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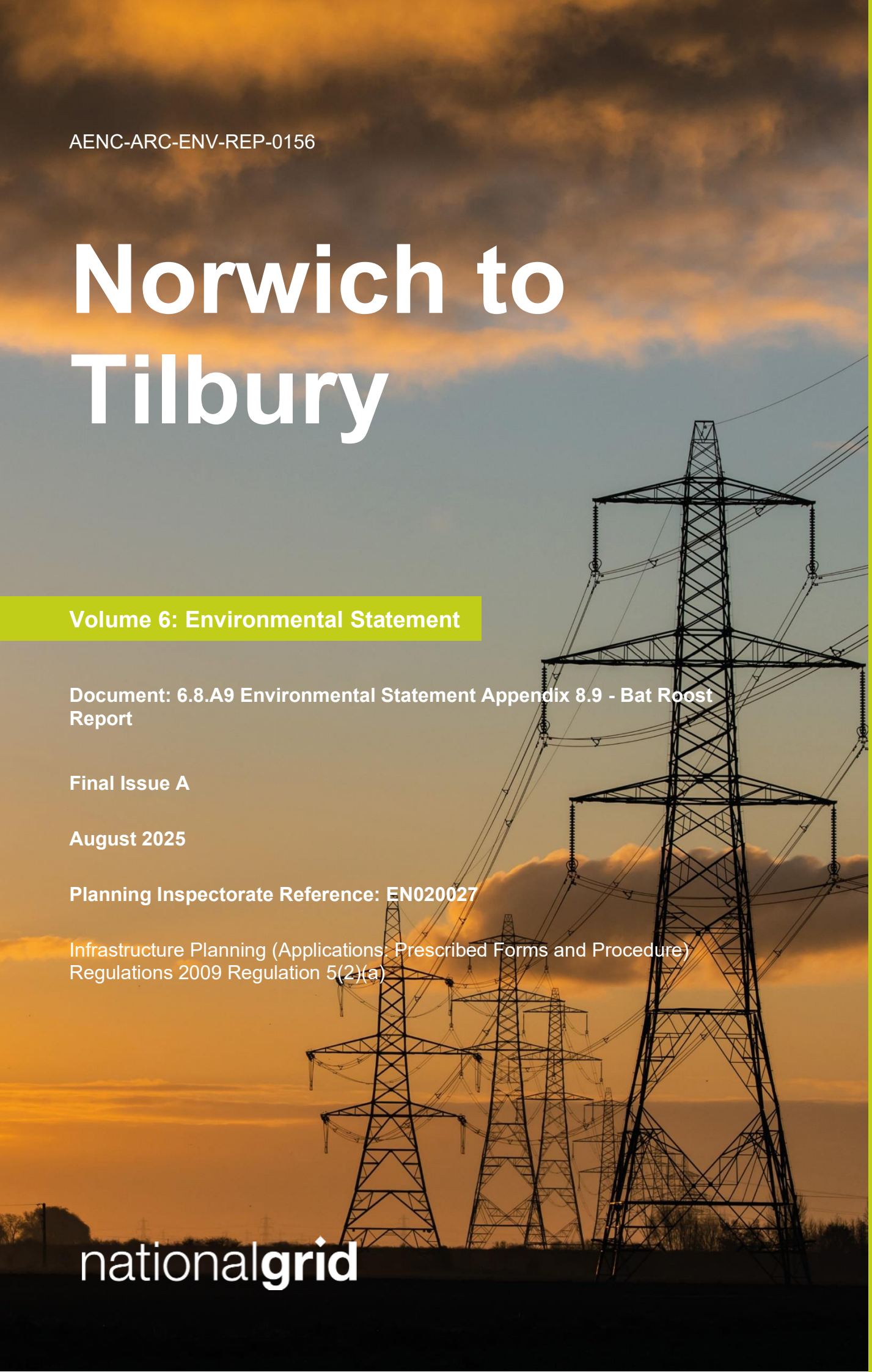

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1. Introduction

1.1 Background

1.1.1 This Bat Roost Report has been produced as an appendix to Chapter 8: Ecology and Biodiversity (document reference 6.8) of the Environment Statement (ES) (Volume 6 of the Development Consent Order (DCO) application) for Norwich to Tilbury (the 'Project'). This report presents the methods and results of the desk study and Ground Level Tree Assessments (GLTA) undertaken between 2023 and 2024.

1.1.2 The ecological background and the scope for this report is set out in the Environmental Impact Assessment (EIA) Scoping Report (document reference 6.19) and agreed within the EIA Scoping Opinion received from the Planning Inspectorate in December 2022 (document reference 6.20).

1.1.3 It was anticipated that the landscape surrounding the Project contained habitat suitable for bats that is well connected to the wider landscape by features such as rivers, tree-lined watercourses, arable field margins, extensive hedgerows, and broadleaved woodland. These habitats have the potential to support a wide range of UK bat species, including Annex II bats (i.e., barbastelle *Barbastella barbastellus*) that do not occur where habitat diversity is of lower quality.

1.1.4 The general approach to impact assessment for bats is to ensure that the impacts to bats are avoided, where possible, minimised and/or mitigation provided to maintain the favourable conservation status of species present that utilise the habitats across the Project. Overall, the Project approach aims to provide habitats of equal or better quality habitat than that affected by the Project and to ensure that these habitats are well connected to the wider landscape. This would be achieved by avoiding permanent effects to habitats of perceived value to bats, reinstating habitats affected by temporary habitat loss to equal or better condition than existing and improving the quality and availability of ecological networks across the Project.

1.1.5 Based upon this approach, the EIA Scoping Report (document reference 6.19) identified the need for roosting surveys for bats where:

- Trees required removal to facilitate the construction of the Project
- Where significant potential adverse effects to roosting, foraging, and commuting bats may occur, for example, in areas where underground cables, Cable Sealing End (CSE) compounds, new and extensions to existing substations and associated construction areas are proposed.

1.1.6 No buildings or other man-made structures have been identified that would be removed by the Project and so there has been no assessment for roosting bats on structures.

1.1.7 This report details the desk study methodology and findings, the approach to surveying roosting bats through GLTAs, as identified in the EIA Scoping Report (document reference 6.19), and the results of the GLTA surveys. Through consultation with Natural England, who agreed the scope in May 2024, the survey methods and roost characterisations reflect the best practice guidelines published in September 2023 (Collins, J. (ed.) (2023)).

1.1.8 This report should be read in conjunction with the following reports:

- Appendix 8.10: Bat Activity Report (document reference 6.8.A10) which provides the approach and results of the bat activity (using static detectors) surveys
- Appendix 8.11: Bat Radiotracking Report (document reference 6.8.A11) provides the approach and results of the bat radiotracking surveys.

1.1.9 The Project has also been sub-divided into eight geographical sections for reader accessibility, based largely on Local Planning Authority boundaries. These are shown on Figure A8.9.1: Ground Level Tree Assessment Results 2024 in Annex A and comprise:

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

1.2 Brief and Objectives

1.2.1 The brief of the survey work was to establish a robust baseline for roosting bats to support an impact assessment through undertaking the following:

- Complete a detailed desk study of bat presence and confirmed roosts
- Use of the baseline dataset to determine the importance of the Survey Area (see Section 1.3 below) for roosting bats
- Field surveys to gain an understanding of tree suitability to support roosting bats and establish the presence of roosting bats and determine likely bat species within the Order Limits.

1.3 Study Area and Survey Area

1.3.1 The following Study Areas were used for the desk study:

- The Order Limits plus a 6 km buffer was selected, within which bat records were obtained from the Local Records Centres (LERCs). This search area was selected based upon the furthest bat core sustenance zone, which is for barbastelle bats (Collins, J. (ed.) (2023))
- The Order Limits plus a 30 km buffer was selected, within which Special Areas of Conservation (SACs) with bats as a designating feature were identified from Multi-Agency Geographic Information (MAGIC) (Natural England, 2025)

- The Order Limits plus a 2 km buffer was selected to identify nationally and locally designated sites that may reference bats within their citation. This included Sites of Special Scientific Interest (SSSI) from MAGIC, as well as Local Wildlife Sites (LWS) and Country Wildlife Sites (CWS) information obtained from LERCs.

1.3.2 The Survey Area comprises all land within the Order Limits.

2. Relevant Legislation and Policy

2.1 Legal Compliance

2.1.1 Surveys and assessments have been undertaken in accordance with current legislation and planning policy in the context of the Project. A summary of the relevant legislation is provided in Table A8.9.1.

Table A8.9.1 Legal compliance

Legislation	Details
Conservation of Habitats and Species Regulations 2017 (as amended in 2019) ('Habitats Regulations')	The Regulations require authorities on behalf of the Secretary of State to maintain a list of sites which are important for bats (SACs) and to provide protection for these sites through designation, planning and other controls. Barbastelle, Bechstein's bat *Myotis bechsteinii*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros* are also listed on Annex II of the European Habitats Directive, which means that SACs may be attributed to internationally important roosts and foraging areas of these species. The Regulations make it an offence (subject to exceptions) to deliberately capture, kill or injure, disturb, trade in, damage or destroy a breeding site or resting place the animals listed in Schedule 2. However, these actions can be made lawful through the granting of licences by the appropriate authority (Natural England). Licences may be granted for several purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on the favourable conservation status of the bat species concerned.
The Environment Act 2021	The Environment Act 2021 is a significant legislative framework aimed at enhancing environmental protection and biodiversity in the UK. In relation to bats, the Act reinforces existing measures to safeguard their habitats, as they are vital indicators of ecosystem health. It includes provisions that require public authorities to conserve and restore biodiversity, which directly supports bat populations by ensuring the protection of roosting sites and foraging areas. Additionally, the Act introduces Biodiversity Net Gain requirements for new developments, mandating that construction projects must leave the natural environment in a better state, benefiting bat habitats. By embedding long-term strategies to improve ecological conditions, the Environment Act 2021 plays a critical role in addressing threats to bats caused by habitat loss and environmental degradation.

Legislation	Details
The Wildlife and Countryside Act 1981, as amended (WCA)	The Act is the main mechanism for legislative protection of wildlife in England. It gives protection to native species (particularly threatened species), their resting places and places of shelter. All 18 native UK bat species receive protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act it is an offence to intentionally kill, injure or take any protected species; intentionally or recklessly damage, destroy or obstruct access to any structure or place which a protected species uses for shelter or protection; and intentionally or recklessly disturb any protected species while it is occupying a structure or place which it uses for shelter or protection.
The Natural Environment and Rural Communities (NERC) Act 2006	The NERC Act 2006 places a duty upon public bodies to maintain Section 41 (s41) lists of flora, fauna, and habitats and to consider these ecological features as a material consideration in planning. It also requires decision-makers to have regard to the conservation of biodiversity in England, when carrying out their normal functions. Seven species of bats are identified as species of principal importance these are: greater horseshoe bat; lesser horseshoe bat; Bechstein's bat; noctule *Nyctalus noctula*; soprano pipistrelle *Pipistrellus pygmaeus*; brown long-eared bat *Plecotus auritus*; and barbastelle.

2.1.2 The Conservation of Habitats and Species Regulations 2017 references Favourable Conservation Status (FCS). FCS is defined as the minimum threshold at which it can be confidently predicted that the species is thriving in England and is expected to continue to thrive sustainably in the future. The conservation status will be taken as 'favourable' when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

2.1.3 Barbastelle bats are widely distributed through southern and central England, but they are uncommon and occur in low numbers. Their range is highly fragmented, reflecting the distribution of their preferred habitat of woodlands. As of July 2022, based on a comparison of the favourable values with the current values, barbastelle bats are not in favourable conservation status. To achieve favourable conservation status, barbastelle populations should increase to between 73,000 and 147,000 individuals, occupying the habitat available across the species' current and historic range (Zeale, M. R. K. and Natural England (2024)).

2.2 Planning Policy

2.2.1 Chapter 8: Ecology and Biodiversity (document reference 6.8) provides further details of relevant planning policy.

3. Methodology

3.1 Nomenclature

3.1.1 Common and scientific names of bat species recorded follow the Bat Conservation Trust (BCT) Guidelines published in September 2023 (Collins, J. (ed.) (2023)). Capital letters have not been used for the common names in keeping with guidance used for the compilation for the Environmental Statement, whereby capital letters are only to be used for proper nouns. Scientific names are provided at first occurrence within the main body of the text.

3.2 Desk Study

3.2.1 Records were obtained from the following LERCs, which includes records from the local bat groups:

- Norfolk Biodiversity Information Service (NBIS)
- Suffolk Biodiversity Information Service (SBIS)
- Essex Field Club (EFC).

3.2.2 Following advice from Natural England in September 2023, a 6 km Study Area was selected based upon the core sustenance zone (CSZ) for barbastelle (Collins, J. (ed.) (2023)). Barbastelle have the largest CSZ of any of the bat species that have the potential to be impacted in this part of the UK. The CSZ refers to the areas surrounding a communal bat roost within which habitat availability and quality will have significant influence on the resilience and conservation status of the colony of the roost. Records were requested from the last 10 years in September 2023, based on standard practice (Department for Environment, Food and Rural Affairs (DEFRA), 2024).

3.2.3 A desk study was conducted in September 2023, to identify records of bats (roosting and activity) within the Study Area (up to 6 km from the Order Limits). These were then re-visited in January 2025 to update the distances from the Order Limits

3.2.4 A search for SACs was also undertaken within 30 km of the Order Limits, where bats are cited as a qualifying feature, using the MAGIC website (DEFRA, 2024).

3.2.5 A search of other statutory designated sites within 2 km was also conducted using MAGIC mapping, where bats are identified in the citation.

3.2.6 The record centres provided information on non-statutory designated sites (CWS and LWS), within 2 km of the Order Limits. Non-statutory designated sites were reviewed for any mention of bats in their designation citation.

3.2.7 The National Infrastructure Planning website and the planning portals for all local planning authorities were searched for any information relating to Annex II bat species geographically present within East Anglia (barbastelle) within 2 km of the Order Limits.

3.3 Survey Scope

3.3.1 Following consultation with Natural England in May 2024, it was agreed that tree climbing inspections and/or emergence surveys would not take place across the Project pre-consent, after the GLTA. A more effective and proportionate approach is to conduct a combination of GLTA, static detector surveys and advanced licence bat survey techniques (ALBST) surveys pre-consent with the view of using precautionary mitigation methods, including pre-construction surveys.

3.3.2 The scope for the subsequent pre-construction tree climbing inspections/emergence surveys will be informed by the results of all three survey methods and once detailed design has been developed, post consent. This will ensure surveys are targeted where impacts to bats are likely and the habitat is of high value for tree-dwelling, woodland roosting bats (i.e., barbastelle) with a particular focus on locations where roosts of high conservation value may be impacted (i.e., maternity roosts). Both survey types will be undertaken in line with best practice guidelines (Collins, J. (ed.) (2023)). The approach to pre-construction surveys has been agreed with Natural England and detailed within the Draft Bat Licence Application.

3.4 Survey Methodology

3.4.1 The survey methodology detailed below is based on professional judgment, based upon previous experience, and the best practice guidance (hereafter referred to as the BCT Guidelines) published in September 2023 (Collins, J. (ed.) (2023)).

Ground Level Tree Assessment

3.4.2 GLTAs were undertaken in line with the BCT Guidelines. Surveys were undertaken during daylight hours and involved the identification of potential bat roosting features within trees.

3.4.3 Trees that were assessed were visually inspected with the use of high-powered torches, endoscopes and binoculars (where appropriate) from the ground for evidence of roosting bats including droppings, urine staining, feeding remains and for potential roost features (PRFs), in line with best practice guidelines (Collins, J. (ed.) (2023)). The use of torches or endoscopes was only undertaken by appropriately licensed bat ecologists. Photographs were taken of each suitable feature, and any evidence of bats was recorded. Where landowner permission was granted, assessed trees were tagged with aluminium tree tags.

3.4.4 The following tree features were considered to have potential to support roosting bats (this is not an exhaustive list, just the typical features):

- Natural holes
- Woodpecker holes
- Cracks/splits in major limbs
- Loose bark
- Bat, bird or mammal boxes
- Partially detached large-stemmed ivy
- Other hollows/cavities.

3.4.5 Each tree was categorised depending on the presence of PRFs suitable for supporting bat roosts, the criteria for which is provided within Table A8.9.2.

Table A8.9.2 Criteria for categorising trees for their potential to support a bat roost (Collins, 2023)

Suitability	Description
None	Negligible habitat features likely to be used by roosting bats.
FAR	Further assessment required (FAR) to establish if PRFs are present in the tree.
PRF	A tree with at least one PRF present

3.4.6 Where a PRF could be inspected internally from ground level by endoscope, or where the suitability of a PRF above head height could be evaluated with confidence from ground level without an internal inspection, it was categorised according to the criteria provided in Table A8.9.3.

Table A8.9.3 Criteria for categorising trees for their potential to support a bat roost (Collins, 2023)

Suitability	Description
PRF-I	PRF only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitat.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

3.4.7 Information recorded for each tree included:

- Tree tag number (where applicable)
- Tree species
- Height
- Diameter at breast height (DBH)
- Status (alive or dead)
- Life stage
  - Young
  - Mature
  - Veteran
  - Ancient
- Suitability for bats (see Table A8.9.3)
- Evidence of bats
- Further survey recommendations.

3.4.8 All data was captured in the field digitally in Geographic Information System (GIS).

3.4.9 For efficiency, large groups of trees categorised as having no potential for bats ('None') were lumped together and not individually surveyed. A description of the group of trees was recorded. Any trees with PRFs within groups were individually assessed and a separate record made.

3.4.10 While surveys were successfully completed for approximately 87.5% of the Project Order Limits, further GLTAs will be undertaken over the 2025 season, for the purpose of the ES (Volume 6 of the DCO application) a reasonable worst-case scenario for the results of these surveys has been assumed. The reasonable worst-case position has been based on professional judgement following a review of bat species records obtained from the desk study, the results of the GLTA surveys undertaken across the rest of the Project and the mapping of trees/woodland habitat from aerial imagery.

3.5 Dates of Survey and Personnel

3.5.1 Surveys were conducted between November 2023 and March 2024, between July and December 2024 and in March 2025.

3.5.2 These surveys were undertaken by suitably experienced and competent ecologists with several years of experience undertaking GLTA surveys. The surveys were undertaken by a pair of ecologists with the lead ecologist in each pair holding as a minimum a Level 2 class licence to survey for bats. Those surveyors without licences did not undertake licensable activities (i.e., surveys using endoscope and powerful torch). Following the BCT best practice guidelines, during sub-optimal periods (July and August) all parts of the tree that were visible were assessed, those parts that were not visible and could not be assessed were given the FAR categorisation.

3.6 Notes and Limitations

3.6.1 Every effort was made to fully survey every tree without restrictions, but where access to trees was restricted or sight of trees was obscured some trees could not be fully assessed and some information, such as tree height or diameter at breast height, could not be recorded with confidence.

3.6.2 Where trees bordered non-accessible land parcels, it was not always possible to assess trees fully from all aspects. In this case, trees were categorised as FAR[1], unless a PRF-M[2] was identified, in which case the tree was categorised as PRF-M.

3.6.3 This report includes data up to the end of March 2025. Given the size and scale of the Project, some ecology and biodiversity surveys have continued in 2025 for completeness, to strengthen the robust baseline survey information gathered in 2023 and 2024. This report includes data obtained up to the end of March 2025 and covers approximately 87.5% of the Order Limits, surveys conducted beyond the end of March 2025 will be included in a further information report as reported in Chapter 8: Ecology and Biodiversity (document reference 6.8).

[1] FAR – Further Assessment Required of a potential roost feature that could not be fully assessed from the ground.

[2] PRF-M – Potential Roost Feature suitable for multiple bats and may therefore be used by a maternity colony

4. Results

4.1 Overview

4.1.1 The results section below presents the summary results of the desk study and GLTA surveys. All desk study results (including LERC records) are shown on Figure A8.9.2: Desk Study Bat Records in Annex A. Field survey results are shown on Figure A8.9.1: Ground Level Tree Assessment Results 2024 in Annex A.

4.2 Desk Study Results

Local Environmental Record Centres

4.2.1 Desk study records identified the presence of 300 confirmed, or likely, bat roosts for 10 species within 6 km of the Order Limits. The most recent records were from 2022.

4.2.2 As shown in Table A8.9.4, and shown on Figure A8.9.2: Desk Study Bat Records in Annex A, the species recorded at these roost sites included barbastelle, brown long-eared bat, common pipistrelle, soprano pipistrelle, Nathusius's pipistrelle *Pipistrellus nathusii*, pipistrelle sp *Pipistrellus sp.,* Daubenton's bat *Myotis daubentoniid*, myotis sp *Myotis sp.*, Leisler's bat *Nyctalus leisleri*, Natterer's bat *Myotis nattereri*, noctule, and serotine *Eptesicus serotinus*.

4.2.3 In Essex, roosts were recorded for all the species listed above, in Norfolk no Nathusius's pipistrelle or Leisler's species roosts were recorded, in Suffolk no Leisler's species roosts had been recorded.

4.2.4 Barbastelle bats were recorded in all three counties, within Section A, B, C and E. Of these, one in Section A was classed as maternity roost and three in Section E were classed as hibernation roosts.

4.2.5 *Myotis* sp. (including Natterer's) were also recorded in all three counties within all Project Sections, except Section F. There were three maternity roosts recorded, one within Section A and two in Section B. Twenty-one hibernation roosts were recorded, of these Section H had the most recorded with six.

Table A8.9.4 Summary of desk study roost records provided by LERCs within 6 km of the Order Limits

Project Section	Bat Species	Number of Roosts	Roost type recorded (if known)
A	*Pipistrelle* sp.	14	1 satellite and maternity
	Common pipistrelle	1	Unknown
	Soprano pipistrelle	9	1 day roost
	Brown long-eared	10	3 day roosts
	Daubenton's	2	2 hibernation
	Natterer's	7	2 hibernation and 1 maternity
	Noctule	1	Unknown
	Serotine	1	Unknown
	Barbastelle	2	1 day roost and 1 maternity
B	*Pipistrelle* sp.	25	1 maternity, 2 hibernation and 2 day roost
	Soprano pipistrelle	8	1 day roost and 1 night roost
	Nathusius's pipistrelle	1	Unknown
	Brown long-eared	22	2 hibernation, 1 maternity, 1 transitional and 1 night roost
	Daubenton's	5	5 hibernation
	Myotis sp.	3	1 maternity and 1 hibernation
	Natterer's	8	4 hibernation, 1 maternity and 1 night
	Noctule	1	1 night roost
	Barbastelle	7	2 day and 1 night roost
	Serotine	2	1 night roost

Project Section	Bat Species	Number of Roosts	Roost type recorded (if known)
C	*Chiroptera* sp.	1	Unknown
	Pipistrelle sp.	14	3 night and 3 day roosts
	Common pipistrelle	2	1 day roost
	Soprano pipistrelle	5	2 day and 1 night roost
	Brown long-eared	12	2 day roost and 1 hibernation
	Daubenton's	1	1 hibernation
	Natterer's	4	3 hibernation
	Noctule	2	1 day and 1 night roost
	Serotine	2	1 night roost
	Barbastelle	3	1 day and 1 night roost
D	*Chiroptera* sp.	1	Unknown
	Pipistrelle sp.	1	Maternity
	Common pipistrelle	1	Unknown
	Soprano pipistrelle	3	Unknown
	Brown long-eared	4	1 maternity
	Daubenton's	1	1 hibernation
	Natterer's	3	1 hibernation
	Serotine	2	Unknown
E	*Pipistrelle* sp.	1	Night roost
	Common pipistrelle	3	Unknown
	Brown long-eared	7	2 hibernation and 2 night roost
	Daubenton's	3	3 hibernation
	Myotis sp.	1	Unknown
	Natterer's	4	3 hibernation
	Barbastelle	3	3 hibernation

Project Section	Bat Species	Number of Roosts	Roost type recorded (if known)
F	*Chiroptera* sp.	2	Uknown
	Pipistrelle sp.	4	Unknown
	Common pipistrelle	3	Unknown
	Soprano pipistrelle	1	Unknown
	Brown long-eared	2	Unknown
	Daubenton's	1	Unknown
G	Common pipistrelle	6	1 maternity and 1 hibernation
	Soprano pipistrelle	9	2 hibernation
	Nathusius's pipistrelle	1	Unknown
	Brown long-eared	9	Unknown
	Daubenton's	2	Unknown
	Natterer's	4	Unknown
	Noctule	1	Unknown
	Leisler's	1	Unknown
H	*Chiroptera* sp.	1	Unknown
	Pipistrelle sp.	3	1 hibernation
	Common pipistrelle	6	3 hibernation
	Brown long-eared	4	2 hibernation
	Daubenton's	13	5 hibernation
	Myotis sp.	4	1 hibernation
	Natterer's	10	5 hibernation

Statutory Designated Sites

4.2.6 No SACs with bats listed as a qualifying feature are present within 30 km of the Order Limits. Therefore, this is Study Area is not shown on Figure A8.9.2: Desk Study Bat Records in Annex A.

4.2.7 A single SSSI lists bats within its citation, this is Hangman's Wood and Deneholes SSSI (Section H) approximately 0.49 km south of the Order Limits. This SSSI is known for its medieval chalk mines that provide important underground hibernation sites for brown long-eared bat, Natterer's bat and Daubenton's bat, with the woodland providing foraging and commuting habitat.

Non-Statutory Designated sites

4.2.8 As shown in Table A8.9.5 and shown on Figure A8.9.2: Desk Study Bat Records in Annex A, there were six non-statutory designated sites of nature conservation importance in the 2 km Study Area that mentioned the presence of bat in their description.

Table A8.9.5 Non-statutory sites within 2 km of the Order Limits that mention bat roosts or bat presence within their description

Project Section	Site Name	Distance/ Direction to Order Limits	Site Description	Bat comment/records
Site with bat roosts in the description				
B	Bonny Wood CWS	0.5 km south	Adjacent to ancient woodland and SSSI, the site comprises mixed deciduous woodland priority habitat.	Wood provides forage and roosting opportunities for bats.
Sites with bat presence in their description				
B	Bramford Meadows CWS	0.59 km north-east	The site consists mainly of the priority habitat floodplain grazing marsh, situated in the valley of the River Gipping.	Key habitat for priority mammals including bats especially Daubenton's
C	Sproughton Park CWS	Within Order Limits	The site supports grassland, wet woodland (predominantly alder *Alnus* sp.), scrub and hedgerow habitats. It is adjacent to Belstead Brook.	Mosaic grassland and hedgerows are ideal feeding habitats for bats.
C	Raydon Great Wood CWS	0.13 km west	Ancient woodland, holding characteristic features of medieval woods.	Priority species are recorded here including bats
C	Chantry Park, Beech Water and Meadow CWS	1.23 km east	A high-quality mosaic of habitats making the site valuable for wildlife, hosting assemblages of priority species.	High quality habitat for bats including brown long-eared, common pipistrelle and noctule.

Project Section	Site Name	Distance/ Direction to Order Limits	Site Description	Bat comment/records
G	Mill Meadows LWS	1.91 km east	Within a stream valley, comprising well-drained, acid soils on the higher ground and waterlogged neutral soils closer to the stream.	Provides vital habitat for several bat species to forage, commute and roost.

Nationally Significant Infrastructure Projects and Local Planning Authority Projects

4.2.9 The results from the search of ecological survey reports produced in support of Nationally Significant Infrastructure Project (NSIPs) and Local Planning Authority projects found one project within 2 km of the Order Limits that note the presence of Annex II bat species roost geographically present within East Anglia (barbastelle). This was the Bramford to Twinstead overhead lines project 2 km north-west of the Order Limits, which undertook targeted barbastelle field surveys and recorded a likely maternity roost within Hintlesham Woods SSSI. This SSSI is 2.4 km west of the Order Limits at its closest point.

4.3 Field Survey Results

Ground Level Tree Assessments

4.3.1 Approximately 4,562 trees, within the Survey Area were individually assessed for the presence of potential roost features.

4.3.2 Of the 4,562 trees assessed within the Order Limits. A total of 2,601 trees were categorised as either FAR (1,751) or PRF-M (274) and 40 with hibernation potential, these will require further assessment to confirm the status of PRFs and to have reasonable confidence in the presence or absence of bat roosts. Further surveys, such as aerial inspections and emergence surveys, will be undertaken on these trees post-DCO consent. 576 trees were categorised as PRF-I, which do not require further surveys, as outlined in Collins, J. (ed.) (2023).

