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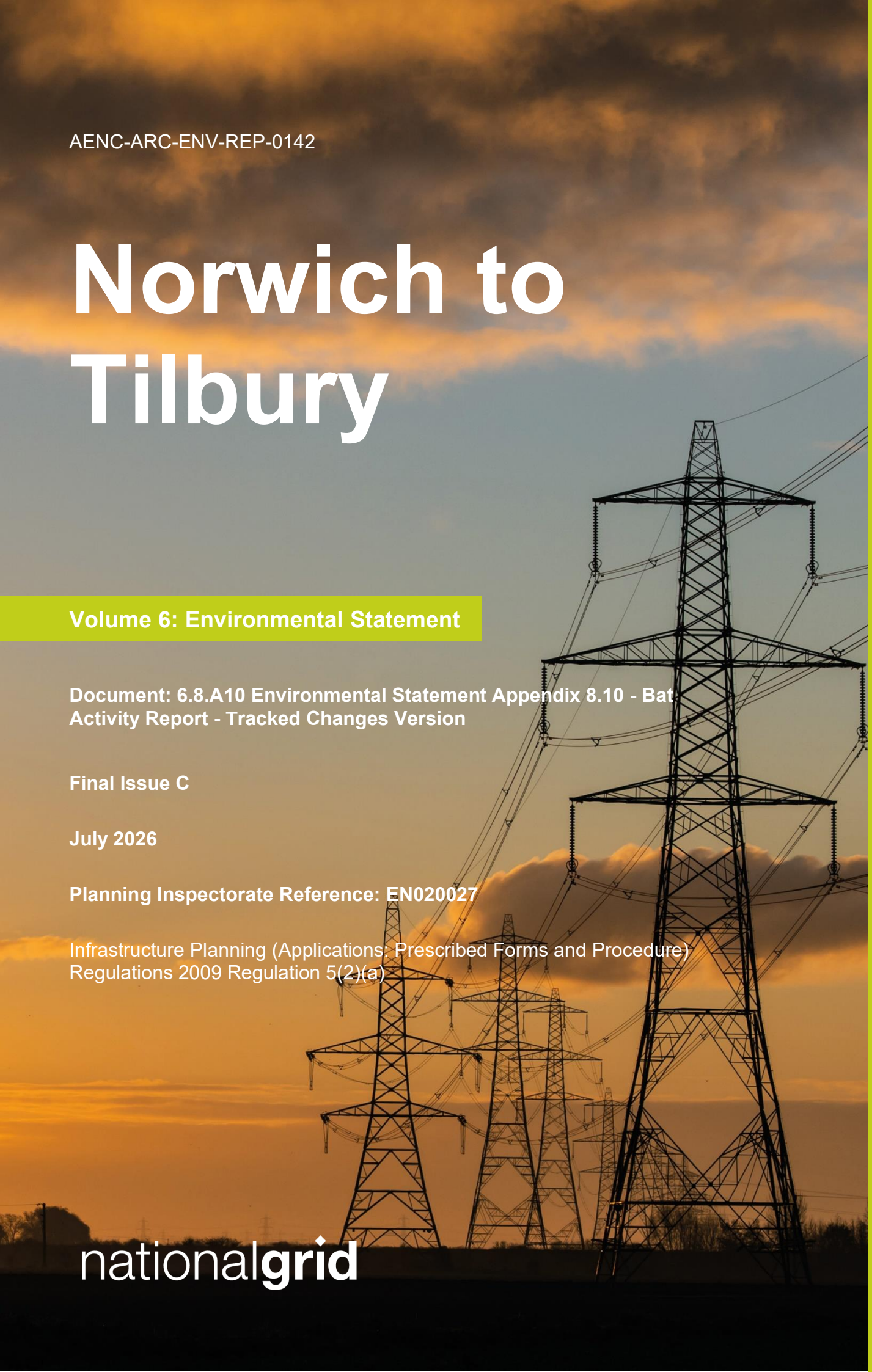

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Revision History

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A	29 August 2025	DCO Application
B	17 November 2025	Providing supplementary environmental information to Responses to advice provided under section 51 of the Planning Act 2008 by the Planning Inspectorate
C	21 July 2026	Deadline 7 to include latest cross references and to reflect corrections highlighted in **8.1 Errata List [REP1-071]** and **8.1 Errata List [REP4-185]**

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1. Bat Activity Report

1.1 Introduction

Background

1.1.1 This report has been produced as an appendix to Chapter 8: Ecology and Biodiversity (document reference 6.8) (Revision C~~B~~) 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 bat activity surveys undertaken between 2023 and 2025, to allow interpretation of bat activity of the period surveyed. This report should be read in conjunction with Appendix 8.9: Bat Roosting Report (document reference 6.8.A9) (Revision C~~B~~) and Appendix 8.11: Bat Radio-tracking Report (document reference 6.8.A11) (Revision B).

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). The methodology applied in this report supports the data collection for the assessment within Chapter 8: Ecology and Biodiversity (document reference 6.8) (Revision C~~B~~) and have been discussed and agreed with Natural England.

