AENC-ARC-ENV-REP-0114

Norwich to Tilbury

Volume 6: Environmental Statement

Document: 6.13.A5 Environmental Statement Appendix 13.5 - National Landscape Assessment Study

Final Issue A

August 2025

Planning Inspectorate Reference: EN020027

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(a)

nationalgrid

Contents

13. National Landscape Assessment Study

13.1 Introduction

13.1.1 This appendix was produced to support Chapter 13: Landscape and Visual (document reference 6.13) of the Environment Statement (ES) (Volume 6 of the Development Consent Order (DCO) application) for Norwich to Tilbury (the 'Project').

13.1.2 Two nationally designated National Landscapes (Areas of Outstanding Natural Beauty (AONBs)) fall within the Landscape and Visual Impact Assessment (LVIA) Study Area for the Project as defined within Chapter 13: Landscape and Visual (document reference 6.13) and below:

- Dedham Vale National Landscape is shown on Figure 13.1: LVIA Study Area and Landscape Designations (document reference 6.13.F1). Section C of the Project passes directly through and to the north and south of the National Landscape. Section D passes to the south of the National Landscape
- The Suffolk and Essex Coast and Heaths National Landscape is shown on Figure 13.1: LVIA Study Area and Landscape Designations (document reference 6.13.F1). Section C of the Project passes to the west of the National Landscape.

13.1.3 No part of the Project either during construction or operation (and maintenance) would directly affect the Suffolk and Essex Coast and Heaths National Landscape, which is located at the edge of the 3 km LVIA Study Area. The National Landscape is approximately 3.7 km to the south-east of the Limits of Deviation (LoD)[1] of the closest above ground operational element of the Project; namely the overhead line and Wenham Grove Cable Sealing End (CSE) compound (Section C). The closest part of the Project during operation would be the underground cable which lies just under 3 km from the National Landscape. Due to a combination of distance and intervening vegetation, site visits have confirmed that there is limited visibility towards the Order Limits from the National Landscape within the Study Area. Views along the Stutton Brook within the National Landscape tend to be inward looking. This National Landscape has therefore not been included within this assessment as it is considered that there is no potential for significant landscape and visual effects to occur, or for any effects on its special qualities.

13.1.4 National Grid has a duty to 'seek to further the purposes' of National Landscapes under Section 85 of the Countryside and Rights of Way Act 2000 (CRoW Act). This duty also applies when considering applications for projects outside the boundaries of these areas as discussed further in this appendix. National Grid is also required to consider National Landscapes under planning policy and guidance when routeing, designing and assessing new electricity transmission infrastructure. Further details of the approach taken in relation to National Landscapes can be found in Chapter 2: Key Legislation and Planning Policy Context (document reference 6.2), Chapter 3: Main Alternatives Considered (document reference 6.3), Policy Compliance Document (document reference 5.7), Design Development Report (document

[1] Lateral overhead line LoD for proposed overhead line and underground cable alignment, lateral / longitudinal overhead line LoD for proposed substations, substation extensions and CSE compound

reference 5.15) and Design and Access Statement (document reference 7.15). The approach to mitigation and enhancement is outlined in Chapter 5: Environmental Impact Assessment (EIA) Approach and Method (document 6.5). Mitigation measures are described in Chapter 4: Project Description (document reference 6.4) and Chapter 13: Landscape and Visual (document reference 6.13).

13.1.5 National Grid's approach to the duty to seek to further the purposes of National Landscapes is set out in National Landscapes – Duty to Seek to Further the Purposes Report (s85 Countryside and Rights of Way Act 2000) (document reference 5.10).

13.1.6 The purpose of this appendix is to assess the effects of the Project on the defined special qualities (natural beauty) of Dedham Vale National Landscape during construction and operation (and maintenance).

13.1.7 The assessment presented in this appendix is based on the design of the Project as shown on Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2). The assessment has included consideration of the potential for changes to the assessment within the LoDs set out in Chapter 4: Project Description (document reference 6.4). This is set out in Section 13.9 of Chapter 13: Landscape and Visual (document reference 6.13).

13.1.8 For a full description of the Project, reference should be made to Chapter 4: Project Description (document reference 6.4), Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference 6.4.F2).

13.1.9 This appendix is supported by an annex which considers the setting of the Dedham Vale National Landscape in the context of overhead electricity transmission infrastructure, titled 'Annex A: Dedham Vale National Landscape Setting Study'. The purpose of the annex is to identify areas of the landscape that form part of the setting of the National Landscape, in order to inform the assessment of effects of the Project on the defined special qualities (natural beauty) of the National Landscape.

13.1.10 There are no locally designated landscapes within the Study Area.

13.2 Assessment of Effects on Dedham Vale National Landscape

13.2.1 This section describes the effects of the Project on the Dedham Vale National Landscape during construction and operation (and maintenance). The National Landscape is shown on Figure 13.1: LVIA Study Area and Landscape Designations (document reference 6.13.F1) and shown with the Zone of Theoretical Visibility (ZTV) of the Project on Figure 13.19: ZTV within Dedham Vale National Landscape (document reference 6.13.F19).

13.2.2 The approach to the assessment of effects on Dedham Vale National Landscape is set out within Appendix 13.1: Landscape and Visual Methodology (document reference 6.13.A1). The method includes an explanation of duration of effects which is also referred to in this appendix. The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (The Landscape Institute and Institute of Environmental Management and Assessment, 2013) states at paragraph 5.51 on page 91 that '*Duration can usually be simply judged on a scale such as short term,*

medium term or long term.' For the purposes of the assessment, duration is determined in relation to the phases of the Project, as follows:

- Short term: This is assumed to be up to 2032 which covers construction plus one year reinstatement
- Medium term: This is assumed to be 2033 to 2048 which is based on year 2-15 post construction
- Long term: This is assumed to be 2049 onwards and it used to describe effects with a duration that extends longer than 15 years post construction.

13.2.3 The duration of effect takes into account the effects of vegetation clearance during construction, which may be experienced for several years after construction is completed, before any replanted habitats have matured.

13.2.4 Observations are drawn from the assessment of landscape and visual effects, as set out in Appendix 13.2: Landscape Baseline and Assessment (document reference 6.13.A2) and Appendix 13.3: Visual Baseline and Assessment (document reference 6.13.A3).

Key Legislation and Planning Policy

13.2.5 National Grid, as a statutory undertaker, has a duty under Section 85 of the CRoW Act which states '*Any relevant authority exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty*'. This duty is also considered to apply to development and activities outside the designated area that may have an impact on its natural beauty as stated in Department for Environment, Food and Rural Affairs (DEFRA) (2024) guidance: '*the duty also applies to functions undertaken outside of the designation boundary which affects land within the Protected Landscape*'. Further detail is provided in Chapter 2: Key Legislation and Planning Policy Context (document reference 6.2), Policy Compliance Document (document reference 5.7) and National Landscapes – Duty to Seek to Further the Purposes Report (s85 Countryside and Rights of Way Act 2000) (document reference 5.10).

National Policy Statements (NPS)

Overarching NPS for Energy (EN-1)

13.2.6 In policy terms, National Landscapes are afforded the highest status of protection, as set out in paragraph 5.10.7 of Overarching NPS for Energy (EN-1) (Department for Energy Security and Net Zero (DESNZ), 2024): '*National Parks, the Broads and AONBs have been confirmed by the government as having the highest status of protection in relation to landscape and natural beauty*.' Paragraph 5.10.8 goes on to state that: '*The duty to seek to further the purposes of nationally designated landscapes also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. In these locations, projects should be designed sensitively given the various siting, operational, and other relevant constraints. The Secretary of State should be satisfied that measures which seek to further the purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development.* '

NPS for Electricity Networks Infrastructure (EN-5)

13.2.7 NPS for Electricity Networks Infrastructure (EN-5) (DESNZ, 2024a) states at paragraph 2.9.21 that in nationally designated landscapes: '*In these areas, and where harm to the landscape, visual amenity and natural beauty of these areas cannot feasibly be avoided by rerouting overhead lines, the strong starting presumption will be that the applicant should underground the relevant section of the line.*'

13.2.8 Full consideration of the relevant NPSs for the Project can be found in the Policy Compliance Document (document reference 5.7).

2025 Revisions to National Policy Statements

13.2.9 In April 2025, the government launched a consultation on proposed changes to EN-1 and EN-5 that ended on 29 May 2025. The consultation covers updates to:

- Draft: Overarching National Policy Statement for Energy (EN-1) (DESNZ, 2025)
- Draft: National Policy Statement for Electricity Networks Infrastructure (EN-5) (DESNZ, 2025a).

13.2.10 Changes consulted upon in the draft 2025 updates to the energy infrastructure NPSs include alignment with Clean Power 2030 targets and endorsement of the Centralised Strategic Network Plan. The 2025 revisions have strengthened the process for delivering major new infrastructure, reinforcing the government's ambition to deliver clean power by 2030.

13.2.11 The transitional provisions on the status of the 2025 revisions say:

'While the review is undertaken, the current suite of energy NPS remain relevant government policy and EN-1 to EN05 have effect for the purposes of the Planning Act 2008. The Secretary of State has decided that for any application accepted for examination before amending the energy NPSs, the current suite of energy NPS, published in 2024, should have effect. The amended energy NPSs will therefore only have effect in relation to those applications for development consent accepted for examination after the publication of the final amended energy NPSs. However, any emerging draft energy NPSs (or those amended but not having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the relevant Secretary of State to consider within the framework of the Planning Act 2008 and with regard to the specific circumstances of each development consent order application'.

13.2.12 At the point of submission of the Project, the NPSs designated in January 2024 were government policy.

13.2.13 If the revised NPSs are designated prior to a decision being made on the application for development consent, deliverables will be reviewed for consistency with the newly-designated NPSs, and any additional requirements would be captured within an errata document post submission. It was confirmed in Section 51 advice received from the Planning Inspectorate that if the new NPSs are adopted after the application has been submitted, the Examining Authority can issue procedural decisions to ask all parties for views on the impacts of new NPSs.

National Planning Policy Framework (NPPF)

13.2.14 Paragraph 189 of the NPPF (Ministry of Housing, Communities & Local Government, 2025) states that: '*Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and National Landscapes which have the highest status of protection in relation to these issues…The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas*.'

Local Planning Policy

13.2.15 The northern half of the Dedham Vale National Landscape is within the Babergh and Mid Suffolk District (within Suffolk), and the southern half is within Colchester Borough and Tendring District (within Essex). The following planning policies are of relevance to the National Landscape.

Babergh and Mid Suffolk Joint Local Plan

13.2.16 Policy LP18 – Area of Outstanding Natural Beauty of the Babergh and Mid Suffolk Joint Local Plan Part 1 (Adopted November 2023) notes that:

- '*Proposals for major development within the AONBs will be refused other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest.*
- *The Councils will support non-major development within the AONBs and development within the setting of the AONBs that:*
  - *Gives great weight to conserving and enhancing the landscape and scenic beauty;*
  - *Integrates positively with the character of the area and reinforces local distinctiveness of the AONBs;*
  - *Is sensitive to the natural and built landscape and visual impacts (including on dark skies and tranquil areas);*
  - *Supports the provision and maintenance of local services, facilities and assets (including affordable housing), so long as it is commensurate with the character and objectives of the AONBs;*
  - *Demonstrates special regard to conserving and enhancing landscape character, landscape values and heritage assets in the AONBs; and*
  - *Conserves the distinctiveness of the AONBs (including quality views), supports the public enjoyment of these areas and the wider social and economic objectives set out in the AONB Management Plans.*
- *Development within the AONB Project Areas should have regard to the relevant Valued Landscape Assessment*.'.

Colchester Local Plan

13.2.17 Policy ENV4: Dedham Vale Area of Outstanding Natural Beauty of the Colchester Local Plan Section 2 (Adopted July 2022) notes that:

- '*Development will only be supported in or on land within the setting of the Dedham Vale Area of Outstanding Natural Beauty (AONB) that:*

  i. Makes a positive contribution to the natural beauty and special qualities of the AONB, including tranquillity and the AONB's good quality night/dark skies; and,

  ii. Does not adversely affect the character, quality views, into and out of the AONB and distinctiveness of the AONB or threaten public enjoyment of these areas, including by increased motorised vehicle movement; and,

  iii. That there are no adverse impacts on the setting of the AONB which cannot reasonably be mitigated against and,

  iv. Supports the wider environmental, social and economic objectives as set out in the Dedham Vale AONB and Stour Valley Management Plan.

- *Applications for major development within or in close proximity to the boundary of the Dedham Vale AONB will be refused unless in exceptional circumstances it can be demonstrated that the development is in the public interest, and this outweighs other material considerations.*
- *Where exceptional development is suitable, landscape enhancements, mitigation or compensation measures must be provided. The Local Planning Authority will seek opportunities to mitigate the impact of features identified as having adverse impacts. Residual impacts may be offset by other planning gain within the AONB or contributions to the Stour Valley Environment Fund….*
- *The Local Planning Authority will also encourage proposals in or near the AONB to underground new infrastructure associated with electricity schemes or communication equipment where financially viable, to help protect its landscape qualities.*'.

Tendring District

13.2.18 Policy PPL 3 of the Tendring District Local Plan 2013-2033 and Beyond (Adopted January 2022) notes that: '*Development proposals affecting protected landscapes must pay particular regard to the conservation and enhancement of the special character and appearance of the Dedham Vale and Suffolk Coast and Heaths AONBs, and their settings, including any relevant AONB Management Plan objectives*.'

Dedham Vale Management Plan

13.2.19 The Dedham Vale AONB and Stour Valley Project Area Management Plan 2021 – 2026 (Dedham Vale National Landscape and Stour Valley, 2021) sets out a vision for the National Landscape and guidance on how it should be managed. Dedham Vale National Landscape and Stour Valley Management Plan 2026 - 2031 (Dedham Vale National Landscape and Stour Valley Partnership, 2025) is currently being consulted upon. The landscape of the area is described in the Statement of Significance (page 21 in the current Management Plan):

'*The Dedham Vale AONB is a predominately agricultural landscape that exhibits a subtle lowland river valley with an assemblage of features associated with this landscape still in place and intact. These features include a gently winding river and tributaries; gentle valley sides with scattered woodlands; sunken rural lanes; picturesque villages with imposing churches and historic timber framed buildings;*

scattered farmsteads and agricultural buildings; small fields enclosed by ancient hedgerows; riverside grazing meadows with associated drainage ditches and visible and hidden archaeology providing evidence of human habitation over previous millennia.

The area remains mostly free of incongruous development and large scale industrial developments. Despite some intrusions of human activity in the twentieth and twenty first centuries, the area retains a rural charm and tranquillity and is largely free of infrastructure associated with modern life.

The essential character of the Dedham Vale AONB was established in the middle of the previous millennium and has remained intact despite social, technological events. The fundamental beauty of the area and the scenes of a working landscape were captured by England's finest landscape artist, John Constable. The sites of his paintings are still recognisable in the heart of what is now the AONB.'

13.2.20 Section 3 of the Management Plan includes a series of objectives which are aimed at conserving and enhancing the natural beauty of the National Landscape. The following are relevant to this study:

- '*CS1 - Support work that contributes to and protects the statutory purposes of the AONB, including impacts on its defined characteristics of landscape and scenic quality, relative wildness, and tranquillity.*
- *CS2 - Resist proposals that significantly negatively impact the AONB's natural beauty and special qualities, including those in its setting.*
- *CS3 - Support work that contributes to local distinctiveness, appropriate climate change mitigation and wildlife recovery in the AONB and Stour Valley project area.*
- *CS4 - Support work to broaden the audiences to the AONB and Stour Valley project area and improve understanding of its natural and built features*.'.

Study Area

13.2.21 The Study Area for the assessment of effects on the National Landscape was defined as 3 km from the Limits of Deviation[2] of the operational above ground elements of the Project, which includes the new East Anglia Connection Node (EACN) Substation, as described in Chapter 13: Landscape and Visual (document reference 6.13) and shown on Figure 13.1: LVIA Study Area and Landscape Designations (document reference 6.13.F1). Some locations outside of the 3 km Study Area were selected as representative viewpoints, to assess visibility of the Project in long-ranging views. These included views across and out of the National Landscape, and were agreed with some stakeholders as outlined in the Draft Statements of Common Ground (SoCGs) (document reference 5.9).

Baseline Description

13.2.22 The Dedham Vale National Landscape is a lowland river valley landscape, located on the Essex/Suffolk border in the East of England (as shown on Figure 13.1: LVIA Study Area and Landscape Designations (document reference 6.13.F1)). The

[2] Lateral overhead line LoD for proposed overhead line and underground cable alignment, lateral / longitudinal overhead line LoD for proposed substations, substation extensions and CSE compounds

National Landscape covers the lower reaches of the River Stour and is low-lying, with the valley floor typically lying at between 0 m and 20 m above ordnance datum (AOD). The River Stour flows into the Cattawade Marshes to the east where the river becomes tidal. The eastern boundary of the National Landscape follows the western edges of the settlements of Cattawade and Manningtree. The western boundary of the National Landscape currently runs between Bures and Wormingford. The Dedham Vale National Landscape and Stour Valley Partnership have an aspiration for a future extension of the boundary into the Stour Valley Project Area between Bures and Sudbury. The northern and southern boundaries of the National Landscape are located a few kilometres either side of the river and its tributaries (the River Box and River Brett) and are typically at between 30 m and 60 m AOD.

Views and Visual Amenity within the Study Area

13.2.23 Dedham Vale National Landscape is used and experienced by people who live, work and visit the area.

13.2.24 There are a number of small settlements within the National Landscape. Within the Study Area these include Higham, Stratford St Mary, Langham, Dedham, Boxted and Little Horkesley. There are also small hamlets and scattered dwellings along a network of minor roads and lanes. Major roads within the Study Area include the A12 and A134.

13.2.25 The National Landscape is visited for a variety of recreational activities. There are various Visitor Information Centres and facilities for tourists including campsites. There are opportunities for exploring nature and wildlife, for example at Black Brook Local Wildlife Site. The area is used by people travelling along the Stour Valley Path, St Edmund's Way and Essex Way long distance paths, both on foot and by bike. There is a network of Public Rights of Way (PRoW), including bridleways which provide connections between the National Landscape and surrounding areas. The River Stour, which is central to the National Landscape, is used for recreation including canoeing and boating. In addition, the National Landscape is well-known for its history and heritage, including its distinctive 'wool churches' and association with artists including famous landscape artist John Constable.