4.3.3 Section C had the highest number of trees that were surveyed within the Order Limits, the highest number of PRF-M categorised trees (62) and the most trees with hibernation potential (15). Section F had the highest recorded number of FAR trees of the Project Sections, with 294 trees categorised.

4.3.4 No confirmed roosts (CR) have been recorded within the Order Limits. A single confirmed roost was identified during ground-level inspections of PRFs in Section H, however this has been avoided through sensitive routeing and therefore is no longer in the Order Limits.

4.3.5 Tree assessment data recorded in each Project Section (A to H) within the Order Limits are summarised in Table A8.9.6 below.

Table A8.9.6 Results of GLTA surveys

Project Section	Suitability of surveyed trees within the Order Limits				
	PRF-M	PRF-I	FAR	Hib*	CR*
A	49	117	248	2	0
B	39	88	256	4	0
C	62	129	292	15	0
D	50	75	279	5	0
E	3	32	188	4	0
F	46	67	294	3	0
G	11	1	128	5	0
H	14	28	66	2	0
Total	**274**	**576**	**1,751**	**40**	**0**

** Hib supporting PRFs suitable for use by one or more hibernating bats; CR a single confirmed roost. Numbers of hibernation trees and confirmed roosts are estimates based on the data to date in absence of further survey information. Any confirmed roosts identified during the bat radiotracking surveys are detailed within Appendix 8.11: Bat Radiotracking Report (document reference 6.8.A11).*

4.3.6 It is anticipated that at detailed design it would be possible to avoid direct effects on many of the trees that have been assessed and adverse effects on bats should they be roosting in the trees. However, if all the trees assessed within the Order Limits were impacted, the following shows the further survey requirements informed by the results of the GLTA:

- 1,489 would require aerial inspections by climbing and/or ladder
- 319 would require ground inspection by torch and endoscope
- 217 would require emergence surveys (where trees are unsafe to climb or where features are so numerous that emergence surveys are the safest or most effective method for assessing PRFs)
- 576 would not require further survey.

4.3.7 41 trees were identified as having suitability to support hibernation roosts for bats. PRFs with hibernation suitability are defined as those that offer bats protection against predation and extreme ambient weather condition, allowing them to remain in torpor for extended periods. Further surveys on these trees will be required should they be impacted at detailed design stage.

4.3.8 Further GLTA surveys are to be undertaken in 2025 and it is reasonable to assume a similar number of trees with potential bat roosting features will be identified across the remaining area given the makeup of the habitat present. On this basis a precautionary reasonable worst-case scenario has been applied for the purpose of the ES (Volume 6 of the DCO application), with the same percentage of PRF trees per hectare applied to the remaining approximately 12.5%, as was found within the surveys undertaken across the rest of the Project. Therefore, a total of 314 additional PRF-M/FAR trees, 86 PRF-I and 6 trees with hibernation potential have been

included within the baseline on a precautionary basis. There would be no change to the overall value of low-medium assigned to roost resource.

4.3.9 The results of the GLTA's undertaken post-March 2025, will be included in a further environmental information report, as reported in Chapter 8: Ecology and Biodiversity (document reference 6.8).

PRF Inspections

4.3.10 Across 2023, 2024 and March 2025 where trees were found to be suitable for further ground level inspection, during the GLTA surveys, bat licensed surveyors used torches and endoscopes to inspect the PRF where possible. Further ground level inspections were undertaken at 62 of the 233 trees identified as suitable.

4.3.11 For 52 of these trees, the PRF categorisation remained unchanged following the more detailed survey. Of the remaining 10 trees, one was downgraded to PRF-I from PRF-M, eight were assessed as PRF-I from FAR and one was assessed as PRF-M from FAR.

5. Further Roosting Surveys to be Undertaken for Barbastelle

5.1.1 It was agreed with Natural England during consultation that a proportional approach to bat roost surveys was to be undertaken on the Project, with only GLTA surveys undertaken pre-consent and further roosting surveys to be undertaken in line with BCT guidelines post-consent, once detailed design had been undertaken. However, it was acknowledged that given barbastelle *Barbastella barbastellus*, which are an Annex II species, are known to be present in East Anglia, a specific survey approach to determine the likely location of any roosting barbastelle bats was needed pre-consent.

5.1.2 A trigger for the need for further inspection of trees pre-consent was determined using the vast amount of data collected from the bat activity surveys, using automated static detectors (for further details refer to Appendix 8.10: Bat Activity Report (document reference 6.8.A10). All barbastelle passes recorded on the static detectors within 60 minutes post sunset were taken forward for review. Based upon a recent study using static surveys to identify maternity colonies in woodland (O'Malley *et al.,* 2023), it was determined that if a static had greater than four barbastelle passes between sunset and 60 minutes post sunset during the maternity period (between May and August, inclusive) there is a higher risk that a roost of high conservation value may be present. The same principle was therefore applied, using four barbastelle passes as a trigger point for further survey effort. This approach to further roost survey was agreed in advance with Natural England.

5.1.3 The review of the bat activity information revealed 13 discrete locations as potentially supporting one or more high value barbastelle roosts (for further details refer to Appendix 8.10: Bat Activity Report (document reference 6.8.A10). Radio tracking surveys covered three of these 13 locations fulfilling the requirement for further roosting surveys. The GLTA results for each of the remaining 10 sites were then analysed to identify the number of FAR and PRF-M trees that were present within each location. Where FAR or PRF-M trees were identified within the Order Limits at these locations, further roost surveys are to be undertaken of these trees over the 2025 bat season. The locations of these 10 sites are shown on Figure 8.9.3: Trees with Potential Roost Features Subject to Further Survey 2025.

5.1.4 Further roosting surveys include either one or a combination of aerial inspections, emergence surveys and/or bat back tracking surveys depending on the suitability of the tree(s) to be climbed and the number of FAR/PRF-M trees within each location. These surveys are being undertaken between May and September 2025 following the survey methods below:

- PRF Inspection Surveys: These surveys consist of either a ground-level inspection or an aerial inspection depending on the height and accessibility of the potential roost feature. The survey is a close inspection of each PRF to further assess the suitability to support roosting bats, including evidence or presence of roosting bats. An endoscope is used to assess the internal cavities for suitability of features, and to look for the presence or evidence of roosting bats. This survey

will either downgrade, confirm or increase the PRF classification that was attributed to the feature from the ground

- Aerial Inspections: For those trees with PRF's which are classified as PRF-M following the close inspection survey, they will be subject to a total of three aerial inspections across the May to September core bat season. This may involve a ladder, use of MEWP or a pair of qualified tree climbers to fully assess the feature for presence/ absence of roosting bats. An endoscope will be used to look for the presence or evidence of roosting bats. A Level 2 bat licensed ecologist will be included within the survey pair to allow licensed use of an endoscope
- Dusk Emergence Surveys: Where a tree has a PRF (either FAR or PRF-M) that is unsafe to inspect through an aerial inspection (due to health and safety reasons, for example being located next to a road or an overhead line, or where the tree is diseased) dusk emergence surveys will be undertaken as an alternative technique. A series of three emergence surveys per tree will be undertaken between May- September following BCT Guidelines. The survey will consist of two surveyors watching for bats emerging from PRFs. This survey is undertaken from the ground only and is assisted by night-vision aids (thermal or infra-red devices). The survey will start 15 minutes before sunset and continue for 1.5 to 2 hours after sunset
- Bat Backtracking Surveys: Three of the 10 discrete locations identified above were found to contain more than 20 trees with PRFs, with particularly challenging access conditions and a large proportion of PRFs on trees that were unsafe to climb. Within these three areas bat backtracking surveys are to be undertaken. This survey requires ecologists to make visual observations of bats in flight between sunset and sunrise, to track the bats back to their roosts. Bat detectors are used to record echolocation calls and identify the species being tracked.

5.1.5 The results of surveys conducted beyond the end of March 2025 will be included in a further information report as reported in Chapter 8: Ecology and Biodiversity (document reference 6.8).

6. Conclusion

6.1.1 A thorough desk-based review has been undertaken to identify habitats offering suitable bat roosting potential. The desk study identified six non-statutory sites of nature conservation importance and one SSSI in the 2 km Study Area that mentioned the presence of bat in their description. The LERC search recorded presence of 300 confirmed, or likely, bat roosts for 10 species within 6 km of the Order Limits (shown on Figure A8.9.2: Desk Study Bat Records in Annex A).

6.1.2 Between November 2023 and end of March 2025, approximately 4,562 trees, within the Survey Area were individually assessed for the presence of potential roost features. A further 3,000 (approx.) trees were also subject to GLTA surveys but have since been excluded from this report as they are no longer located within the Order Limits following design changes.

6.1.3 The result of the 4,562 trees assessed within the Order Limits are:

- 274 PRF-M
- 1,751 FAR
- 576 PRF-I.

6.1.4 There were 40 trees that were also identified as having hibernation potential for bats.

6.1.5 In total, 62 trees were further surveyed from ground level in 2023 and 2024 by torch and endoscope to confirm their status as either PRF-I (45) or PRF-M (17).

6.1.6 A total of 314 additional PRF-M/FAR trees, 86 PRF-I and 6 trees with hibernation potential have also been included within the baseline information on a precautionary reasonable worst-case basis. This accounts for the likely results of the further bat surveys being undertaken in 2025 (March onwards), based on professional judgement.

6.1.7 No confirmed bat roosts have currently been found within the Order Limits.

6.1.8 Further aerial inspection, emergence surveys and bat backtracking surveys are being undertaken pre-consent at 10 targeted locations, based on a barbastelle activity trigger point as agreed with Natural England. Surveys conducted beyond the end of March 2025 will be included in a further information report as reported in Chapter 8: Ecology and Biodiversity (document reference 6.8).

6.1.9 Further surveys, such as aerial inspections or emergence surveys, will be required prior to the commencement of construction, for PRF-M and FAR trees that would be impacted, as agreed with Natural England at consultation. Trees with PRF-I features will be subject to a pre-felling check by a bat licensed ecologist.

6.1.10 Any future confirmed roosts identified during future PRF inspection surveys that need to be ‘removed’ or ‘affected managed’ by the Project would need to be subject to sufficient surveys to characterise the roost in line with the requirements detailed within the draft bat licence.

Abbreviations

Abbreviation	Full Reference
ALBST	Advanced licence bat survey techniques
BCT	Bat Conservation Trust
CR	Confirmed Roost
CSE	Cable Sealing End
CSZ	Core Sustenance Zone
CWS	County Wildlife Site
DBH	Diameter at Breast Height
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
EFC	Essex Field Club
EIA	Environmental Impact Assessment
ES	Environmental Statement
FAR	Further Assessment Required
FCS	Favourable Conservation Status
GIS	Geographical Information System
GLTA	Ground Level Tree Assessment
LERC	Local Environmental Record Centres
LWS	Local Wildlife Sites
MAGIC	Multi-Agency Geographic Information for the Countryside
NBIS	Norfolk Biodiversity Information Service
NERC	Natural Environment and Rural Communities Act 2006
NSIP	Nationally Significant Infrastructure Project
PRF	Potential Roost Feature (Bat)
SAC	Special Areas of Conservation
SBIS	Suffolk Biodiversity Information Service
SSSI	Site of Special Scientific Interest
WCA	Wildlife and Countryside Act

Glossary

Term	Description
Ancient woodland	Land that has been continually wooded since at least 1600 in England. Regarded as 'irreplaceable habitat' in national planning policy and guidance. Ancient woodland greater than 2 ha is recorded on the Natural England Ancient Woodland Inventory.
Ancient Woodland Inventory	A dataset managed by Natural England to identify and record information about ancient woodland sites in England.
Biodiversity	The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.
Cable	An insulated conductor designed for underground installation.
Cable Sealing End	Structures used to transfer transmission circuits between underground cables and overhead lines.
Cable Sealing End Compound	Electrical infrastructure used as the transition point between overhead lines and underground cables. A compound on the ground acts as the principal transition point.
Consultation Strategy	A strategy setting out National Grid's approach to and programme of public consultation.
Core Sustenance Zone (CSZ)	The CSZ refers to the areas surrounding a communal bat roost within which habitat availability and quality will have significant influence on the resilience and conservation status of the colony of the roost.
County Wildlife Site	Non-designated areas of land important for their wildlife and nature conservation value. Designation in Suffolk.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
Environmental Impact Assessment (EIA)	An assessment of the likely effects of a development project on the environment, which is reported in an Environmental Statement that is publicised and consulted on and taken into account in the decision on whether a project should proceed.
Environmental Statement (ES)	The main output from the EIA process, an ES is the report required to accompany an application for development consent (under the Infrastructure Planning (EIA) Regulations 2017) to inform public and stakeholder consultation and the decision on whether a project should be allowed to proceed. The EIA Regulations set out specific requirements for the contents of an ES for Nationally Significant Infrastructure Projects.

Term	Description
European Protected Species	Animals and plants listed under the Habitats Directive and protected under the Conservation of Habitats and Species Regulations 2017, as amended.
European Protected Species Licence	The licence issued to permit an activity affecting European Protected Species that would otherwise be an offence under the Habitats Regulations.
Fauna	All the animals in a given area.
Flora	The plants within a particular habitat or region.
Geographical Information System	GIS is a framework for gathering, managing and analysing data. It analyses spatial location data and organises layers of information into visualisations on maps.
Habitat	The natural home or environment of an animal, plant, or other organism.
Landscape	An area, as perceived by people, the character of which is the result of the action and integration of natural and/or human factors.
Local Nature Reserve	Sites dedicated by the Local Planning Authority under Section 21 of the National Parks and Access to the Countryside Act 1949 for nature conservation which have wildlife or geological features that are of special interest locally.
Local Planning Authority	The public authority whose duty it is to carry out specific planning functions for a particular area.
Local Wildlife Site	Non-designated areas of land important for their wildlife and nature conservation value.
Mitigation	The action of reducing the severity and magnitude of change (impact) to the environment. Measures to avoid, reduce, remedy or compensate for significant adverse effects.
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.
Nationally Significant Infrastructure Project	Typically, a large-scale development of national importance that requires development consent from The Secretary of State, under the Planning Act 2008.
Non-statutory designated site	A site designated at a local level for its biodiversity and/or geological value. These are not underpinned by legislation.
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.

Term	Description
Priority species	Species identified as of principal importance in England, in accordance with requirements of the Natural Environment and Rural Communities Act 2006. These are based on the UK Biodiversity Action Plan Priority Species.
Special Area of Conservation	Protected sites designated under the Habitats Directive, representing internationally important, high-quality conservation sites.
Sites of Special Scientific Interest	SSSIs are protected by law under the Wildlife and Countryside Act 1981. They are important because they support rare or endangered fauna and flora, and they represent the United Kingdom's best wildlife and geological sites.
Species	A group of living organisms consisting of similar individuals capable of exchanging genes or interbreeding.
Statutory Consultee	A national public organisation or body that must be consulted with on planning applications, depending on the nature of the development and its location.
Statutory designated site	A site which receives protection by means of legislation in recognition of its biodiversity value.
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses.
UK Power Networks	UK Power Networks (Operations) Limited (registered company number 03870728) and/or its affiliate Eastern Power Networks plc (registered company number 02366906) as applicable.
Underground cabling	An insulated conductor carrying electric current designed for underground installation. Underground cables link together two Cable Sealing End compounds.
Zone of Influence	The defined geographic area within which the project's environmental receptors are located.

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Annex A. Figures

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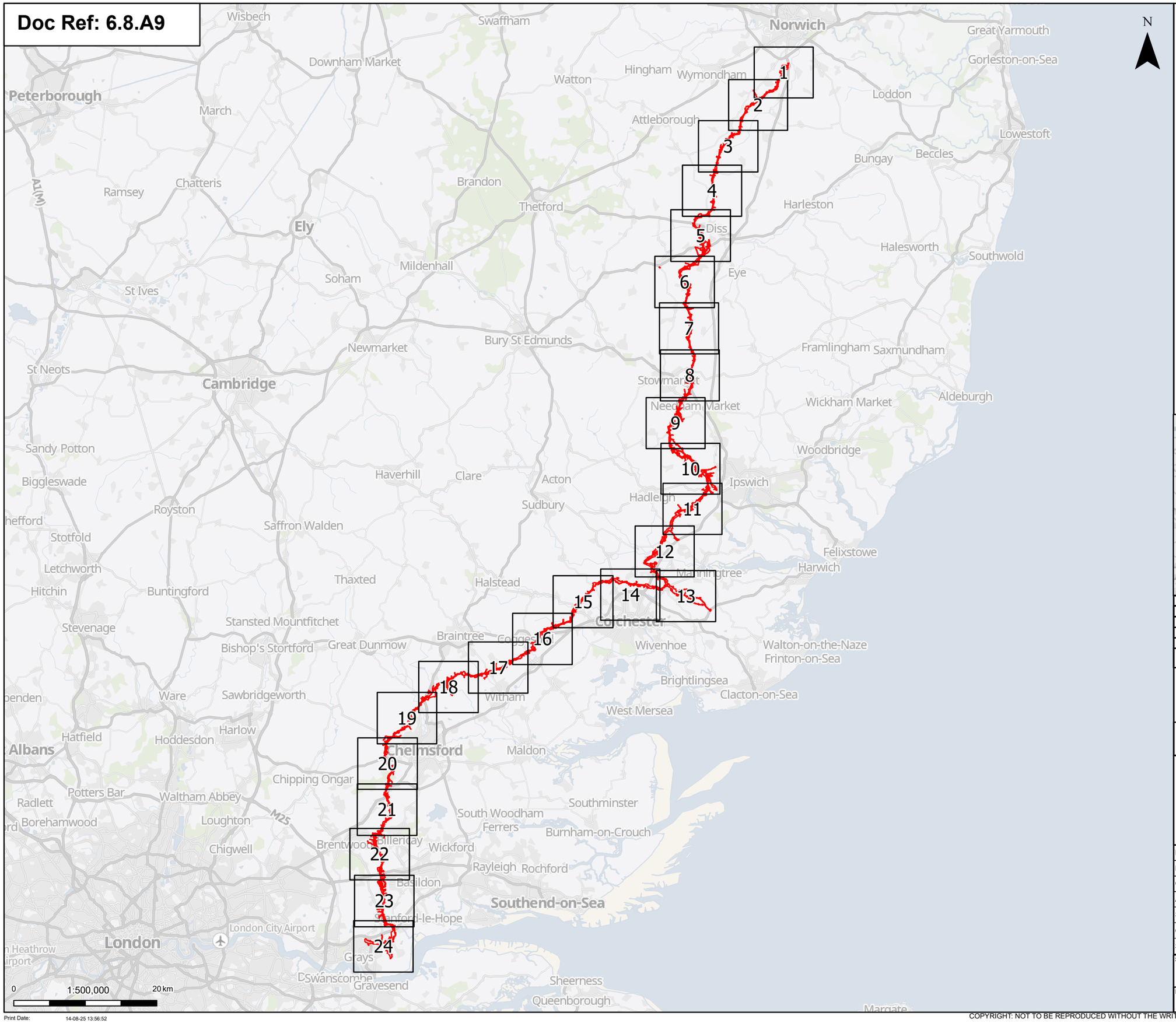

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PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Overview

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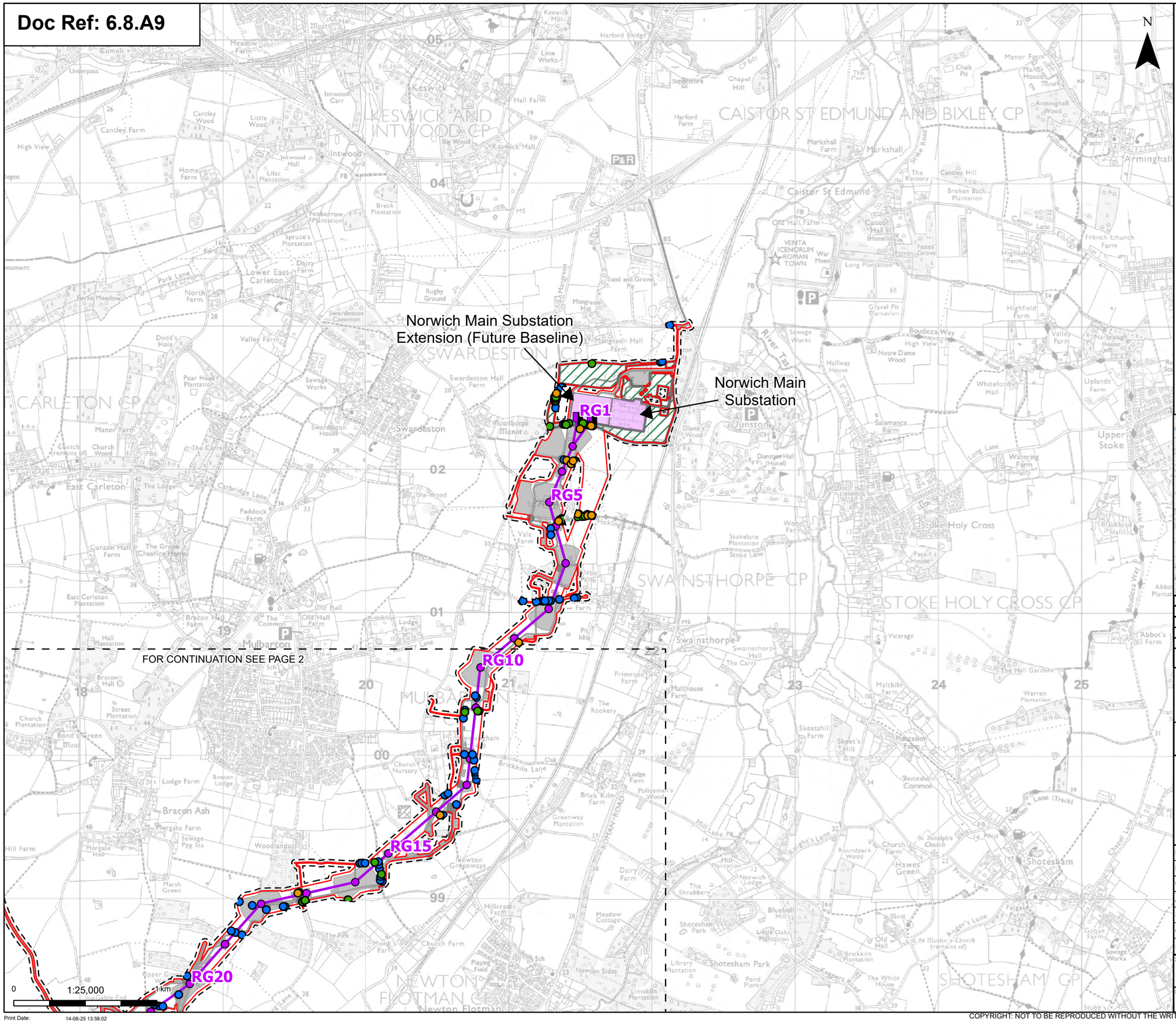

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Proposed project design details

- Order limits
- Sheet index cutline
- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Norwich Main Substation
- Norwich Main Substation Extension (future baseline)
- Environmental area
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Page 1 of 24

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RG20

RG25

RG30

RG35

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Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

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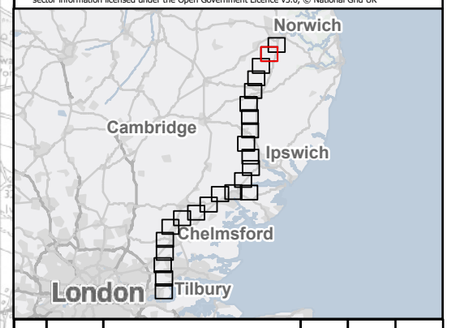

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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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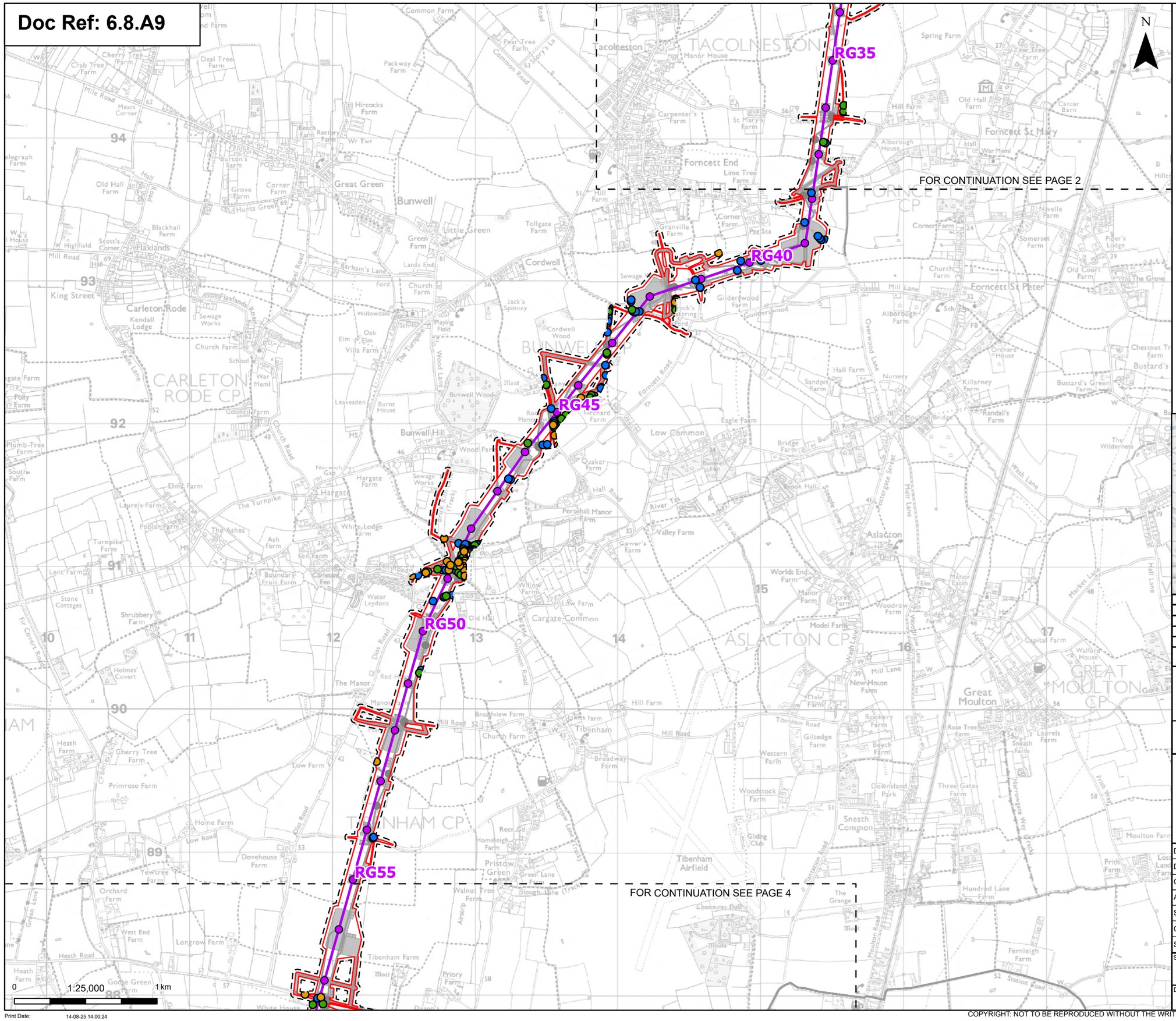

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Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

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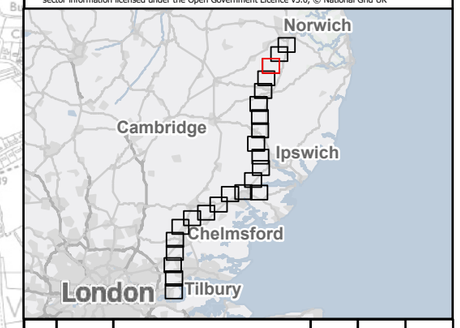

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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Page 3 of 24

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RG70

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Order limits

Sheet index cutline

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Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

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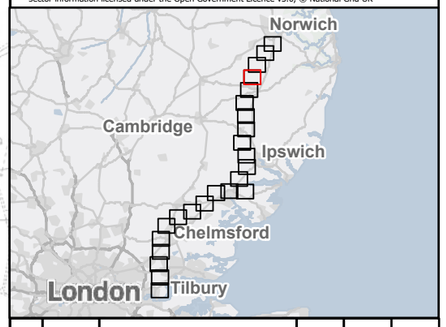