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 habitat 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 of the of the European Habitats Directive woodland bats (i.e., barbastelle *Barbastella barbastellus*) that do not occur where habitat diversity is of lower quality. Other species listed on Annex II of the European Habitats Directive (Bechstein's bat *Myotis bechsteinii*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*) were scoped out of this assessment as their geographical range restricts them to the south-west of England and Wales. Furthermore, their presence was not noted in the desk-based search or identified during the automated static surveys.

1.1.4 Based upon this approach, the EIA Scoping Report (document reference 6.19) identified the need for 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.

1.1.5 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 bats of such structures.

1.1.6 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 A8.10.1: Bat Static Deployment 2023-2025 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.

Brief and Objectives

1.1.7 The brief of the survey work was to obtain a baseline data for the Project to inform a robust impact assessment on commuting and foraging bats. The baseline data was informed by the following:

- A detailed desk study of bat activity records
- Field surveys using bat static detectors to establish the presence of bats and determine species.

1.1.8 The objectives of the study were to:

- Gain a representative sample of seasonal and spatial bat activity to assess the species assemblages and distribution at pre-determined locations based on habitat suitability and potential impacts
- Use the baseline dataset to determine the importance of the Survey Area for bats and identify key areas of bat activity
- Determine the likelihood of nearby roosting barbastelle and trigger the need for further aerial close inspection of trees to determine presence/absence of roosting bats
- Outline requirements for further survey work to inform detailed mitigation design and for a European Protected Species (EPS) licence application (should this be required).

Desk Study Area

1.1.9 A detailed desk study was undertaken in September 2023, as shown in Appendix A.9: Bat Roosting Report (document reference A.8.A9) (Revision C ~~B~~).

1.1.10 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. 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 Local Records Centres.

Survey Area

1.1.11 The Survey Area comprises all land within the Order Limits. Given the evolution of the design since the surveys began in 2023, there are some static detector locations that no longer fall within the Order Limits (and outside the Survey Area). The data collected has still been included in this report as the features selected for survey have connectivity with habitat features that could be used by commuting and foraging bats that lie within the Order Limits. The automated static detector locations are shown in Figure A8.10.1: Bat Static Deployment 2023-2025 in Annex A.

1.1.12 This Survey Area was selected based on the types of habitats and the nature of construction work (i.e., the avoidance of impacts, where possible, and the minimal/temporary nature of the remaining impacts proposed to habitat offering suitable potential for bats).

1.2 Relevant Legislation and Policy

Legal Compliance

1.2.1 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 A8.10.1.

Table A8.10.1 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, greater horseshoe bat and lesser horseshoe bat 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, injure, disturb, trade in, damage or destroy a breeding site or resting place of the animals such as bats that are 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.
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 by making it an offence to kill, injure, take, damage, destroy, sell, or possess them (with exceptions).

Legislation	Details
	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.

1.2.2 The Conservation of Habitats and Species Regulations 2017 references favourable conservation status (FCS). FCS is the minimum threshold at which there is confidence 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.

1.2.3 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 FCS. To achieve FCS, barbastelle bat populations in the UK should increase to be within the range of 73,000 to147,000 individuals, occupying the habitat available across the species' current and historic range (Matt Zeale, M. R. K. and Natural England, 2024).

Planning Policy

1.2.4 Chapter 8: Ecology and Biodiversity (document reference 6.8) (Revision C ~~B~~) provides details of relevant planning policy.

1.3 Methodology

Desk Study

1.3.1 Appendix 8.9: Bat Roosting Report (document reference 6.8.A9) (Revision C ~~B~~) provides the desk study methodology for bats.

Survey Methodology

1.3.2 The survey methodology detailed below is based on professional judgment, previous experience and best practice guidance (Collins, J. (ed.) (2023)).

Automated static detector surveys

Scoping

1.3.3 Aerial photographs and Ordnance Survey maps were examined to identify the distribution of suitable habitats within the landscape and the connectivity of features for bats to determine the most appropriate locations at which to locate static detectors. This desk-based information was used in combination with the proposed design of the Project. Static detectors were strategically placed where effects on bats were anticipated because of severance/fragmentation of habitat, temporary/permanent removal of vegetation and/or indirect effects arising from light and noise of temporary construction (i.e., haul roads, access tracks, temporary construction compounds) and/or operational use of permanent assets (i.e. substations, CSE compounds, permanent access roads for substations/CSE compounds). Locations that were identified for the placement of static detectors met the following criteria:

- Loss of suitable linear habitat (i.e., a significant gap which could adversely affect bat species using the site), or
- Habitat is suitably mature, thick (at least 5 m wide), or
- Roosting habitat (buildings/woodlands with roost potential) with connectivity to suitable habitat that is likely to support bat activity.