13.2.26 Field work, an understanding of the Project (including review of ZTVs) and consultation with stakeholders (including Dedham Vale National Landscape, Suffolk County Council and Essex County Council) informed the selection of nine viewpoints within, or immediately outside of, the National Landscape as listed below:

- Figure 7.12.F84: Viewpoint 3.15: Birchwood Road west of Lamb Corner (document reference 7.12)[3].
- Figure 7.12.F86: Viewpoint 3.19: Essex Way/Mill Hill, west of Lawford (document reference 7.12)
- Figure 7.12.F87: Viewpoint 3.20: Fenbridge Lane (document reference 7.12)
- Figure 7.12.F91: Viewpoint 3.24: Higham Hill, south of Lower Raydon (document reference 7.12)
- Figure 7.12.F93: Viewpoint 3.26: Essex Way near Langham Hall (document reference 7.12)

[3] This viewpoint is located on the edge of the National Landscape

- Figure 7.12.F94: Viewpoint 3.27: B1066 Park Road, near Thorington Street (document reference 7.12)
- Figure 7.12.F105: Viewpoint 4.07: School Road / Stour Valley Path, west of Little Horkesley (document reference 7.12)
- Figure 7.12.F111: Viewpoint 4.13: B1508 Main Road, Wormingford (document reference 7.12)[4].
- Figure 7.12.F133: Viewpoint 4.36: Green Lane/Essex Way, Horkesley Green (document reference 7.12)[3].

13.2.27 Visualisations (wirelines or photomontages) were produced from a number of these viewpoints, to illustrate the potential visibility of the Project. The visualisations were considered in the assessment of visual effects of the Project. They were also used to inform the assessment of the Project on special qualities and *'natural beauty indicators'* (Alison Farmer Associates, 2016) of the National Landscape.

The Natural Beauty and Special Qualities of the National Landscape

13.2.28 A study by Alison Farmer Associates (2016) provides evidence on the *'natural beauty and special qualities'* of the National Landscape. It includes a detailed assessment of the factors which contribute to the natural beauty of the National Landscape and the relationship between them. It comments on the natural beauty indicators (or natural beauty characteristics) used as considerations as part of Dedham Vale's National Landscape designation process.

13.2.29 The Alison Farmer study summarises the *'special qualities'* on page 8 as follows:

- '*Iconic lowland river valley associated with the artist John Constable RA, the views he painted are still recognisable today*
- *Historic villages with timber framed housing and prominent churches*
- *Valley bottom grazing marshes with associated drainage ditches and wildlife*
- *Naturally functioning River Stour with associated tributaries, meres, and historic river management features*
- *Semi natural ancient woodlands on valley sides with associated wildlife*
- *Traditional field boundaries intact and well managed*
- *Apparent and buried archaeology indicating millennia of human activity*
- *A sense of relative tranquillity*
- *Surprisingly long-distance views from higher ground along the valley in an area associated with large skies*'.

The Project in relation to Dedham Vale National Landscape

13.2.30 The construction and operation (and maintenance) elements of the Project are shown on Figure 4.1: Proposed Project Design (document reference 6.4.F1) and Figure 4.2: Proposed Project Design – Permanent Features (document reference

[4] This viewpoint is located just outside the National Landscape

6.4.F2). The text below describes the Project in relation to Dedham Vale National Landscape.

13.2.31 The Project would be installed as underground cable through Dedham Vale National Landscape and adjacent land. Wenham Grove CSE compound would be located to the east of Raydon Great Wood, approximately 2 km to the north-east of the National Landscape at its closest point. The Project would transition from underground cable at this point, back on to overhead line heading north away from the National Landscape. To the south-east of the National Landscape, the underground cable route would continue outside the National Landscape and terminate at a new substation known as the EACN Substation, approximately 1.3 km south of the National Landscape. The Project would transition to overhead line between the EACN Substation and Great Horkesley (EACN side) CSE compound to the west. A further section of underground cable is proposed to the south-west of the National Landscape at Great Horkesley, where the Project is within the setting of the National Landscape (see Annex B). The Great Horkesley (EACN side) and Great Horkesley (Tilbury side) CSE compounds are located approximately 1.3 km to the south of the National Landscape at each end of this underground section. The Project would transition back to overhead line at Great Horkesley (Tilbury side) CSE compound, and head south away from the National Landscape.

13.2.32 The components of the Project which were assessed in relation to effects on the special qualities of the National Landscape are the construction and operation (and maintenance) of the 400 kV underground cables and the construction and operation (and maintenance) of the 400 kV overhead line.

13.2.33 The construction and operation (and maintenance) of the CSE compounds and the EACN Substation that fall within 3 km of the National Landscape would have negligible and not significant effects on the National Landscape. These judgements were made following desktop analysis of ZTVs, an appreciation of views from the National Landscape undertaken during site visits (in both winter and summer) and an understanding of the Project. Table A13.1.1 provides a summary of the justification for this.

Table A13.1.1 Project components excluded from assessment of effects on the National Landscape

Project Component	Justification for not considering further in the assessment
Wenham Grove CSE compound	Wenham Grove CSE compound is approximately 2 km from the National Landscape boundary. The ZTV (as shown on Figure 13.11: ZTV of Wenham Grove CSE Compound (document reference 6.13.F11)) indicates very few publicly accessible locations within approximately 2 km to 3 km from which glimpsed views of the gantries (the tallest elements of the CSE compound) may be possible. Much of the CSE compound would be screened by existing tree cover and over time mitigation planting around the CSE compound would increase screening. This is shown as an 'Environmental Area' on Figure 4.1: Proposed

Project Component	Justification for not considering further in the assessment
	Project Design (document reference 6.4.F1). Furthermore, at these distances the gantries would be difficult to perceive as their apparent height would be approximately 0.4 cm to 0.3 cm high respectively. At worst, effects would be negligible and not significant and as mitigation matures there would be no visual effect relating to the CSE compound. Views towards the Project from the National Landscape are represented by Figure 7.12.F91: Viewpoint 3.24: Higham Hill, south of Lower Raydon (document reference 7.12).
Great Horkesley (EACN side) CSE compound	Great Horkesley (EACN side) CSE compound is approximately 1.3 km from the National Landscape boundary. The ZTV (as shown on Figure 13.13: ZTV of Great Horkesley (EACN side) CSE Compound (document reference 6.13.F13)) indicates very few publicly accessible locations within approximately 1.3 km to 3 km from which glimpsed views of the gantries may be possible. Much of the CSE compound would be screened by existing tree cover and over time mitigation planting within the Environmental Area around the CSE compound would increase screening. Furthermore, at these distances the gantries would be difficult to perceive as their apparent height would be approximately 0.7 cm to 0.3 cm high respectively. At worst, effects would be negligible and not significant and as mitigation planting within the Environmental Area around the CSE compound matures there would be no visual effect relating to the CSE compound. Views towards the Project from the edge of the National Landscape are represented by Figure 7.12.F133: Viewpoint 4.36: Green Lane / Essex Way, Horkesley Green (document reference 7.12) and Figure 7.12.F111: Viewpoint 4.13: B1508 Main Road, Wormingford (document reference 7.12).
Great Horkesley (Tilbury side) CSE compound	Great Horkesley (Tilbury side) CSE compound is approximately 1.3 km from the National Landscape boundary. The ZTV (as shown on Figure 13.14: ZTV of Great Horkesley (Tilbury side) CSE Compound (document reference 6.13.F14)) indicates few publicly accessible locations within 1.3 km to 3 km from which glimpsed views of the gantries may be possible. Views towards the CSE compound would be filtered and screened by existing tree cover and

Project Component	Justification for not considering further in the assessment
	over time mitigation planting would increase screening. Furthermore, at these distances the gantries would be difficult to perceive as their apparent height would be approximately 0.7 cm to 0.3 cm high respectively. At worst effects would be negligible and as mitigation planting within the Environmental Area around the CSE compound matures there would be no visual effect relating to the CSE compound. Views towards the Project from the edge of the National Landscape are represented by Figure 7.12.F105: Viewpoint 4.07: School Road / Stour Valley Path, west of Little Horkesley (document reference 7.12) and Figure 7.12.F111: Viewpoint 4.13: B1508 Main Road, Wormingford (document reference 7.12).
EACN Substation	The EACN Substation is approximately 1.3 km from the National Landscape boundary. The ZTV (as shown on Figure 13.12: ZTV of East Anglia Connection Node (EACN) (document reference 6.13.F12)) indicates few publicly accessible locations within approximately 1.3 km to 3 km from which glimpsed views of the tops of taller equipment such as gantries within the substation may be possible. Views towards the EACN Substation would be filtered and screened by existing tree cover and over time mitigation planting would increase screening. Furthermore, at these distances the taller equipment such as gantries would be difficult to perceive as their apparent height would be approximately 0.7 cm to 0.3 cm high respectively. At worst effects would be negligible and as mitigation planting within the Environmental Area around the EACN Substation matures there would be no visual effect relating to the EACN Substation. Views towards the Project from the National Landscape are represented by Figure 7.12.F86: Viewpoint 3.19: Essex Way / Mill Hill, west of Lawford (document reference 7.12).

Zone of Theoretical Visibility Mapping

13.2.34 This section provides a summary of theoretical visibility of the above ground 400 kV overhead line component of the Project from the National Landscape, with reference to the ZTV as shown on Figure 13.19: ZTV within Dedham Vale National Landscape (document reference 6.13.F19).

13.2.35 In addition to the above ZTV, a more detailed ZTV analysis was undertaken to inform the assessment. This has taken into consideration the theoretical visibility of smaller

sections of the 400 kV overhead line within 3 km to 5 km of the National Landscape. The detailed ZTVs are presented in the following figures in Annex B:

- Figure A13.5.6: Zone of Theoretical Visibility (ZTV) – Pylons JC23 – JC30. This figure illustrates theoretical visibility of pylons between 3 km – 5 km north-east of Dedham Vale National Landscape
- Figure A13.5.7: Zone of Theoretical Visibility (ZTV) – Pylons JC31 – JC33. This figure illustrates theoretical visibility of pylons within 3 km, to the north-east of Dedham Vale National Landscape
- Figure A13.5.8: Zone of Theoretical Visibility (ZTV) – Pylons TB3 – TB12. This figure illustrates theoretical visibility of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.9: Zone of Theoretical Visibility (ZTV) – Pylons TB13 – TB21. This figure illustrates theoretical visibility of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.10: Zone of Theoretical Visibility (ZTV) – Pylons TB22 – TB32. This figure illustrates theoretical visibility of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.11: Zone of Theoretical Visibility (ZTV) – Pylons TB37 – TB43. This figure illustrates theoretical visibility of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.12: Zone of Theoretical Visibility (ZTV) – Pylons TB44 – TB51. This figure illustrates theoretical visibility of pylons between 3 – 5 km, to the south of Dedham Vale National Landscape
- Figure A13.5.6: Zone of Theoretical Visibility (ZTV) – Top half of pylons JC23 – JC30. This figure illustrates theoretical visibility of the top half of pylons between 3 km – 5 km north-east of Dedham Vale National Landscape
- Figure A13.5.7 Zone of Theoretical Visibility (ZTV) – Top half of pylons JC31 – JC33. This figure illustrates theoretical visibility of the top half of pylons within 3 km, to the north-east of Dedham Vale National Landscape
- Figure A13.5.8 Zone of Theoretical Visibility (ZTV) – Top half of pylons TB3 – TB12. This figure illustrates theoretical visibility of the top half of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.9 Zone of Theoretical Visibility (ZTV) – Top half of pylons TB13 – TB21. This figure illustrates theoretical visibility of the top half of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.10 Zone of Theoretical Visibility (ZTV) – Top half of pylons TB22 – TB32. This figure illustrates theoretical visibility of the top half of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.11 Zone of Theoretical Visibility (ZTV) – Top half of pylons TB37 – TB43. This figure illustrates theoretical visibility of the top half of pylons within 3 km, to the south of Dedham Vale National Landscape
- Figure A13.5.12 Zone of Theoretical Visibility (ZTV) – Top half of pylons TB44 – TB51. This figure illustrates theoretical visibility of the top half of pylons between 3 km – 5 km, to the south of Dedham Vale National Landscape.

13.2.36 Reference within the assessment is also made to supporting visualisations from the following viewpoints:

- Figure 7.12.F84: Viewpoint 3.15: Birchwood Road west of Lamb Corner (photomontage) (document reference 7.12)
- Figure 7.12.F86: Viewpoint 3.19: Essex Way / Mill Hill, west of Lawford (photomontage) (document reference 7.12)
- Figure 7.12.F87: Viewpoint 3.20: Fenbridge Lane (photomontage) (document reference 7.12)
- Figure 7.12.F91: Viewpoint 3.24: Higham Hill, south of Lower Raydon (wireline) (document reference 7.12)
- Figure 7.12.F93: Viewpoint 3.26: Essex Way near Langham Hall (baseline photograph) (document reference 7.12)
- Figure 7.12.F94: Viewpoint 3.27: B1066 Park Road, near Thorington Street (baseline photograph) (document reference 7.12)
- Figure 7.12.F105: Viewpoint 4.07: School Road / Stour Valley Path, west of Little Horkesley (photomontage) (document reference 7.12)
- Figure 7.12.F111: Viewpoint 4.13: B1508 Main Road, Wormingford (photomontage) (document reference 7.12)
- Figure 7.12.F133: Viewpoint 4.36: Green Lane / Essex Way, Horkesley Green (wireline) (document reference 7.12).

13.2.37 An assessment of the visual effects of the Project from these viewpoints is presented in Annex A: Viewpoint Assessment of Appendix 13.3: Visual Baseline and Assessment (document Reference 6.13.A3). Table A13.1.2 provides a summary of the viewpoint assessment.

Table A13.1.2 Viewpoint assessment summary

Viewpoint Reference	Construction	Operation Year 1 (Without Mitigation)	Operation Year 15 (Without Mitigation)
3.15 Birchwood Road west of Lamb Corner	**Major and significant (adverse)**	**Moderate and significant (adverse)**	**Moderate and significant (adverse)**
3.19 Essex Way / Mill Hill, west of Lawford	**Minor-moderate and not significant (adverse)**	**Minor-moderate and not significant (adverse)**	**Minor-moderate and not significant (adverse)**
3.20 Fenbridge Lane	**Minor and not significant (adverse)**	**Minor and not significant (adverse)**	**Minor and not significant (adverse)**
3.24 Higham Hill, south of Lower Raydon	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**

Viewpoint Reference	Construction	Operation Year 1 (Without Mitigation)	Operation Year 15 (Without Mitigation)
3.26 Essex Way near Langham Hall	**Minor and not significant (adverse)**	**No effect (not significant)**	**No effect (not significant)**
3.27 B1066 Park Road, near Thorington Street	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**
4.07 School Road / Stour Valley Path, west of Little Horkesley	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**
4.13 B1508 Main Road, Wormingford	**Minor and not significant (adverse)**	**Minor and not significant (adverse)**	**Minor and not significant (adverse)**
4.36 Green Lane / Essex Way, Horkesley Green	**Minor and not significant (adverse)**	**Negligible and not significant (adverse)**	**Negligible and not significant (adverse)**

13.2.38 There is intermittent theoretical visibility of the proposed overhead line to the north of the National Landscape from its northern edge, given the elevation of the landform which in places rises to around 50 m AOD. The proposed overhead line is also theoretically visible from parts of the more distant southern upper valley slopes. This includes theoretical visibility from relatively short sections of the A12, B1068, local road and PRoW network. However, at over 2 km from the National Landscape the Project is not anticipated to be a noticeable feature in views, particularly when layers of field boundary vegetation and woodland are considered (as shown on Figure 7.12.F91: Viewpoint 3.24: Higham Hill, south of Lower Raydon (document reference 7.12)). Although the ZTV indicates the potential for more distant views from the B1068, the Project would be barely perceptible. The baseline photograph taken from the B1068, shown on Figure 7.12.F94: Viewpoint 3.27: B1066 Park Road, near Thorington Street (document reference 7.12), illustrates views looking north-east towards the proposed overhead line approximately 8 km away. At this distance the apparent height of the pylons would be approximately 0.4 cm.

13.2.39 Theoretical visibility of the proposed overhead line between the EACN Substation and Great Horkesley (EACN side) CSE compound to the south of the National Landscape is relatively widespread from areas inside the southern edge of the National Landscape, on the upper sides of the Stour Valley. This includes theoretical visibility from parts of the local road and PRoW network, parts of the Stour Valley Path and St Edmund's Way long distance paths, and from small parts of villages including Boxted, Langham, Parney Heath, Lamb Corner, Dedham and Dedham Heath. However, it was noted during site visits that many views out of the National Landscape are filtered and screened by vegetation within it. At a distance of over 1.3 km the proposed overhead line is not anticipated to be a noticeable feature in many views from within the National Landscape, particularly when field boundary and other intervening vegetation is taken into account as represented by Figure 7.12.F86: Viewpoint 3.19: Essex Way / Mill Hill, west of Lawford (document reference 7.12) and

Figure 7.12.F133: Viewpoint 4.36: Green Lane / Essex Way, Horkesley Green (document reference 7.12). The baseline photograph for Viewpoint 3.36 also illustrates the layers of vegetation that filter and screen views out of the National Landscape (as shown on Figure 7.12.F93: Viewpoint 3.26: Essex Way near Langham Hall (document reference 7.12)). There are instances where the Project would be visible from the edge of the National Landscape such as at viewpoint 3.15 (as shown on Figure 7.12.F84: Viewpoint 3.15: Birchwood Road west of Lamb Corner (document reference 7.12)).

13.2.40 The overhead line between the EACN Substation and Great Horkesley (EACN side) CSE compound is also theoretically visible from parts of the more distant northern upper valley slopes. At a distance of approximately 4 km the overhead line is not anticipated to be a noticeable feature in many views from within the National Landscape, particularly when field boundary and other intervening vegetation is taken into account as represented by Figure 7.12.F87: Viewpoint 3.20: Fenbridge Lane (document reference 7.12).

13.2.41 Theoretical visibility of the overhead line south of Great Horkesley (Tilbury side) CSE compound to the south of the National Landscape is relatively contained from areas inside the southern edge of the National Landscape, on the upper sides of the Stour Valley. It is also theoretically visible from parts of the more distant northern upper valley slopes; north of Wissington and Nayland. This includes theoretical visibility from parts of the local road and PRoW network, parts of the Stour Valley Path and St Edmund's Way long distance paths, and from small parts of Little Horkesley. However, it was noted during site visits that many views out of the National Landscape are filtered and screened by vegetation within it. At over 1.3 km the proposed overhead line is not anticipated to be a noticeable feature in many views from within the National Landscape, particularly when field boundary and other intervening vegetation is considered as represented by Figure 7.12.F105: Viewpoint 4.07: School Road / Stour Valley Path, west of Little Horkesley (document reference 7.12). There are instances where the Project would be visible from the edge or close to the edge of the National Landscape such as at Figure 7.12.F111: Viewpoint 4.13: B1508 Main Road, Wormingford (document reference 7.12)).