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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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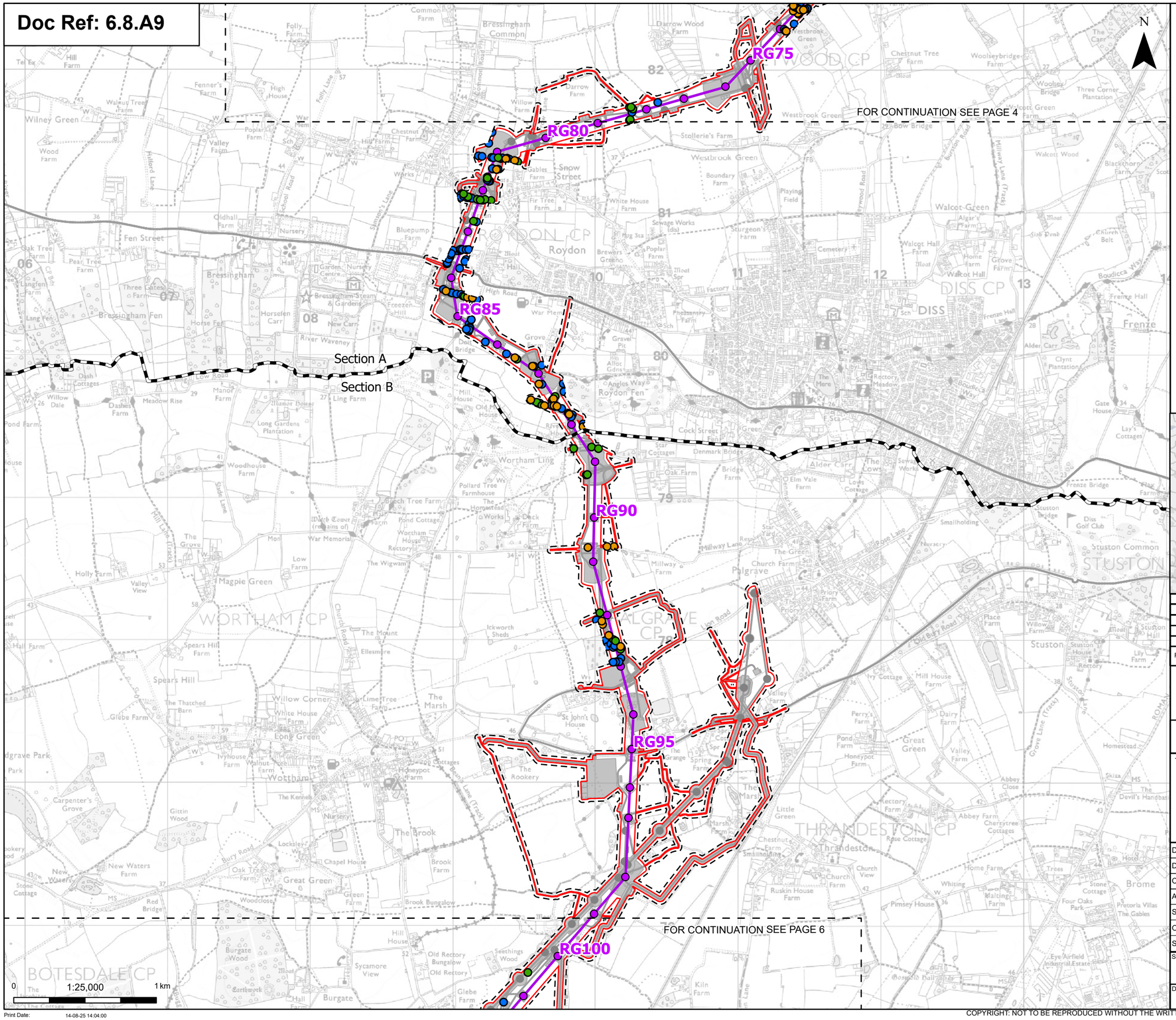

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Proposed overhead line alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

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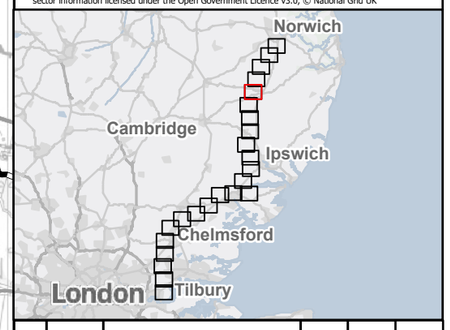

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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221
Revision: A

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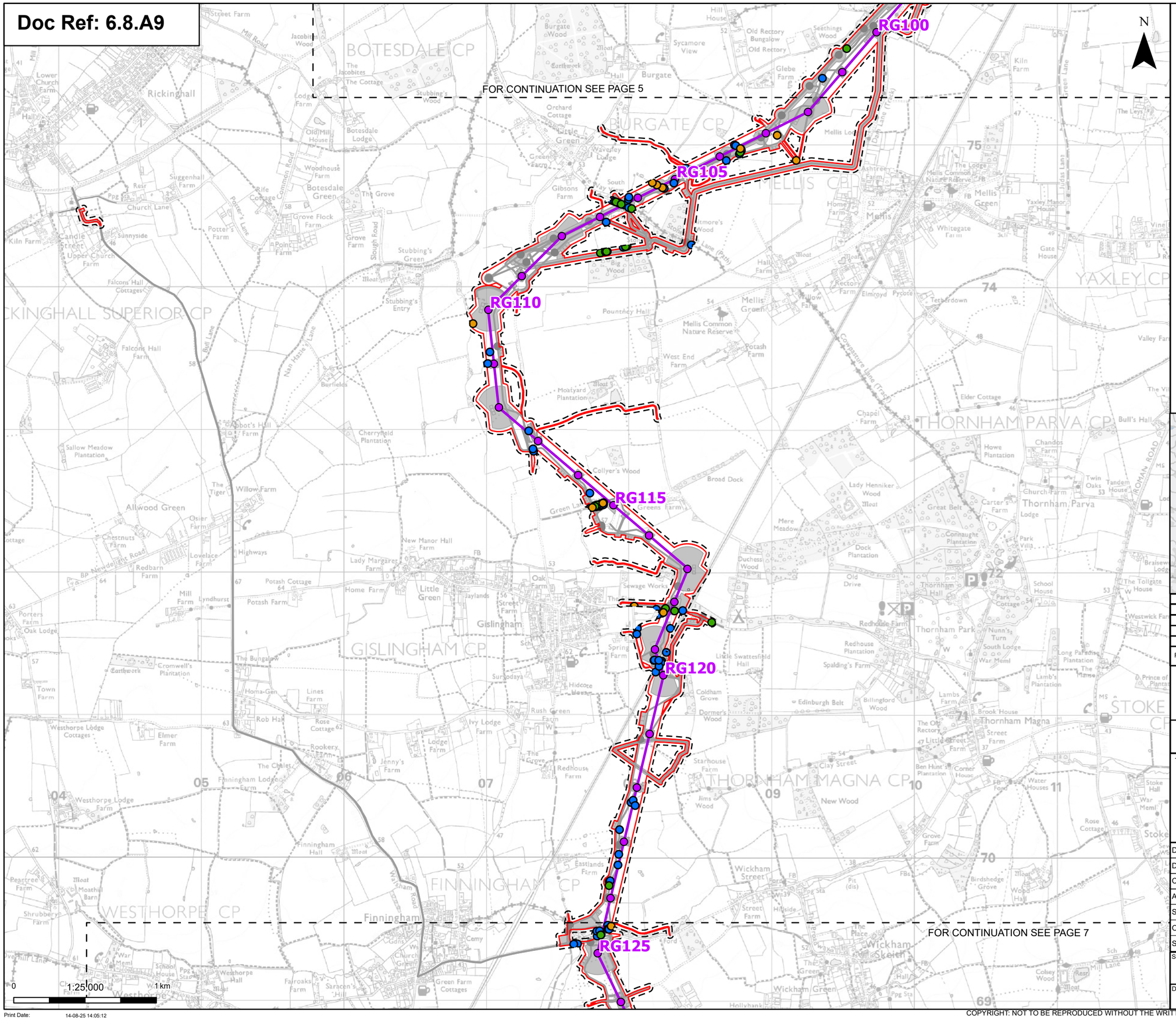


Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

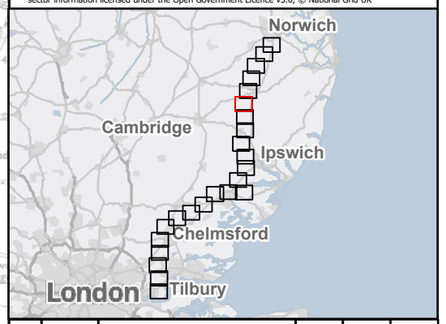
Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

PRF-I - One or more PRF-I present (but no PRF-M)

PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Page 6 of 24

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
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Suitability Code:	A2	Project Number:	10059280

Suitability Description:

Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

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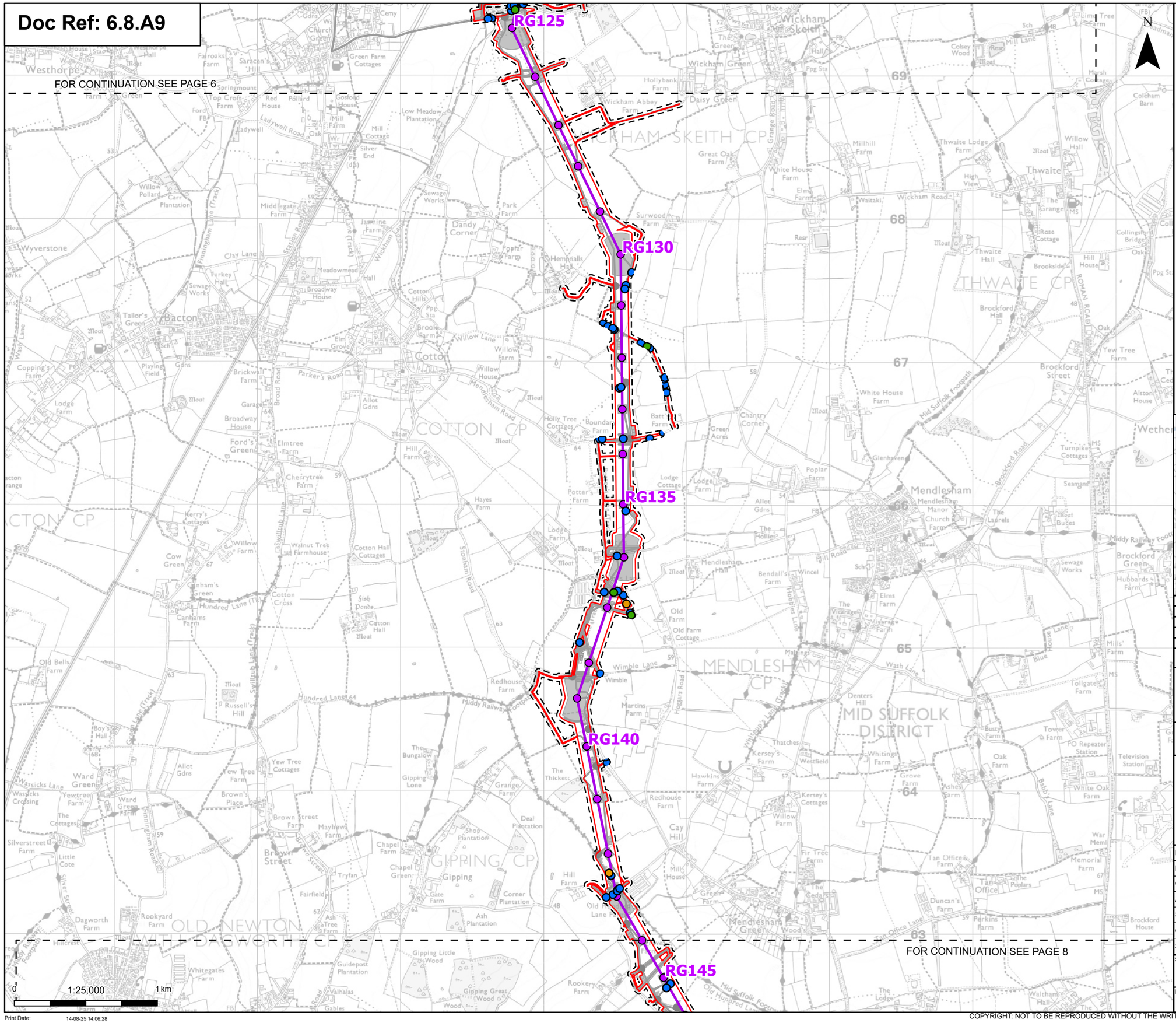
FOR CONTINUATION SEE PAGE 6



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Print Date: 14-08-25 14:06:28

Order limits

Sheet index cutline

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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

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PROJECT: Norwich to Tilbury

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Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
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Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

Doc Ref: 6.8.A9

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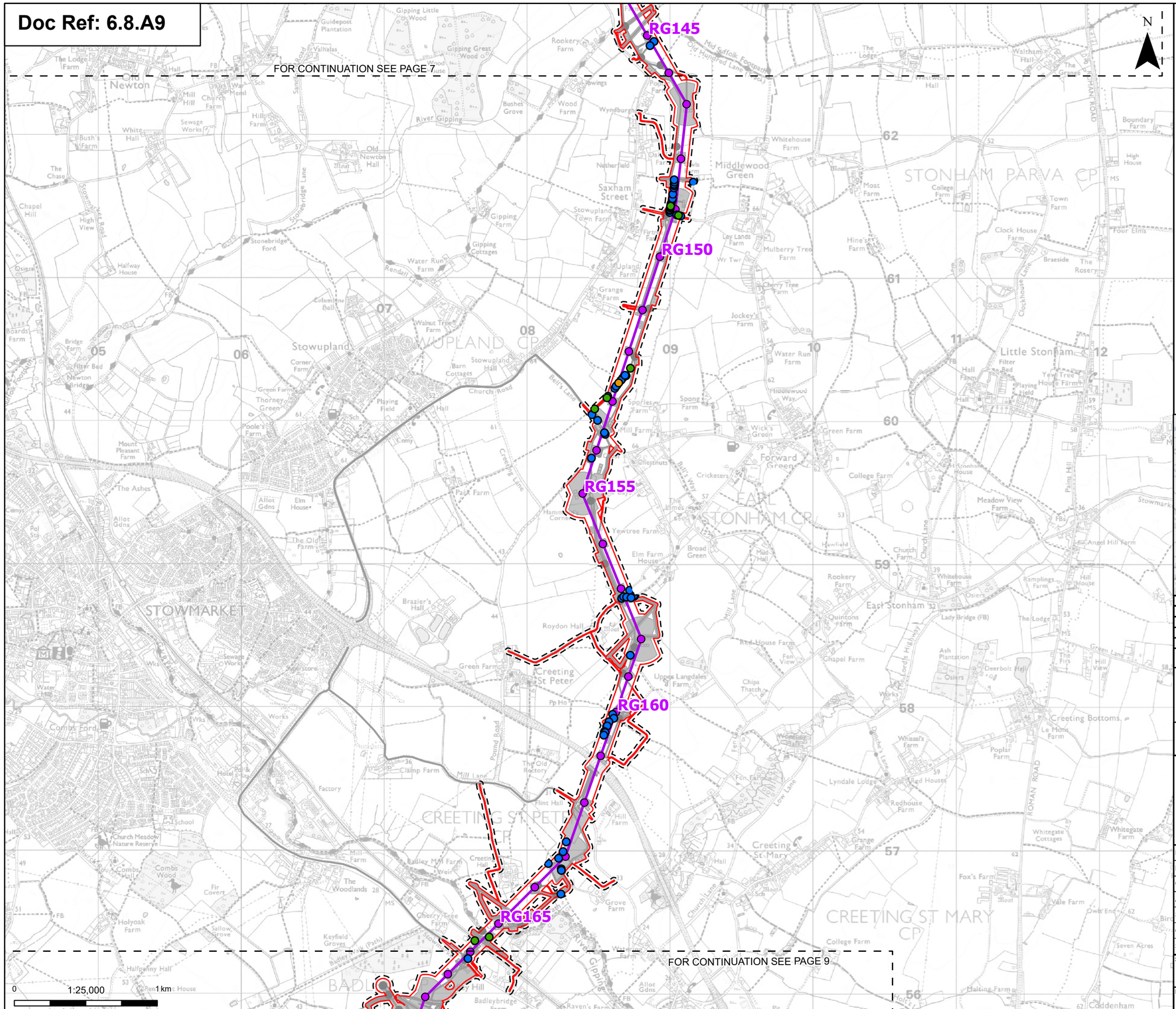

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Order limits

Sheet index cutline

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

Rev	Date	Description	Drawn	Check	Approv
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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Page 8 of 24

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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Approved	K. Burrows	Date	21 Aug 25
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Suitability Code:	A2	Project Number:	10059280

Suitability Description:

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RG170

RG175

RG180

RG185

RG190

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Order limits
Sheet index cutline
Project section line

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

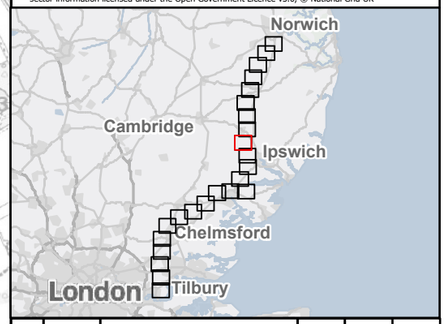
Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

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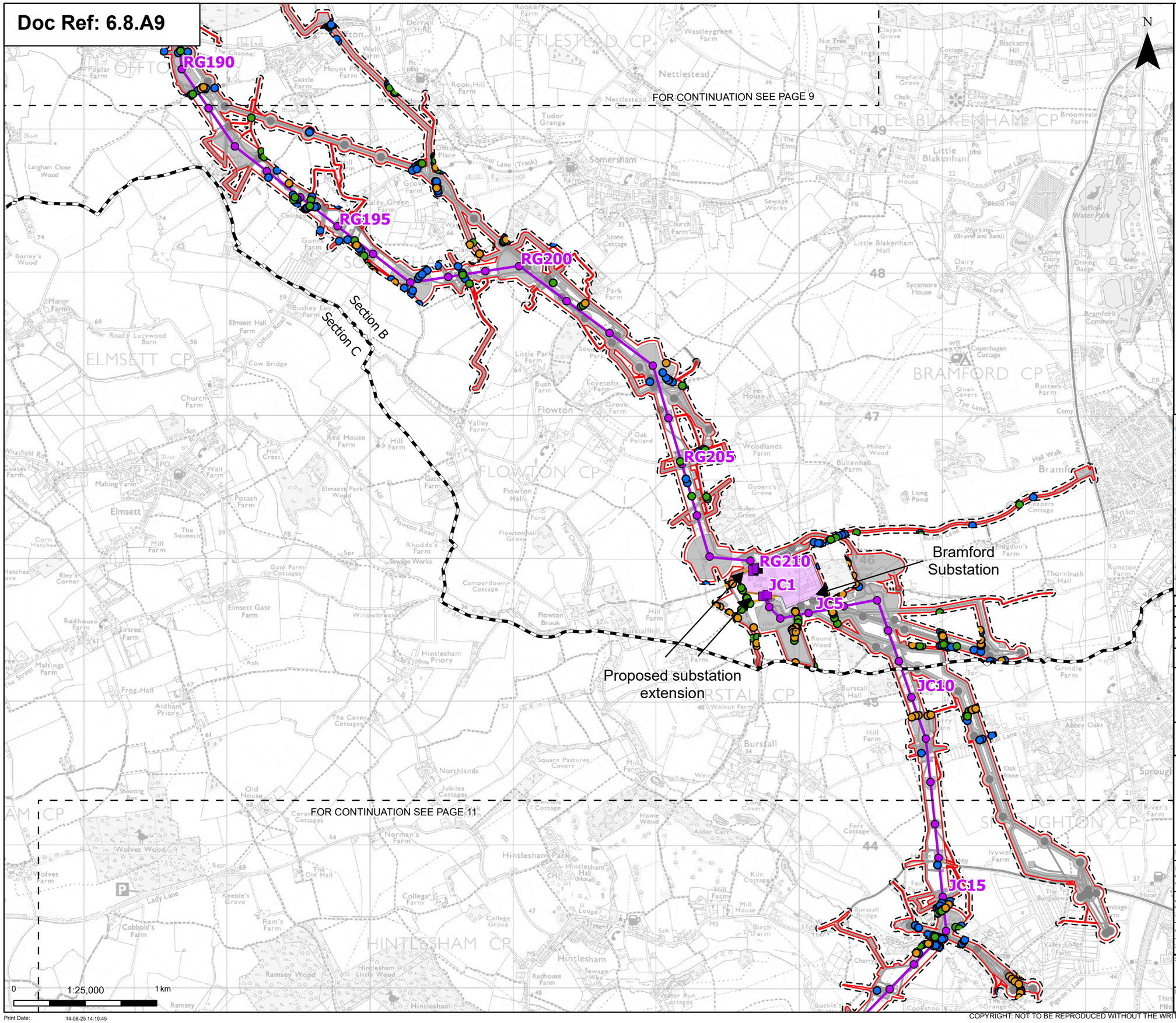

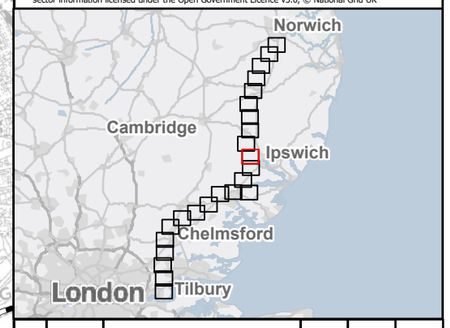

- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed full line tension gantry
- Proposed low duty gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Bramford Substation
- Bramford Substation Extension
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

Rev	Date	Description	Drawn	Check	Approv
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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Page 10 of 24

Designed	V. Handby	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

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Revision: A

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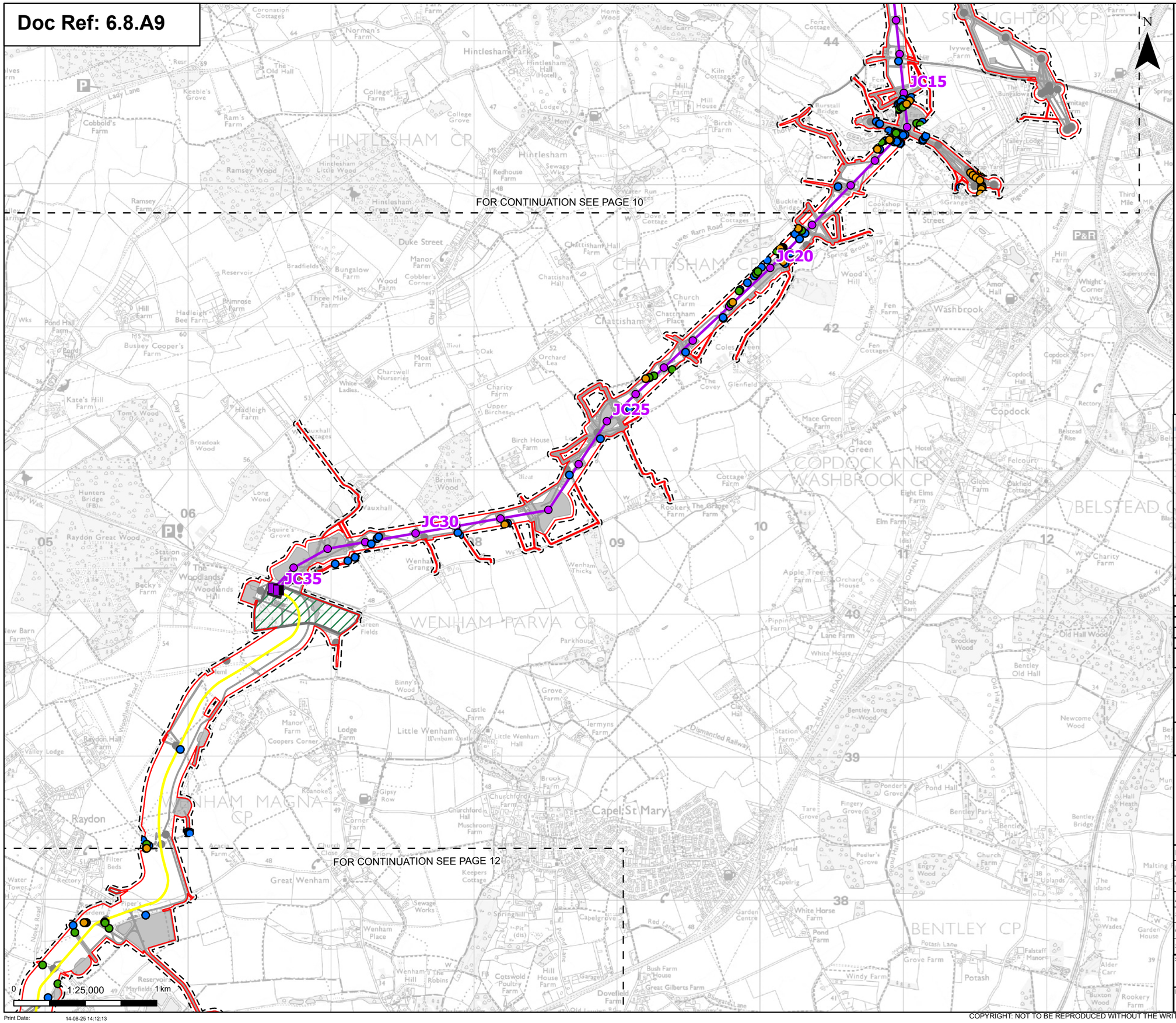

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Order limits

Sheet index cutline

Proposed project design details

Proposed full line tension gantry

Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Proposed cable sealing end compound (CSEC)

Environmental area

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

PRF-I - One or more PRF-I present (but no PRF-M)

PRF-M - One or more PRF-M present

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025 Page 11 of 24

Designed	V. Handby	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:

Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

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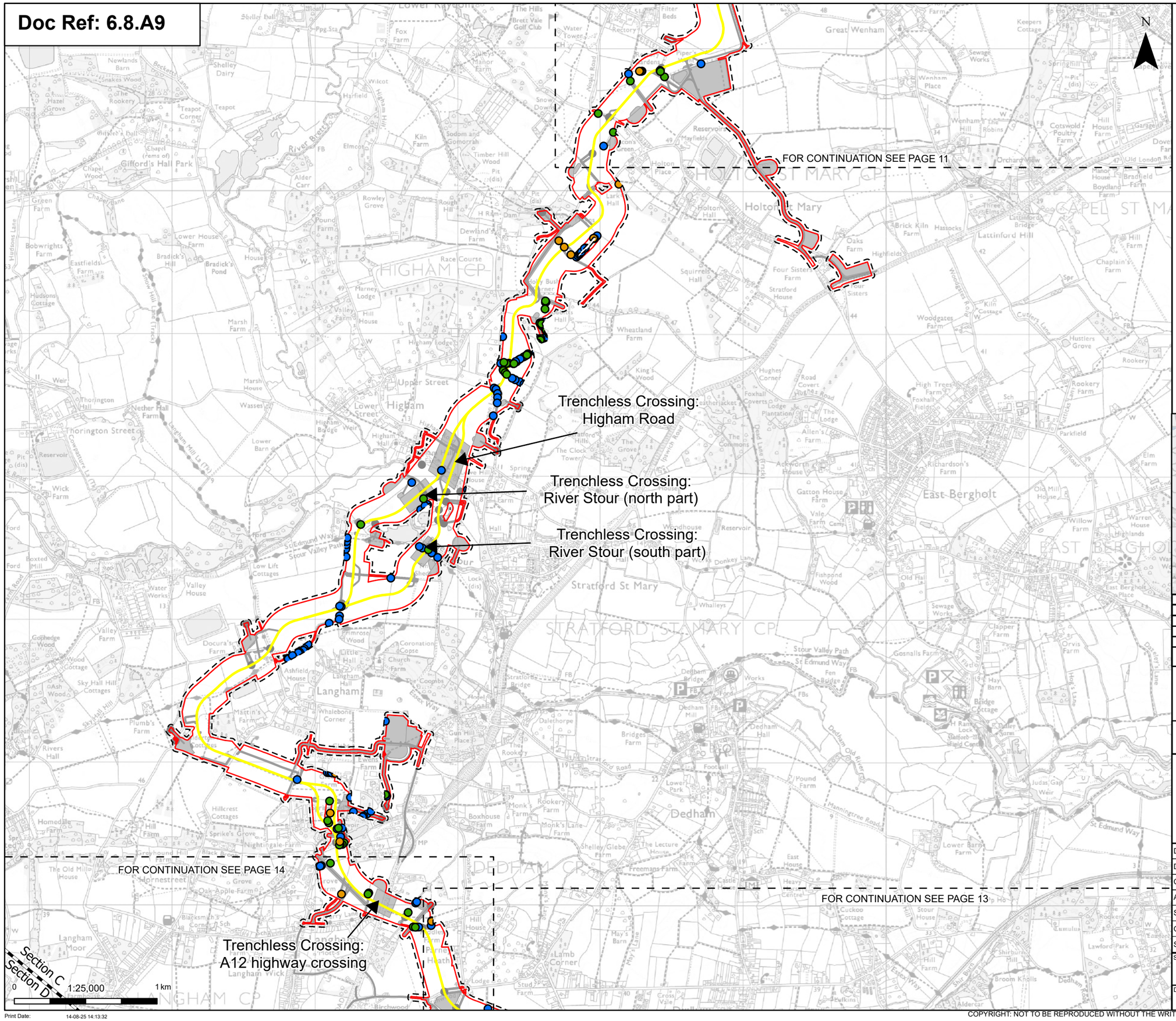

