham and Little Carlton. These villages are within the area defined as being within the setting of the AONB.
- 3A.5.10 In the open views from the AONB, a new overhead line in the Western Option would be very noticeable, with multiple pylons visible on the skyline, in places spanning the full width of the panoramic view. It is not however considered that the overhead line in the Western Option would significantly affect views from Bluestone Heath Road, which is listed under the Special Quality 'Expansive Sweeping Views' in the Lincolnshire Wolds AONB Management Plan (Ref 4).
- 3A.5.11 When viewed from the AONB, pylons associated with a new overhead line in the Eastern Option (corridor sections E6 to E11) would appear to be approximately half the height of those in the equivalent sections of the Western Option. They would be seen as part of the distant visual backdrop, blending with existing coastal development, including both onshore and offshore wind turbines.
- 3A.5.12 As described below, the Eastern Option may still result in significant effects on views generally but due to the intervening distance, they are unlikely to be those which focus on/towards the AONB. These views in the vicinity of the Eastern Option are already affected by wind turbines and the coastal development, including large holiday parks, and impacts are therefore less likely to be significant.
- 3A.5.13 In respect of the AONB, the review concluded that

- i. from some locations there are likely to be significant effects with the Western Option on the views in and out of the AONB, which may affect its Special Qualities; and
- ii. as detailed below, the Eastern Option is still likely to result in significant visual effects, but these are less likely to be on views to or from the AONB and therefore the potential for impacts on the AONB does not increase as a result of the review of the Eastern Option.

Other Landscape and Visual considerations

- 3A.5.14 The Western Option passes through a landscape with a coherent landscape character, much of which is rural, with a limited presence of vertical built structures. The landscape complements the Lincolnshire Wolds to the west, with shared visual, topographical, and ecological attributes contributing to a cohesive and integrated landscape setting. In addition to the historic market town of Louth, attractive hamlets and villages are dispersed throughout the area, enhancing the scenic quality and character of the broader landscape. St James' Church's spire in Louth is a prominent landmark in views across the farmland. The sensitivity of the landscape within the Western Option means that significant effects on the landscape are likely to arise.
- 3A.5.15 The Eastern Option is closer to the more developed coastline, where urban development, large holiday parks, and onshore and offshore wind turbines are present. Overall, this makes the landscape within the Eastern Option generally less sensitive to the Project. While this does not eliminate the potential for significant effects on the landscape with the Eastern Option, such effects are less likely to occur with the Eastern Option compared to the Western Option.

Flood Risk

- 3A.5.16 Both the Western and Eastern Options have areas which would require routeing within Flood Zone 2 and/or Flood Zone 3. Within the Eastern Option a significant proportion of the route would be located in the floodplain, which includes a broad swathe across all corridor sections from E6 to E11. Within the Western Option isolated lengths of floodplain along watercourses pass from west to east through corridor sections W7 to W9 and W11 to W13.

Ecological Considerations

- 3A.5.17 The review resulted in a higher likelihood of impact for corridor section C6 to the north and E14 to the south due to ecology impact risks with regard to qualifying species of the Humber Estuary SPA, and for corridor section C7 to the south due to ecology impact risks on qualifying species of the Humber Estuary SPA. However, it should be noted that these corridor sections (C6, E14 and C7) also form part of the alternative Eastern Option and therefore do not differentiate between the options.
- 3A.5.18 The review largely reconfirms the findings of the CPRSS in relation to potential impacts on coastal ecological designations, as the new information supports the previous conclusions reached. The review was informed by more recent publicly available data from the Viking CCS project as well as the Project's ongoing surveys in the wider area, which confirmed that the Eastern Option is more likely to have a greater impact on the SPA than the Western Option due to the presence of qualifying species in corridor sections E10 and E11. Qualifying bird species related to the SPA are also understood to be present and/or utilising common corridor sections to the

north (C6) and south (E12 to E14 and C7), however, these areas are common to both the Western and Eastern Options and therefore not a differentiator.

Engineering

- 3A.5.19 The review did not result in changes for the Western Option from an engineering perspective, however, the outcome for the Eastern Option was increased following the review due to the presence of Manby (Eastfield Farm) Airfield and the potential impact on flightpaths due to the proximity of an overhead line. As noted in paragraph 3A.4.9 this was a result of the review process as opposed to new information.