Assessment of Effects on Special Qualities

13.2.42 The following table sets out the assessment of effects on the special qualities of the National Landscape during construction and operation (and maintenance), with reference to natural beauty indicators identified in the Alison Farmer Associates study (2016).

Table A13.1.3 Assessment of effects on the special qualities of Dedham Vale National Landscape

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
Iconic lowland river valley associated with the artist John Constable RA, the views he painted are still recognisable today	Landscape quality Scenic quality Cultural heritage	The Statement of Significance in the Dedham Vale Area of Outstanding Natural Beauty and Stour Valley Project Area Management Plan 2021-26 identifies the National Landscape as a '*predominately agricultural landscape that exhibits a subtle lowland river valley with an assemblage of features associated with this landscape still in place and intact*.' In relation to this lowland river valley, the Alison Farmer study (2016) notes that '*Gentle valley slopes and steeper tributary valleys with woodland give rise to a subtle but legible landscape*.'	The Project would affect the perception of the Stour Valley as an '*iconic lowland river valley*' with an '*assemblage of features…in place and intact*'. During construction (short to medium term), the underground cable component of the Project would result in the removal of some landscape features including grazing marsh along the River Stour, part of an avenue of recently planted trees (west of Stratford St Mary) and field boundary hedgerows and trees elsewhere within the National Landscape. Larger areas of woodland and trees that line the banks of the River Stour would be retained by utilising trenchless crossing techniques (e.g. Horizontal Directional Drilling (HDD)). The activities required to construct the underground cables would noticeably alter the appearance of the local landscape within the construction corridor which is typically 120 m wide and	During operation (longer term) vegetation which was removed would be reinstated, including field boundary hedgerows. Although trees could not be replanted over or within 10 m of the underground cables, hedgerows would be replaced. Given proposed underground cables within the National Landscape and its immediate setting, and the reinstatement of vegetation in the longer term, there would be a **minor and not significant (adverse) effect on this special quality during operation (and maintenance)**.

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			approximately 200 m wide at trenchless crossing locations. During construction there would be a **major and significant (adverse) effect** on some of the '*in place and intact*' '*assemblage of features*' which combine to create the '*iconic lowland river valley*'. The effect would be localised albeit along the length of the underground cable corridor and short to medium term.	
		The Statement of Significance notes that '*The fundamental beauty of the area and the scenes of a working landscape were captured by England's finest landscape artist, John Constable. The sites of his paintings are still recognisable in the heart of what is now the AONB*.' In relation to Constable and other artists, the Alison Farmer study notes that '*The AONB contains an assemblage of features captured in the paintings of John Constable, Sir Alfred Munnings and John Nash*	The Project would affect the '*assemblage of features*' captured in paintings by Constable and other artists. During construction (short to medium term), the underground cable component of the Project would result in the removal of some landscape features including grazing marsh along the River Stour, part of an avenue of recently planted trees (west of Stratford St Mary) and field boundary hedgerows and trees elsewhere within the National Landscape. Larger areas of woodland and trees that line the banks of the River Stour would be retained by utilising	In the longer term, vegetation which was removed would be reinstated, including field boundary hedgerows. Although trees could not be replanted over underground cables, hedgerows would be replaced. The overhead line component of the Project would affect some longer views from the National Landscape. The overhead line would be approximately 2 km to the north and 1.3 km to the south of the National Landscape at its closest point. Figure 7.12.F87: Viewpoint 3.20: Fenbridge Lane (document reference 7.12)

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
		which are still evident today. The similarity of the landscape today to that depicted in historic paintings reinforces the timeless quality of this landscape.'	trenchless crossing techniques (e.g. HDD). The activities required to construct the underground cables would noticeably alter the appearance of the local landscape within the construction corridor which is typically 120 m wide and approximately 200 m wide at trenchless crossing locations. Construction of the overhead line component of the Project would affect some longer views from the edges of the National Landscape. The overhead line would be approximately 2 km to the north and 1.3 km to the south of the National Landscape at its closest point. Construction activity relating to mobile cranes required to construct the pylons would be temporarily visible on the skyline above the tops of intervening layers of vegetation in these long distance views, but these would not form notable features. During construction there would be a **major and significant (adverse) effect** on some of the '*assemblage of features*' which	illustrates long distance views across the Stour Valley to the south, in the direction of the Project. Pylons would be visible on the skyline approximately 4 km away above the tops of intervening layers of vegetation in these long distance views but would not form notable features. Given proposed underground cables within the National Landscape and its immediate setting, and the distance between the National Landscape and overhead line component, the effect on this special quality would be **minor and not significant (adverse) during operation (and maintenance)**.

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			reinforce the '*timeless quality of this landscape*' during construction. The effect would be as a result of the construction of underground cables and be localised and short to medium term. Given the distance between the National Landscape and construction of the overhead line component, effects relating to longer views would be **minor and not significant (adverse) during construction**.	
Historic villages with timber framed housing and prominent churches	Landscape quality Scenic quality Cultural heritage	The Statement of Significance notes that the National Landscape contains an assemblage of features including '*picturesque villages with imposing churches and historic timber framed buildings*'. The Alison Farmer study notes that these villages have a '*distinctive settlement form clustered around small triangular greens or 'tyes'. The small scale of traditional villages, built form and layout and the relationship between the village and the wider*	There would be no direct effects on the '*historic villages*' which are noted as a special quality. The Project would affect the '*wider landscape setting*' of Higham and Langham during construction. During construction (short to medium term), the underground cable component of the Project would result in the removal of some vegetation, and the introduction of activity and disruption along the underground cable construction corridor which is typically 120 m wide and	There would be no direct effects on the '*historic villages*' which are noted as a special quality. The Project would affect the '*wider landscape setting*' of these villages. However, given that the Project would be undergrounded through the National Landscape and its immediate setting and removed vegetation would be largely reinstated in the longer term, there would be **negligible and not significant (adverse) effects** on this special quality during operation. An assessment of effects on the

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
		landscape setting remains predominately intact.'	approximately 200 m wide at trenchless crossing locations. There would be **minor and not significant (adverse)** effects on this special quality during construction. An assessment of effects on the historic environment is provided in Chapter 11: Historic Environment (document reference 6.11).	historic environment is provided in Chapter 11: Historic Environment (document reference 6.11).
Valley bottom grazing marshes with associated drainage ditches and wildlife	Landscape quality Scenic quality	The Statement of Significance notes that the National Landscape contains an assemblage of features including '*riverside grazing meadows with associated drainage ditches*'. The Alison Farmer study notes that these meadows comprise '*Green and luxuriant pastures, with grazing cows and sheep, river meandering lazily amid stout but graceful willows*.'	The Project would affect the '*valley bottom grazing marshes*' which are identified as a special quality. The Project passes through large areas of grazing marsh along the River Stour, which are identified on Natural England's Priority Habitat Inventory. Parts of these areas would be avoided where the Project would use trenchless crossing techniques (e.g. HDD) to cross the River Stour, but some sections of drainage ditches areas of grazing marsh would be removed within the cable swathe during construction. Chapter 8: Ecology and Biodiversity (document reference 6.8) concludes that effects on	In the longer term, drainage ditches would be reinstated and vegetation which was removed would be reinstated, including field boundary hedgerows. Although trees could not be replanted over underground cables, hedgerows would be replaced. Chapter 8: Ecology and Biodiversity (document reference 6.8) concludes that effects on Priority Habitats, Habitats of Principal Importance and Groundwater Dependent Terrestrial Ecosystems during operation (which would cover the grazing marshes and River Stour) would be temporary and assessed on a case-by-case

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			Priority Habitats, Habitats of Principal Importance and Groundwater Dependent Terrestrial Ecosystems (GWDTE) during construction (which would cover the grazing marshes and River Stour) would be largely temporary with habitats to be reinstated or mitigated for through Biodiversity Net Gain commitments. To protect effects on ground water dependent habitats (such as GWDTE), measures are set out in the Outline Code of Construction Practice (CoCP) (document reference 7.2) through commitments W01 to W16. There would also be a loss of some mature trees within the National Landscape during construction, including mature hedgerow trees enclosing smaller-scale fields west of Bobbitts Hall, hedgerow trees east of Broomhouse, field boundary trees north and north-west of Langham, field boundary trees near Alderton's Cottages. Some mature trees would also be removed to accommodate the cable swathe in the fields to the	basis. Standard operation procedures would be followed when undertaking any vegetation removal as set out in the Outline CoCP (document reference 7.2). Given the reinstatement of vegetation in the longer term, the effect on this special quality would be **minor and not significant (adverse) during operation (and maintenance)**.

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			east of Langham, between the A12 and Parney Heath. Part of an avenue of recently planted trees near to the River Stour (west of Stratford St Mary) would be removed to facilitate temporary drainage works. No Veteran Trees or ancient woodland would be affected as impacts on those within the National Landscape were designed out. During construction there would be a **moderate and significant (adverse) effect** on the '*valley bottom grazing marshes*' due to the loss of vegetation in the short to medium term.	
Naturally functioning River Stour with associated tributaries, meres, and historic river management features	Landscape quality Scenic quality Natural heritage features	The Statement of Significance notes that the National Landscape contains an assemblage of features including a '*gently winding river and tributaries*'. The Alison Farmer study notes that there is a '*concentration of valued habitats*' along the River Stour including '*Sites of Special Scientific Interest and County Wildlife Sites*', '*Alder and black poplar and*	The Project would indirectly affect the '*naturally functioning River Stour*' which is identified as a special quality. The Project would cross the River Stour in two locations, between Broomhouse and Stratford St Mary. The cable route would split to the east and west of a small lake (mere) though the Order Limits extend over the western end of the lake. The river would be crossed using trenchless	In the longer term, vegetation which was removed would be reinstated, including field boundary hedgerows. Although trees could not be replanted over underground cables, hedgerows would be replaced. Chapter 8: Ecology and Biodiversity (document reference 6.8) concludes that effects on Priority Habitats, Habitats of Principal Importance

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
		pollarded willow', '*rough grassland*' and '*Iconic scenes along the river e.g. Flatford Mill derived from traditional management which over time has created valued habitats*.' Flatford Mill and Sites of Special Scientific Interest (SSSIs) associated with the Stour are located further east and are not within the Landscape and Visual Study Area. There is a County Wildlife Site at Wasses Marshes, within the Study Area but upstream of the Project.	crossing techniques (e.g. HDD), which would avoid direct effects on the trees which line the watercourse in this location. Part of an avenue of recently planted trees near to the River Stour (west of Stratford St Mary) would be removed to facilitate temporary drainage works and drainage ditches near to the river would also be directly affected. South of the National Landscape the Project would cross the Black Brook, a tributary of the River Stour. Here, the brook would be crossed via open cut techniques which would result in the loss of an area of deciduous woodland identified on Natural England's Priority Habitat Inventory along the brook and within the cable swathe. Chapter 8: Ecology and Biodiversity (document reference 6.8) concludes that effects on Priority Habitats, Habitats of Principal Importance and GWTDE (which would cover the River Stour) would be largely temporary with habitats to be reinstated or mitigated for through Biodiversity Net Gain commitments. To protect effects	and Groundwater Dependent Terrestrial Ecosystems during operation (which would cover the River Stour) would be temporary and assessed on a case-by-case basis. Standard operation procedures would be followed when undertaking any vegetation removal. Given the protection of riverside trees along the River Stour, balanced with the loss of deciduous woodland along a tributary of the River Stour (outside of the National Landscape but within its setting), the effect on this special quality would be **minor and not significant (adverse) during operation (and maintenance)**.

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			on ground water dependent habitats (such as GWDTE), measures are set out in the Outline CoCP (document reference 7.2) through commitments W01 to W15. Given the protection of riverside trees along the River Stour, balanced with direct impacts on drainage ditches and the loss of deciduous woodland along a tributary of the River Stour (outside of the National Landscape but within its setting), the effect on this special quality would be **moderate and significant (adverse) during construction**.	
Semi natural ancient woodlands on valley sides with associated wildlife	Landscape quality Scenic quality Natural heritage features	The Statement of Significance notes that the National Landscape contains an assemblage of features including '*gentle valley sides with scattered woodlands*'. The Alison Farmer study notes there are '*Appealing woodland patterns and woodland habitat networks*' as well as '*Ancient woodland on the valley sides e.g.*	There are no areas of ancient woodland within the National Landscape in the Order Limits for the Project. There are a number of areas of broadleaved woodland which are identified on Natural England's Priority Habitat Inventory, including small areas along the River Stour. These areas of woodland would be retained by utilising trenchless crossing techniques (e.g. HDD) during construction. There would	Given the protection of broadleaved woodland within the National Landscape, balanced with the loss of broadleaved woodland along the Black Brook, the effect on this special quality would be **minor and not significant (adverse) during operation (and maintenance)**.

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
		Boxted Hall and alder carr along the valley Floor'.	be some loss of broadleaved woodland identified on Natural England's Priority Habitat Inventory adjacent to Black Brook (outside of the National Landscape but within the setting). Given the protection of broadleaved woodland within the National Landscape, balanced with the loss of broadleaved woodland along the Black Brook, the effect on this special quality would be **minor and not significant (adverse)during construction**.	
Traditional field boundaries intact and well managed	Landscape quality Scenic quality	The Statement of Significance notes that the National Landscape contains an assemblage of features including '*small fields enclosed by ancient hedgerows*'. The Alison Farmer study notes that '*The high concentration/frequency of these features* [including hedgerows and hedgerow oaks] *and their distribution is grounded in the traditional management of the valley*	The Project would affect '*traditional field boundaries*' which are identified as a special quality. A number of the field boundaries affected within the underground cable swathe during construction relate to larger amalgamated fields such as those either side of Higham Road and those north of Langham Hall and Birchwood Road. Elsewhere, field boundary hedgerows and hedgerow trees would be removed from smaller enclosed fields, including short sections for	In the longer term, vegetation which was removed would be reinstated, including field boundary hedgerows. Although trees could not be replanted over underground cables, hedgerows would be replaced. Given the relatively short sections of hedgerow which would be removed within the National Landscape and their replacement in the longer term, the effect on this special quality would be at most **minor and**

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
		and is remarkably intact but highly vulnerable to loss.'	field boundaries to the east of Green Lane, east of Broomhouse, east of Aldertons Cottages and east of the A12. Overall, vegetation loss within the National Landscape was kept to a minimum through routeing and narrowing of Order Limits where practicable. The Outline Landscape and Ecology Management Plan (LEMP) (document 7.4) includes a commitment that where the underground cable crosses hedgerows the working swathe would be pinched in to minimise hedgerow loss as far as practicable. Areas of woodland would be retained by utilising trenchless crossing techniques (e.g. HDD). Given the relatively short sections of hedgerow which would be removed within the National Landscape, the effect on this special quality would be **minor and not significant (adverse) during construction.**	**not significant (adverse) during operation (and maintenance)**.
Apparent and buried archaeology	Landscape quality Scenic quality	The Statement of Significance notes that the National Landscape contains	The Project has the potential to affect '*apparent and buried archaeology*' which is identified	The Project has the potential to affect '*apparent and buried archaeology*' which is identified

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
indicating millennia of human activity	Cultural heritage	an assemblage of features including '*visible and hidden archaeology providing evidence of human habitation over previous millennia*'. The Alison Farmer study notes that there is a '*Significant collection of visibly tangible historic features, structures and buildings'* and that '*Tangible historic sites including above ground and below ground archaeology e.g. cropmarks...*'	as a special quality, during construction. An assessment of effects on the historic environment is provided in Chapter 11: Historic Environment (document reference 6.11). The assessment concludes that construction of the Project would remove part or all of the recorded assets within the cable swathe. Therefore, the effect on this special quality would be adverse but the residual effect following archaeological mitigation would **not be significant during construction**.	as a special quality, during operation (and maintenance). As assessment of effects on the historic environment is provided in Chapter 11: Historic Environment (document reference 6.11). The assessment concludes that operation of the Project would remove part or all of the recorded assets within the cable swathe, but this physical impact could only occur once as the affected assets (or parts of) would be removed by this impact and therefore impacts would not be repeated during operation (and maintenance). Effects could occur to remaining assets during operation (and maintenance) as a result of changes within their settings that affect their value. However, the underground cable proposed in this area has resulted in assessment concluding the effects on this special quality would be **neutral and not significant during operation (and maintenance).**

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
A sense of relative tranquillity	Relative tranquillity	The Statement of Significance notes that '*The area remains mostly free of incongruous development and large scale industrial developments*' and '*retains a rural charm and tranquillity and is largely free of infrastructure associated with modern life*'. The Alison Farmer study notes that factors which contribute to relative tranquillity include: '*Familiar idyllic images* *Lack of overt signs of development* *Natural sounds* *Presence of water along the banks of the Stour* *Minimal noise and light intrusion* *Ability to enjoy/walk lanes with minimal traffic*'. Detractors from perceptions of tranquillity are noted to include '*Visibility and noise intrusion from A12*' which is located within the Landscape	The Project would affect the '*sense of relative tranquillity*' which is identified as a special quality, during construction. The construction of the underground cables would introduce activity and disruption along a corridor which is typically 120 m wide for approximately 5.7 km within the National Landscape and approximately 200 m wide at trenchless crossing locations. Lighting in the hours of darkness would also have direct effects. Although, it is noted that visibility, light and noise intrusion from the A12 locally reduces baseline tranquillity in proximity to the Project (within approximately 0.6 km at its closest point). The effect would be localised albeit along the length of the underground cable corridor and short to medium term. Overall, the effect on this special quality would be **major and significant (adverse) during construction**.	The Project has the potential to affect the '*sense of relative tranquillity*' which is identified as a special quality. However, the Project would be undergrounded within the National Landscape and is not anticipated to affect the factors which contribute to relative tranquillity in the longer term. The overhead line component of the Project would affect some longer views from the National Landscape. The overhead line would be approximately 2 km to the north and 1.3 km to the south of the National Landscape at its closest point. Figure 7.12.F87: Viewpoint 3.20: Fenbridge Lane (document reference 7.12) illustrates long distance views across the Stour Valley to the south, in the direction of the Project. Pylons would be visible on the skyline approximately 4 km away above the tops of intervening layers of vegetation in these long distance views but would not form notable features and the National Landscape would remain '*mostly free of*

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
		and Visual Study Area. '*Overhead lines*' are also noted as a detractor, although these cross the National Landscape in the north-west between Leavenheath and Polstead they are not within the Study Area. Smaller voltage overhead lines on lattice towers cross the National Landscape in a north to south direction broadly between East Bergholt and Lawford.		*incongruous development and large scale industrial developments'.* Overall, the effect on this special quality would be **minor and not significant (adverse) during operation (and maintenance)**.
Surprisingly long-distance views from higher ground along the valley in an area associated with large skies	Scenic quality	The Alison Farmer study notes that within the National Landscape '*woodlands and trees and overlapping lines of vegetation enclose lanes, enhance landform and frame views such that there is an unfolding sequence of views*.' The study notes that there is a '*Wooded skyline including woodland on the surrounding plateau which defines the vale*.'	The Project has the potential to affect the '*Surprisingly long-distance views from higher ground*' identified as a special quality, during construction. The activities required to construct the underground cables would noticeably alter the appearance of the local landscape within the construction corridor which is typically 120 m wide and approximately 200 m wide at trenchless crossing locations. Larger areas of woodland and trees that line the banks of the River Stour would	The Project has the potential to affect the '*Surprisingly long-distance views from higher ground*' identified as a special quality. As noted in the Alison Farmer study, woodland on the surrounding plateau defines the vale, and this woodland along with other field boundary and roadside vegetation would help to screen and filter outward views towards the Project from '*higher ground along the valley*'. Where visible, the overhead line component of the Project would be seen at over 2 km to the

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			be retained by utilising trenchless crossing techniques (e.g. Horizontal Directional Drilling (HDD)). During construction there would be limited views from the upper valley sides. This is due to the undulating nature of the valley side landform and layers of vegetation which reduce the possibility of *Surprisingly long-distance views from higher ground* in in this part of the National Landscape. During construction there would be a **moderate and significant (adverse) effect** on this special quality because of the underground cable component of the Project. The effect would be localised and short term. Construction of the overhead line component of the Project would also affect some longer views. As noted in the Alison Farmer study, woodland on the surrounding plateau defines the vale, and this woodland along with other field boundary and roadside vegetation would help to screen and filter views towards construction activity. Where	north and over 1.3 km to the south, further reducing the perceptibility of the Project. The Project would typically be seen at a similar or lower elevation than the viewpoint and would not affect the appreciation of '*large skies*' within the vale. Elevated, long distance views from higher ground along the valley of the National Landscape are demonstrated from the following viewpoints: • Figure 7.12.F87: Viewpoint 3.20: Fenbridge Lane (looking south) (document reference 7.12) • Figure 7.12.F94: Viewpoint 3.27: B1066 Park Road, near Thorington Street (looking south) (document reference 7.12) Views towards the Project would be filtered by field boundary vegetation and woodland. Where visible, the overhead line would be seen in the distance on the skyline, and the lower half of the pylons would typically be screened by intervening vegetation.