Order limits
Sheet index cutline
Project section line

Proposed project design details

Proposed underground cable alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
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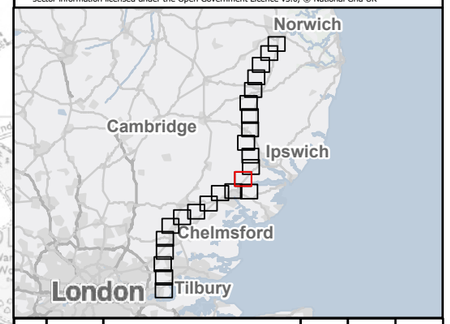
Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:
Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221
Revision: A

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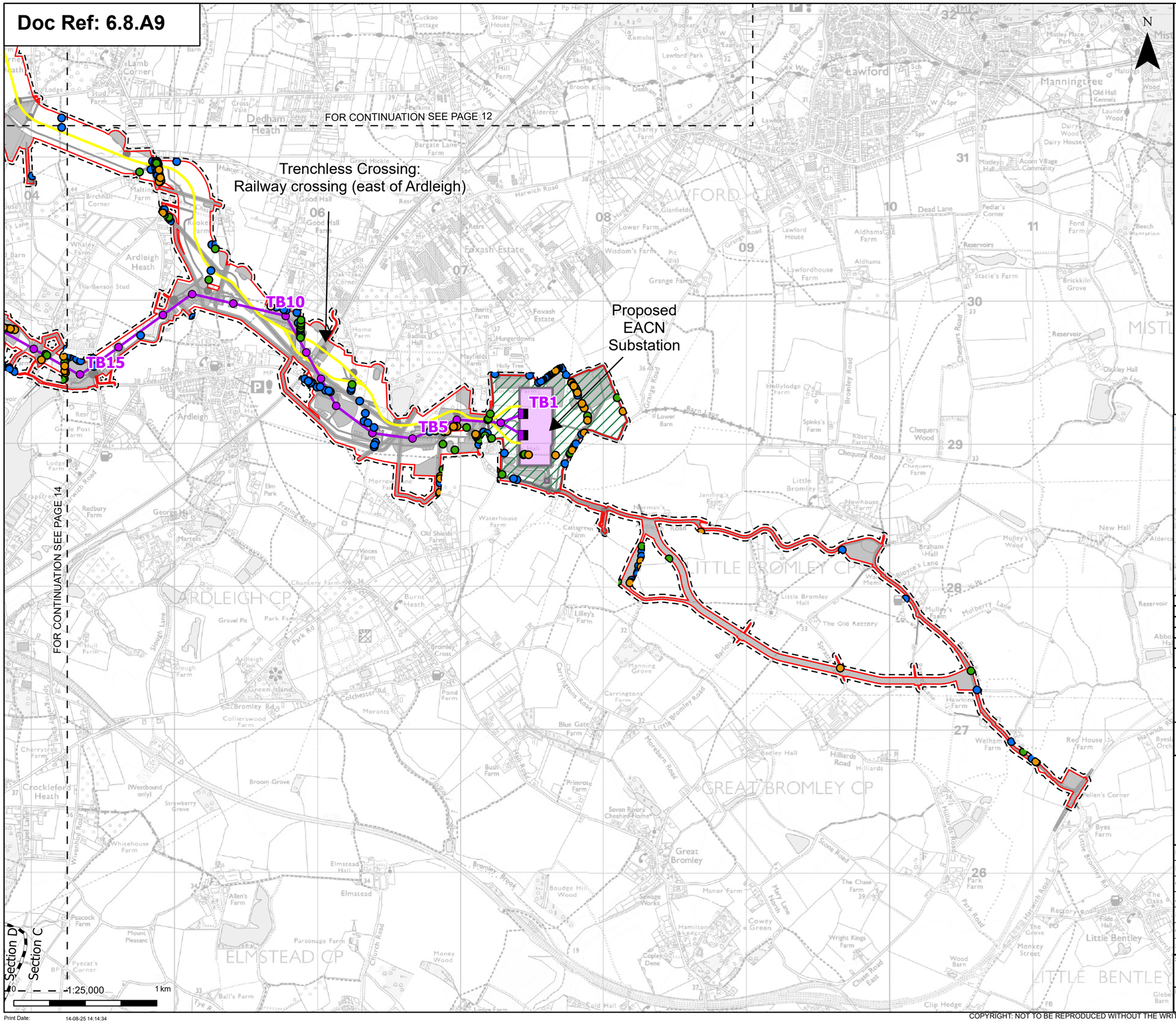
Doc Ref: 6.8.A9



- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed DNO Substation
- Proposed East Anglia Connection Node Substation (EACN)
- Environmental area
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

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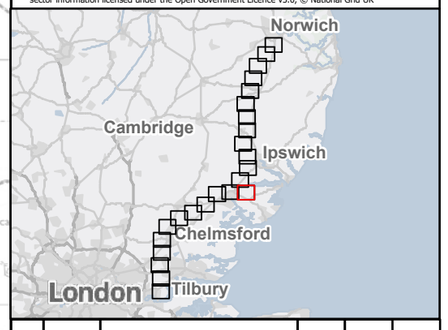

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A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

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PROJECT: Norwich to Tilbury

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Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Suitability Code:	A2	Project Number:	10059280

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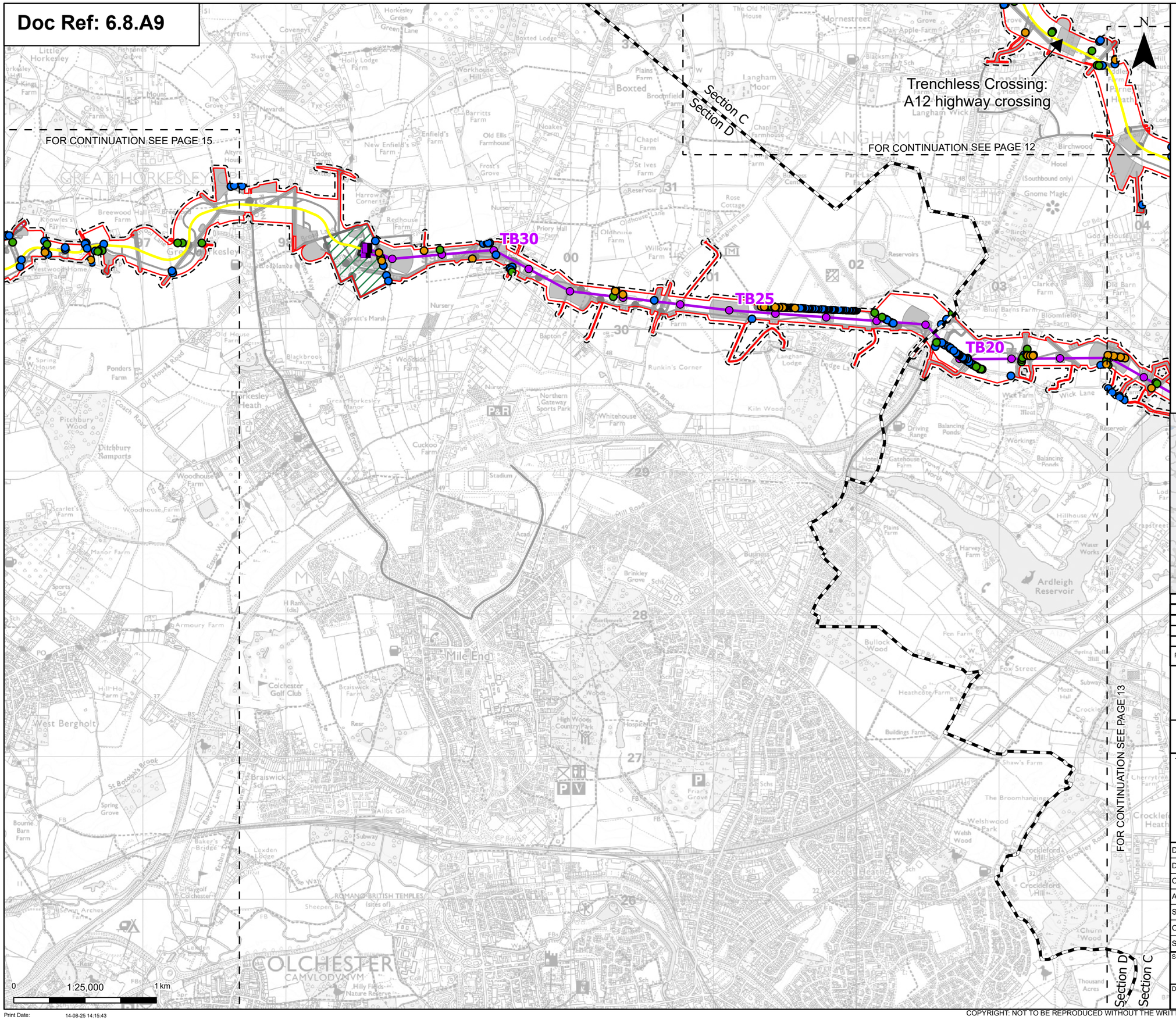

Order limits
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Project section line

Proposed project design details

Proposed full line tension gantry
Proposed standard lattice pylon location
Proposed overhead line alignment
Proposed underground cable alignment
Proposed cable sealing end compound (CSEC)
Environmental area
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

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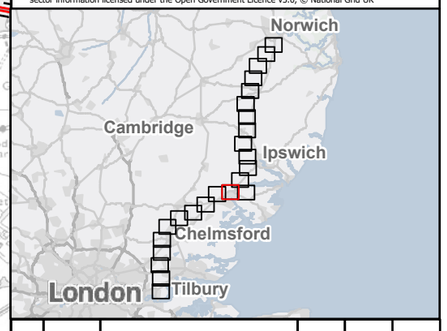

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PROJECT:
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Title:
Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Approved	K. Burrows	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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Revision: A

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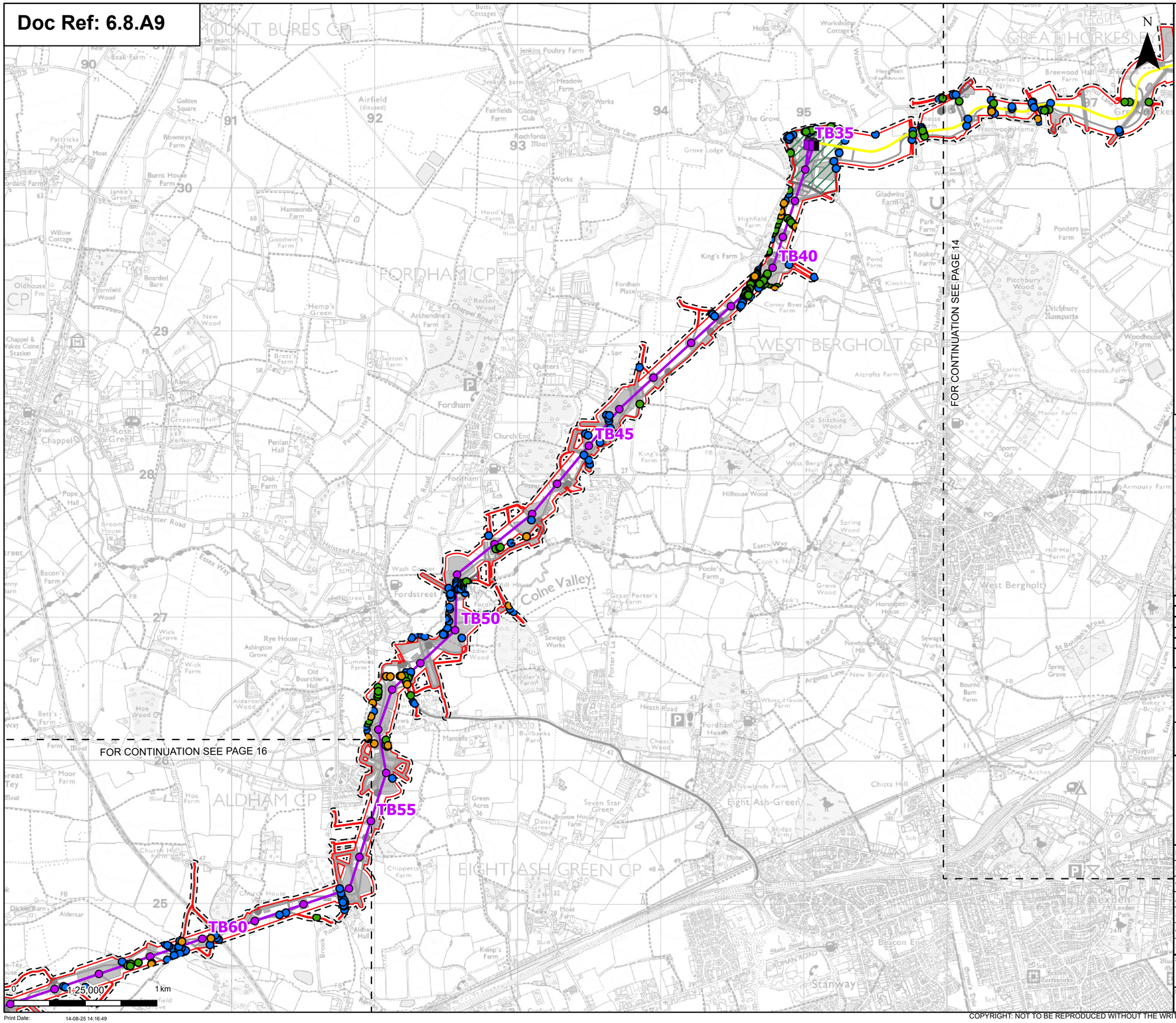

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Order limits

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Proposed project design details

Proposed full line tension gantry

Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Proposed cable sealing end compound (CSEC)

Environmental area

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

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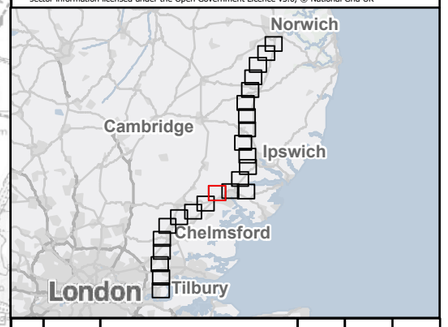

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nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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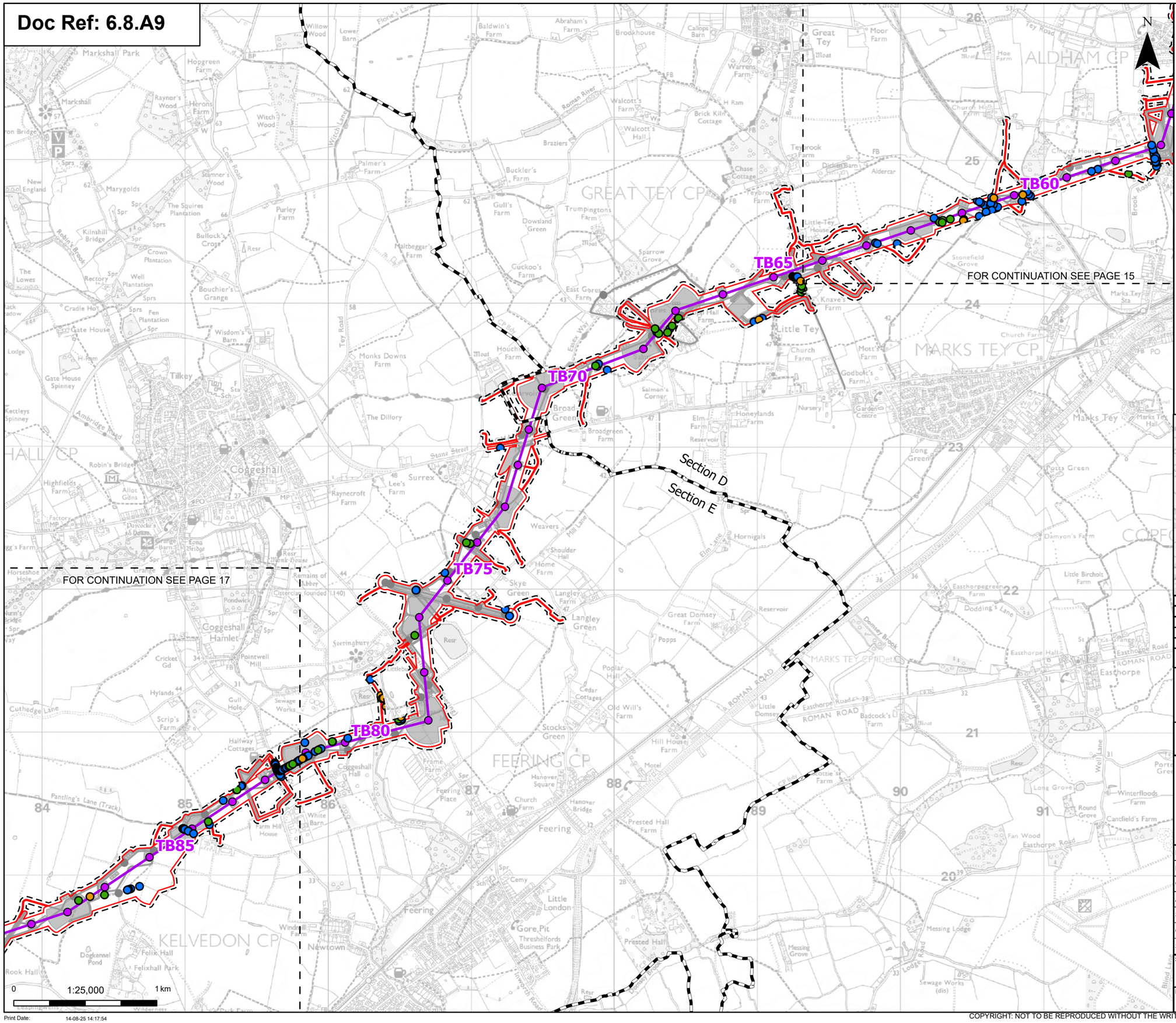

Order limits
Sheet index cutline
Project section line

Proposed project design details

Proposed standard lattice pylon location
Proposed overhead line alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

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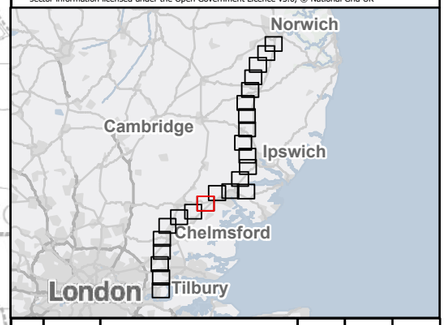

Rev	Date	Description	Drawn	Check	Approv
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PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:
Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Suitability Code:	A2	Project Number:	10059280

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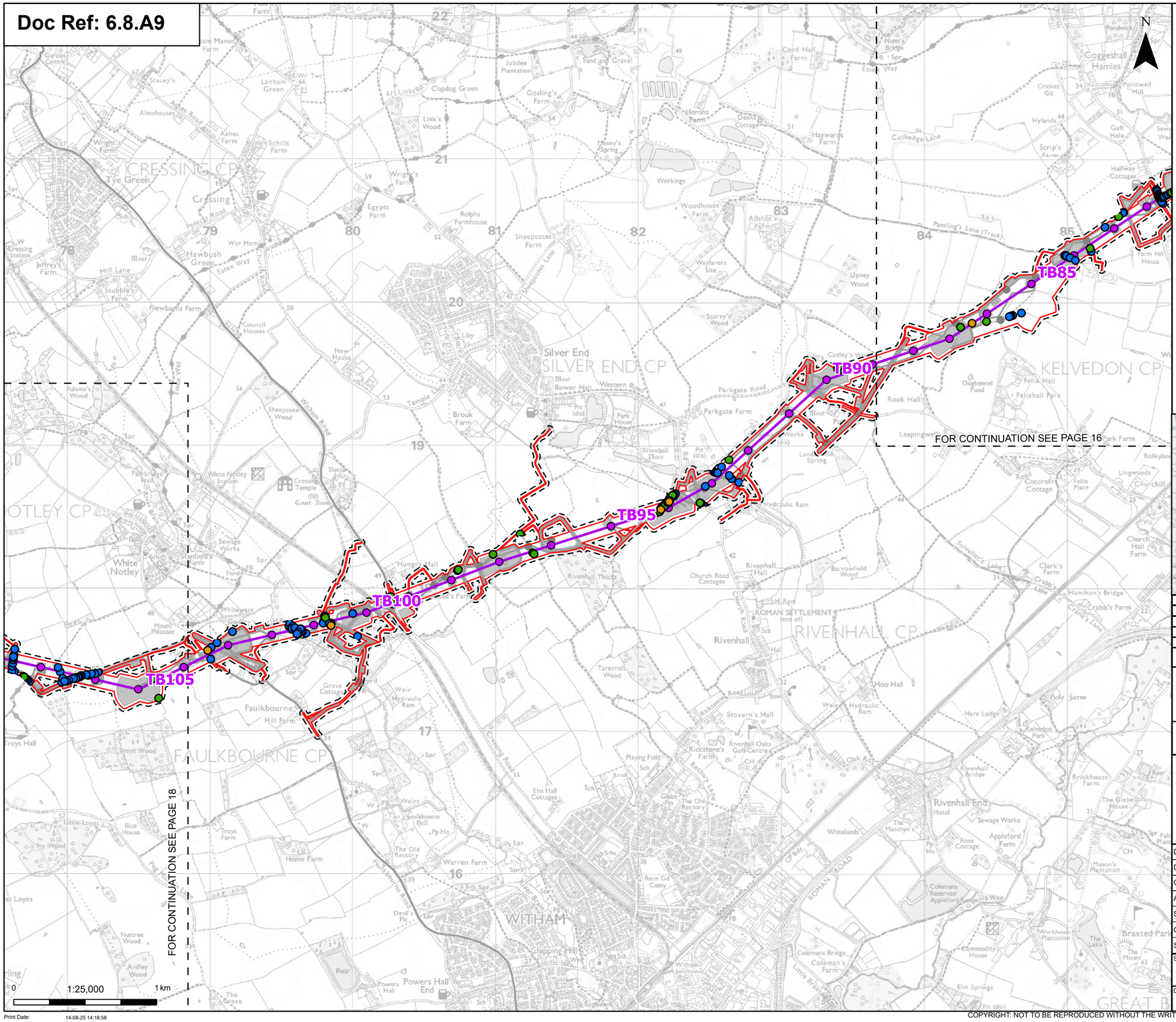

N

Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

PRF-I - One or more PRF-I present (but no PRF-M)

PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
Page 17 of 24

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:

Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

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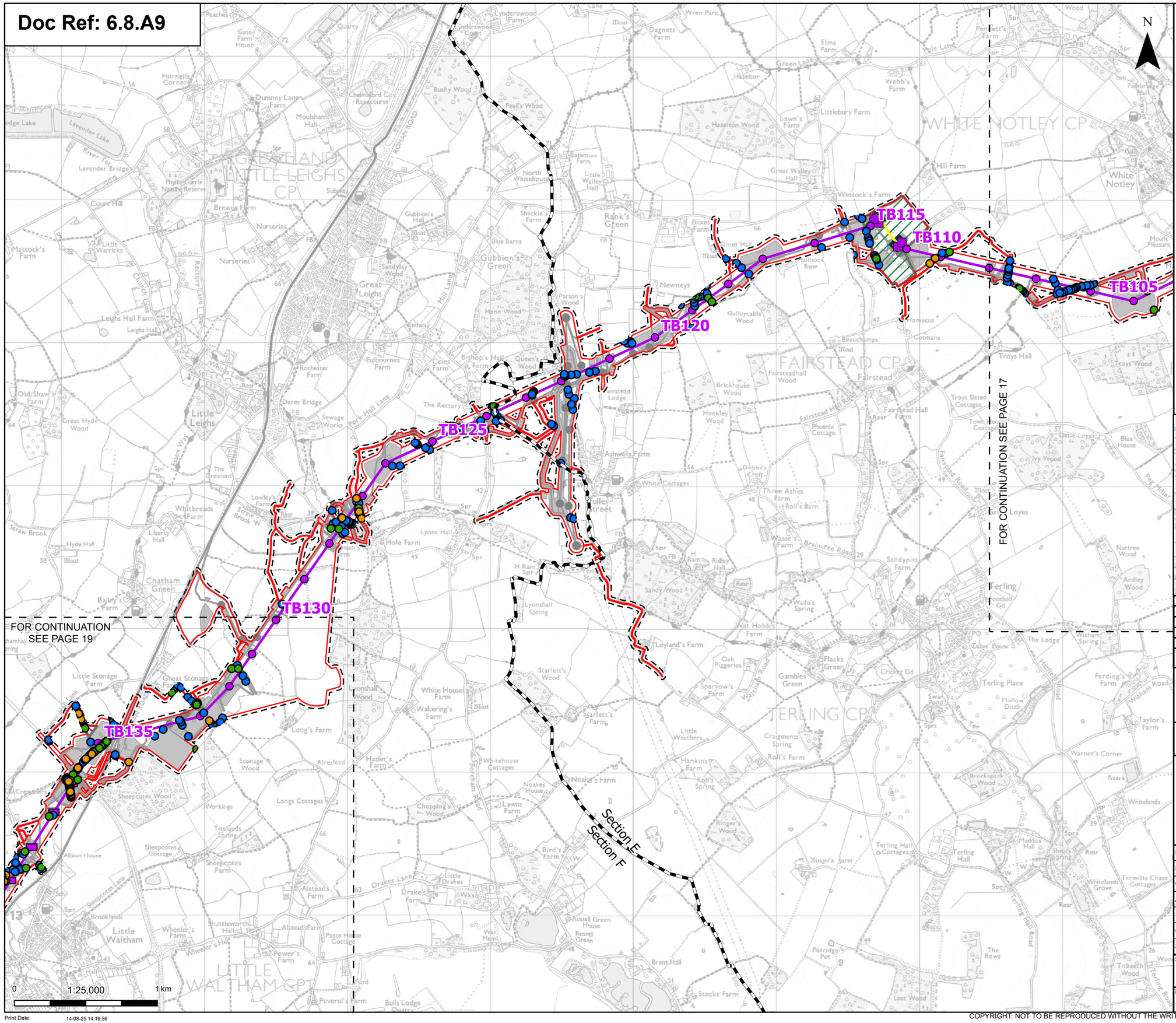


- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed low duty gantry
- Proposed low height pylon location
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

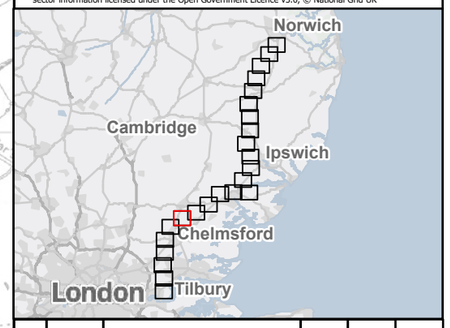
Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