Policy and Legislative Considerations

- 3A.5.20 With reference to the key points of relevance from National Policy Statement (NPS) EN-1 (Ref 5) and in respect of the duty under Section 85(A1) of the Countryside and Rights of Way Act 2000 (Ref 6), described at paragraph 3A.2.14 above, there are a number of issues which are relevant to the comparative analysis between the Western and Eastern Options.

Lincolnshire Wolds AONB (Countryside and Rights of Way Act 2000, section 85(A1) and EN-1, paragraphs 5.10.8 and 5.10.34)

- 3A.5.21 As highlighted above, the section 85(A1) duty applies to functions performed outside of the relevant designation boundary which affect the designated landscape. As a result, it is clear that the duty is relevant to both Options.
- 3A.5.22 The review has identified that the key potential impacts with regard to the Western Option are both the impacts on views out of the AONB and the impacts on views into the AONB. The greater distance of the Eastern Option from the AONB reduces the potential for significant effects on views looking both into and out of the AONB.
- 3A.5.23 More generally, due to the presence of existing infrastructure and coastal development, the landscape and views associated with the Eastern Option are less sensitive to the Project than the Western Option. While this does not eliminate the potential for significant landscape and visual effects, such effects are considered less likely to arise from the Eastern Option when compared to the Western Option.
- 3A.5.24 The policy requirements as to sensitive design, measures which seek to further the purpose of designation, avoidance of harm to the purposes of designation and minimising adverse effects under paragraphs 5.10.8 and 5.10.34 of EN-1 would apply to either Option if it were progressed and would be borne out through the ongoing design process. To date, only the Western Option has been subject to further design, following selection as part of the emerging preferred corridor in the CPRSS.
- 3A.5.25 At this stage in the design process for the Western Option, any proposals for mitigation, compensation and enhancement have not yet been fully defined. However, there has been ongoing consideration of mitigation as part of the design development process, which includes the routeing of the overhead line alignment as well as the anticipated use of low-height pylons in parts of the Western Option. The latter would help to mitigate the effects on views out of the AONB, although the tops of the pylons would still be visible on the skyline across the view and there would be more of them due to the shorter spacing. Irrespective of the Option progressed as a result of this review, any measures of the nature referred to in paragraph 5.10.8 of

EN-1 would be progressed and detailed in the application for development consent, with the assessment of impacts presented in the ES and a fuller analysis of the relevant policy and legislative requirements (including those set out above) also provided at that stage.

- 3A.5.26 In that context, paragraph 5.10.34 of EN-1 makes clear that visibility from a designated area should not itself be reason for the Secretary of State to refuse consent, while paragraph 5.10.35 requires consideration to be given to the potential for adverse impacts on the landscape to be offset by the benefits of a project.
- 3A.5.27 In the case of the Project, any adverse impacts on the AONB will be assessed within the ES, including an assessment of any conflict with the natural beauty, special qualities and key characteristics of the AONB. Further analysis will also be provided alongside those assessments as part of the wider DCO application, to address the duty applicable under section 85(A1) and the policy requirements detailed above.
- 3A.5.28 In the meantime, while the review has identified that there are likely from some locations to be significant effects with the Western Option on the views in and out of the AONB which may affect its Special Qualities, it is not expected that these impacts would be sufficient to outweigh the benefits of the Project. The wider benefits of the Project will be presented in full as part of the DCO application but the key elements of the need case for the Project are described in section 4 of the **Strategic Options Report 2025** and section 1.2 of **PEI Report Volume 2 Part A Chapter 1 Introduction** as the accommodating of increased power flows and the connection of generation projects. Without the reinforcement provided in part by the Project, the transmission system between the North and South of England would have insufficient capacity to accommodate contracted and predicted generation connections in the area. This includes the connection of new renewable energy generators, to facilitate the achievement of the Government's Net Zero target of connecting up to 50 gigawatts (GW) of offshore wind by 2030 and the transition away from fossil fuels required to achieve the Government's legally binding "Net Zero" commitment of a 100 per cent reduction in greenhouse gas emissions by 2050. It is not expected that the impacts would outweigh these substantial public benefits.
- 3A.5.29 Therefore, based on the information available as part of this review, the potential impacts on the AONB arising from the Western Option are considered capable of being offset by the benefits of the Project, for the purpose of paragraph 5.10.35 of EN-1. As such, while significant landscape and visual effects in respect of the AONB are considered more likely to arise from the Western Option, the increased likelihood alone is not sufficient to constitute the sole determining factor in the selection of the preferred Option.
- 3A.5.30 Further detailed analysis, drawing on the full assessment of impacts and proposed mitigation to be described in the ES and the detailed description of the benefits of the Project, will be provided as part of the DCO application.