Special Quality	Relevant Natural Beauty Indicators	Description	Assessment of Effects during Construction	Assessment of Effects during Operation (and maintenance)
			visible, construction activity related to the overhead line would be seen at a distance of over 2 km to the north and over 1.3 km to the south, further reducing its perceptibility. Construction activity would typically be seen at a lower elevation than the viewpoint and would not affect the appreciation of '*large skies*'. Where visible, some mobile cranes and partially constructed towers may be seen on the distant skyline. Construction activity at ground level would typically be screened by intervening vegetation. Given the distance between the National Landscape and construction of the overhead line component, and existing vegetation which would filter and screen views, the effect on this special quality would be **minor and not significant (adverse) during construction**.	Given the distance between the National Landscape and the Project, and existing vegetation which would filter and screen views, the effect on this special quality would be **minor and not significant (adverse) during operation (and maintenance)**.

13.3 Conclusion

13.3.1 National Landscapes are deemed to be of national importance for their outstanding natural beauty. They are afforded the highest level of protection within the NPS EN-1 and the NPPF. It is clear in NPS EN-5 that the starting presumption of overhead lines for new electricity transmission projects is reversed in National Landscapes, where these areas cannot feasibly be avoided by rerouting overhead lines.

13.3.2 Although the Project would be underground within Dedham Vale National Landscape, construction would have direct impacts. The installation of underground cables would involve disturbance to vegetation, soils and watercourses within a swathe of land in the National Landscape that is approximately 5.7 km long and typically 120 m wide and approximately 200 m wide at trenchless crossing locations. The construction phase would also introduce temporary haul roads, soil storage, drainage, construction activity, vehicles and machinery and lighting in the hours of darkness.

13.3.3 The assessment of effects on the special qualities of Dedham Vale National Landscape has established that the following special qualities would be subject to **major and significant (adverse) effects** during construction:

- *'Iconic lowland river valley associated with the artist John Constable RA, the views he painted are still recognisable today*
- *A sense of relative tranquillity'.*

13.3.4 Three of the special qualities would be subject to **moderate and significant (adverse) effects** during construction:

- *'Valley bottom grazing marshes with associated drainage ditches and wildlife*
- *Naturally functioning River Stour with associated tributaries, meres, and historic river management features*
- *Surprisingly long-distance views from higher ground along the valley in an area associated with large skies'.*

13.3.5 Four special qualities would be subject to **minor and not significant (adverse) effects** during construction:

- *'Historic villages with timber framed housing and prominent churches*
- *Semi natural ancient woodlands on valley sides with associated wildlife*
- *Traditional field boundaries intact and well managed*
- *Apparent and buried archaeology indicating millennia of human activity'.*

13.3.6 Effects on special qualities would reduce to **minor and not significant (adverse)** during operation (and maintenance) once the underground cables are covered over and land use and landcover reinstated as far as practicable.

13.3.7 The Project was sited and designed to reduce as far as practicable, the potential for adverse effects on Dedham Vale National Landscape and alteration of its defined special qualities. Further details can be found in Chapter 3: Main Alternatives Considered (document reference 6.3), Design Development Report (document reference 5.15) and Design and Access Statement (document reference 7.15). No additional mitigation beyond the embedded mitigation in the siting and design of the

Project is proposed to avoid or reduce the effects identified in this assessment, and so the effects identified are residual. National Grid is committed to measures to seek to further the purpose of Dedham Vale National Landscape as set out in National Landscapes – Duty to Seek to Further the Purposes Report (s85 Countryside and Rights of Way Act 2000) (document reference 5.10).

13.3.8 In conclusion, the Project would result in **significant adverse effects** on the special qualities of the Dedham Vale National Landscape during construction. However, during operation (and maintenance) the adverse effects on the special qualities of the National Landscape are judged to be **minor and not significant (adverse).**

Abbreviations

Abbreviation	Full Reference
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
CoCP	Code of Construction Practice
CRoW	Countryside and Rights of Way Act 2000
CSE	Cable Sealing End
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
EIA	Environmental Impact Assessment
EACN	East Anglia Connection Node
ES	Environment Statement
GLVIA	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition
GWDTE	Groundwater Dependent Terrestrial Ecosystems
HDD	Horizontal Directional Drill
LCA	Landscape Character Areas
LCT	Landscape Character Types
LEMP	Landscape and Ecological Management Plan
LVIA	Landscape and Visual Impact Assessment
NPPF	National Planning Policy Framework
NPS	National Policy Statement
PRoW	Public Right of Way
SOCG	Statement of Common Ground
SSSI	Sites of Special Scientific Interest
ZTV	Zone of Theoretical Visibility

Glossary

Term	Definition
Apparent height	The apparent height of an object is defined as the height that the object would appear when measured at arm's length (in this instance 61 cm) from the viewer.
GLVIA3	The Landscape Institute and Institute of Environmental Management and Assessment's Guidelines for Landscape and Visual Impact Assessment, Third Edition, Published by Routledge
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse [taken from An Approach to Landscape Character Assessment, Natural England 2014]
Landscape Character Areas	These are single unique areas which are the discrete geographical areas of a particular landscape type. Each has its own individual character and identity, even though it shares the same generic characteristics with other types [taken from An Approach to Landscape Character Assessment, Natural England 2014].
Landscape Character Assessment	This is the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive. This process results in the production of a Landscape Character Assessment [taken from An Approach to Landscape Character Assessment, Natural England 2014].
Landscape Character Types	These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use, and settlement pattern [taken from An Approach to Landscape Character Assessment, Natural England 2014].
Landscape effects	Effects on the landscape as a resource in its own right [GLVIA3].

Term	Definition
Landscape value	The relative value or importance attached to different landscapes by society on account of their landscape qualities [taken from Technical Guidance Note 02/21 Assessing landscape value outside national designations, Landscape Institute, 2021]
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration [taken from GLVIA3].
National Planning Policy Framework	The National Planning Policy Framework is a key part of the government's reforms to make the planning system less complex and more accessible. It vastly simplifies the number of policy pages about planning. The planning practice guidance to support the framework is published online and regularly updated.
Natural beauty	The term 'natural beauty' is enshrined in the National Parks and Access to the Countryside Act 1949 (it was also subsequently included in the Nature Conservation and Amenity Lands Order (NI) 1985). Natural beauty is not exhaustively defined in the legislation, but its meaning was clarified and interpreted through a series of studies, guidance documents and public inquiries. [taken from Technical Guidance Note 02/21 Assessing landscape value outside national designations, Landscape Institute, 2021]
Order Limits	The maximum extent of land within which the authorised development may take place.
Overhead line	Conductor (wire) carrying electric current, strung from pylon to pylon.
Pylons	Structures that support the overhead line (conductors). There are two types of pylons; suspension (line), where the conductors are simply suspended from the tower and tension (angle).
Residual effects	The consequence of an 'impact' of construction, operation and decommissioning of the proposed development after mitigation measures have been applied.
Scoping	Scoping is the process of determining the content and extent of matters that should be covered in the environmental impact assessment.

Term	Definition
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor [taken from GLVIA3].
Significance (in EIA)	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic [taken from GLVIA3].
Special qualities	A statutory expression used in (amongst other places) sections 5 and 11A of the National Parks and Access to the Countryside Act 1949 (as amended) and section 87 of the Countryside and Rights of Way Act 2000. Paragraph 87 of the Countryside and Rights of Way Act 2000 requires a conservation board to have regard to the purpose of increasing the understanding and enjoyment by the public of the special qualities of the area of outstanding natural beauty.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area. [taken from GLVIA3]
Visual effects	Effects on specific views and on the general visual amenity experienced by people. [taken from GLVIA3]
Visual receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal. [taken from GLVIA3]
Visualisation	A computer simulation, photomontage or other technique illustrating the predicted appearance of a development. [taken from GLVIA3]
Zone of Theoretical Visibility (ZTV)	A map, usually digitally produced, showing areas of land within which a development is theoretically visible. [taken from GLVIA3]

Bibliography

Alison Farmer Associates (2016) *Dedham Vale AONB Natural Beauty and Special Qualities and Perceived and Anticipated Risks Final Report*

Babergh District Council / Mid Suffolk District Council (2023) *Babergh and Mid Suffolk Joint Local Plan – Part 1*

Colchester City Council (2022) *Colchester City Local Plan 2017-2033 Section 2*

Countryside Commission (1997) *The Dedham Vale Landscape*

Dedham Vale National Landscape & Stour Valley (2021) *Dedham Vale AONB and Stour Valley Project Area Management Plan 2021-2026*

Dedham Vale National Landscape and Stour Valley Partnership (2025) *Dedham Vale National Landscape and Stour Valley Management Plan 2026-2031 - Consultation Draft*

Department for Energy Security and Net Zero (DESNZ) (2024) NPS for Energy (EN-1)

Department for Energy Security and Net Zero (DESNZ) (2024a) NPS for Energy (EN-5)

Department for Energy Security and Net Zero (DESNZ) (2025) *Revised Draft National Policy Statement for Renewable Energy Infrastructure (EN-3).*

Department for Energy Security and Net Zero (DESNZ) (2025a) *Revised Draft National Policy Statement for Electricity Networks Infrastructure (EN-5).*

Department for Environment, Food and Rural Affairs (DEFRA) (2024) *Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes.*

Ministry of Housing, Communities & Local Government (2025) *National Planning Policy Framework (NPPF)*

Ministry of Housing, Communities & Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities (2025) Natural Environment Planning Practice Guidance (PPG)

National Grid (2023) Bramford to Twinstead Reinforcement Document 6.3.6.2.1: ES Appendix 6.2 – Annex A Dedham Vale AONB Approach and Identification of Setting Study [online]. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020002/EN020002-000611-6.3.6.2.1%20ES%20Appendix%206.2%20Annex%20A%20Dedham%20Vale%20AONB%20Approach%20and%20Identification%20of%20Setting%20Study.pdf. Accessed 17 July 2025.'

National Landscape Partnership (2024) *Development in the Setting of the Dedham Vale AONB Position Statement*

Tendring District Council (2022) *Tendring District Local Plan 2013-2033 and Beyond, Section 2*

The Landscape Institute and Institute of Environmental Management and Assessment *(2013) The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)*

Annex A. Dedham Vale National Landscape Setting Study

nationalgrid

Annex A: Dedham Vale National Landscape Setting Study

A.1 Overview

A.1.1 This study gives consideration to the 'setting' of the Dedham Vale National Landscape in the context of overhead electricity transmission infrastructure. A setting study was requested by statutory consultees, as set out in the EIA Scoping Opinion (document reference 6.20).

A.1.2 The purpose of the annex is to identify areas of the landscape that form part of the setting of the National Landscape, in order to inform the assessment of effects of the Project on the defined special qualities (natural beauty) of the National Landscape. In particular, this study considers areas of the landscape where pylons may give rise to '*substantial impacts, positive or negative, on the natural beauty and special qualities*' of the National Landscape, as defined in the Development in the Setting of the Dedham Vale AONB Position Statement (National Landscape Partnership, 2024). The Dedham Vale AONB Position Statement (NLP 2024) reflects the collective view of the National Landscape Partnership on key issues that affect the Dedham Vale National Landscape. The Dedham Vale AONB Position Statement (NLP 2024) is intended to be used to support the inclusion of management plan policies and objectives covering development and land management in the setting of National Landscapes in Local Plans and other relevant policy documents. It is intended to aid decision-making for development or land management proposals in the setting of the National Landscapes as it clarifies the National Landscape Partnership's understanding of setting.

A.1.3 The study identifies areas of landscape which have a complementary relationship with the character of the designated landscape. It also identifies areas where there is intervisibility, and where views to and from the National Landscape are important.

A.1.4 The 'setting' information has informed the development of the design of the Project to reduce landscape and visual effects. This specifically relates to the location of CSE compounds north and south of Dedham Vale National Landscape and additional areas of underground cable in proximity to the National Landscape. The Project is described in full in Chapter 4: Project Description (document reference 6.4).

A.1.5 The identification of 'setting' also informed the assessment of effects of the Project on the defined natural beauty of the Dedham Vale National Landscape, as set out in the main body of this Appendix.

A.1.6 This study was shared with Natural England, the Dedham Vale National Landscape and Stour Valley Partnership and relevant Local Planning Authorities within the boundaries of the National Landscape, for comment in October, 2024.

A.2 Structure of this Study

A.2.1 This study is structured as follows:

- Introduction – overview, structure and limitations (this section)
- Key Legislation and Planning Policy

- Dedham Vale National Landscape – an overview of the landscape and special qualities of Dedham Vale
- Approach to Defining the Setting of the National Landscape – an explanation of what is meant by the 'setting' of the National Landscape and the approach to defining it within the context of the Project
- The Setting of the Dedham Vale National Landscape – identification of complementary landscapes and intervisibility with the National Landscape, and a conclusion on what areas of the landscape constitute 'setting' in the context of the Project.

A.3 Limitations of this Study

A.3.1 This study is based on landscape and visual considerations only, informed by desk studies and field work. The Project design, including the underground cable alignment and location of CSE compounds was informed by wider technical and environmental studies. The development of the Project design is described in full in Chapter 4: Project Description (document reference 6.4).

A.4 Key Legislation and Planning Policy

A.4.1 Key legislation including National Grid's duty under Section 85 of the CRoW Act and planning policy of relevance to Dedham Vale National Landscape is summarised in the main body of this Appendix and set out in more detail in Chapter 2: Key Legislation and Planning Policy Context (document reference 6.2) and Policy Compliance Document (document reference 5.7).

A.4.2 Paragraph 5.10.8 of NPS EN-1 states that '*The duty to seek to further the purposes of nationally designated landscapes also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them*.'

A.4.3 Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes was published by DEFRA in 2024. This guidance includes a section on the setting of protected landscapes which states '*The duty also applies to functions undertaken outside of the designation boundary which affects land within the Protected Landscape. Natural beauty, special qualities, and key characteristics can be highly dependent on the contribution provided by the setting of a Protected Landscape*'. As noted in NPPF paragraph 189, development within the setting of a nationally designated landscape '*…should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas*.'

A.4.4 The Natural Environment Planning Practice Guidance (PPG) (2025) provides more detail about development within the setting of a National Landscape. It confirms that the statutory duty applies to proposals located outside of National Landscape boundaries, as they might have an impact on their setting or protection. The PPG goes on to state that:

'*Land within the setting of these areas often makes an important contribution to maintaining their natural beauty, and where poorly located or designed development can do significant harm. This is especially the case where long views from or to the designated landscape are identified as important, or where the landscape character of land within and adjoining the designated area is complementary. Development*

within the settings of these areas will therefore need sensitive handling that takes these potential impacts into account.'

A.5 Dedham Vale National Landscape

A.5.1 A description of the National Landscape and its special qualities is provided below.

Overview of the Landscape

A.5.2 The character of the Dedham Vale landscape is described in the Countryside Commission's The Dedham Vale Landscape (1997). The Dedham Vale Landscape (1997) identifies three main Landscape Character Types (LCTs): Valley Floor Landscapes; Valley Sides Landscapes; and Upland Landscapes. A summary of these LCTs is provided in the paragraphs that follow.

Valley Floor Landscapes

A.5.3 The lowland character of the Dedham Vale landscape, including lush, damp riverside pastures, meadows and marshes adjacent to the Rivers Stour, Brett and Box, epitomise the Dedham Vale landscape. Many of these aspects and elements were depicted by artists including John Constable, Sir Alfred Munnings, Thomas Gainsborough and John Nash.

A.5.4 Landscape elements such as pollarded willows, lines of bat willows, expanses of water, meadows and pastures are common throughout the flat or gently undulating valley floors of the Rivers Stour and Brett and determine the landscape character. The influences of land use, land management, flood control, the sea, and the maturing of landscape features along the river have created floodplain and valley floor landscapes of varying character.