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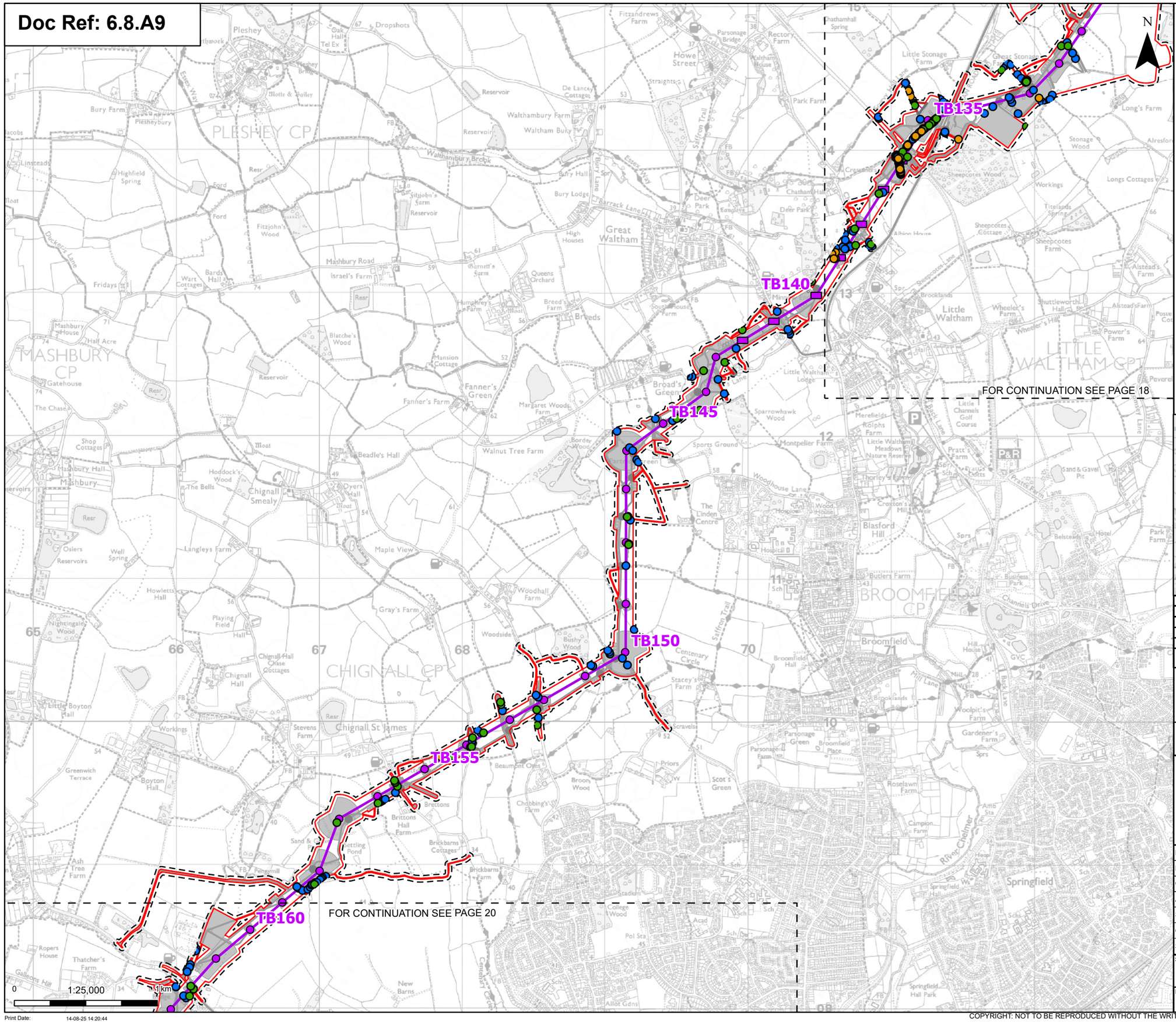
Doc Ref: 6.8.A9



Order limits

Sheet index cutline

Proposed project design details

Proposed low height pylon location

Proposed standard lattice pylon location

Proposed overhead line alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

PRF-I - One or more PRF-I present (but no PRF-M)

PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

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Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

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Doc Ref: 6.8.A9

TB160

TB165

TB170

TB175

TB180

FOR CONTINUATION SEE PAGE 19

FOR CONTINUATION SEE PAGE 21

N

0 1:25,000 1 km

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- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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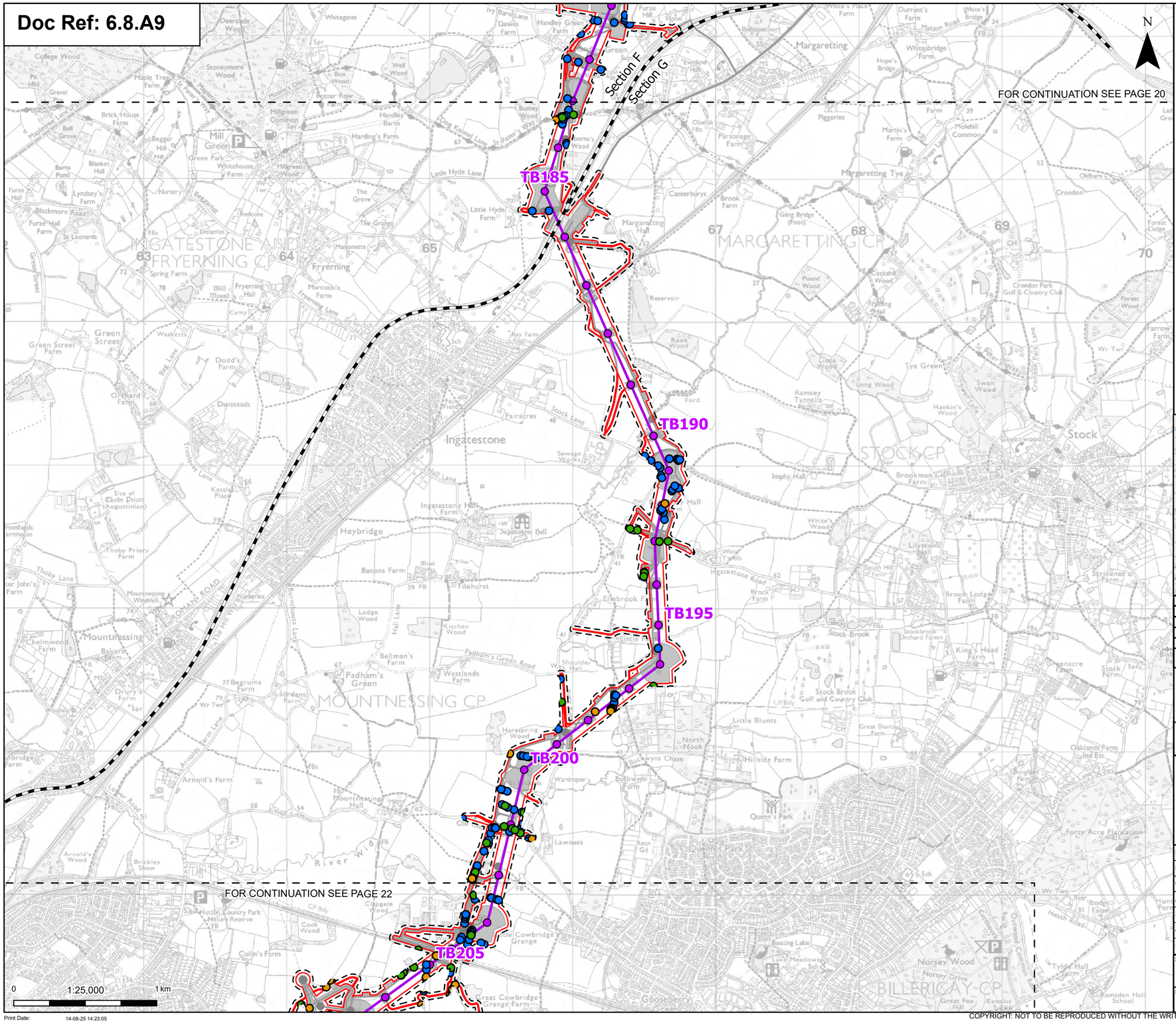
Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

Doc Ref: 6.8.A9



Order limits
Sheet index cutline
Project section line

Proposed project design details

Proposed standard lattice pylon location
Proposed overhead line alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

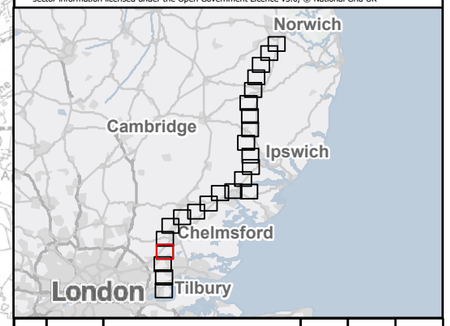
Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

PRF-I - One or more PRF-I present (but no PRF-M)

PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
Page 21 of 24

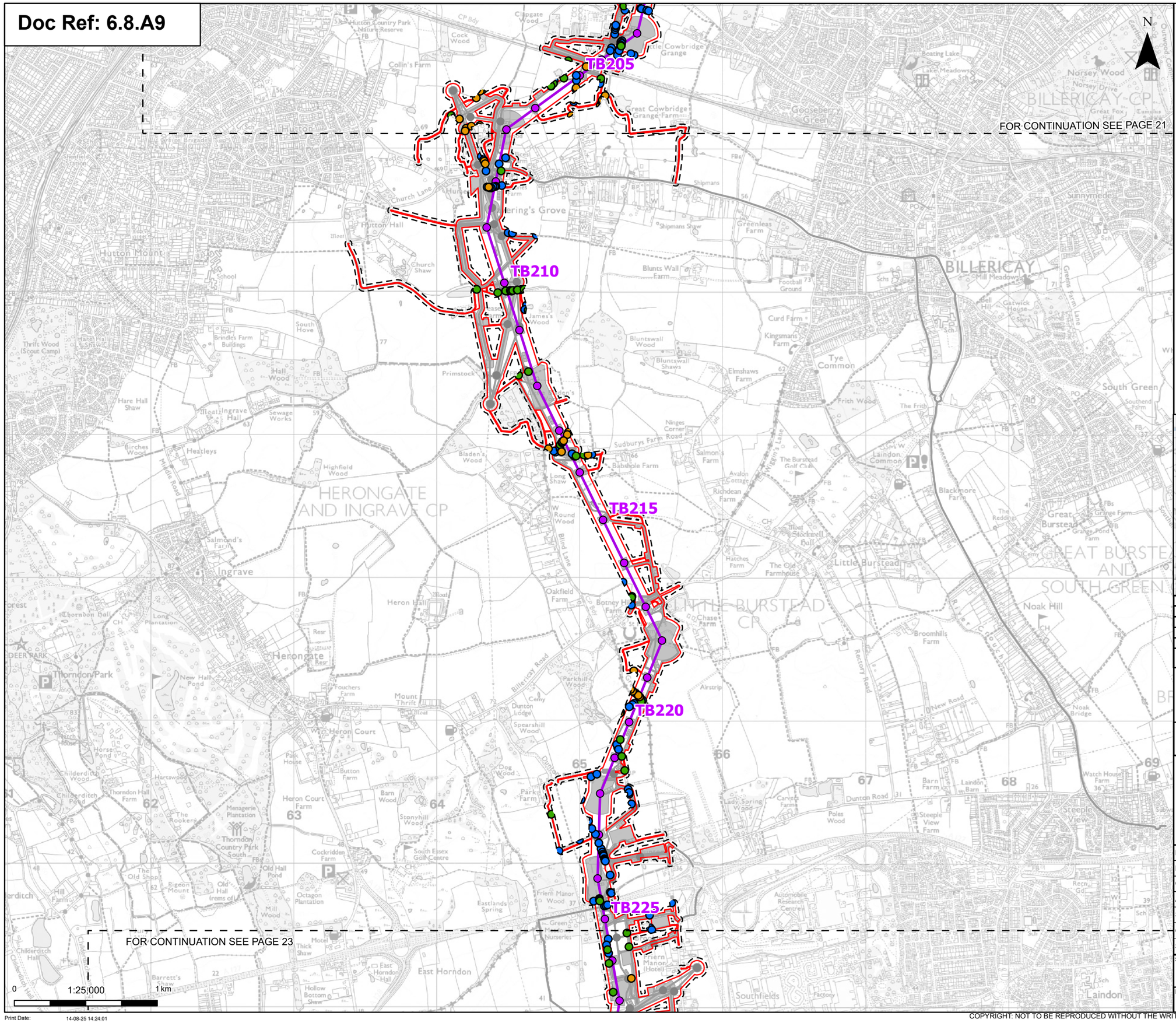
Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221
Revision: A

Print Date: 14-08-25 14:23:05

Doc Ref: 6.8.A9



Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

20 m Study Area

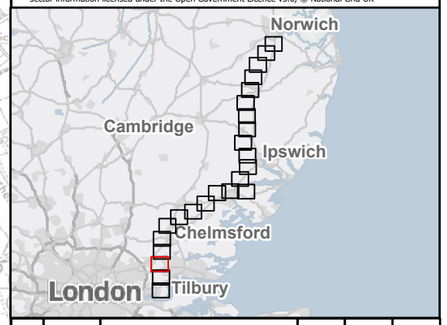
Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree

PRF-I - One or more PRF-I present (but no PRF-M)

PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

Print Date: 14-08-25 14:24:01

Doc Ref: 6.8.A9

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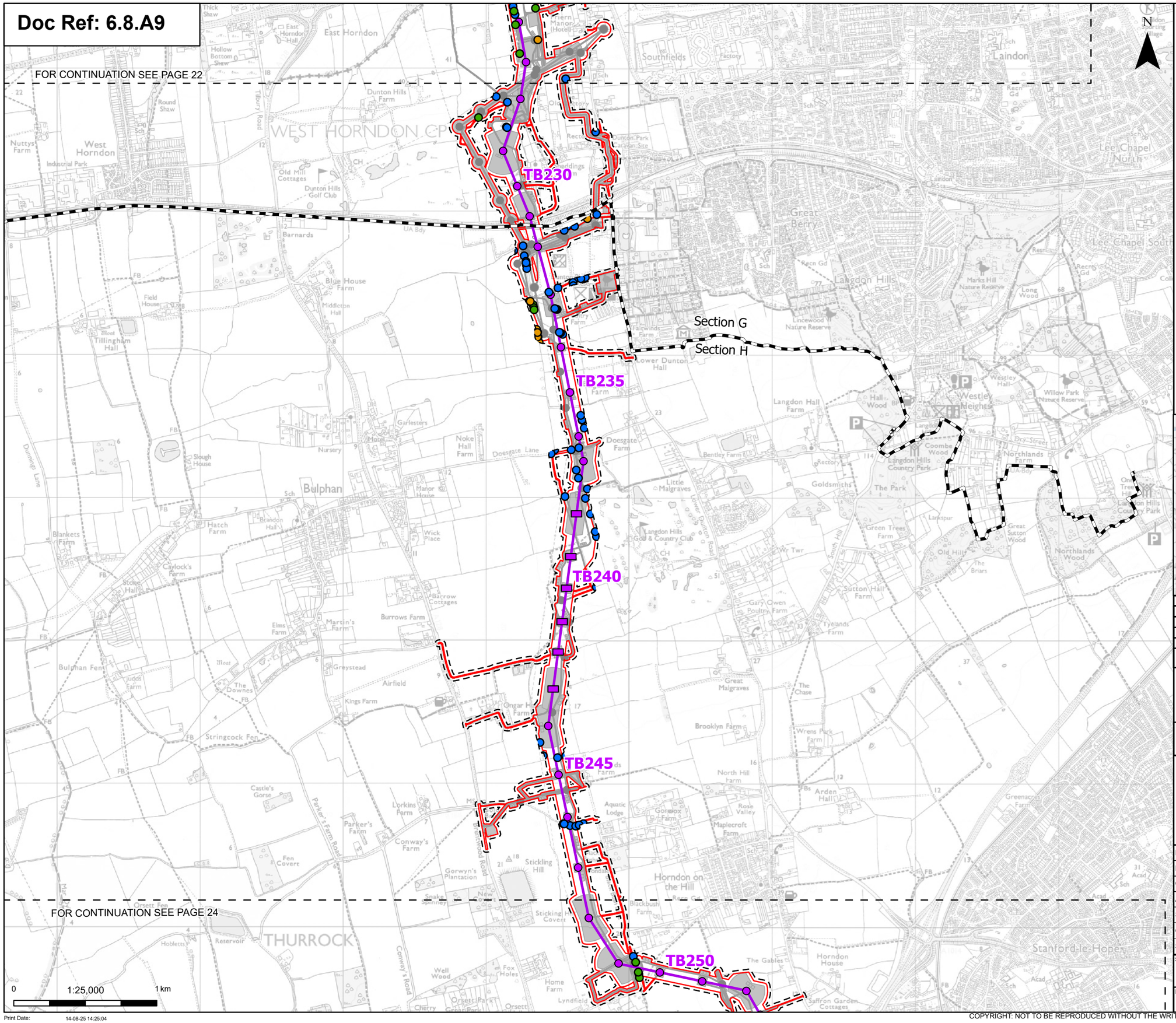


FOR CONTINUATION SEE PAGE 24

0 1:25,000 1 km

Print Date: 14-08-25 14:25:04

N

- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed low height pylon location
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

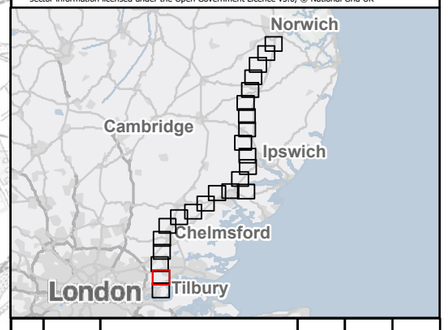
Discipline specific constraints

- 20 m Study Area

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
Page 23 of 24

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

Doc Ref: 6.8.A9

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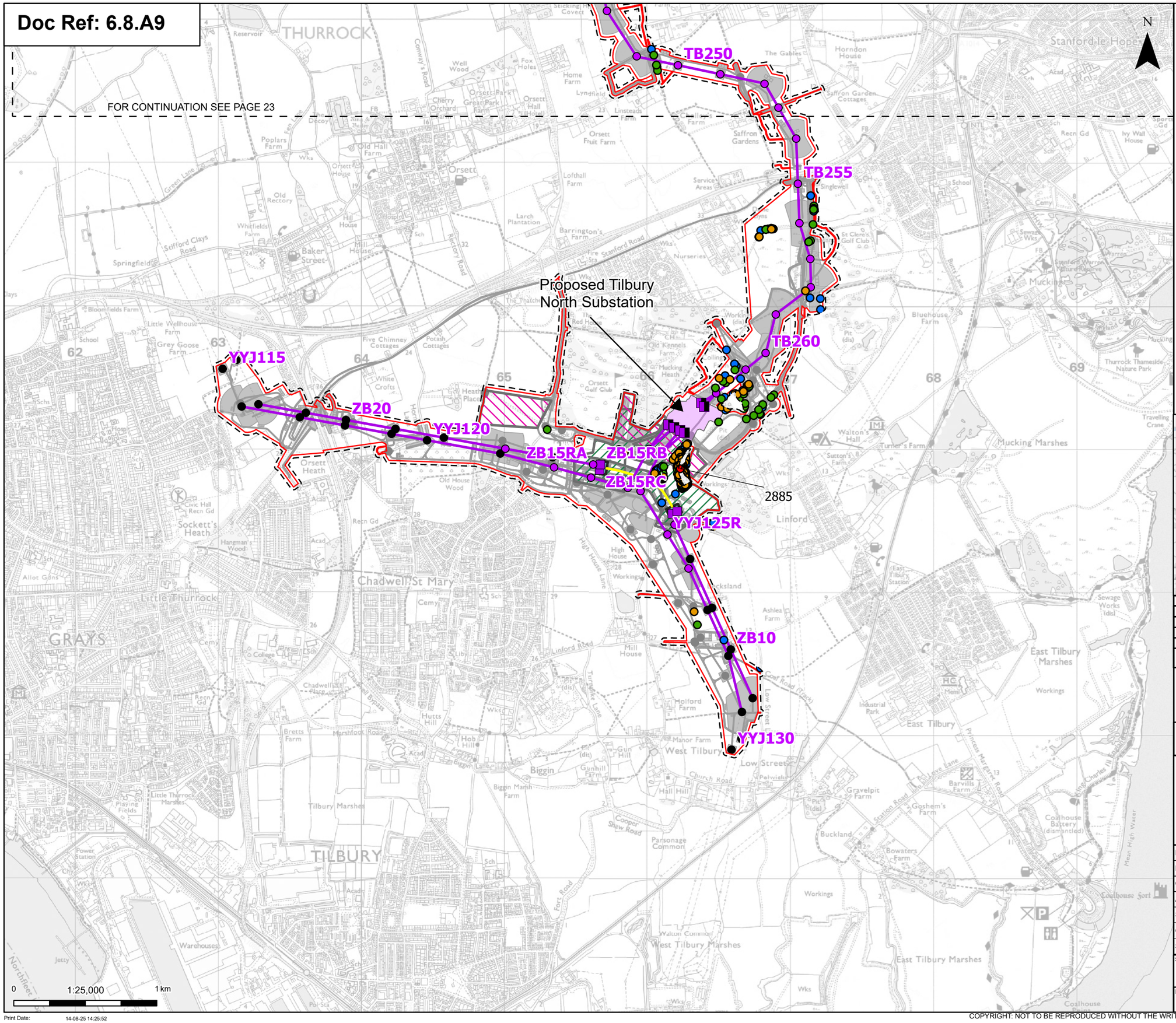

Order limits

Sheet index cutline

Proposed project design details

- Proposed full line tension gantry
- Proposed low duty gantry
- Existing pylon (modify)
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed Tilbury North Substation
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- 20 m Study Area
- Confirmed roost

Bat Ground Level Tree Assessment and Potential Roost Feature (PRF) Inspection Survey

- FAR - Further assessment required to establish presence and/or suitability of PRFs in the tree
- PRF-I - One or more PRF-I present (but no PRF-M)
- PRF-M - One or more PRF-M present

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further

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A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.1 - Ecology and Biodiversity - Ground Level Tree Assessment Results 2024 and 2025
Page 24 of 24

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00221

Revision: A

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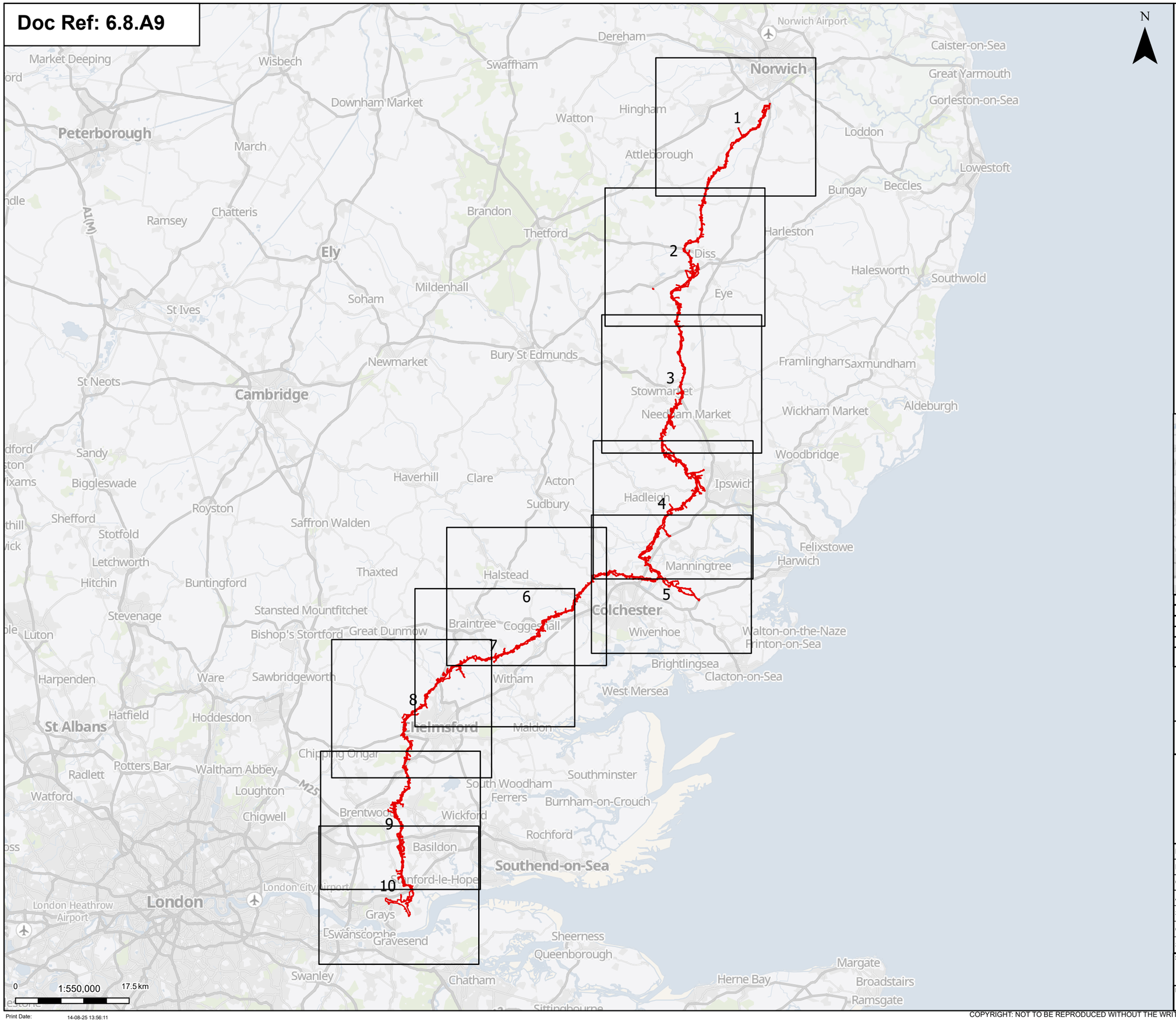

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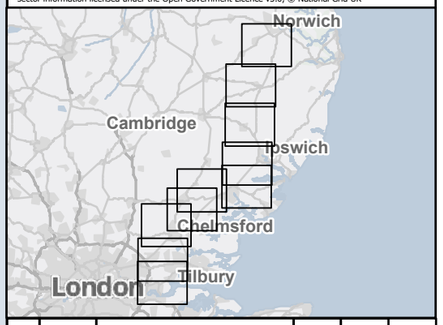

Rev	Date	Description	Drawn	Check	Approv
A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

nationalgrid

PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records Overview

Designed	V. Handby	Date	21 Aug 25
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Scale:	1:550,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9

Norwich Main Substation Extension (Future Baseline)

Norwich Main Substation

FOR CONTINUATION SEE PAGE 2

0 1:75,000 2.5 km

Print Date: 14-08-25 13:56:20

N

- Order limits
- Sheet index cutline

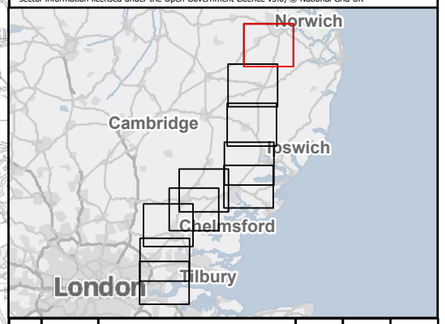
Proposed project design details

- Proposed overhead line alignment
- Existing substation
- Other temporary and permanent construction and operational works
- Environmental area
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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Designed	V. Handby	Date	21 Aug 25
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Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9

FOR CONTINUATION SEE PAGE 1

FOR CONTINUATION SEE PAGE 3

Section A

Section B

0 1:75,000 2.5 km

Print Date: 14-08-25 13:56:30

N

Order limits
Sheet index cutline
Project sections

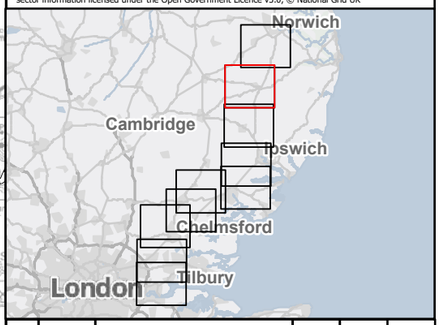
Proposed project design details

Proposed overhead line alignment
Other temporary and permanent construction and operational works
Environmental mitigation

Discipline specific constraints

2 km Study Area
6 km Study Area
Activity
Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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Designed	V. Handby	Date	21 Aug 25
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Approved	K. Burrows	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9