Ecological Considerations (EN-1, section 5.4)

- 3A.5.31 In relation to the Humber Estuary SPA and SSSI, which are considered to be more likely to be adversely affected by the Eastern Option due to its relative proximity to them, relevant policy considerations under paragraphs 5.4.4 and 5.4.7 of EN-1 relate to the potential to adversely impact the integrity of the SPA or have an adverse effect on the SSSI.

- 3A.5.32 The Eastern Option avoids the SPA and SSSI itself, but available information considered as part of the review indicates that the corridor crosses areas used by qualifying species of the designation and which have the potential to be functionally linked. This information is not conclusive in terms of establishing an effect on the integrity of the site and further detailed surveys would be required. Parts of the Western Option (which are common to the Eastern Option) also interact with land which has the potential to be functionally linked with the Humber Estuary SPA but as noted previously this commonality means it does not differentiate between the Western and Eastern Options. Overall, it is considered that the Humber Estuary SPA and SSSI are less likely to be adversely affected by the Western Option because further away when compared to the Eastern Option.
- 3A.5.33 With reference to the application of the mitigation hierarchy and consideration of reasonable alternatives under paragraph 5.4.42 of EN-1, the Western Option has greater potential to avoid and less potential to impact the Humber Estuary SPA compared to the Eastern Option.

Flooding Considerations (EN-1, section 5.8)

- 3A.5.34 In both the CPRSS and the subsequent review, a clear preference was expressed for the Western Option due to flood risk as well as the impact of potential flooding on construction programme. This accords with the Sequential Test, which is intended to guide development towards areas of lower flood risk taking into account wider sustainable development objectives.
- 3A.5.35 The Exception Test is applied where the Sequential Test alone cannot deliver an acceptable site (or in this case route), with the circumstances when an acceptable site cannot be delivered including alternative sites subject to national designations (such as AONBs) where application of relevant policies would provide a clear reason for refusing development.
- 3A.5.36 The Eastern Option is largely outside the setting of the AONB as defined by the PEI Report. However, the Eastern Option crosses significant areas identified as Flood Zones 2 and 3. Consequently, the application of the Sequential Test requires consideration of the Western Option as a potential alternative. Although the Western Option also passes through areas of Flood Zones 2 and 3, it presents a lower risk of tidal flooding compared to the Eastern Option. Therefore, the Western Option is considered sequentially preferable. While the review identified the potential for impacts in respect of the AONB arising from the Western Option, for the reasons set out below this alone is not sufficient to justify the rejection of the sequentially preferable alternative and the application of the Exception Test.
- 3A.5.37 The review highlights an increased risk of impacts on the AONB in respect of the Western Option. At this stage in the design process for the Western Option, the assessment of impacts is not complete and any proposals for mitigation, compensation and enhancement have not yet been fully defined. This will be presented in the ES submitted as part of the DCO application, with accompanying policy analysis. The DCO application will address the balance between need, policy and impacts as well as other important and relevant considerations.
- 3A.5.38 Notwithstanding the ongoing design development and assessment, paragraphs 5.10.34 and 5.10.35 of EN-1 make clear that the visibility of a project from within a protected landscape is not in itself a reason for refusal and any adverse impacts on a protected landscape must be weighed against the benefits (including need) of the relevant project. As identified at paragraph 3A.5.27, above, in the case of the Project,

any adverse impacts on the AONB will be assessed within the ES and, should adverse impacts be identified following the application of mitigation, those impacts will be weighed against the benefits of the Project. However, as detailed at paragraphs 3A.5.28 to 3A.5.30, above, based on the information available as part of this review, the potential impacts on the AONB arising from the Western Option are considered capable of being offset by the benefits of the Project, for the purpose of paragraph 5.10.35 of EN-1.