A.5.5 Estuarine areas tend to have a simpler and exposed character with more open views, and some marshy areas which feel secluded and are less settled. Enclosed valley floor areas feature pasture and meadow with a greater number of trees and riverside vegetation, some woodland blocks, and sinuous hedgerows and lanes. These areas are more settled with hamlets and villages, farmsteads and buildings associated with the rivers and watercourses. Views are generally more contained by vegetation. Open valley floor areas are generally simpler in nature, with some smaller patches of woodland, and less influence from rivers and watercourses. They are often lightly undulating and pastoral in nature, with more dispersed small-scale settlement and few roads. Fewer trees and the more open character leads to unrestricted views across these more isolated valley areas.

A.5.6 The seasons play a role in the character of this landscape. In winter it is an open and remote landscape with brown reeds lining water channels and frost on the branches of willow and alder. By contrast in summer, the landscape becomes green and more enclosed, populated not only by cattle grazing in the meadows but also by tourists boating, walking, and picnicking. The river channels generally have well-vegetated margins, in places with overhanging willows forming tunnels of shady green.

Valley Side Landscapes

A.5.7 The valley sides landscapes flank the River Stour on either side of the valley floor and are comprised of gently convex slopes dissected by a variety of tributaries of the

Stour. This results in a complex and undulating landscape. The sands and gravels of the valley sides have created deep, well-drained fine loamy and sandy soils, which support a small-scale pattern of pasture, arable fields, and woodland.

A.5.8 To the north and south of the vale, the landform is more complex and undulating as the valley side landscapes are dissected by several small tributaries of the Stour, as well as the more substantial River Box.

A.5.9 The undulating matrix of the valley sides landscape lies to the north of the main River Stour, and is small-scale and semi-enclosed, with inward views which are enclosed by well treed hedgerows bordering arable fields and pasture. Steeper valley slopes tend to be more wooded, and areas or remnant parkland further add to an increasing sense of enclosure. Settlement pattern is varied with nucleated and dispersed settlements, connected by a network of sinuous hedgerow lined lanes which extend from the river along valley sides and then to the upper slopes.

A.5.10 The Stour valley sides landscape is a linear and steeply sloping landscape that flanks the main Stour Valley and the eastern side of the Brett Valley, creating an undulating edge of small overlapping ridge lines with framed views across the valleys. Enclosed fields and blocks of mixed woodland including areas of oak, pine and poplar, some associated with old parkland, add to the sense of enclosure. Tributary valleys are generally very intimate and secluded, with the valleys of Black Brook and Little Horkesley being more generous in scale. A well-connected network of lanes connects a dispersed pattern of villages and farm buildings dotted along the valley sides, along with halls set in parkland. The landscape appears sparsely settled due to the extent of screening from vegetation.

A.5.11 The distinction of land uses associated with the valley sides (arable, woodland and settlement) and valley floor (pastures and grazing marsh) reinforces the legibility of the valley form.

Upland Landscapes

A.5.12 The upland fringe landscape is found towards the outer extents of the National Landscape and forms part of a plateau of South Suffolk and North Essex Claylands that extends across Essex and Suffolk. The landscape is lightly undulating but feels flat in comparison to the valley sides, and is more exposed with a sense of bleakness in winter. Extensive views are therefore characteristic, though views into the Stour Valley are not always possible due to intervening woodland on the edge between the valley sides and the upland fringe landscapes. The upland fringe landscape is more intervisible with the areas outside the National Landscape than the valley floor or valley side landscapes which are more inward looking. Hedgerow removal and the effects of Dutch Elm disease in the 1970s reinforces the more open and exposed character of the landscape.

A.5.13 The intervisibility of this landscape means that factors causing change outside the National Landscape are likely to extend their influence within this part of the National Landscape. This includes tall masts and communications towers on the plateau surrounding the National Landscape, and the water tower at Raydon which serves as a landmark. This also includes existing 400 kV and 132 kV overhead lines that were features in the landscape before the National Landscape was designated as an Area of Outstanding Natural Beauty (AONB) in 1970.

Landscape Character Assessment

Landscape Character Types

A.5.14 At a regional scale, Dedham Vale National Landscape is described in the East of England Landscape Typology (Landscape East, 2011). The East of England LCTs are shown on Figure 13.5 – Landscape and Visual – National Character Areas and East of England Typology (document reference 6.13.F5). The following East of England LCTs are within the National Landscape:

- Valley Meadowlands LCT – along the floor of the Rivers Stour, Brett and Box
- Valley Settled Farmlands LCT – on the lower slopes of the Stour, Brett and Box Valleys
- Plateau Estate Farmlands LCT and Wooded Plateau Farmlands LCT in the upland fringes.

A.5.15 Dedham Vale National Landscape is covered by two county level Landscape Character Assessments: the Suffolk Landscape Character Assessment (Suffolk County Council, 2011), and the Essex Landscape Character Assessment (Chris Blandford Associates (CBA), 2003). LCTs are shown on Figure A13.5.1 within Annex B.

A.5.16 The Suffolk Landscape Character Assessment recognises five LCTs across the National Landscape: Valley Meadowlands; Rolling Valley Farmlands; Ancient Rolling Farmlands; Plateau Farmlands; and Ancient Estate Claylands.

A.5.17 The Essex Landscape Character Assessment recognises three LCTs across the National Landscape: River Valley Landscapes; Wooded Hills/Ridges Landscapes; and London Clay Landscapes.

Landscape Character Areas

A.5.18 Landscape Character Areas (LCAs) within the National Landscape are described in the Colchester Borough Landscape Character Assessment (CBA, 2005), the Tendring District Landscape Character Assessment (LUC, 2001) and the Essex Landscape Character Assessment. LCAs are shown on Figure A13.5.2 within Annex B.

A.5.19 The following LCAs are within the National Landscape within Colchester District: Stour River Valley Floor LCA; Stour River Valley Slopes LCA; Rochfords Farmland Plateau LCA; Great Horkesley Farmland Plateau LCA; and Langham Farmland Plateau LCA.

A.5.20 The following LCAs are within the National Landscape within Tendring District: Cattawade Marshes LCA; Stour Estuary Open Marshes; Stour Valley System LCA; and Bromley Heaths LCA.

A.5.21 The following LCAs are within the National Landscape within Essex County: Stour Estuary Slopes LCA; Tendring Plain LCA; Stour Valley LCA; and North Colchester Farmlands LCA.

Special Qualities of the National Landscape

A.5.22 The Dedham Vale AONB Natural Beauty and Special Qualities and Perceived and Anticipated Risks Final Report (Alison Farmer, July 2016) summarises the 'special qualities' of the Dedham Vale National Landscape as follows:

- '*Iconic lowland river valley associated with the artist John Constable RA, the views he painted are still recognisable today*
- *Historic villages with timber framed housing and prominent churches*
- *Valley bottom grazing marshes with associated drainage ditches and wildlife*
- *Naturally functioning River Stour with associated tributaries, meres, and historic river management features*
- *Semi natural ancient woodlands on valley sides with associated wildlife*
- *Traditional field boundaries intact and well managed*
- *Apparent and buried archaeology indicating millennia of human activity*
- *A sense of relative tranquillity*
- *Surprisingly long-distance views from higher ground along the valley in an area associated with large skies*'.

Natural Beauty Indicators of the National Landscape

A.5.23 The former Dedham Vale AONB and Stour Valley Project Area Management Plan (2016-2021) identified the 'special qualities' of the AONB. The current version of the Management Plan (2021-2026) refers instead to 'natural beauty indicators'. These are set out in Section 2.6 of the AONB Management Plan, and are identified as follows:

- '*Landscape quality: Intactness of landscape and generally free of incongruous features*
- *Scenic quality: Iconic lowland river valley with assemblage of features*
- *Relative wildness: Sense of remoteness, historic human and agricultural activity*
- *Relative tranquillity: Limited, but significant, incursions from human activity*
- *Natural heritage features: Functioning river, with associated habitats and species*
- *Cultural heritage: Historic villages, visible archaeology, and artistic associations*'.

Approach to Defining the Setting of the National Landscape

Introduction to Setting

A.5.24 Although the legislative/policy basis for considering the setting of nationally designated landscapes in relation to development is clearly set out (see paragraphs 13.3.9 to 13.3.12 of this annex), NPPF does not define 'setting' from a landscape perspective.

National Landscape Position Statement on Setting

A.5.25 As part of its commitment to conserving and enhancing the National Landscape and as an action within the AONB Management Plan, the National Landscape Partnership (NLP) has produced position statements on key issues affecting the National Landscape.

A.5.26 The Development in the Setting of the Dedham Vale AONB Position Statement (NLP, 2024) is relevant to the Project. The Position Statement clarifies the National Landscape Partnership's understanding of setting as follows: '*The National Landscape Partnership…considers the setting to the AONB to be the area within which development and land management proposals, by virtue of their nature, design, scale, siting, materials and colour have the potential to result in substantial impacts, positive or negative, on the natural beauty and special qualities of the AONB*.'

A.5.27 Appendix 3 of the Position Statement explains that the setting of the National Landscape does not have a defined geographical border, noting that '*The location, design, scale, materials and colour of a proposed development or land management activity will determine how it impacts the natural beauty and special qualities of the AONB*.' Examples of potential adverse impacts from development and land management proposals are provided in Appendix 3:

- '*Blocking or the interference of views out of the AONB particularly from public viewpoints*
- *Blocking or the interference of views of the AONB from public viewpoints outside the AONB*
- *Loss of tranquillity through the introduction of lighting, noise, or traffic movement*
- *An abrupt change to landscape character*
- *Loss of biodiversity, particularly species of importance within the AONB*
- *Loss of features of historic interest, particularly if these are contiguous with features within the AONB*
- *Reduction in public access to or within the AONB*
- *Increase in air or water pollution*'.

Natural England Consultation Responses

A.5.28 In their non-statutory consultation response to the Project (letter dated 16 June 2022), Natural England note that there is no agreed definition of what constitutes the setting of the National Landscape, and recommend that a study is carried out to identify setting. Natural England state that:

- '*Sealing end compounds should be set back as far as possible from the edge of the AONB and ideally outside of 'the setting' to the AONB. It is plausible that a location may be found that takes advantage of topography just outside of the AONB boundary to largely screen their visibility from within the designated landscape. 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 and connecting OHLs can be visually removed from the AONB (or reduced visually to a below significant level) either by distance and/or allowing better topographical screening to be used*.'.

A.5.29 Natural England consider that the following areas would contribute to the setting of the AONBs 'simply due to their being adjacent to the AONB, with the potential for good views from and into the designated area:

- *To the south, the area around the point at which the preferred option route exits the AONB to the Tendering Peninsula-EAC substation -Ardleigh –Great Horkesley/Great Wormingford area*
- *To the north of Dedham Vale AONB, areas to the south of Capel St Mary are proximate to the boundary line for both the Dedham Vale AONB and Suffolk and Essex Coast and Heaths AONB and therefore are likely to form the setting to either one of both of these AONBs*.'.

A.5.30 Natural England also requested a setting study in their statutory consultation response (letter dated 26 July 2024).

Definition of Setting used in this Study

A.5.31 As discussed above, the term 'setting' in relation to protected landscapes implies and is generally taken to mean the land surrounding the designated area which, whilst not designated, has a complementary relationship and is intervisible with the designated landscape. The setting contributes to the understanding of the significance of the landscape. For Dedham Vale National Landscape, this is the defined natural beauty that forms the basis for designation.

A.5.32 National Grid's Bramford to Twinstead Reinforcement project, Appendix 6.2, Annex A, Section 3.1 of the DCO submission (Bramford to Twinstead Reinforcement application document 6.3.6.2) (National Grid, 2023) sets out a definition of 'setting' which was reviewed to inform this study. Since the Bramford to Twinstead setting study was undertaken the wording of the National Landscape Position Statement (NLP, 2024) was updated and now refers to setting in terms of identifying locations where there is potential for '*substantial impacts, positive or negative, on the natural beauty and special qualities of the AONB*' rather than just areas that might have 'impacts'. Substantial impacts are considered to equate to significant effects for the purposes of this study.

A.5.33 In most cases, the setting of the National Landscape comprises land outside the protected area which is visible from the National Landscape and from which the National Landscape can be seen. Setting can also affect views within the National Landscape, for example a development outside the National Landscape could be visible between different parts of the National Landscape, affecting the integrity of internal views of the National Landscape's landscape.

A.5.34 Setting can extend beyond visual relationships, and include the experience of the landscape. For example, noise from a development may affect aspects such as tranquillity or the perception of remoteness.

A.5.35 In some cases, the setting area would be compact and close to the National Landscape boundary, perhaps because of natural or man-made barriers or because of the nature of the proposed change. Conversely, the setting area may be substantial for example if the development is very tall, or where there is a strong contrast in topography between higher and lower ground.

A.5.36 An area of setting does not have to be contiguous with the designated area, for example, the top of a tall structure outside and possibly some distance from the

National Landscape may be visible beyond a key ridgeline when viewed from within the National Landscape, potentially affecting its natural beauty.

The Setting of the Dedham Vale National Landscape

Introduction

A.5.37 The focus of this study is on the north-eastern and southern boundaries of the National Landscape, as these are the areas most likely to be affected by the Project whether in terms of views or change to landscape character. The appraisal was informed by both desktop and site-based work between 2022 and 2024, in summer and winter.

A.5.38 There are two separate but linked aspects which need to be considered when identifying the setting of the Dedham Vale National Landscape:

- Complementary setting – areas outside the National Landscape where the landscapes and landforms visually or functionally link with the National Landscape. Such landscapes are likely to display similar characteristics and contribute to the character, qualities, and sense of place of the landscape within the National Landscape thereby supporting the delivery of the National Landscape's statutory purpose i.e., to conserve and enhance the area's natural beauty
- Development defined setting – identification of areas where the Project would be visible in views to, from or within the National Landscape and where it may therefore influence the defined natural beauty of the National Landscape.

Development Defined Setting

A.5.39 The Project has the potential to be visible in views to, from or within the National Landscape and may therefore influence the defined natural beauty of the National Landscape, for example by:

- '*Blocking or the interference of views out of the AONB particularly from public viewpoints*
- *Blocking or the interference of views of the AONB from public viewpoints outside the AONB*
- *Loss of tranquillity through the introduction of lighting, noise, or traffic movement*
- *An abrupt change to landscape character*' (NLP Position Statement, 2024).

A.5.40 The scale, height, siting, use, materials, and design of a development are all factors that determine whether the Project would potentially affect the natural beauty of the National Landscape. Incompatibility with its surroundings, movement, reflectivity, and colour are also likely to play a part.

A.5.41 In most cases, the further away a development is from the National Landscape boundary, the more the effect is likely to be reduced.

Zone of Theoretical Visibility

A.5.42 The approach below follows that which was taken to support the identification of the setting of Dedham Vale National Landscape for National Grid's Bramford to

Twinstead Reinforcement project. To understand the issue of intervisibility in relation to the National Landscape and 400 kV overhead line infrastructure development in general, a Zone of Theoretical Visibility (ZTV) exercise was undertaken. ZTV analysis is the process of determining the theoretical visibility of an object in the landscape. It does not convey the nature or magnitude of visual effects. In this case the ZTV analysis considered views from within the National Landscape looking out. GIS software was used to calculate the areas outside the National Landscape where the top half of 50 m high structures would potentially be visible from within the National Landscape. This helped to identify the distances at which typical 50 m high pylons would be potentially visible from within the National Landscape.

A.5.43 The difference between this ZTV and more typical ZTVs, including those undertaken to inform the LVIA undertaken as part of the Environmental Impact Assessment (EIA) process, is that there are no fixed structure location points. This is because the aim is not to assess the effect of the proposed overhead line (which as noted above was undertaken as part of the EIA process), but rather to identify anywhere within the National Landscape from where the top half of a structure (25-50 m high) located outside the National Landscape may be visible.

A.5.44 The top half of the structure (25-50 m) is mapped rather than just its top, as it is considered that a glimpse of the top of a pylon is unlikely to influence the defined natural beauty of the Dedham Vale National Landscape, particularly since views of pylons and other man-made features are an existing feature of parts of the National Landscape and its surrounding landscape.

A.5.45 As a starting point, grid of viewer points were distributed within and along the National Landscape boundary at 250 m centres. These represent non-specific views from within the National Landscape and are based on 1.5 m observer eye level. A combination of OS Terrain 5 and Terrain 50 Digital Terrain Model was used.

A.5.46 The landscape in the National Landscape is characterised by a high level of tree cover, therefore the ZTV takes larger woodland blocks within the National Landscape into account as these serve as visual barriers. These were defined by desk study using the National Forest Inventory mapping dataset. They were assigned a 15 m height, which is considered a conservative approach to represent the likely screening/filtering effects of mature woodland within the National Landscape.

A.5.47 The resultant heat map shown on Figure A13.5.3 within Annex B, illustrates the areas outside the National Landscape where the top half (25 – 50 m) of a structure would theoretically be visible from within the National Landscape. The percentage value relates to the percentage of the receptor points within the National Landscape which would theoretically be able to see the top half of a pylon outside the National Landscape.

A.5.48 Whilst this heat map shows that 50 m high structures could be theoretically visible over a wide area, it does not mean that their presence in views would influence the defined natural beauty of the National Landscape. This is because the modifying effect of distance must be taken into account as the further away the pylons are from the National Landscape boundary, the more the impact is likely to be reduced. As an example, at 3 km, a 50 m high pylon would have an apparent height (Gillespies, 2014) of around 10 mm. At 5 km this would reduce to 6 mm. It is also because the ZTV does not take into consideration smaller areas of woodland, hedgerows, hedgerow and field trees which all play a part in screening, filtering and directing views which was accounted for in the viewpoint assessment undertaken as part of the EIA.

A.5.49 The heat map helped focus and inform the site survey in respect of identifying locations where 50 m tall pylons would be likely to have the greatest intervisibility with the National Landscape and could potentially affect its natural beauty.

North-east of the National Landscape

Complementary Setting

A.5.50 The National Landscape boundary south of the junction of the B1070 and Wade's Lane (north of Raydon) follows the transition between the upper wooded slopes of the River Stour and River Brett and their small tributaries and the adjacent plateaux landscapes. The elevated and gently rolling plateau which forms the northern edge of the National Landscape extends from within the National Landscape into the adjacent area of countryside to the north-east, broadly between Great Wenham, Holton St Mary and East Bergholt. This area is part of the Plateau Farmlands LCT (Suffolk Landscape Character Assessment) which is characterised by its flat or gently rolling landform, straight-edged arable fields with tall hedgerows, plantation woodlands and strong sense of ruralness. This plateau separates Dedham Vale National Landscape from the Suffolk and Essex Coast and Heaths National Landscape to the north-east.