FOR CONTINUATION SEE PAGE 2

FOR CONTINUATION SEE PAGE 4

0 1:75,000 2.5 km

Print Date: 14-08-25 13:56:40

N

- Order limits
- Sheet index cutline
- Project sections

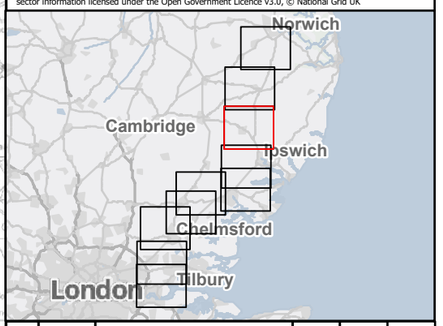
Proposed project design details

- Proposed overhead line alignment
- Other temporary and permanent construction and operational works
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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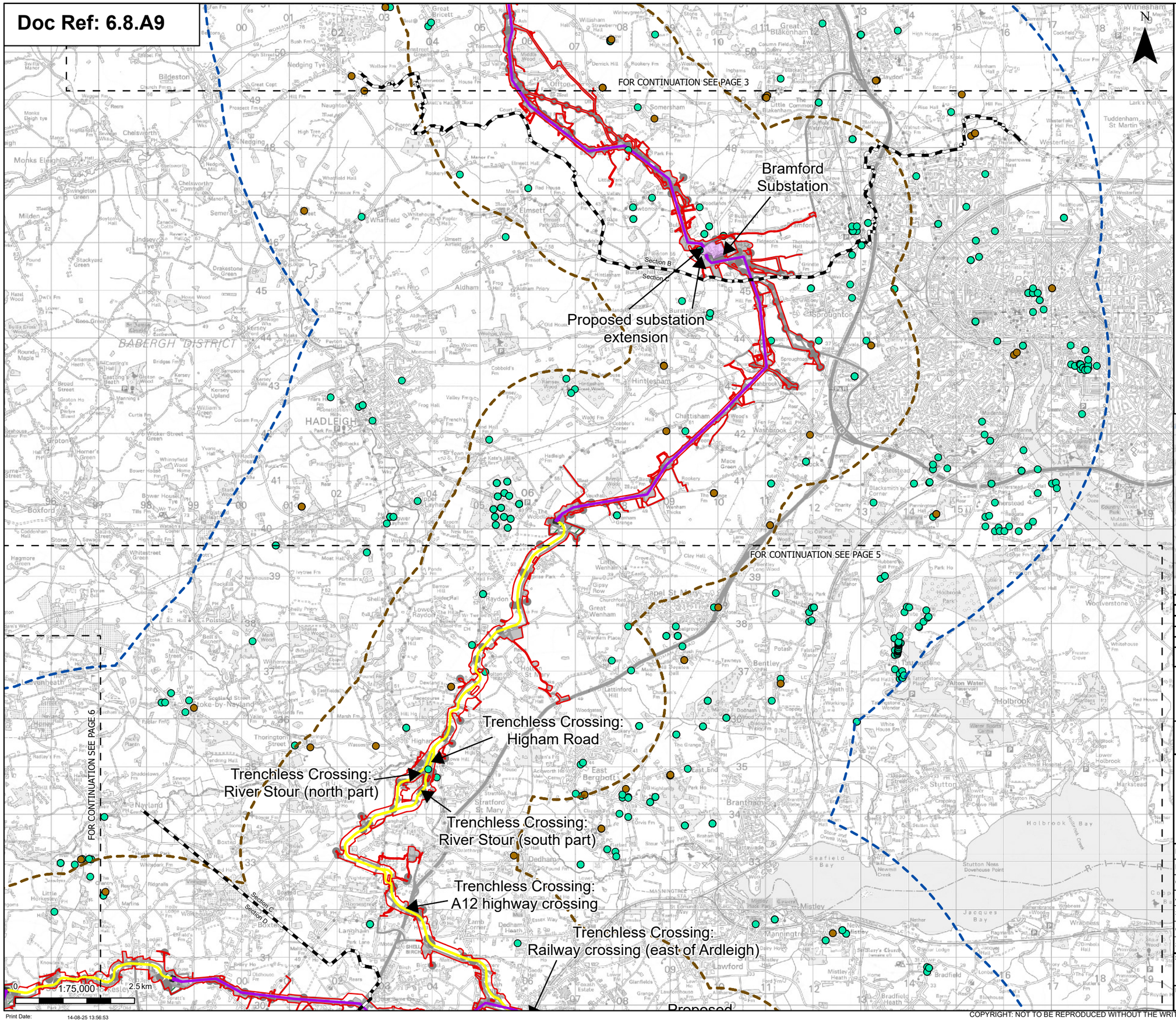
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9



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- Order limits
- Sheet index cutline
- Project sections

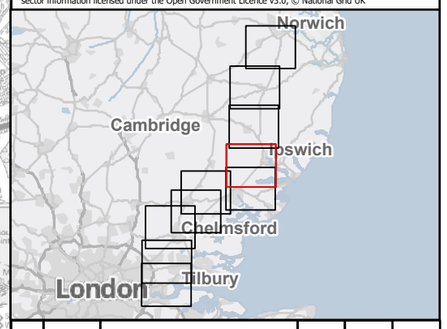
Proposed project design details

- Proposed overhead line alignment
- Proposed underground cable alignment
- Existing substation
- Proposed cable sealing end compound (CSEC)
- Other temporary and permanent construction and operational works
- Environmental area
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
Page 4 of 10

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9

Trenchless Crossing: Higham Road

Trenchless Crossing: River Stour (north part)

Trenchless Crossing: River Stour (south part)

Trenchless Crossing: A12 highway crossing

Trenchless Crossing: Railway crossing (east of Ardleigh)

Proposed EACN Substation

FOR CONTINUATION SEE PAGE 4

FOR CONTINUATION SEE PAGE 6

Section C

Section D

Section D

Section C

N

0 1:75,000 2.5 km

Print Date: 14-08-25 13:57:06

- Order limits
- Sheet index cutline
- Project sections

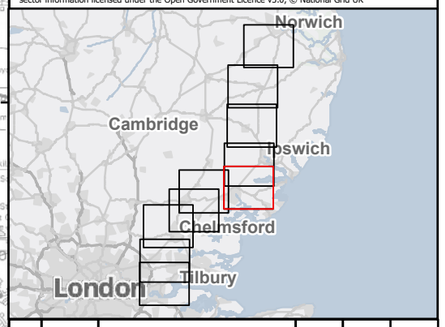
Proposed project design details

- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed EACN substation
- Proposed cable sealing end compound (CSEC)
- Other temporary and permanent construction and operational works
- Environmental area
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
Page 5 of 10

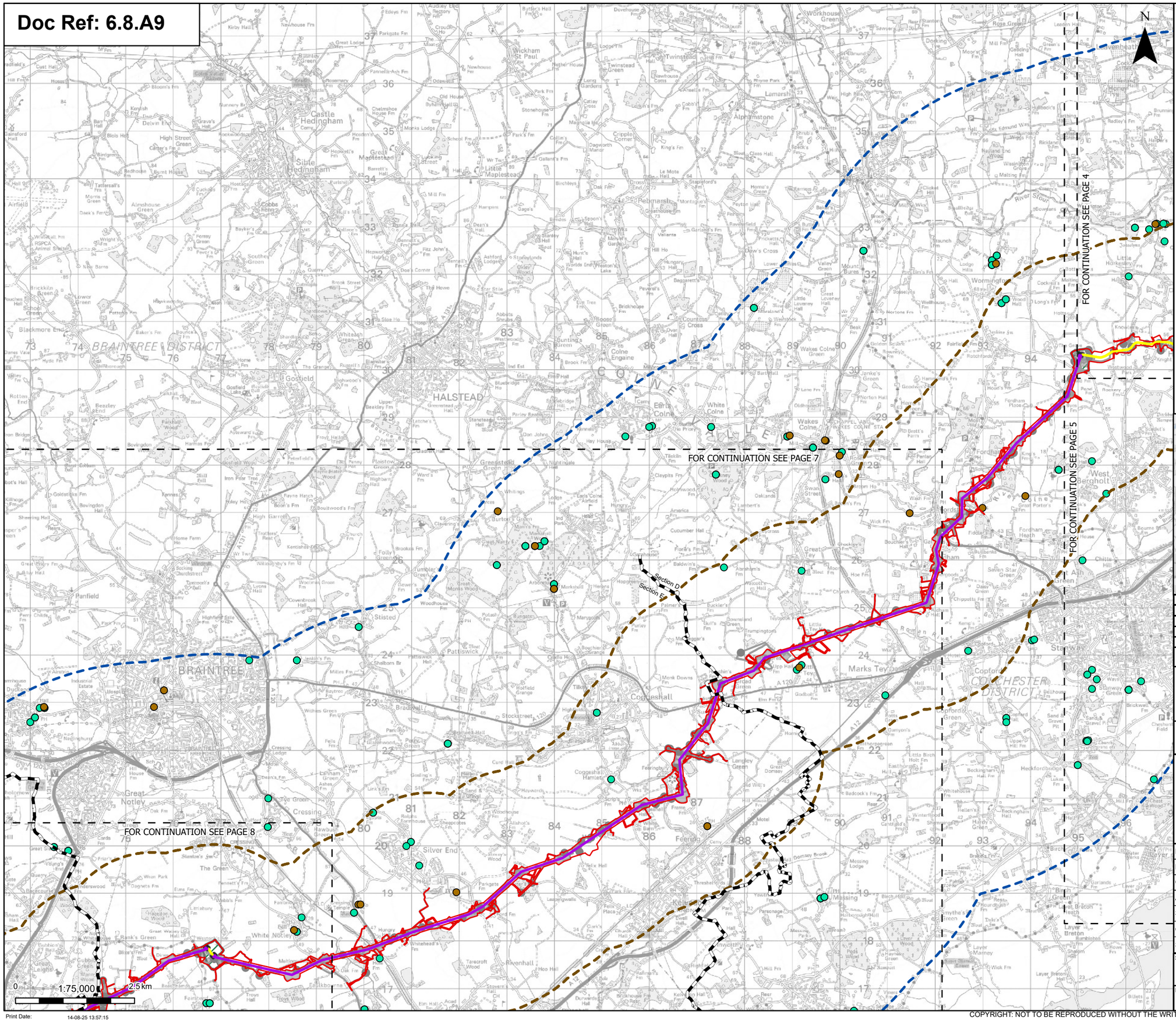
Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9



Print Date: 14-08-25 13:57:15

- Order limits
- Sheet index cutline
- Project sections

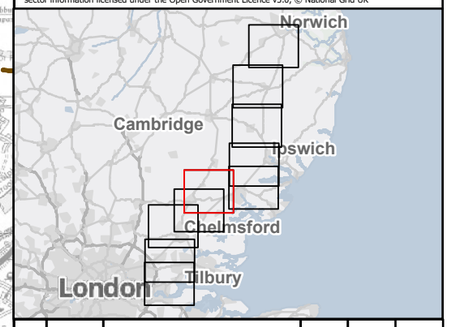
Proposed project design details

- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Other temporary and permanent construction and operational works
- Environmental area
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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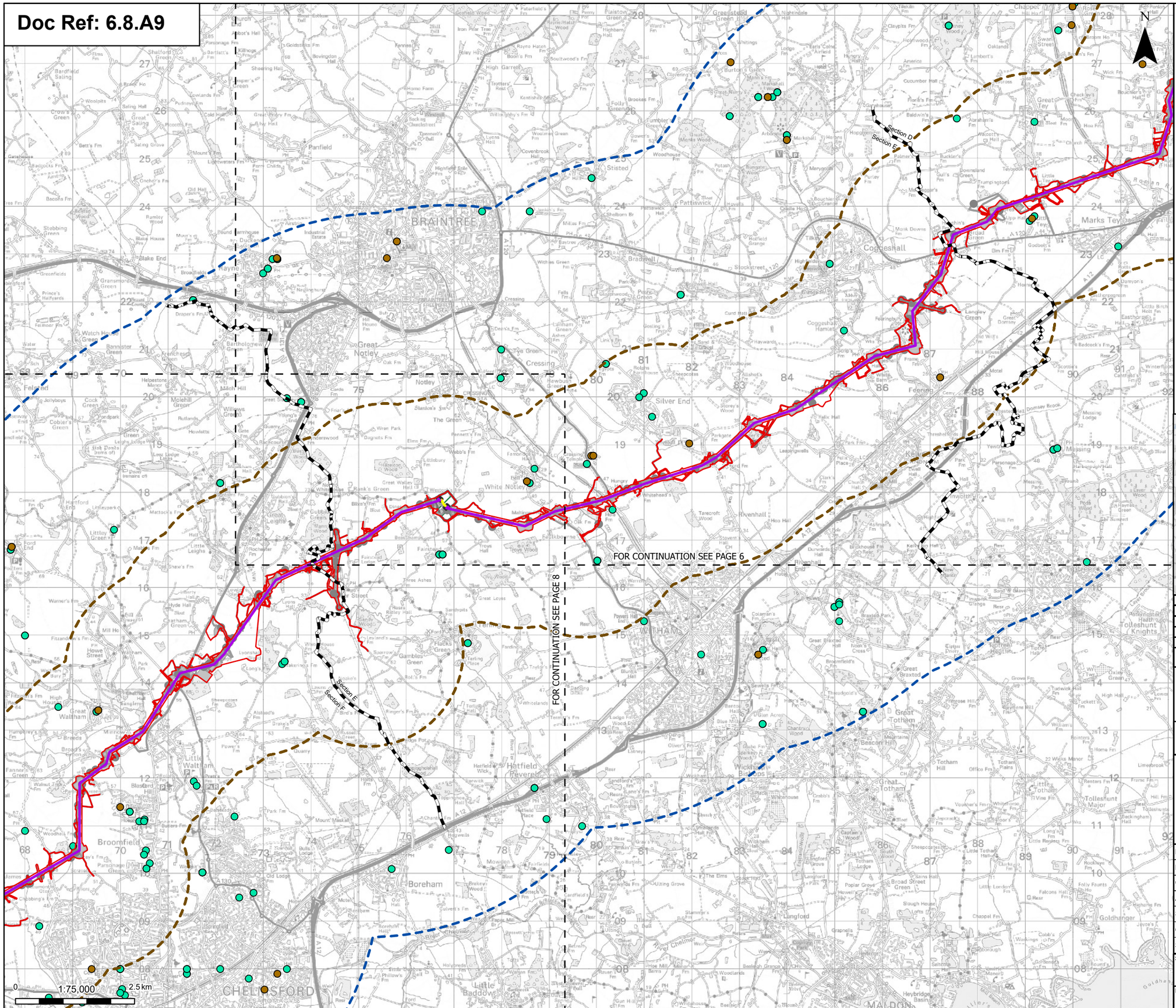
Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9



- Order limits
- Sheet index cutline
- Project sections

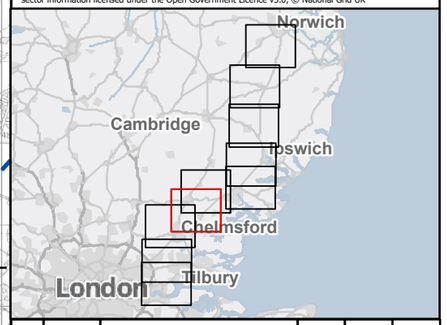
Proposed project design details

- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Other temporary and permanent construction and operational works
- Environmental area
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

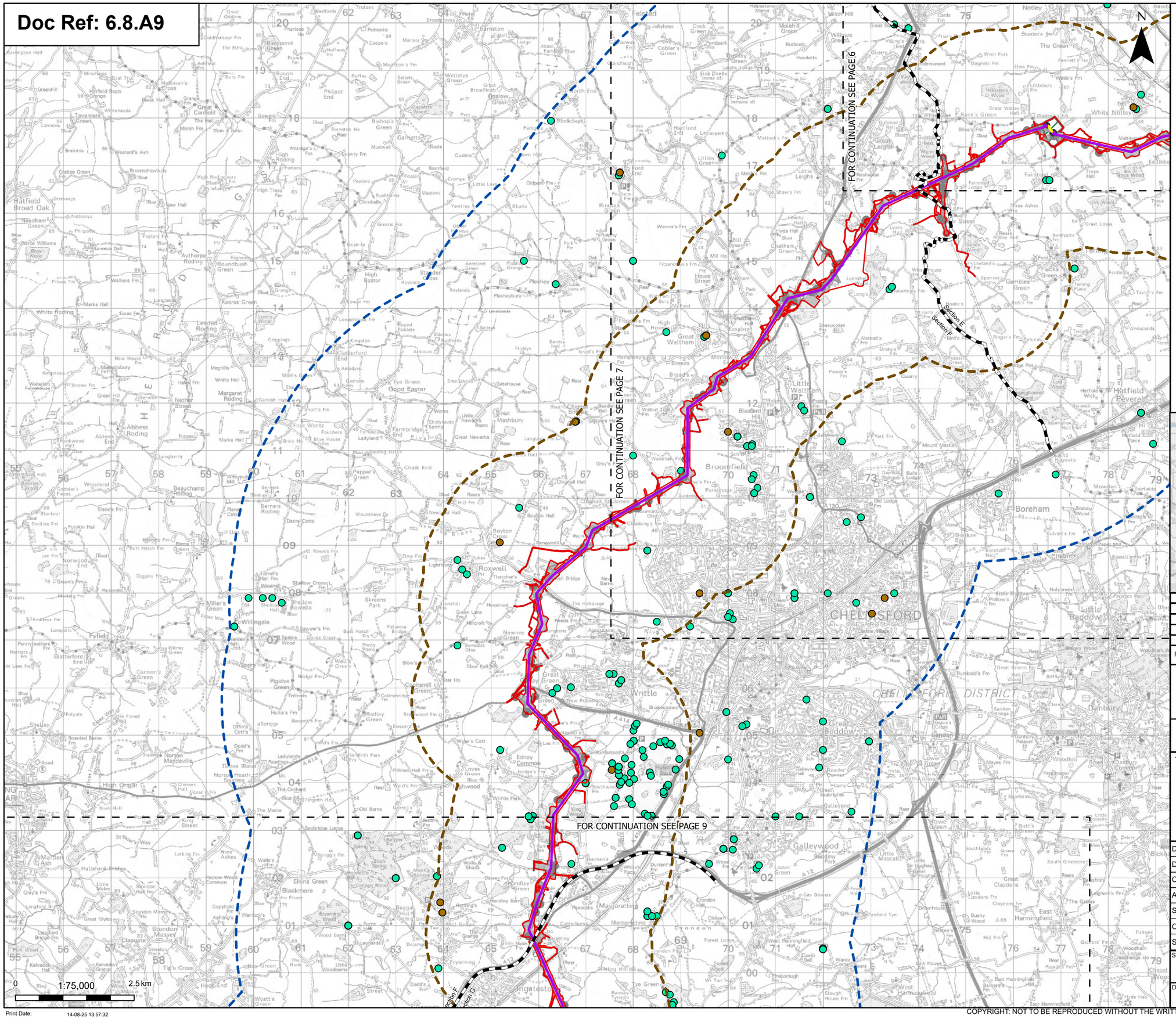
Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Print Date: 14-08-25 13:57:24

Doc Ref: 6.8.A9



Order limits
Sheet index cutline
Project sections

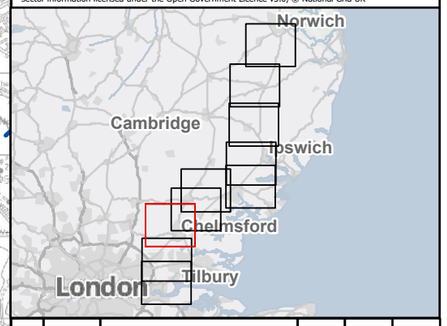
Proposed project design details

Proposed overhead line alignment
Proposed underground cable alignment
Proposed cable sealing end compound (CSEC)
Other temporary and permanent construction and operational works
Environmental area
Environmental mitigation

Discipline specific constraints

2 km Study Area
6 km Study Area
Activity
Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

PROJECT:
nationalgrid Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330
Revision: A

Print Date: 14-08-25 13:57:32

Doc Ref: 6.8.A9

FOR CONTINUATION SEE PAGE 8

FOR CONTINUATION SEE PAGE 10

Section F

Section G

Section G

Section H

N

0 1:75,000 2.5 km

Print Date: 14-08-25 13:57:42

- Order limits
- Sheet index cutline
- Project sections

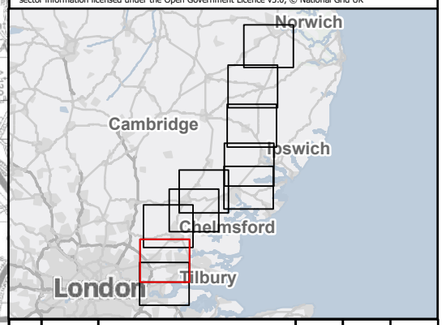
Proposed project design details

- Proposed overhead line alignment
- Other temporary and permanent construction and operational works
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
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Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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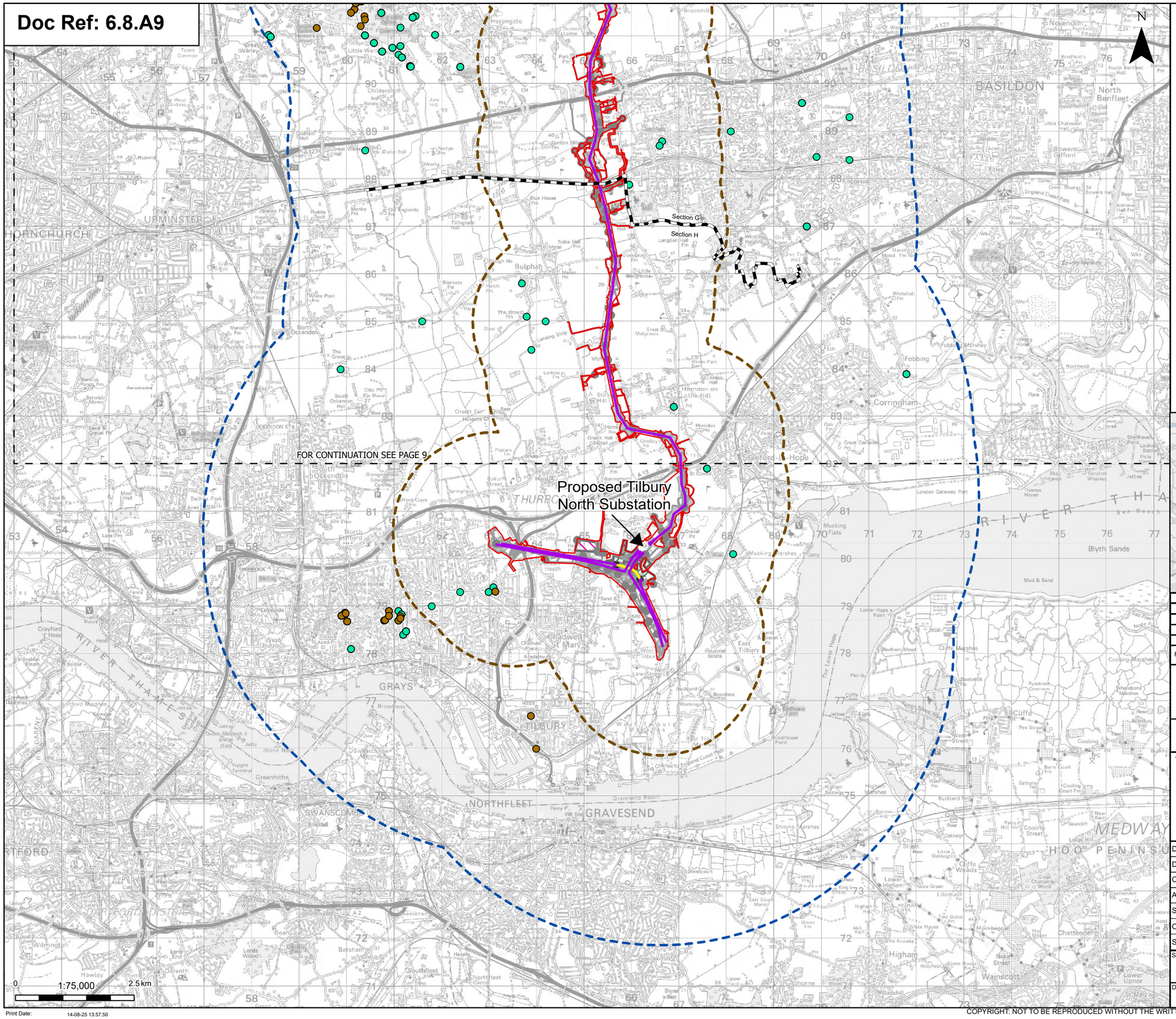
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330

Revision: A

Doc Ref: 6.8.A9



N

- Order limits
- Sheet index cutline
- Project sections

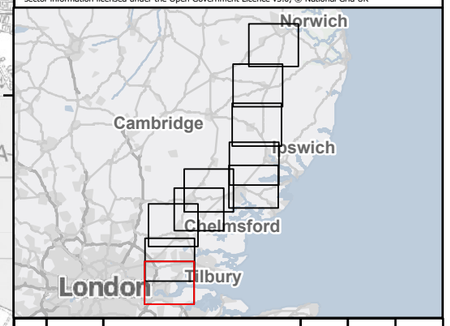
Proposed project design details

- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Other temporary and permanent construction and operational works
- Environmental area
- Environmental mitigation

Discipline specific constraints

- 2 km Study Area
- 6 km Study Area
- Activity
- Roost

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A.8.9.2 - Ecology and Biodiversity - Desk Study Bat Records
Page 10 of 10

Designed	V. Handby	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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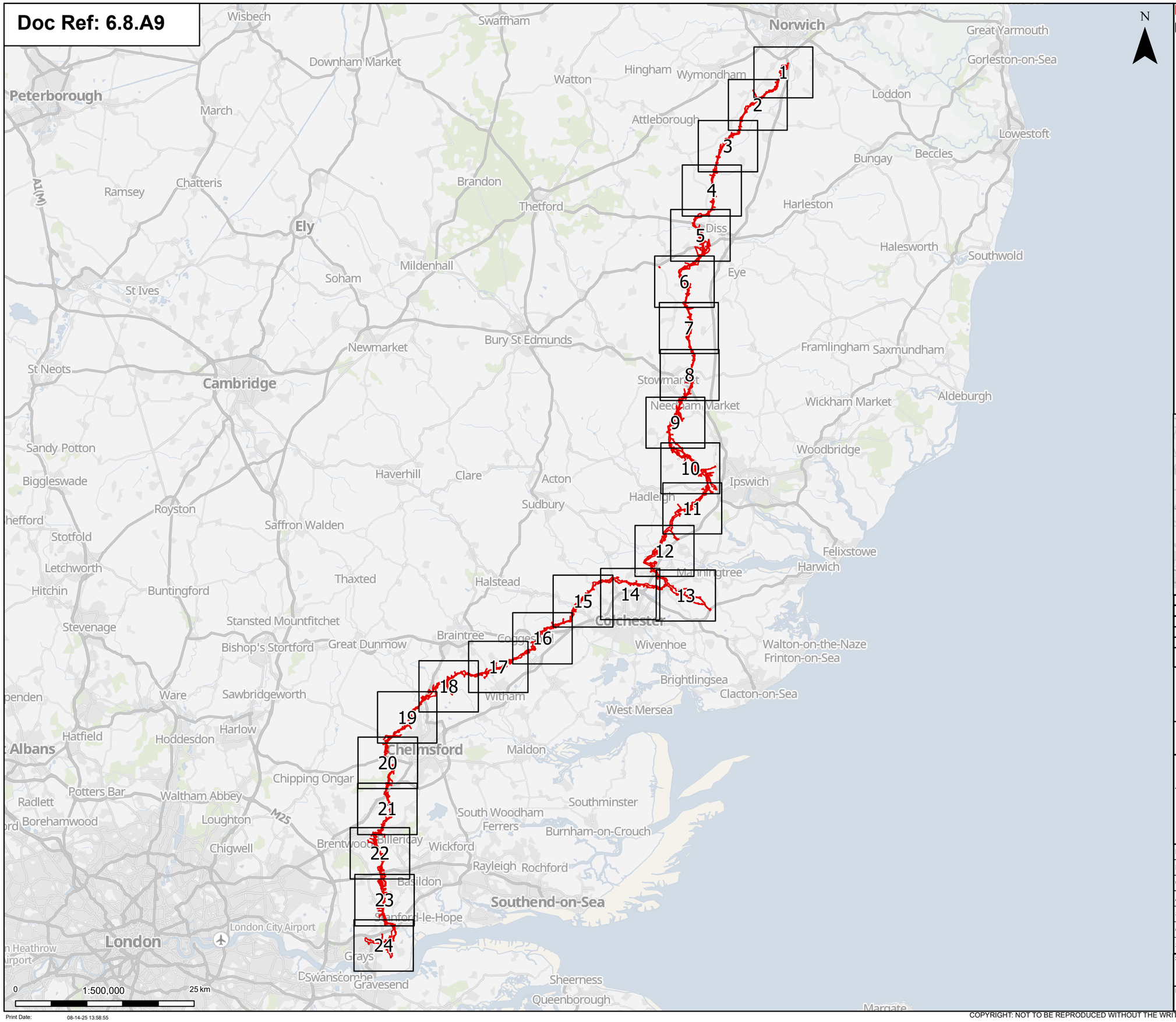
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:75,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EBD-ZZ-DR-ZZ-00330
Revision: A