- 3A.5.39 As such, the identification as part of the review of an increased likelihood for potential impacts on the AONB arising from the Western Option does not provide a clear reason for refusing development consent. Therefore, the selection of the Western Option accords with the Sequential Test under Section 5.8 of EN-1 and, as stated above, further assessment of the Western Option will be presented in the ES.

Summary of Findings

- 3A.5.40 The comparative analysis highlights that distinguishing factors in the selection of the preferred option remain finely balanced and largely relate to the increased potential for significant adverse effects on the AONB associated with the Western Option and the increased potential for significant adverse effects on the coastal ecological designations and flood risk issues associated with the Eastern Option. The review also reconsidered the constraints affecting the Eastern Option and while the impact/constraint outcomes have not increased, they have in some instances (e.g. Humber Estuary SPA) been validated through the consideration of new information. In terms of constructability and programme, the engineering appraisal expressed a preference for the Western Option due to the flood risk issues within the Eastern Option and the risk of delay as a result of flooding during construction.
- 3A.5.41 While the review highlights an increased risk of impact on the AONB in respect of the Western Option, when balanced against the ecological, flood risk and engineering implications in respect of the Eastern Option this is not considered sufficient to warrant a change in the preferred Option from the Western Option to the Eastern Option. The Western Option is within the setting of the AONB as defined by the PEI Report, however, likely significant adverse effects are limited to sections of the eastern part of the AONB. As such, this is not considered a determinative factor and as part of the review has had to be balanced against other factors.
- 3A.5.42 Relevant policy and legislative considerations in respect of AONB, ecology and flooding are described at section 5.2, above. and include requirements relating to the AONB, ecology and flooding:
- i. AONB – The duty under section 85(A1) is described in the Guidance and in EN-1. At this stage of the development of the Project, there is insufficient design detail to carry out a full analysis of the potential impacts on the AONB because there are elements of the Project subject to ongoing design, including its mitigation. A detailed assessment of any such adverse impacts on the AONB arising from the Project will be provided within the ES. Further analysis will also be provided alongside those assessments as part of the wider DCO application, to address the section 85(A1) duty and the policy requirements. This will include the scope for sensitive design, measures which seek to further the purpose of the designation and a description of the benefits of the Project. As detailed at paragraphs 3A.5.28 to 3A.5.30, above, based on the information available as part of this review, the potential impacts on the AONB arising from the Western Option are considered to be capable of being offset by the benefits of the

Project, for the purpose of paragraph 5.10.35 of EN-1. Therefore, while significant landscape and visual effects in respect of the AONB are considered more likely to arise from the Western Option, this is not considered to be so significant as to outweigh the substantial public benefits and prevent the grant of development consent.

- ii. Ecology – EN-1 makes clear that development should, in line with the mitigation hierarchy, seek to avoid significant harm to biodiversity interests including through the consideration of reasonable alternatives. The Western Option has greater potential to avoid and less potential to impact the Humber Estuary SPA compared to the Eastern Option, consistent with the application of the mitigation hierarchy.
- iii. Flooding – EN-1 confirms that the Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site (or in this case route). When considering the Eastern Option, the application of the Sequential Test leads to the Western Option as an acceptable alternative. As such, the threshold for the application of the Exception Test to the Eastern Option is not met.

3A.5.43 Overall, the change in appraisal outcomes for the Western Option in comparison with those for the Eastern Option following the review is not considered significant enough to require a change of route corridor. It does not significantly alter the previous conclusions reported in the CPRSS and the preference for the Western Option.

Programme Considerations

3A.5.44 As detailed at paragraph 3A.2.7, above, environmental, socio-economics and engineering are the key topics for appraisal to inform the decision-making process. The assessment of the Western Option was undertaken and its suitability as the preferred option confirmed without regard to the potential implications for the timing of delivery for the Project. However, considerations in relation to programme implications were taken into account as an additional factor, as detailed below.