A.5.51 Raydon to the north is located within the Ancient Estate Claylands LCT (Suffolk Landscape Character Assessment), characterised by its medium to large scale fields, small streams, blocks of ancient semi-natural woodland and Raydon World War II airfield, which is noted to have a 'significant local visual impact'. Only a very small part of the Ancient Estate Claylands LCT crosses into the National Landscape either side of a small tributary valley of the River Brett, to the west of Raydon.

A.5.52 The National Landscape is not prominent in views from the north-east and likewise there are no key views out of the National Landscape out to the north-east. Intervisibility between the Stour Valley (and its tributary the Brett Valley) within the National Landscape and the area to the north-east is typically limited by the enclosing valley landform together with intervening layers of woodland and trees. Towards the more elevated plateau at the northern edge of the National Landscape there are some longer views north up the Brett Valley. An example of views out of the National Landscape is provided in the panoramic photograph taken from an elevated viewpoint on Higham Hill (as shown on Figure 7.12.F91: Viewpoint 3.24 Higham Hill, south of Lower Raydon (document reference 7.12)) which demonstrates that although the top of the existing water tower near Raydon is visible there is a large amount of intervening vegetation which screens views of the landscape to the north-east. More distant views are afforded to the north up the Brett Valley although these views are filtered and screened in some locations by field boundary vegetation and a high proportion of woodland.

Development Defined Setting

A.5.53 As shown on Figure A13.5.3 within Annex B there would be greater theoretical visibility of the top half (25 m – 50 m) of a structure from areas of more elevated plateau between Raydon, Great Wenham and East Bergholt, including from the A12 at Four Sisters. Theoretical visibility would reduce along tributary valleys and where woodland along the boundary of the National Landscape would provide screening of outward views.

Conclusion on Setting

A.5.54 Bringing together the considerations of complementary and development defined setting discussed above, the north-east setting of the Dedham Vale National Landscape in relation to 50 m high pylons is shown on Figure A13.5.4 within Annex B. It is important to note that this is a gradual, rather than hard boundary. The setting includes:

- The complementary landscape of the Brett Valley south of Upper Layham which reflects the findings of the National Grid's Bramford to Twinstead project, Appendix 6.2, Annex A, Section 3.1 of the DCO submission (National Grid, 2023)
- The complementary landscape of the farmed plateau broadly between Raydon and Brantham, also encompassing Holton St Mary and East Bergholt
- Areas which have the greatest intervisibility with the National Landscape at distances within which pylons could be considered to have a substantial impact on its natural beauty and special qualities.

South of the National Landscape

Complementary Setting

A.5.55 To the south of the National Landscape between the westernmost boundary and the A12, the Stour River Valley Slopes LCT (Colchester Landscape Character Assessment) transitions into a gently undulating upland plateau on the southern fringes of the National Landscape. This plateau extends into the farmland to the south of the National Landscape and is classified as being part of the Farmland Plateau LCT. This is defined as the Rochfords Farmland Plateau LCT around Wormingford, Great Horkesley Farmland Plateau LCT between Tye Green and Boxford Cross and Langham Farmland Plateau LCT around Langham (Colchester Landscape Character Assessment). The Rochfords sub-type in the west is the most elevated part of this farmland plateau, and features medium to large scale rolling arable fields enclosed by gappy hedgerows, with occasional mature hedgerow trees and small woodlands. The Great Horkesley sub-type is more enclosed, with small to medium scale arable fields with some mature trees and diverse hedgerows. The Langham sub-type contains large-scale arable fields with remnant orchards and clipped straight hedges, which cover the former airfield.

A.5.56 These aspects contribute to the varying nature of the intervisibility between the typically lower lying National Landscape and the plateau landscape to the south. Part of the Stour Valley Project Area is located along the southern boundary of the National Landscape, between Boxted Cross and Langham.

A.5.57 To the south of Little Horkesley the Stour River Valley Slopes LCT (Colchester Landscape Character Assessment) extends beyond the National Landscape boundary. This roughly aligns with the Stour Valley LCA (Essex Landscape Character Assessment) and is indicative of the area reflecting the landscape character within Dedham Vale National Landscape due to the patchwork of smaller scale fields, interspersed with mature tree lined field boundaries, pockets of deciduous woodland and undulating tributary valley landform. The Stour Valley River Slopes LCT (Colchester Landscape Character Assessment) also extends beyond the National Landscape boundary south of Boxted and at Black Brook near Langham; these areas are considered to reflect the character within Dedham Vale National Landscape.

A.5.58 To the south of the National Landscape between the A12 and Cattawade, the landform is defined by plateau landform; albeit slightly lower lying. There is a gradual transition between the Stour Valley flood plain within the National Landscape, and the area outside of the boundary around Ardleigh which forms part of the Heathland Plateaux LCT (Bromley Heaths sub-type).

A.5.59 Intervisibility between the Stour Valley within the National Landscape and the area to the south is generally limited by the enclosing valley landform. Towards the gently rising plateau at the southern edge of the National Landscape there are some long views south. These views are typically filtered and screened in places by field boundary vegetation and woodland. There are also some occasional long distance views southwards towards the wooded skyline of the valley from upper parts of the south facing valley slopes near East Bergholt, to the north of the River Stour. These views are from the part of the National Landscape which has close associations with John Constable.

Development Defined Setting

A.5.60 As shown on Figure A13.5.3 within Annex B there would be greater theoretical visibility of the top half (25 m – 50 m) of a structure from elevated areas of plateau immediately south of the National Landscape, north and west of Great Horkesley, and between Ardleigh and Dedham Heath. Theoretical visibility would reduce along tributary valleys and where woodland along the boundary of the National Landscape would provide screening of outward views.

Conclusion on Setting

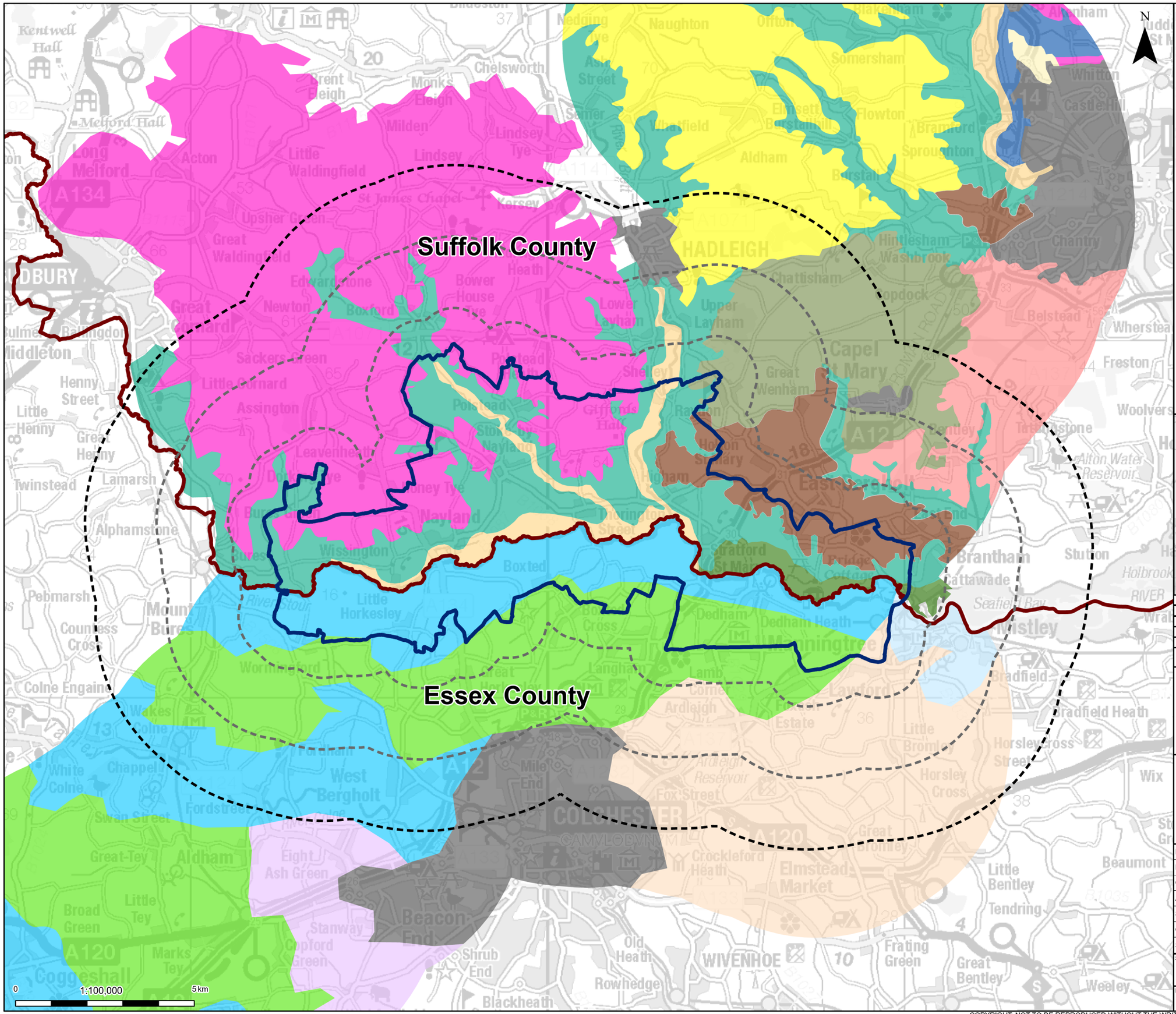
A.5.61 Bringing together the considerations of complementary and development defined setting discussed above, the southern setting of the Dedham Vale National Landscape in relation to 50 m high pylons is shown on Figure A13.5.5 within Annex B. There is a gradual transition in landform and landscape characteristics to the south of the National Landscape. The setting is therefore a gradual, rather than hard boundary.

A.5.62 The setting includes:

- The complementary landscapes of tributary valleys of the River Stour, including the Black Brook
- The complementary landscapes of the farmed plateau between Wormingford and Langham, including Great Horkesley, Boxted and parts of Ardleigh Heath and Dedham Heath
- Areas which have the greatest intervisibility with the National Landscape at distances within which pylons could be considered to have a substantial impact on its natural beauty and special qualities.

Annex B. Figures

nationalgrid



Dedham Vale National Landscape
Dedham Vale National Landscape - 1km buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
County boundary

Landscape Character Types - Counties

Suffolk
- Ancient Estate Claylands
- Ancient Estate Farmlands
- Ancient Plateau Claylands
- Ancient Rolling Farmlands
- Plateau Estate Farmlands
- Plateau Farmland
- Rolling Estate Farmlands
- Rolling Valley Farmland
- Urban
- Valley Meadowlands
- Wooded Valley Meadowlands

Essex
- Coastal Landscapes
- Glacial Till Plateau
- London Clay Landscape
- London Clay Landscapes
- River Valley Landscapes
- Urban

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	NB	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.1 - Landscape and Visual - County Level Landscape Character Types

Designed	L. Cargill	Date	21 Aug 25
Drawn	N. Banu	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DD-ZZ-00730

Revision: A

Print Date: 06-24-25 10:52:34

Babergh District

Colchester District

Tendring District

N

0 1:100,000 5km

Print Date: 07-09-25 10:57:19

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km Buffer
Dedham Vale National Landscape - 5km Buffer
Local Authority District Boundary

Landscape Character Areas - Local Authority

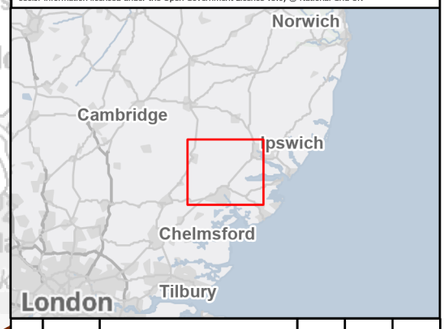
Colchester

- Ardleigh River Valley
- Colchester Urban Landscape
- Colne Drained Estuarine Marsh
- Colne River Valley Floor
- Colne River Valley Slopes
- Easthorpe Farmland Plateau
- Great Horkesley Farmland Plateau
- Great Tey Farmland Plateau
- Langham Farmland Plateau
- Rochfords Farmland Plateau
- Southern Colchester Farmland Plateau
- Stour River Valley Floor
- Stour River Valley Slopes
- Wivenhoe Farmland Plateau
- Wooded Roman River Valley

Tendring

- Ardleigh Valley System
- Arlesford Valley System
- Bromley Heaths
- Cattawade Marshes
- East Tendring and Wix Clay Plateaux
- Holland Valley System
- Stour Estuary Open Marshes
- Stour Valley System

Note: There are currently no Landscape Character Assessments for Babergh District



Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	NB	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.2 - Landscape and Visual- District Level Landscape Character Areas

Designed	L. Cargill	Date	21 Aug 25
Drawn	N. Banu	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DD-ZZ-00731

Revision: A

N

Dedham Vale National Landscape

Viewer grid points

Dedham Vale National Landscape - 1km Buffer

Dedham Vale National Landscape - 3km Buffer

Dedham Vale National Landscape - 5km Buffer

Zone of Theoretical Visibility (ZTV) - Dedham Vale National Landscape

- <5%
- 5 - 10%
- 10 - 15%
- 15 - 20%
- 20 - 25%
- 25 - 30%
- 30 - 35%

This Zone of Theoretical Visibility (ZTV) mapping illustrates areas within which the top half of 50m high structures located outside the National Landscape would be theoretically visible from viewer grid points within the National Landscape (screening effects of National Landscape woodland included)

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	NB	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.3 - Landscape and Visual- Reverse Zone of Theoretical Visibility (ZTV) from the National Landscape

Designed	L. Cargill	Date	21 Aug 25
Drawn	N. Banu	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DD-ZZ-00732

Revision: A

0 1:100,000 5 km

Print Date: 07-18-25 12:16:09

N

- Dedham Vale National Landscape
- Dedham Vale National Landscape - 1km Buffer
- Dedham Vale National Landscape - 3km Buffer
- Dedham Vale National Landscape - 5km Buffer
- Suffolk and Essex Coast and Heaths National Landscape (an Area of Outstanding Natural Beauty (AONB)
- Setting to North East

0 1:100,000 5 km

Print Date: 07-09-25 11:02:00

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	NB	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.4 - Landscape and Visual-Setting of Dedham Vale National Landscape in relation to the Project (north-east)

Designed	L. Cargill	Date	21 Aug 25
Drawn	N. Banu	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DD-ZZ-00733

Revision: A

N

Dedham Vale National Landscape (an Area of Outstanding Natural Beauty)

Dedham Vale National Landscape - 1km Buffer

Dedham Vale National Landscape - 3km Buffer

Dedham Vale National Landscape - 5km Buffer

Setting to South

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	NB	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.5 - Landscape and Visual-Setting of Dedham Vale National Landscape in relation to the Project (south)

Designed	L. Cargill	Date	21 Aug 25
Drawn	N. Banu	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

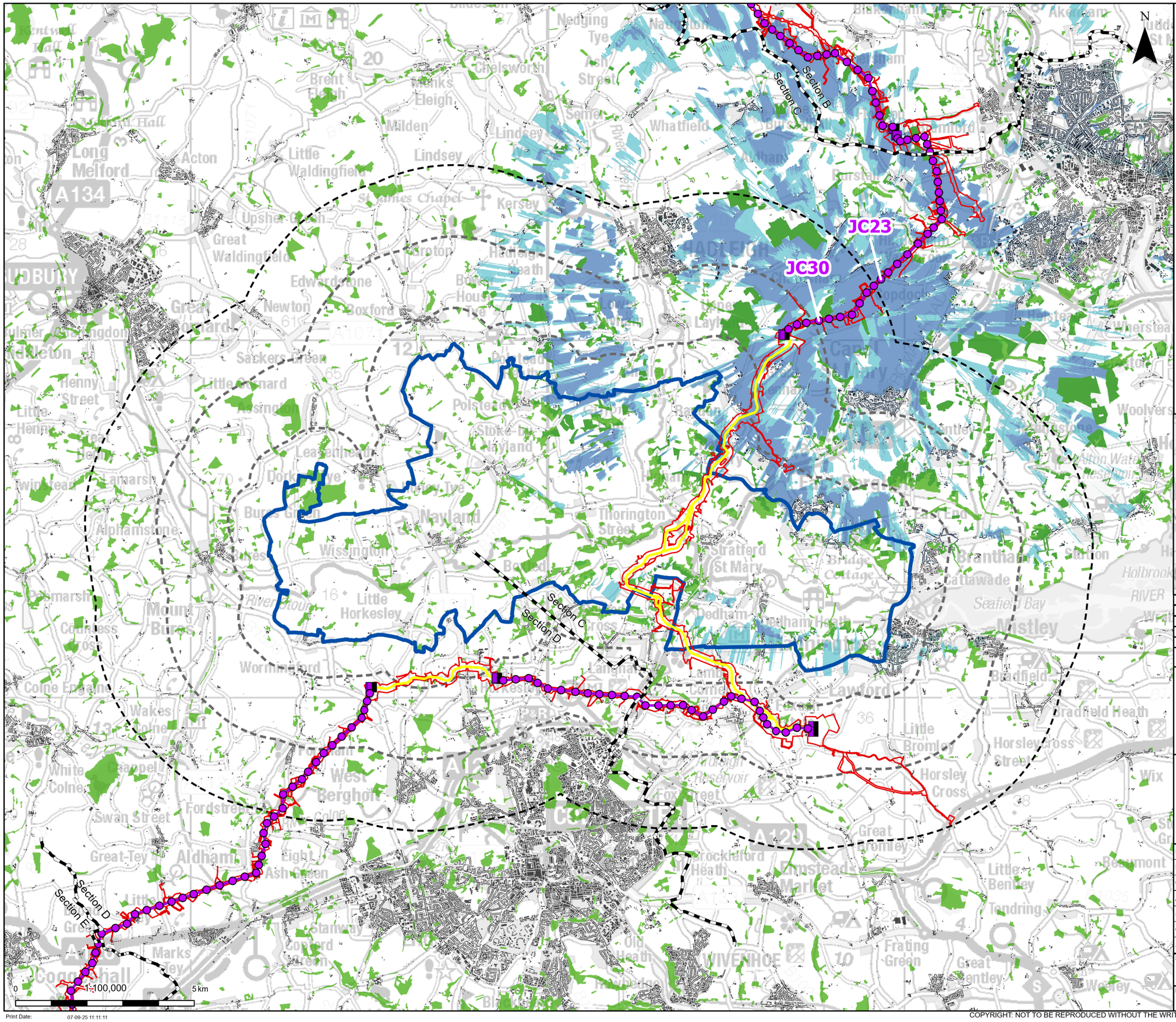
Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DD-ZZ-00734