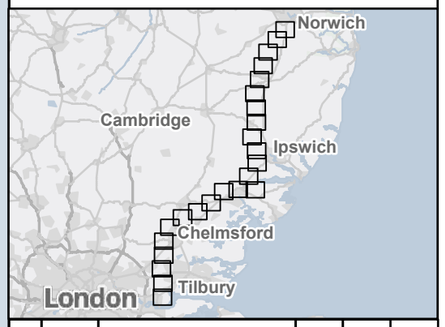
Print Date: 14-08-25 13:57:50

Doc Ref: 6.8.A9



Order limits

Page



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025 Overview

Designed	E. Pickering	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:500,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Print Date: 08-14-25 13:58:55

Doc Ref: 6.8.A9

Norwich Main Substation Extension (Future Baseline)

Norwich Main Substation

RG1

RG5

RG10

RG15

RG20

FOR CONTINUATION SEE PAGE 2

0 1km

1:25,000

Print Date: 08-14-25 13:58:59

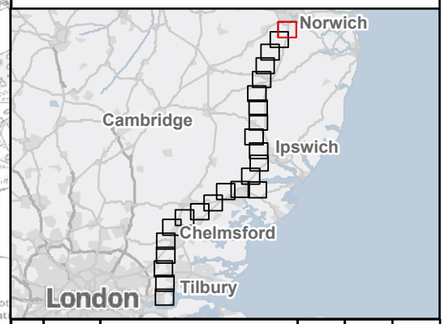
N

- Order limits
- Sheet index cutline

Proposed project design details

- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Norwich Main Substation
- Norwich Main Substation Extension (future baseline)
- Environmental area
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
Page 1 of 24

Designed	E. Pickering	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Doc Ref: 6.8.A9

RG10
RG15
RG20
RG25
Survey location 1
RG30
RG35

FOR CONTINUATION SEE PAGE 1
FOR CONTINUATION SEE PAGE 3

0 1:25,000 1 km

Print Date: 08-14-25 13:59:04

- Order limits
- Sheet index cutline

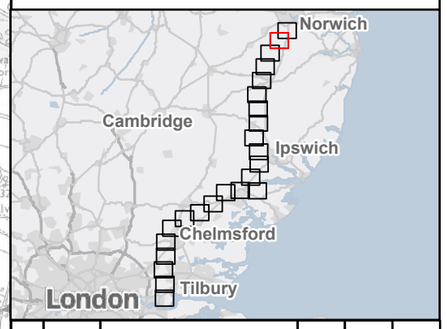
Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025

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Scale:	1:25,000	Datum:	AOD
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Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

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RG35

RG40

RG45

RG50

RG55

Survey location 2

Survey location 3

FOR CONTINUATION SEE PAGE 2

FOR CONTINUATION SEE PAGE 4

0 1:25,000 1 km

Print Date: 08-14-25 13:59:10

N

Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

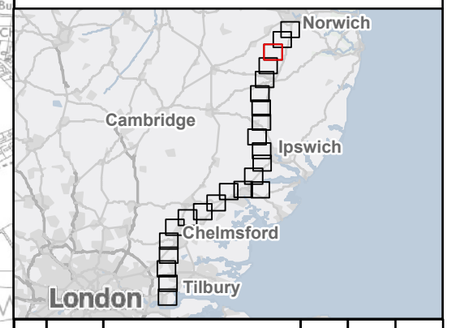
Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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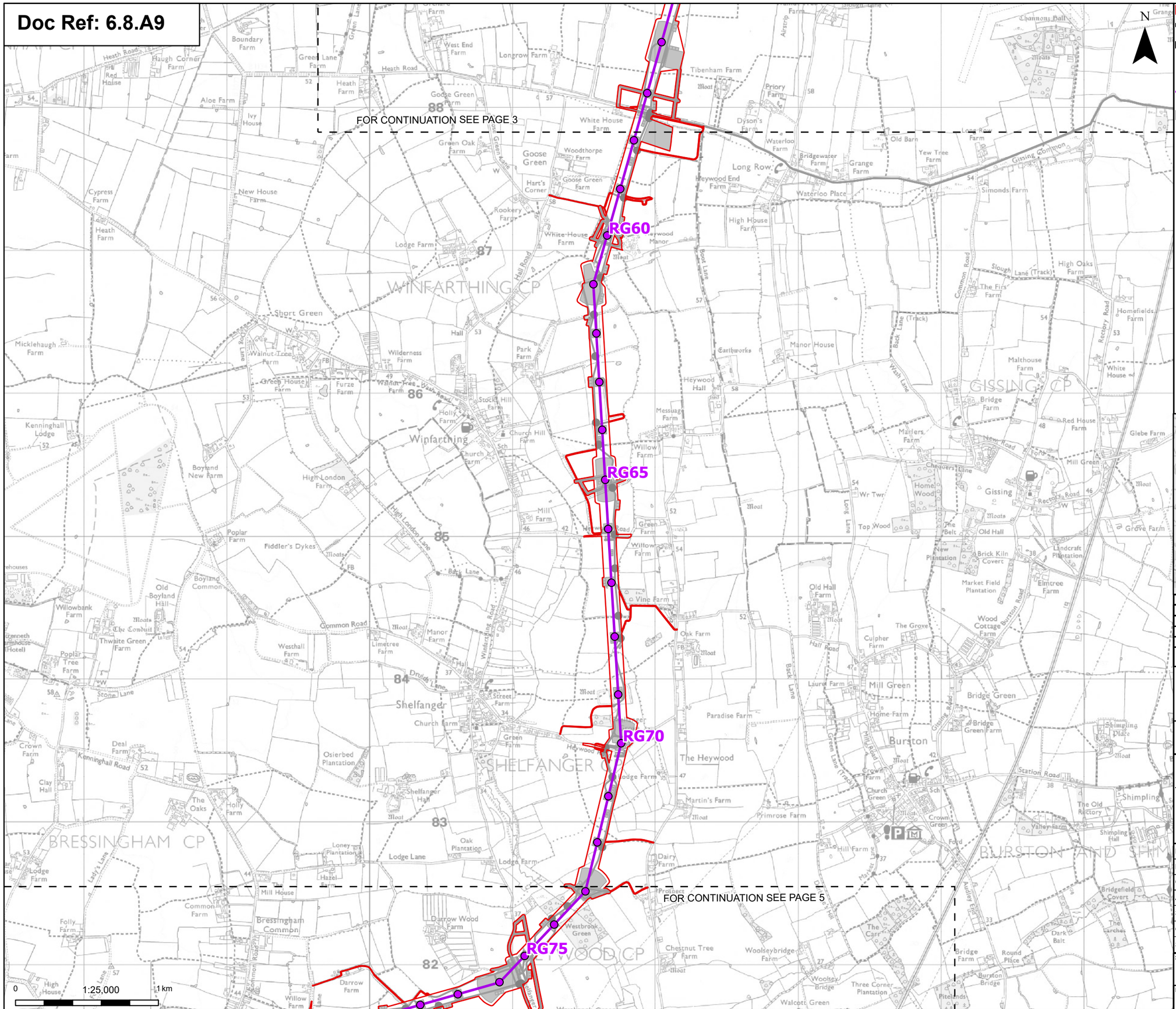
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Doc Ref: 6.8.A9



- Order limits
- Sheet index cutline

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Print Date: 08-14-25 13:59:15

Doc Ref: 6.8.A9

RG75
RG80
RG85
RG90
RG95
RG100

Survey location 4
Survey location 5

Section A
Section B

FOR CONTINUATION SEE PAGE 4
FOR CONTINUATION SEE PAGE 6

0 1:25,000 1 km

Print Date: 08-14-25 13:59:20

N

- Order limits
- Sheet index cutline
- Project section line

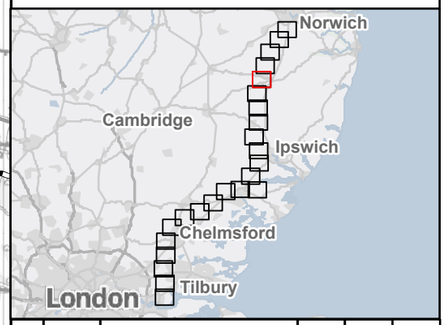
Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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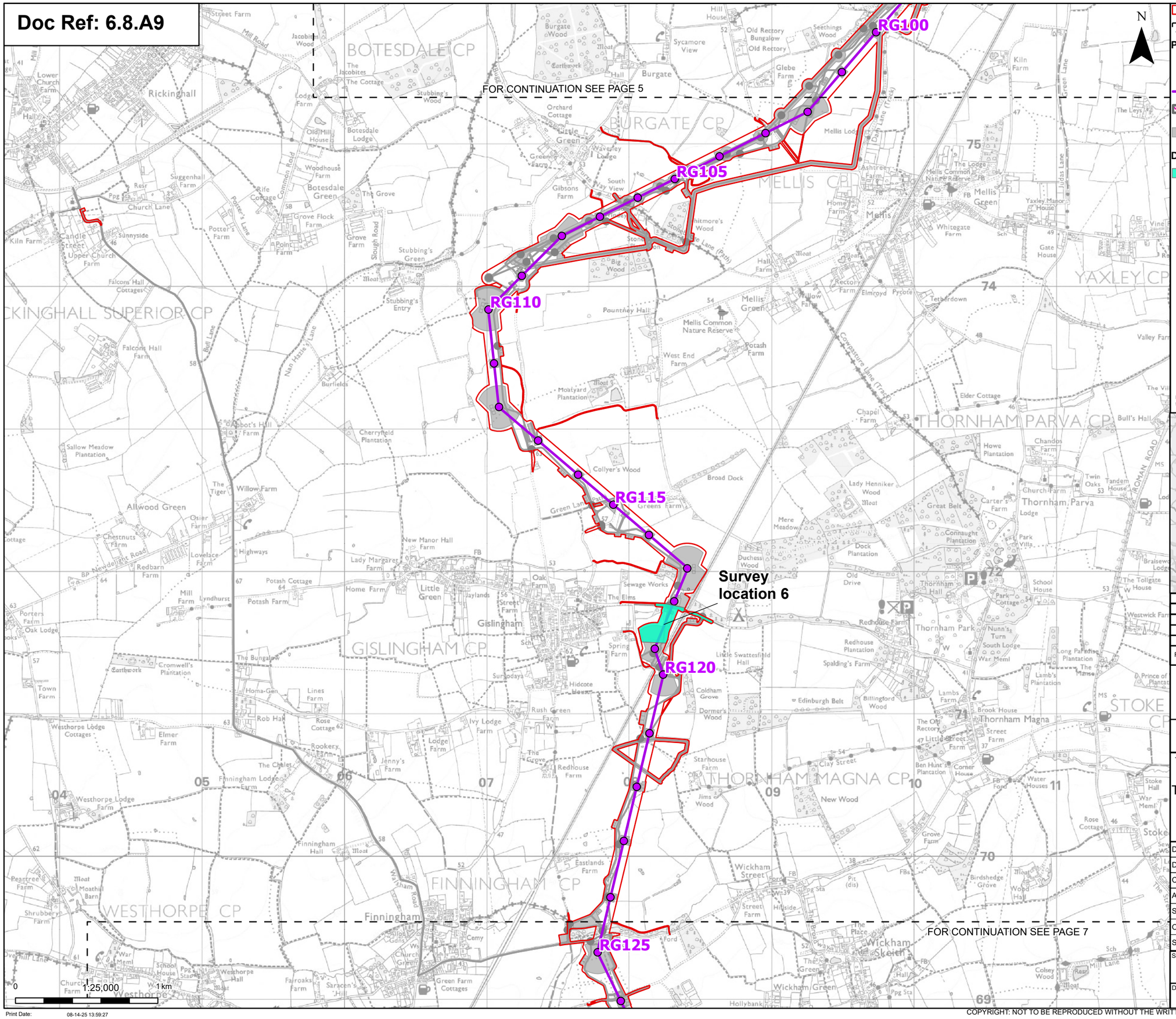


Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

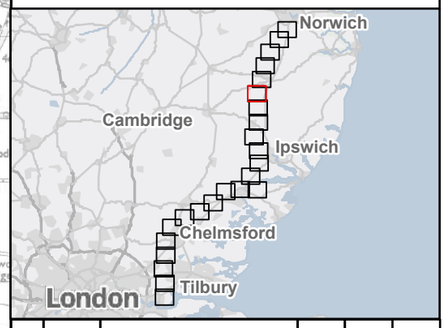
Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
Page 6 of 24

Designed	E. Pickering	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

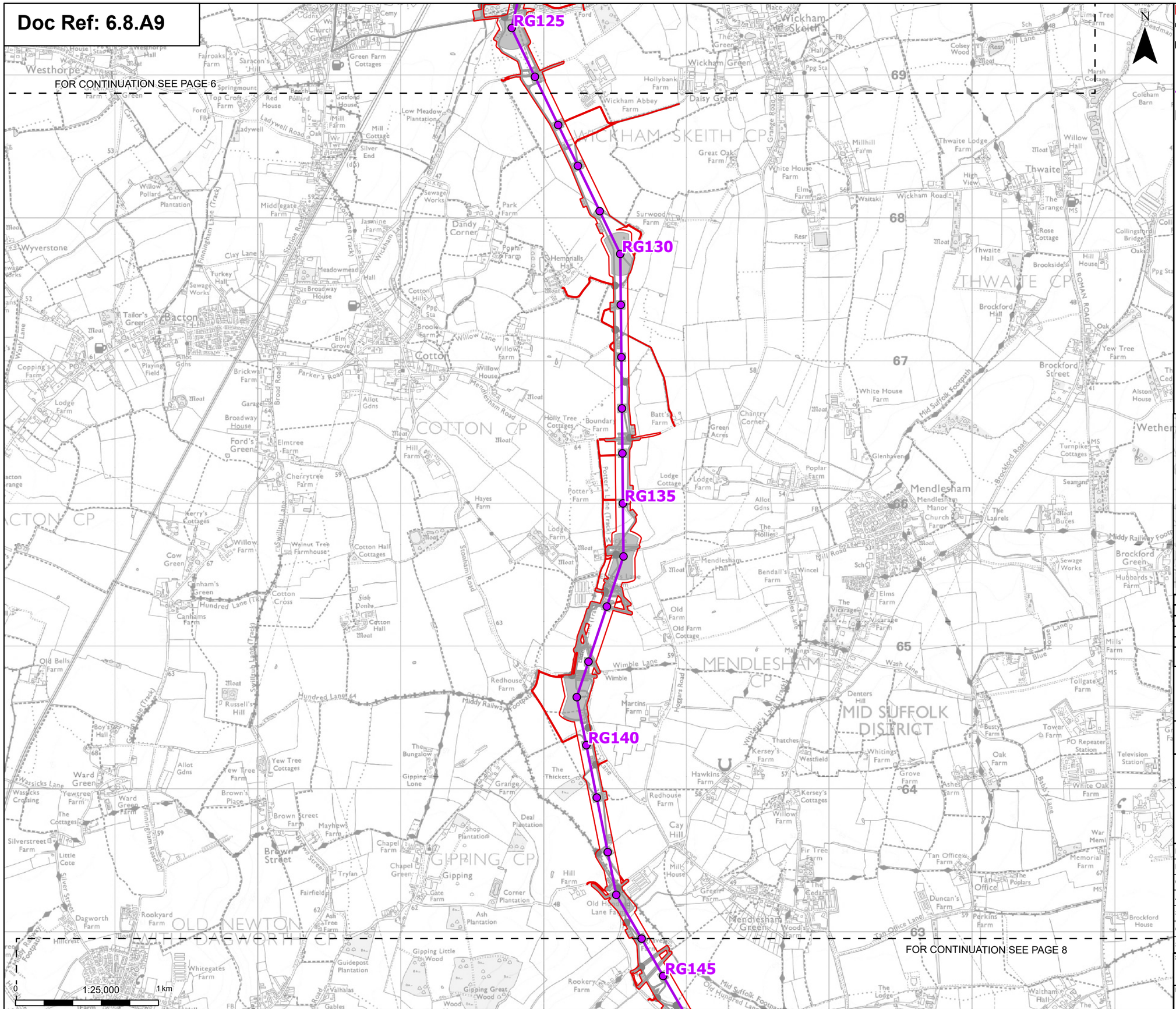
Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Print Date: 08-14-25 13:59:27

Doc Ref: 6.8.A9



Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

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A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

nationalgrid

PROJECT: Norwich to Tilbury

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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
Drawn	K. Fischer	Date	21 Aug 25
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Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

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Doc Ref: 6.8.A9

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RG145

RG150

RG155

RG160

RG165

N

0 1:25,000 1 km

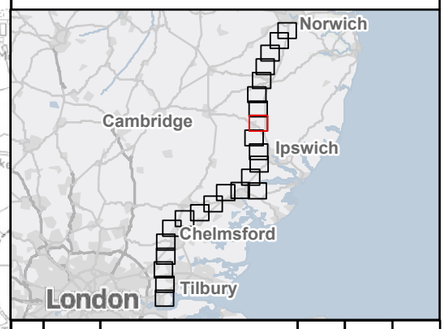
Print Date: 08-14-25 13:59:38

- Order limits
- Sheet index cutline

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

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RG170

RG175

RG180

RG185

RG190

Survey location 7

Survey location 8

FOR CONTINUATION SEE PAGE 10

N

0 1:25,000 1 km

Print Date: 08-14-25 13:59:44

- Order limits
- Sheet index cutline
- Project section line

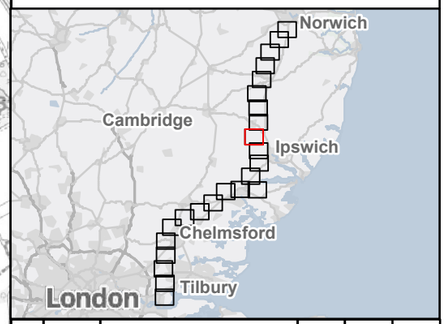
Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

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Survey location 8

RG190

RG195

RG200

RG205

RG210

JC1

JC5

JC10

JC15

Section B

Section C

Bramford Substation

Proposed substation extension

FOR CONTINUATION SEE PAGE 9

FOR CONTINUATION SEE PAGE 11

N

0 1:25,000 1 km

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- Order limits
- Sheet index cutline
- Project section line

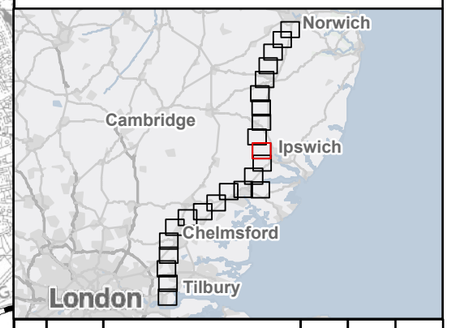
Proposed project design details

- Proposed full line tension gantry
- Proposed low duty gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Bramford Substation
- Bramford Substation Extension
- Other temporary and permanent construction and operational works

Discipline specific constraints

- Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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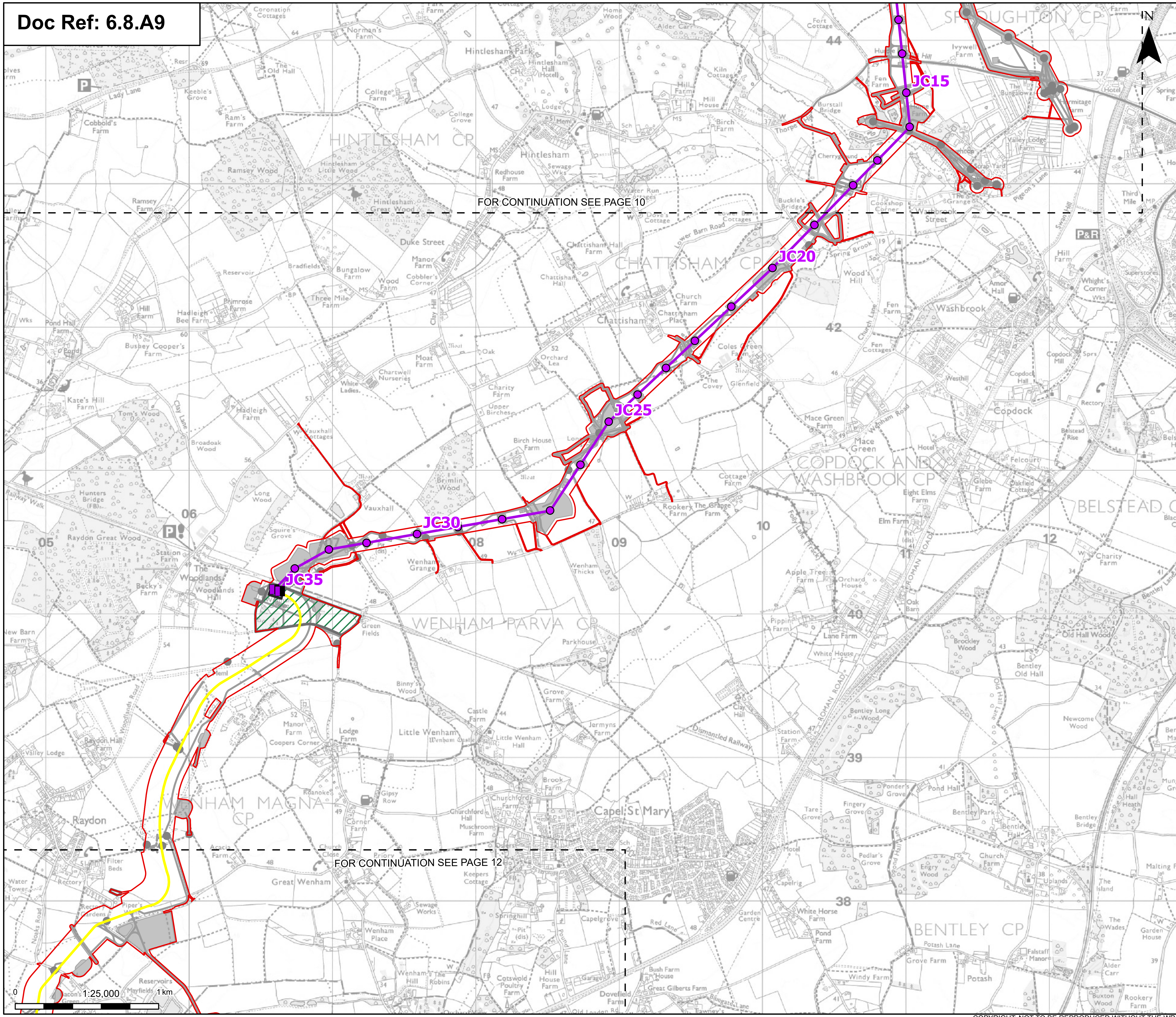
Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Doc Ref: 6.8.A9



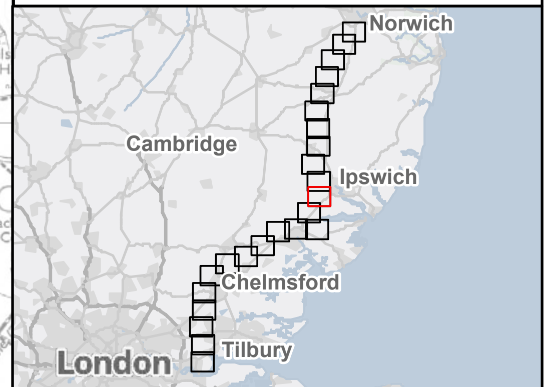
Legend

- Order limits
- Sheet index cutline

Proposed project design details

- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

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Trenchless Crossing: Higham Road

Trenchless Crossing: River Stour (north part)

Trenchless Crossing: River Stour (south part)

Trenchless Crossing: A12 highway crossing

FOR CONTINUATION SEE PAGE 11

FOR CONTINUATION SEE PAGE 14

FOR CONTINUATION SEE PAGE 13

Section C
Section D

0 1:25,000 1 km

Print Date: 08-14-25 14:00:05

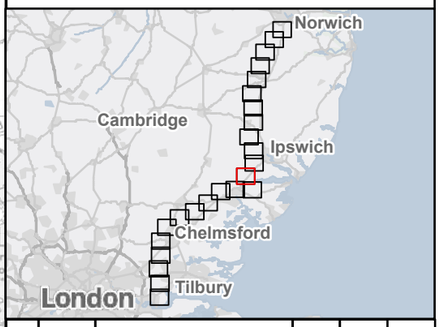
N

- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed underground cable alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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A	Aug 2025	FOR DCO APPLICATION	KF	AF	KB

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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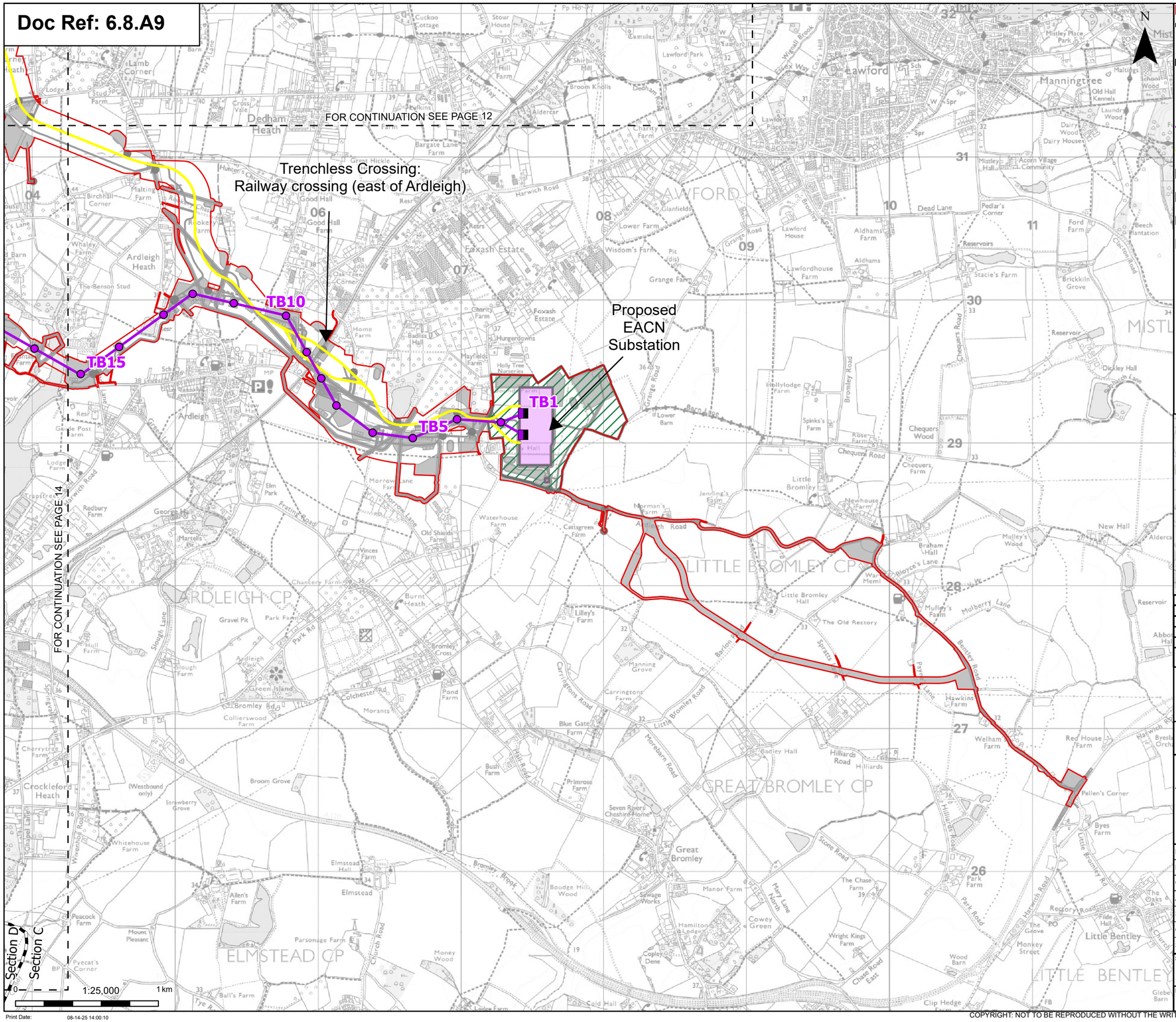
Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Doc Ref: 6.8.A9