3A.5.45 The Project will be delivered under the Accelerated Strategic Transmission Investment (ASTI) framework, these projects play a vital part in achieving the UK Government's ambition of connecting 50GW of offshore wind by 2030. This is reinforced by National Policy Statement (NPS) for Electricity Networks Infrastructure (EN-5) (Ref 8) which confirms the government's view of the Project being critical national priority (CNP) and should be progressed as quickly as possible. The Clean Power 2030 Action Plan: A new era of clean electricity was published by the Government in December 2024 (Ref 9). This report further demonstrates the criticality of timely delivery of the Project.

3A.5.46 At this stage, a decision to change the preferred corridor would significantly impact the Required in Service Date (RISD) milestone of the Project; this milestone is part of the licence agreement between Ofgem and National Grid. The high-level likely impact of this change would be an approximate delay of 12 months to the critical path of the Project. The reason behind this delay would be due to the additional design work and consultation which would be required following a change in preferred corridor.

3A.5.47 The impact of this delay would be severe. Notably the delay in the programme would directly negatively affect the reduction of greenhouse gas emissions as the required infrastructure would not be in place to connect clean, low-carbon power projects to the transmission system, many of which are reliant on the Project being energised.

Furthermore, with the increase in connection of generation sources outside of those traditional locations that have hosted fossil fuel generators, earlier completion of the Project will reduce the bottlenecks on the transmission system and the subsequent constraint costs which inevitably puts pressure on consumer bills. Delay to the completion of the Project would have a significant and direct impact on the commencement and completion of a number of other CNP projects. This would therefore increase the cumulative impact of the factors discussed within this section.

- 3A.5.48 Aside from the impacts noted above, National Grid is obliged through its licence conditions to provide timely access to the transmission system for customers with whom it has connection agreements. The Project is providing physical connection points to upwards of 17 new customers, whilst also acting as the 'enabling works' for a much larger number of new customers connecting across the wider transmission network. Further delay to the delivery timescales for the Project would therefore jeopardise contracted connection dates. In addition to connecting new customers, the Project is also delivering new demand capacity for two DNOs, further enabling the connection of embedded generation, industrial, commercial and residential customers across the distribution networks. The Project also facilitates the provision of circa 7GW of additional capability on the transmission network which is required to provide vital uplifts in bulk power transfer across major boundaries B8 and B9, without which consumer constraint costs are likely to continue rising substantially.
- 3A.5.49 In summary, while the confirmation of the Western Option as the preferred option following the review was made without reference to the programme implications associated with changing the preferred corridor, those considerations are relevant as an additional confirmatory factor. For the reasons outlined above, the critical nature of the Project means it should be delivered as quickly as possible, which would not be achieved if there was a change in the preferred option. Rather, a decision to change the preferred corridor at this stage would have various impacts including environmental, cost pressures on consumers and other CNP projects. For that reason, the consideration of programme implications supports the retention of the Western Option as the preferred option.

3A.6 Conclusion

- 3A.6.1 Following the review, the additional information and resulting change to the appraised constraints/impacts in the Western Option in comparison with those in the Eastern Option do not materially alter the previous conclusions reported in the CPRSS and the preference for the Western Option. Therefore, the review confirmed the appropriateness of selecting the Western Option and National Grid is continuing to progress the design of the Western Option and wider preferred corridor, as presented at Stage 2 (Statutory) consultation.
- 3A.6.2 The predominant factors considered as part of the review and in reaching the above conclusion are:
- i. Landscape and visual considerations and the AONB setting, including consideration of the duties and policies referred to in section 3A.2;
 - ii. Ecological considerations and mitigation hierarchy;
 - iii. Flood zone extents and the sequential test; and
 - iv. Engineering considerations in relation to an airfield.

3A.6.3 Considerations in relation to programme represent an additional confirmatory factor, with environmental, technical and cost being considered as 'core' impacts in the decision-making process. It is important for consideration to be given to programme impact as the Project will be delivered under the ASTI framework, and as such plays a vital part in the UK Government's Net Zero ambitions. The significance in relation to programme delivery is further reinforced by NESO's publication of the Clean Power 2030 report (Annex 2) (Ref 10) which explains the benefit of potential acceleration opportunities for the Project. The UK Government has also launched the Mission Control for Clean Power 2030 plan (Ref 11) to help accelerate progress on energy projects, including the Grimsby to Walpole project.

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National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com