Revision: A

0 1:100,000 5 km

Print Date: 06-24-25 10:47:58



Order limits

Project section line

Proposed project design details

Proposed full line tension gantry

Proposed low duty gantry

Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer

Dedham Vale National Landscape - 3km Buffer

Dedham Vale National Landscape - 5km Buffer

Buildings

Woodland

Zone of Theoretical Visibility, full structure theoretically visible - Pylons JC23 to JC30

1 - 5 pylons visible

5 - 8 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.6 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons JC23 – JC30

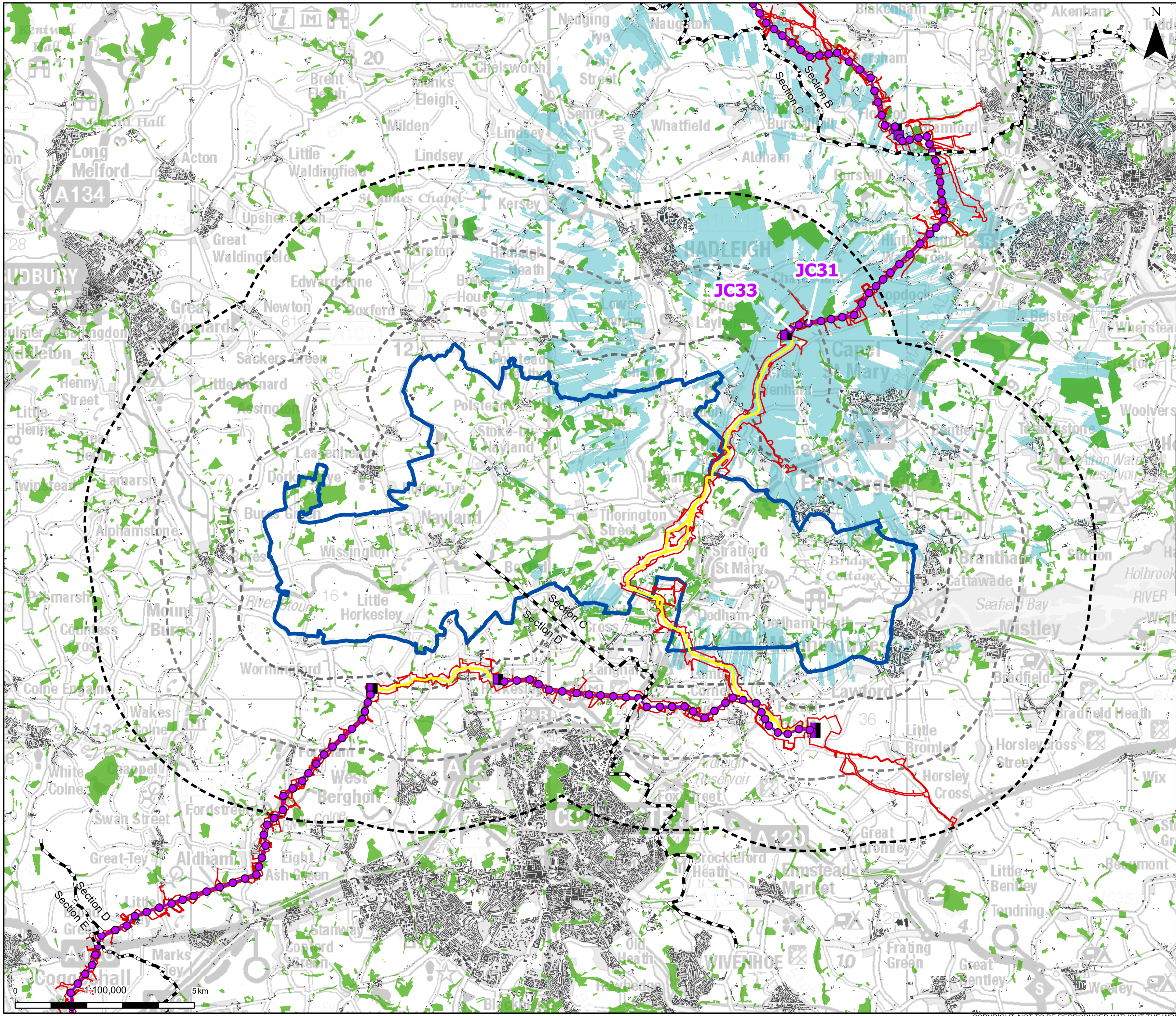
Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00735

Revision: A

Print Date: 07-09-25 11:11:11



Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

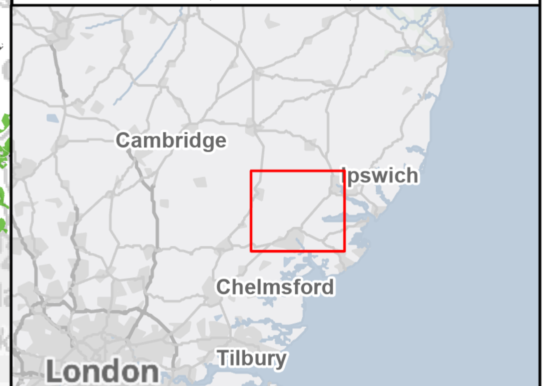
Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, full structure theoretically visible - Pylons JC31 to JC33

1 - 4 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.



Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

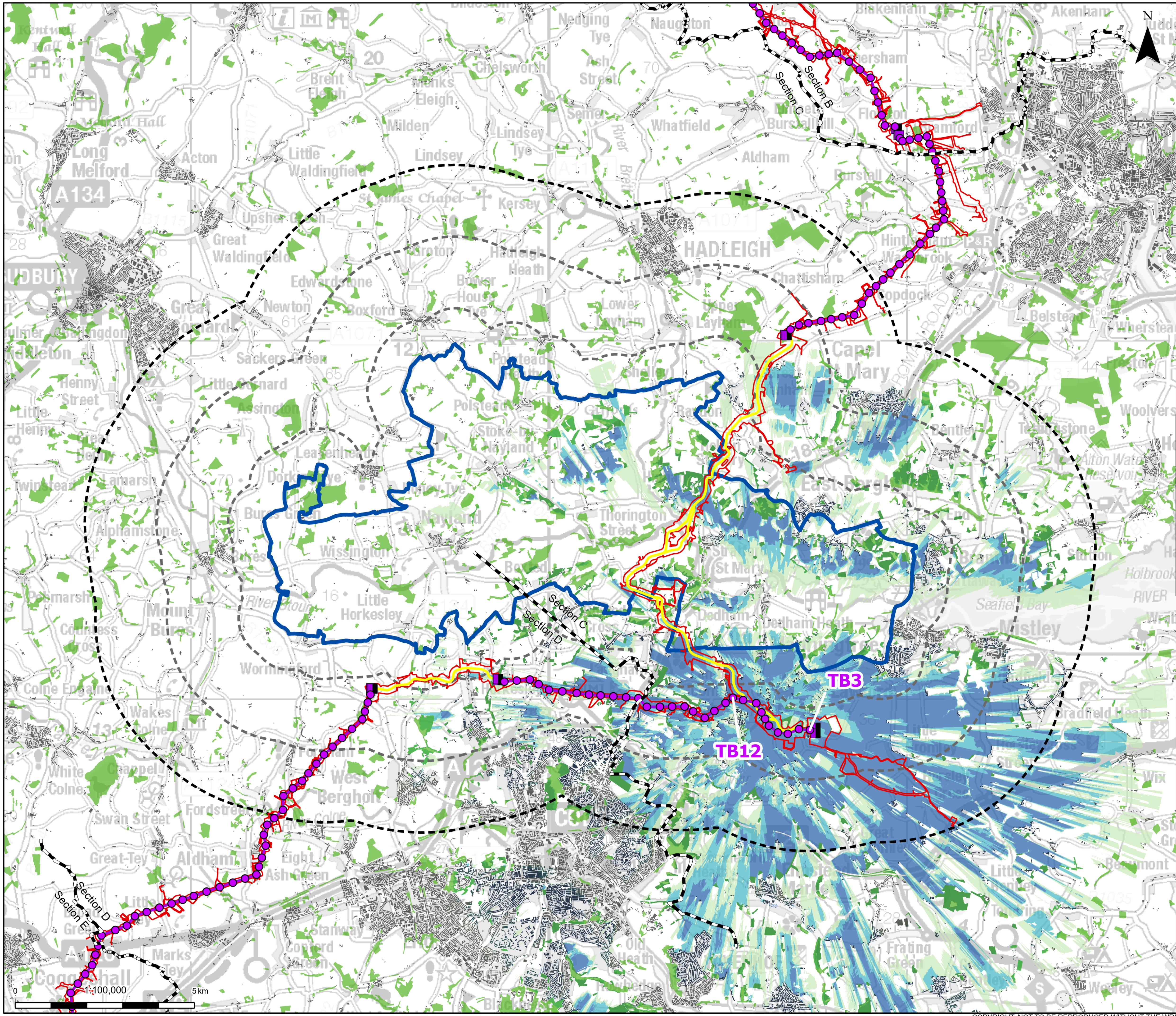
Figure A13.5.7 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons JC31 – JC33

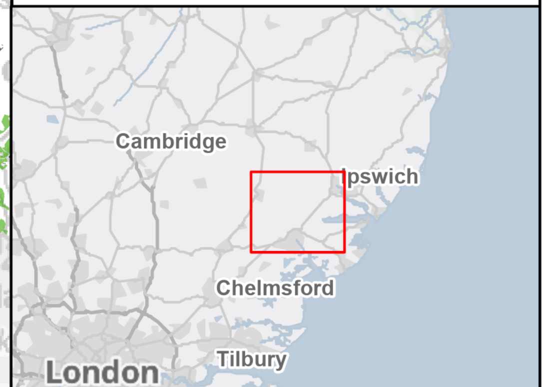
Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00736
Revision: A

Print Date: 07-09-25 11:16:04





Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, full structure theoretically visible - Pylons TB3 to TB12

1 - 4 pylons visible
5 - 8 pylons visible
9 - 12 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.8 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons TB3 – TB12

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00737
Revision: A

Print Date: 07-09-25 11:25:19

Section B
Section C
Section C
Section D
Section D
Section E
TB21
TB13
N
0
1:100,000
5 km

Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, full structure theoretically visible - Pylons TB13 to TB21

1 - 4 pylons visible
5 - 8 pylons visible
9 - 12 pylons visible

Ncte: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.9 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons TB13 – TB21

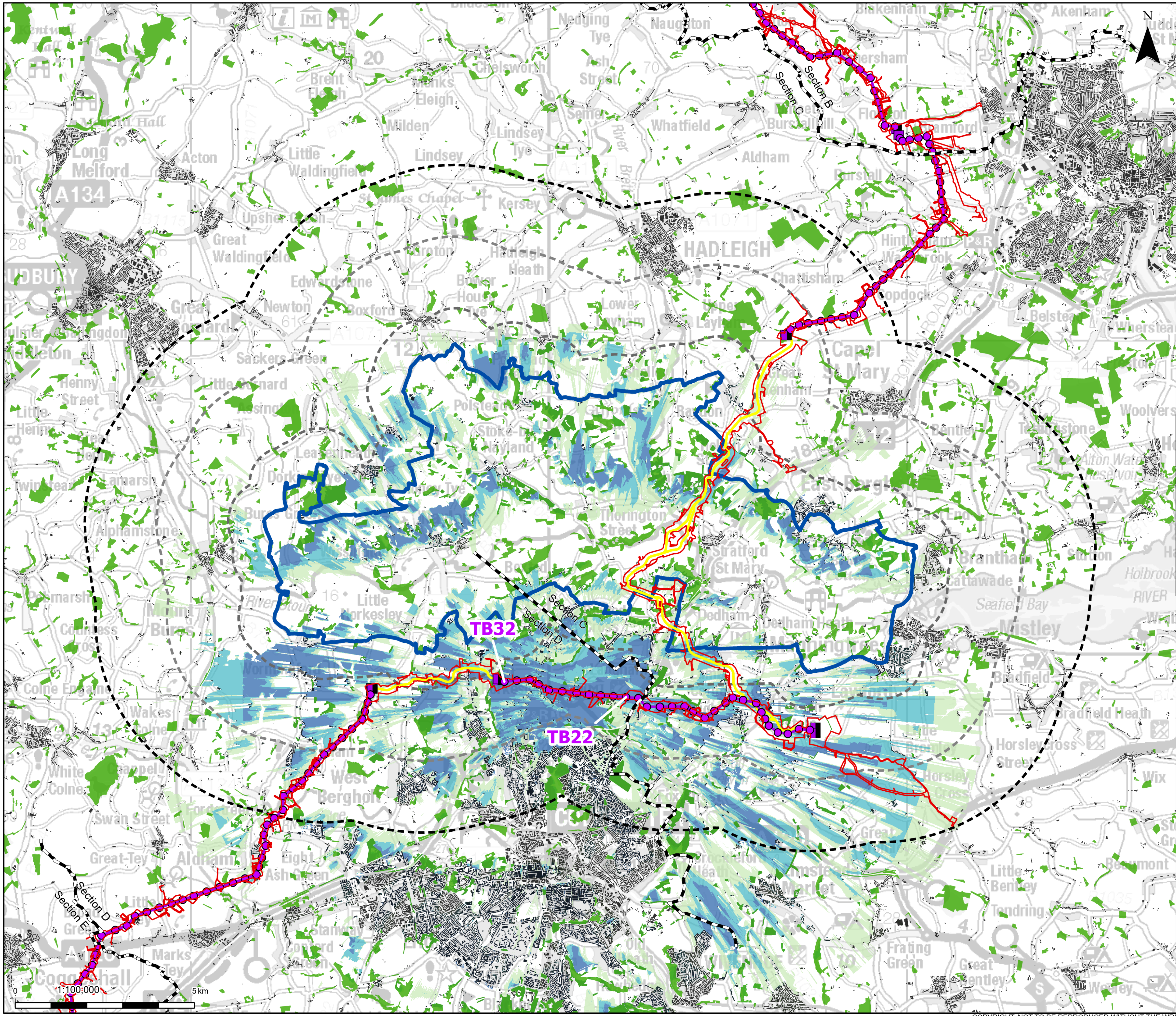
Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number:
10059280-ARC-ELS-ZZ-DR-ZZ-00738

Revision:
A

Print Date: 07-09-25 11:48:58



Order limits

Project section line

Proposed project design details

Proposed full line tension gantry

Proposed low duty gantry

Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer

Dedham Vale National Landscape - 3km buffer

Dedham Vale National Landscape - 5km buffer

Buildings

Woodland

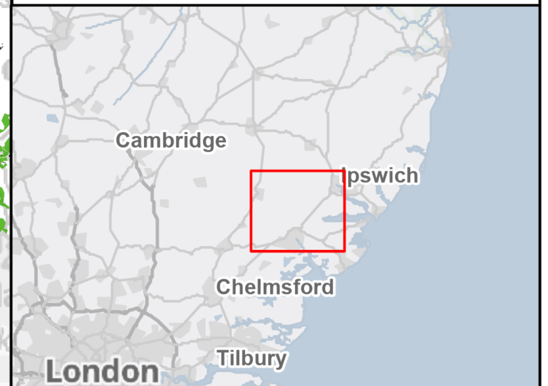
Zone of Theoretical Visibility, full structure theoretically visible - Pylons TB22 to TB32

1 - 4 pylons visible

5 - 8 pylons visible

9 - 12 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.



Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.10 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons TB22 – TB32

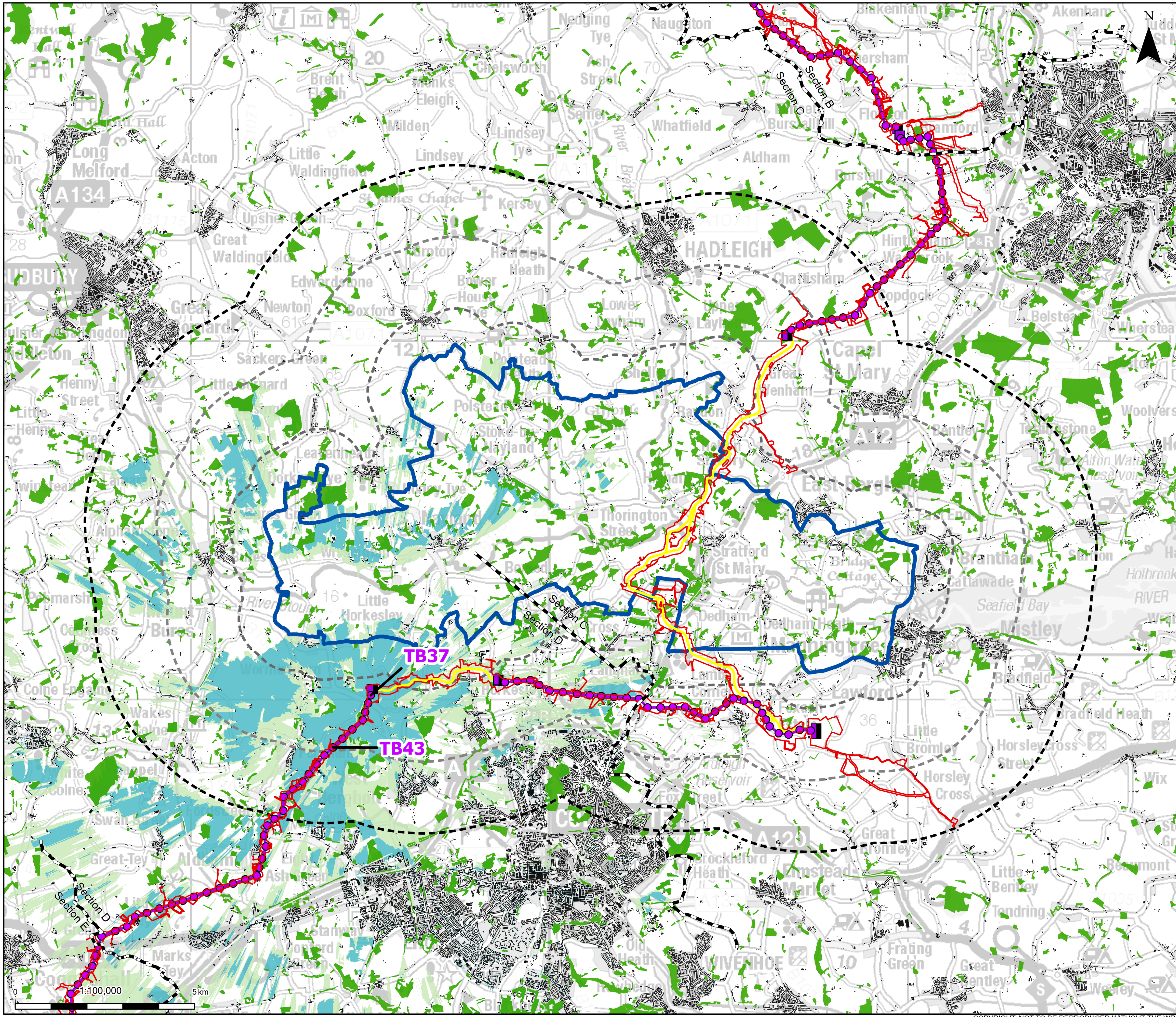
Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