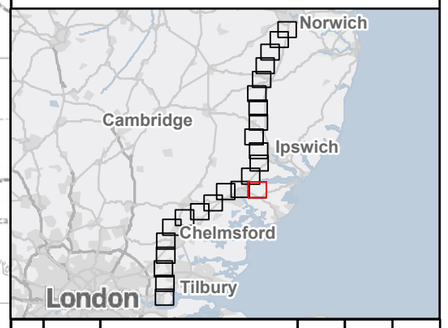


- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed DNO Substation
- Proposed East Anglia Connection Node Substation (EACN)
- Environmental area
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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Scale:	1:25,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

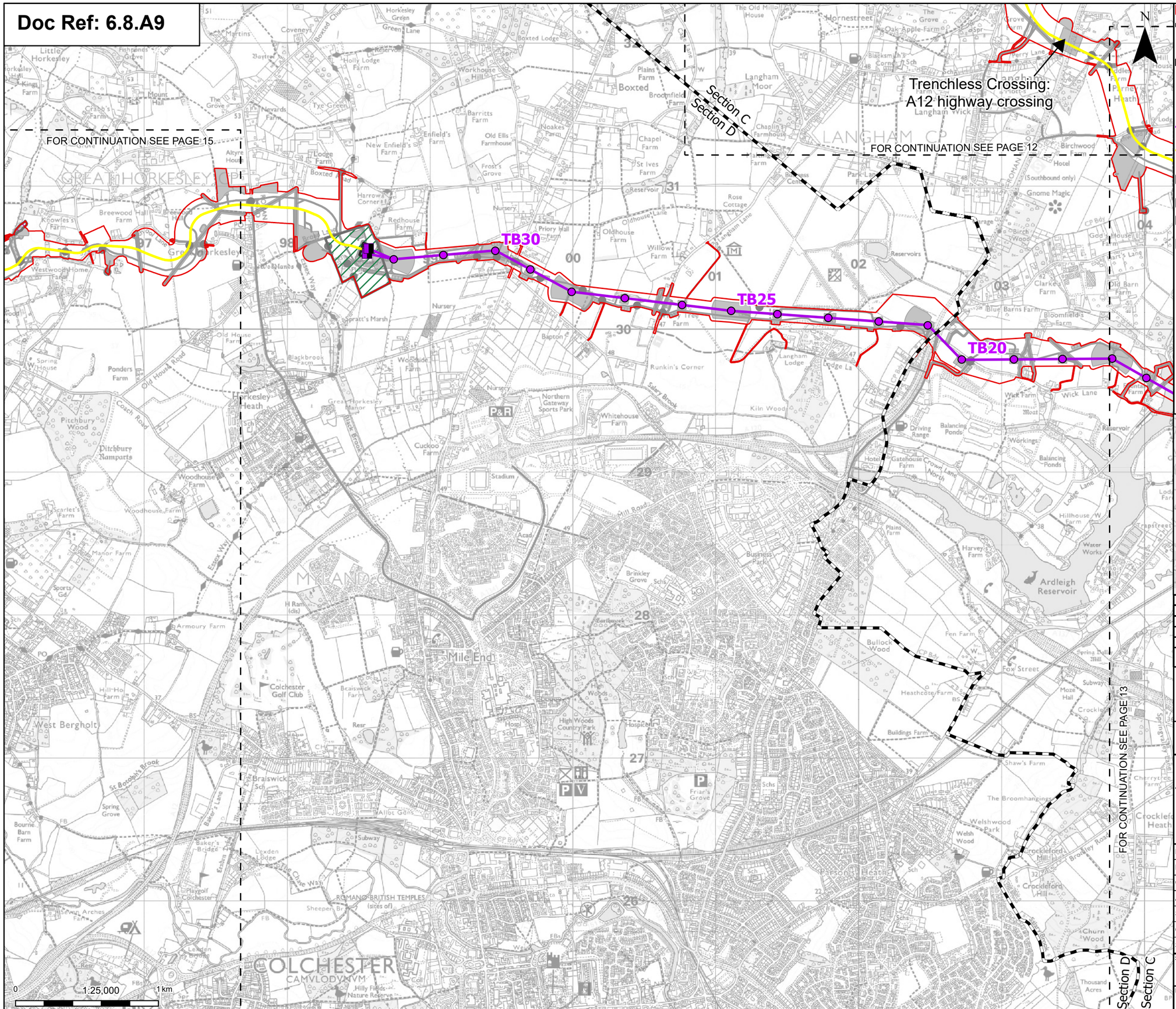
Suitability Description:
Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Print Date: 08-14-25 14:00:10

Doc Ref: 6.8.A9

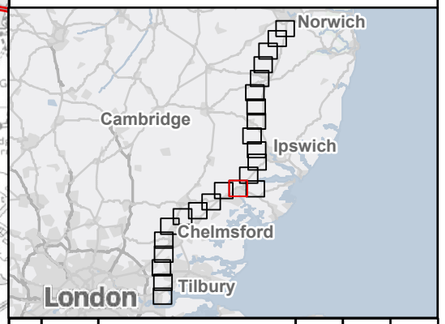


- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

nationalgrid

PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

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TB35
TB40
TB45
TB50
TB55
TB60

Survey location 9

FOR CONTINUATION SEE PAGE 14

FOR CONTINUATION SEE PAGE 16

0 1:25,000 1 km

Print Date: 08-14-25 14:00:22

N

- Order limits
- Sheet index cutline

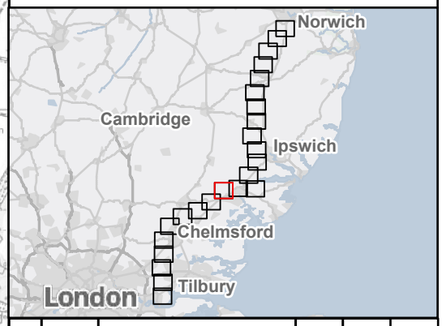
Proposed project design details

- Proposed full line tension gantry
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

Discipline specific constraints

- Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



Rev	Date	Description	Drawn	Check	Approv
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nationalgrid

PROJECT: Norwich to Tilbury

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Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description: Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

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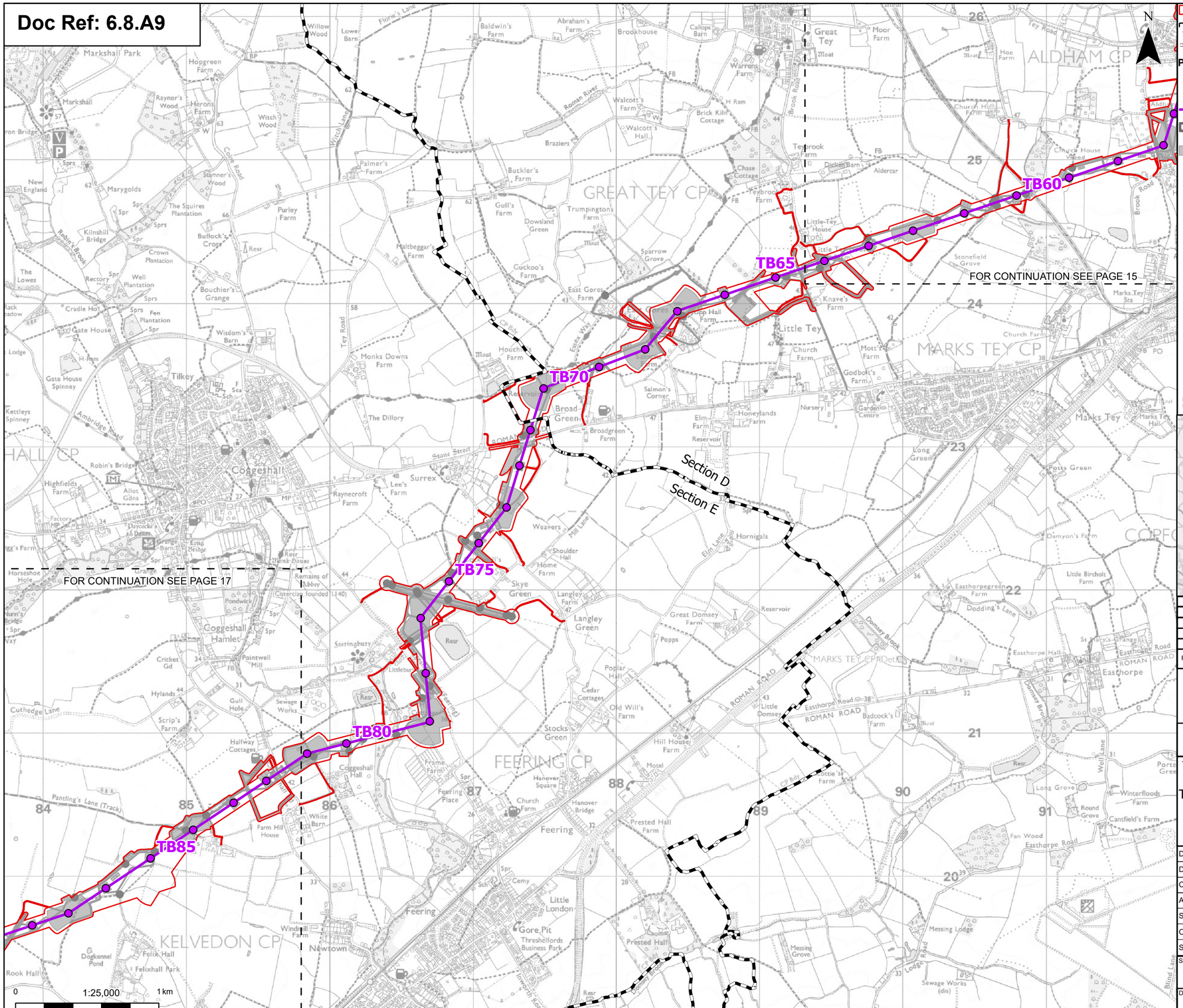

Order limits

Sheet index cutline

Project section line

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

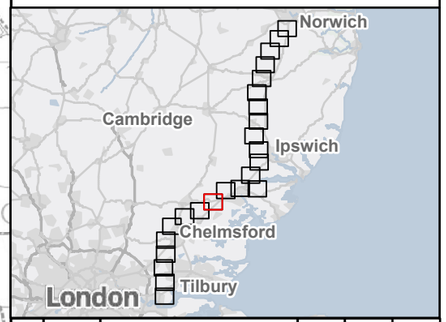

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

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TB85
TB90
TB95
TB100
TB105

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FOR CONTINUATION SEE PAGE 18

0 1:25,000 1 km

Print Date: 08-14-25 14:00:36

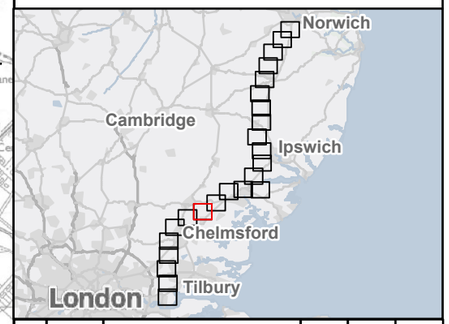
N

- Order limits
- Sheet index cutline

Proposed project design details

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



Rev	Date	Description	Drawn	Check	Approv
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PROJECT: Norwich to Tilbury

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Revision: A

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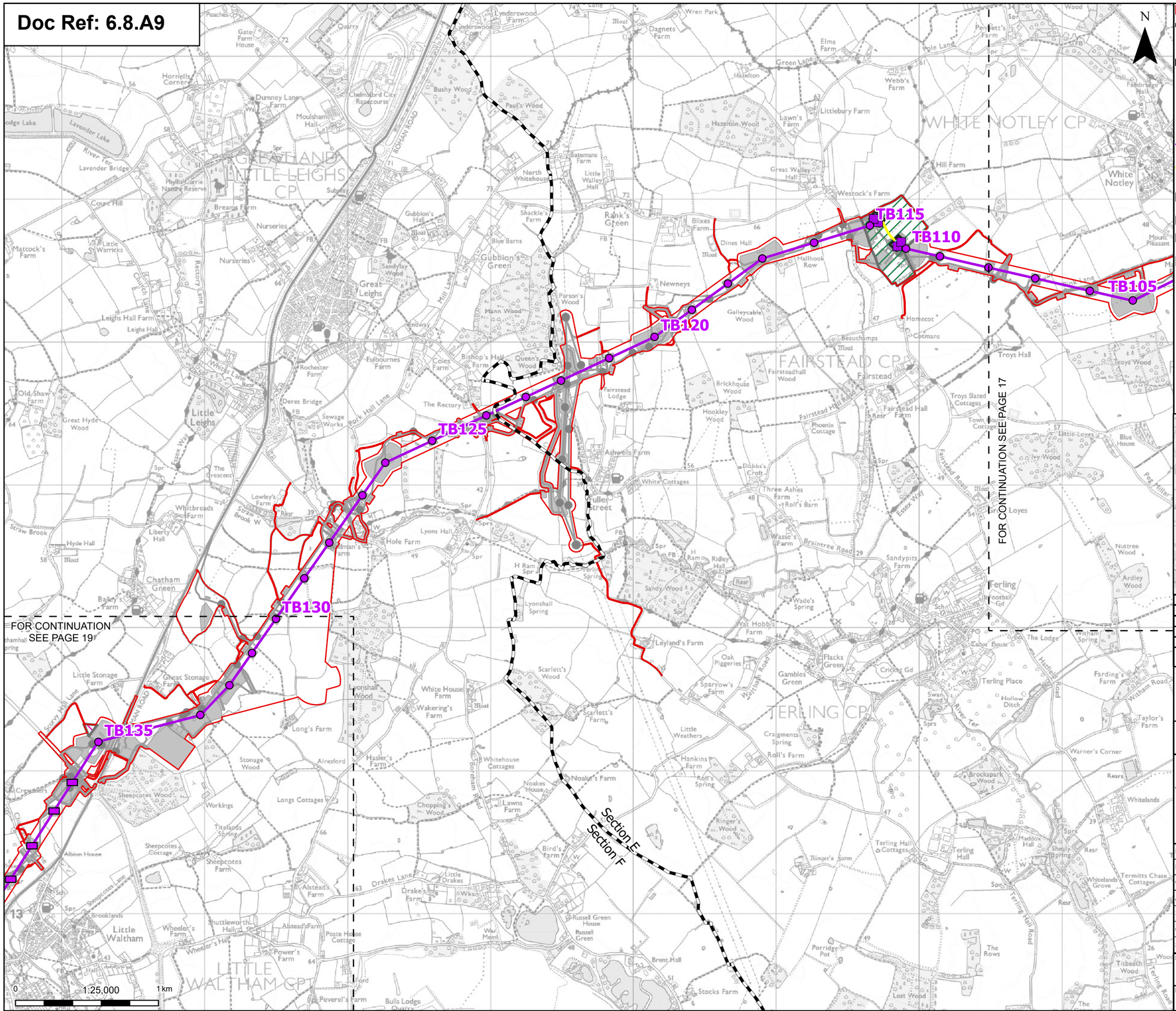

- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed low duty gantry
- Proposed low height pylon location
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

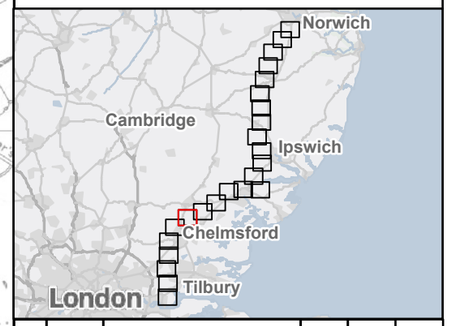

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025

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Suitability Code:	A2	Project Number:	10059280

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TB135

TB140

TB145

TB150

TB155

TB160

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FOR CONTINUATION SEE PAGE 20

N

0 1:25,000 1 km

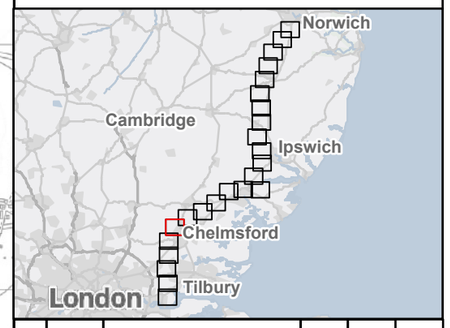
Print Date: 08-14-25 14:00:49

- Order limits
- Sheet index cutline

Proposed project design details

- Proposed low height pylon location
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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Designed	E. Pickering	Date	21 Aug 25
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Suitability Code:	A2	Project Number:	10059280

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Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00414

Revision: A

Doc Ref: 6.8.A9

TB160

TB165

TB170

TB175

TB180

Survey location 10

FOR CONTINUATION SEE PAGE 19

FOR CONTINUATION SEE PAGE 21

N

0 1:25,000 1 km

Order limits

Sheet index cutline

Project section line

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

Further bat survey areas

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

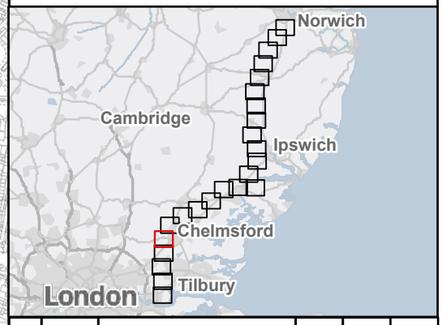

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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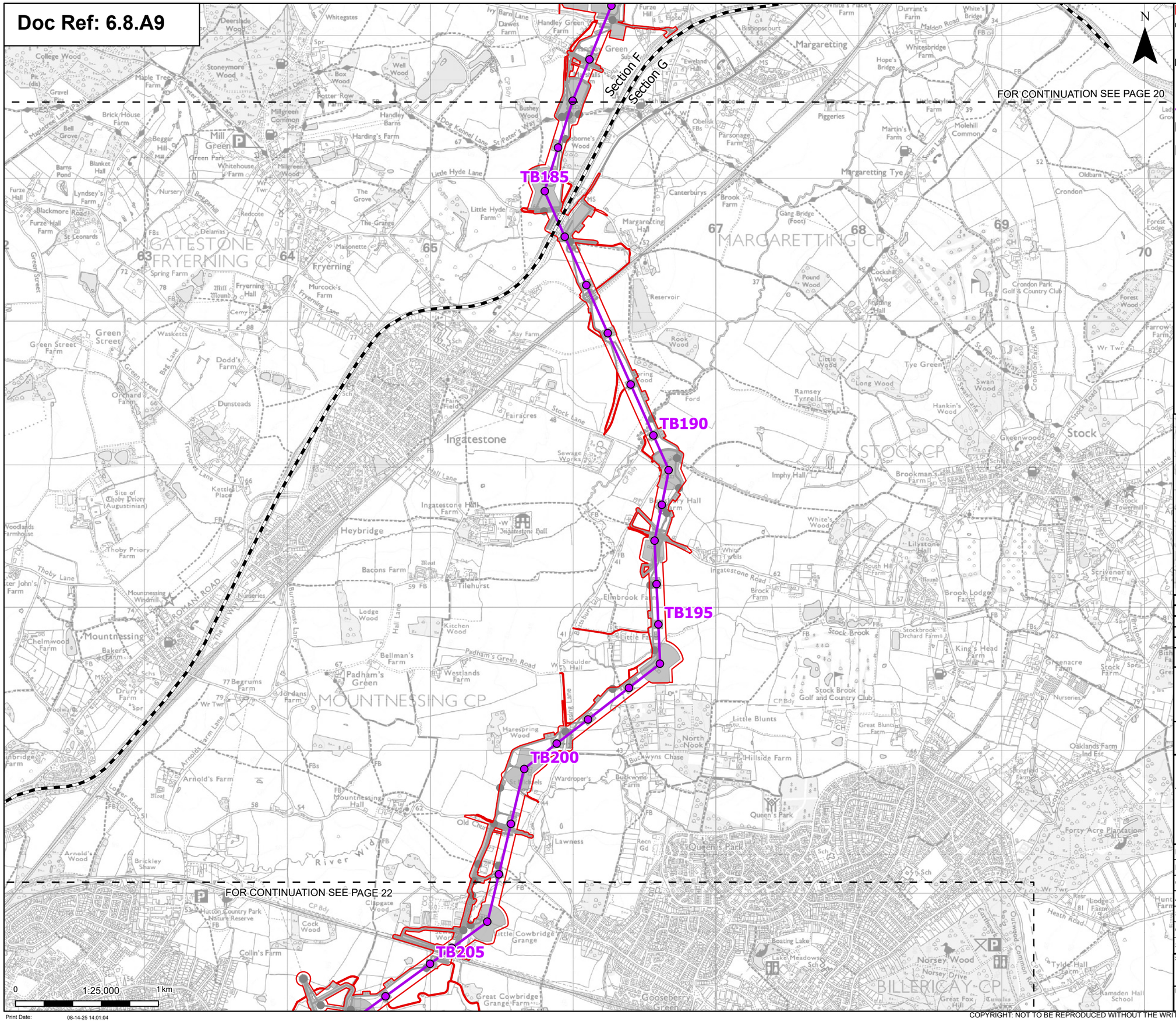

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Order limits
Sheet index cutline
Project section line

Proposed project design details

Proposed standard lattice pylon location
Proposed overhead line alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

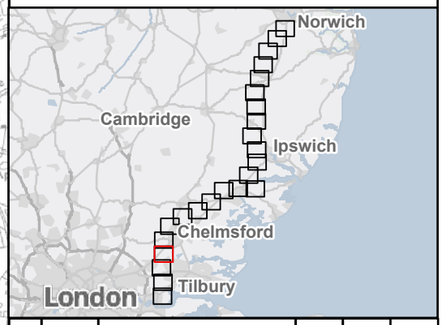

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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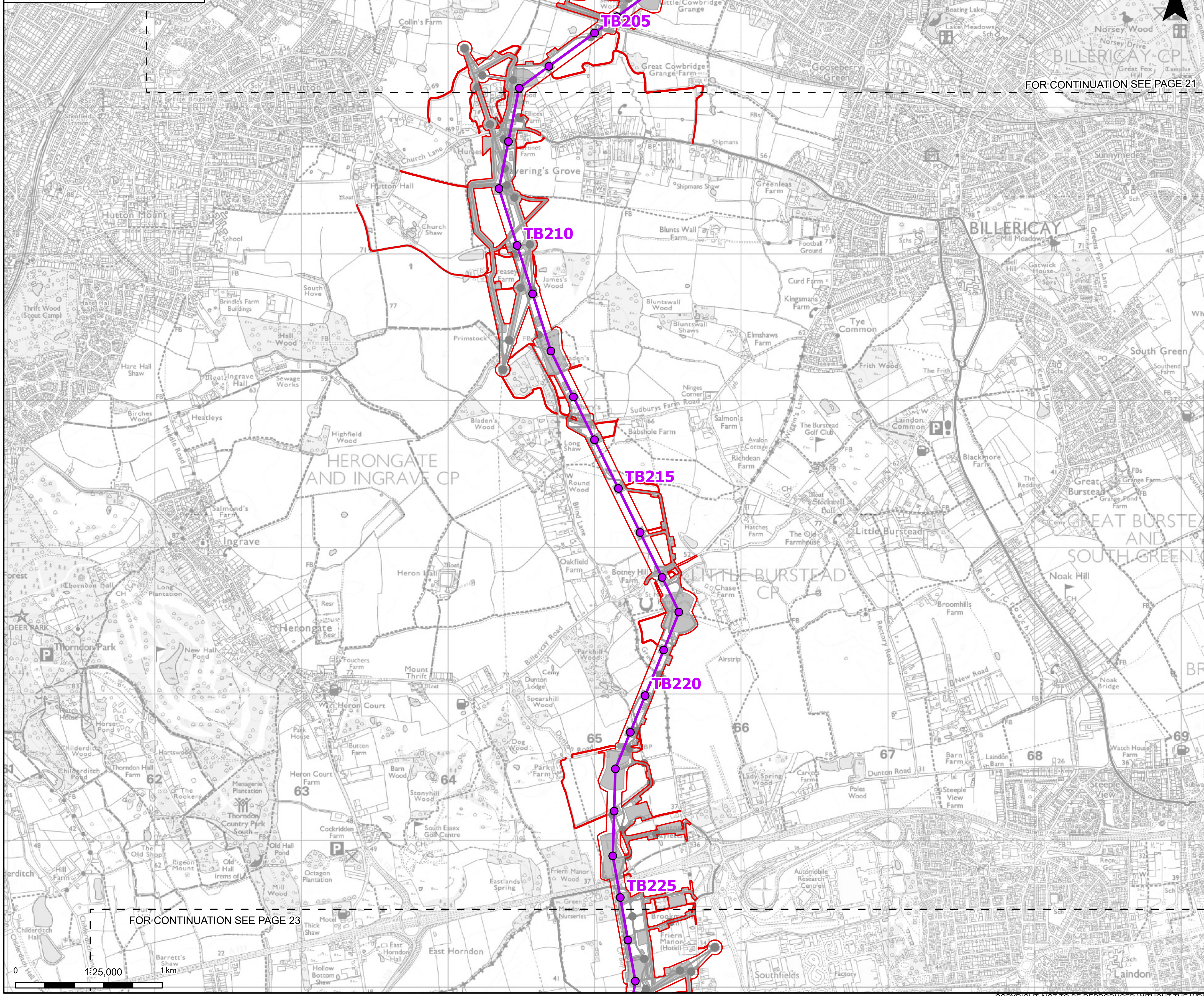

Order limits

Sheet index cutline

Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

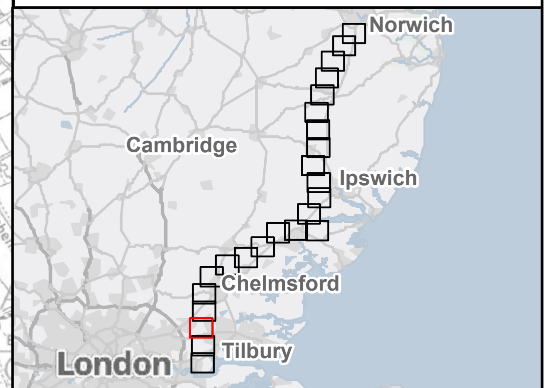

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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FOR CONTINUATION SEE PAGE 24

TB230

TB235

TB240

TB245

TB250

Section G

Section H

0 1:25,000 1 km

Print Date: 08-14-25 14:01:17

N

- Order limits
- Sheet index cutline
- Project section line

Proposed project design details

- Proposed low height pylon location
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).

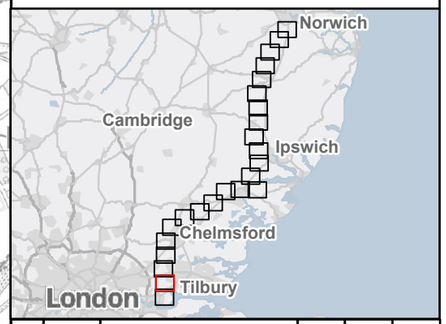

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Figure 8.9.3 - Ecology and Biodiversity - Trees with Potential Roost Features Subject to Further Survey 2025
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TB250
TB255
TB260
YYJ115
ZB20
YYJ120
ZB15RA
ZB15RB
ZB15RC
YYJ125R
ZB10
YYJ130
Proposed Tilbury North Substation

N

0 1:25,000 1 km

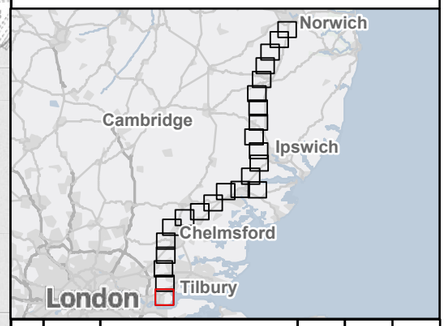
Print Date: 08-14-25 14:01:24

- Order limits
- Sheet index cutline

Proposed project design details

- Proposed full line tension gantry
- Proposed low duty gantry
- Existing pylon (modify)
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed Tilbury North Substation
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2).



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