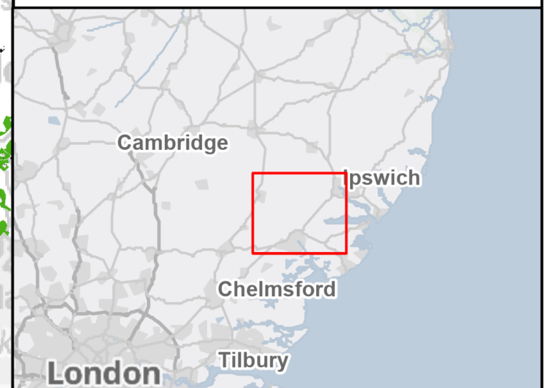
Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00739

Revision: A

Print Date: 07-09-25 11:51:21





Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, full structure theoretically visible - Pylons TB37 to TB43

1 - 4 pylons visible
5 - 8 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.11 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons TB37 – TB43

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00740
Revision: A

Print Date: 07-09-25 11:59:13

Section B
Section C
Section D
Section E
TB44
TB51
1:100,000
0
5 km

N

Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, full structure theoretically visible - Pylons TB44 to TB51

1 - 4 pylons visible
5 - 8 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.12 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Pylons TB44 – TB51

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number:
10059280-ARC-ELS-ZZ-DR-ZZ-00741

Revision:
A

Print Date: 07-09-25 12:05:31

Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons JC23 to JC30

1 - 4 pylons visible
5 - 8 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB
Rev	Date	Description	Drawn	Check	Approv

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.13 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons JC23 – JC30

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:95,070	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number:
10059280-ARC-ELS-ZZ-DR-ZZ-00742

Revision:
A

Print Date: 07-09-25 12:12:44

N

Section B
Section C
Section C
Section D
Section D
Section E

JC33
JC31

0 1:100,000 5 km

Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons JC31 to JC33

1 - 4 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.14 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons JC31 – JC33

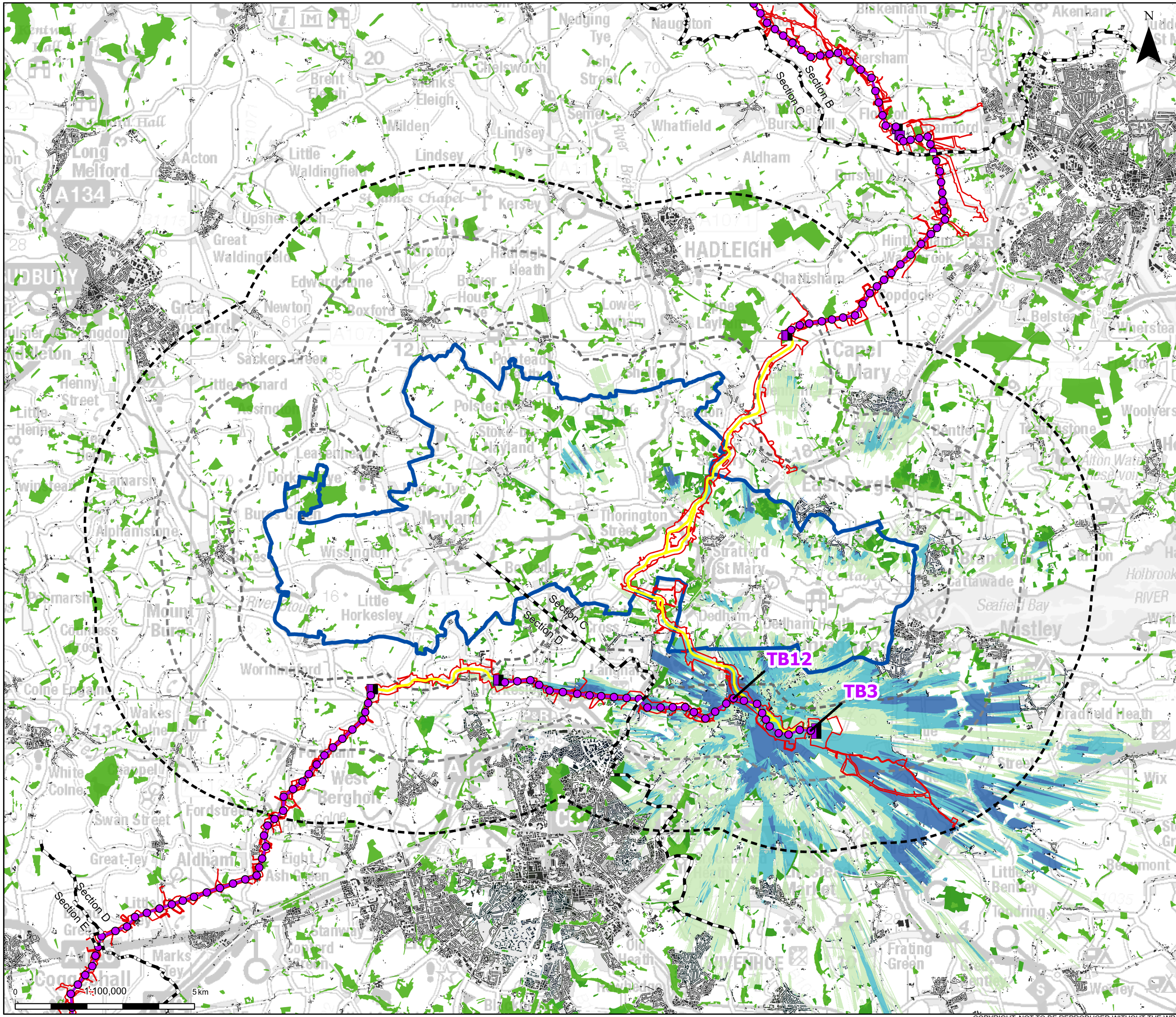
Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00743

Revision: A

Print Date: 07-09-25 12:20:49



Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

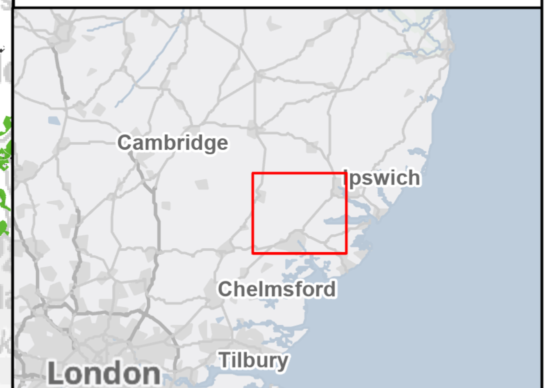
Discipline specific constraints

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons TB3 to TB12

1 - 4 pylons visible
5 - 8 pylons visible
9 - 12 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.



Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.15 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons TB3 – TB12

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00744
Revision: A

Print Date: 07-09-25 12:27:19

Section B
Section C
Section C
Section D
Section D
Section E
TB21
TB13
N
0
5 km
1:100,000

Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape
Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons TB13 to TB21

1 - 4 pylons visible
5 - 8 pylons visible
9 - 12 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

Figure A13.5.16 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons TB13 – TB21

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number:
10059280-ARC-ELS-ZZ-DR-ZZ-00745

Revision:
A

Print Date: 07-09-25 12:34:15

Section B
Section C
Section C
Section D
Section D
Section E
TB32
TB22
N
0
1:100,000
5 km

Order limits
Project section line

Proposed project design details

Proposed full line tension gantry
Proposed low duty gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer
Dedham Vale National Landscape - 3km buffer
Dedham Vale National Landscape - 5km buffer
Buildings
Woodland

Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons TB22 to TB32

1 - 4 pylons visible
5 - 8 pylons visible
9 - 12 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Title:

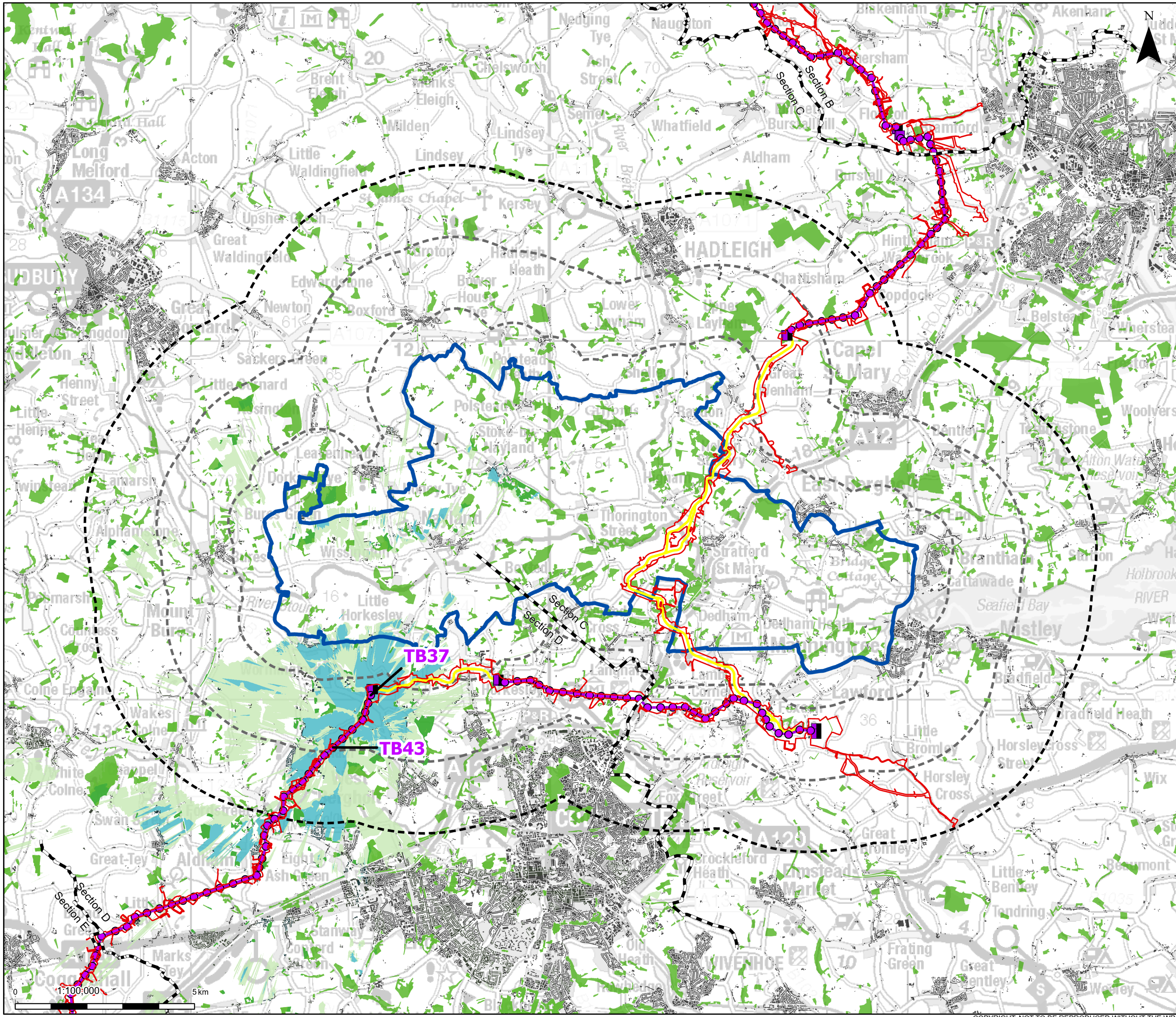
Figure A13.5.17 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons TB22 – TB32

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00746
Revision: A

Print Date: 07-09-25 12:41:29



Order limits

Project section line

Proposed project design details

Proposed full line tension gantry

Proposed low duty gantry

Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Discipline specific constraints

Dedham Vale National Landscape

Dedham Vale National Landscape - 1km Buffer

Dedham Vale National Landscape - 3km buffer

Dedham Vale National Landscape - 5km buffer

Buildings

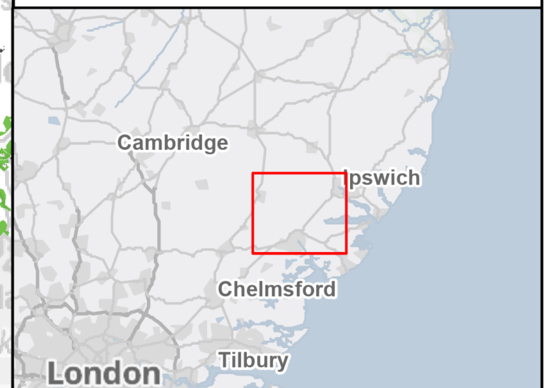
Woodland

Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons TB37 to TB43

1 - 4 pylons visible

5 - 8 pylons visible

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.



Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

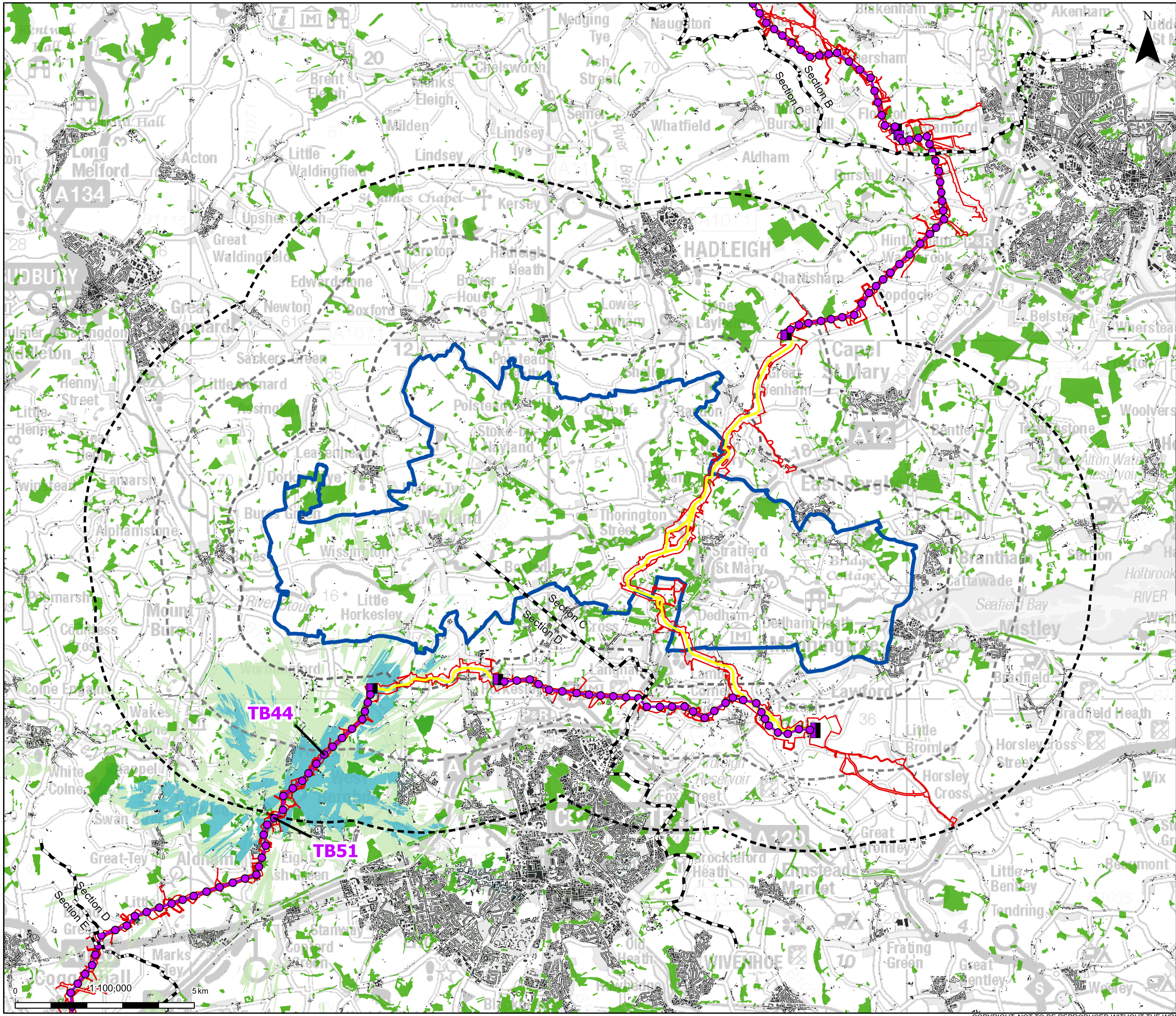
Figure A13.5.18 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons TB37 – TB43

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

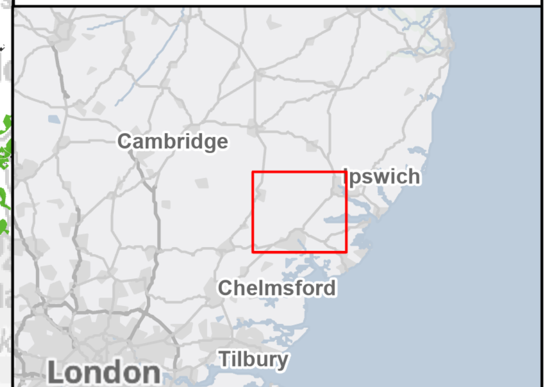
Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00747 Revision: A

Print Date: 07-09-25 12:47:51



Order limits	Dedham Vale National Landscape - 1km Buffer
Project section line	Dedham Vale National Landscape - 3km buffer
Proposed project design details	Dedham Vale National Landscape - 5km buffer
Proposed full line tension gantry	Buildings
Proposed low duty gantry	Woodland
Proposed standard lattice pylon location	Zone of Theoretical Visibility, top half of structure theoretically visible - Pylons TB44 to TB51
Proposed overhead line alignment	1 - 4 pylons visible
Proposed underground cable alignment	5 - 8 pylons visible
Discipline specific constraints	
Dedham Vale National Landscape	

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.



Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Title:

Figure A13.5.19 - Landscape and Visual - Zone of Theoretical Visibility (ZTV) – Top half of pylons TB44 – TB51

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:100,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-ELS-ZZ-DR-ZZ-00748 | Revision: A

Print Date: 07-09-25 12:56:58

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