1.3.4 Based upon the initial scoping assessment, the proposed static detector locations were reviewed, and Red-Amber-Green (RAG) rated. The RAG rating criteria were as follows:

- Red: High value bat habitat (i.e., deciduous woodland, structurally diverse and mature hedgerows, watercourses, suitable commuting and foraging habitat connecting to potential roosting locations)
- Amber: Moderate value bat habitat (i.e., conifer plantation with linear habitat connections, watercourses, scattered trees, and pasture / meadow habitat)
- Green: Low value bat habitat (i.e., filled with gaps, fragmented and recently planted hedgerows, and arable land).

1.3.5 In addition to considering the potential impact of the Project to bats, other contributory factors were assessed. This included the presence of rarer species such as barbastelle for which East Anglia is considered to support a population that is 'highly significant in the context of national distribution' (Harrington *et al.,* 1995). A

review of presence records for barbastelle was undertaken supported by predictions of habitat suitability for this species.

1.3.6 Table A8.10.2 provides justification of the RAG rating at each static location with locations shown on Figure A8.10.1: Bat Static Deployment 2023-2025 in Annex A.

1.3.7 To enable a pragmatic approach to static survey deployment along the length of the Project, locations rated Red and Amber were taken forward for static surveys. Following best practice guidance (Collins, J. (ed.) (2023)), in the Red rated locations static detectors were operational for 5 consecutive nights per month from May to September. At Amber rated locations static detectors were operational for five consecutive nights in pre-parturition (spring), maternity (summer) and post-parturition (autumn).

1.3.8 No static detectors were deployed in low value habitat (RAG rated Green). However, these locations will still be treated as suitable habitat for more widespread, common bat species in lower numbers and any impacts to these habitats would be mitigated for appropriately.

Table A8.10.2 Scoping of automated static detectors

Project Section	Location	RAG Rating	Habitat Description
A	1	Amber	Public path going through mixed deciduous woodland fenced on either side from cropland.
A	2	Amber	Mixed deciduous woodland edge connected by hedgerows to wider landscape.
A	3	Red	Mixed deciduous hedgerow between cropland and connected to the wider landscape by other hedgerows.
A	4	Amber	Mixed deciduous hedgerow with trees between croplands and connected to wider landscape by hedgerows.
A	5	Red	Mixed deciduous hedgerow between cropland and connected to the wider landscape by other hedgerows.
A	6	Amber	Mixed deciduous woodland edge between cropland and water treatment station connected by hedgerows to the wider landscape.
A	7	Red	Edge of mixed deciduous woodland located between grassland and connected to the wider landscape by hedgerows.
A	8	Amber	Hedgerow with trees between cropland and grassland and connected to the wider landscape by hedgerows.
A	9	Red	Hedgerow with trees between cropland and grassland. Connected to woodlands at each end and to the wider landscape by hedgerows.
A	10	Red	Hedgerow between croplands and connected to the wider landscape by other hedgerows.

Project Section	Location	RAG Rating	Habitat Description
A	11	Red	Edge of mixed deciduous woodland located between grassland and cropland and connected to the wider landscape by hedgerows.
A	12	Amber	Deciduous tree line between cropland and grassland, connected to the wider landscape by hedgerows.
A	13	Red	Hedgerow with trees between cropland and connected to the wider landscape by hedgerows.
A	14	Red	Tree line between a road and cropland, connected to the wider landscape by hedgerows.
A	15	Red	Deciduous forest edge between grassland and connected to the wider landscape by hedgerows.
B	16	Red	Deciduous woodland edge between grassland and a local road, connected to the wider landscape by hedgerows.
B	17	Amber	Deciduous woodland edge next to cropland, connected to the wider landscape by hedgerows.
B	18	Red	Hedgerow with trees between cropland, connected to woodland at each end and to the wider landscape by hedgerows.
B	19	Amber	Hedgerow with trees between cropland, connected to the wider landscape by hedgerows.
B	20	Red	Mixed deciduous woodland with grassland, between local road, cropland and grassland, connected to the wider landscape by hedgerows.
B	21	Red	Edge of mixed deciduous woodland located between grassland, cropland and local road, and connected to the wider landscape by hedgerows.
B	22	Amber	Hedgerow with trees between cropland, connected to the wider landscape by hedgerows.
B	23	Amber	Mixed deciduous woodland between cropland, connected to woodland at each end and to the wider landscape by hedgerows.
B	24	Amber	Hedgerow with trees between cropland, connected to wider landscape by hedgerows.
B	25	Red	Edge of mixed deciduous woodland located between grassland and cropland, connected to the wider landscape by hedgerows.
B	26	Amber	Hedgerow with trees between cropland, connected to woodland at each end and to the wider landscape by hedgerows.
B	27	Red	Hedgerow with trees between cropland, local road and grassland, connected to the wider landscape by hedgerows.

Project Section	Location	RAG Rating	Habitat Description
B	28	Red	Hedgerow with trees between grassland, along public path and connected to wider landscape by hedgerows.
B	29	Amber	Hedgerow with trees between grassland and cropland, with woodland at one end and connected to wider landscape by hedgerows.
B	30	Amber	Hedgerow between cropland and grassland, with woodland at one end and connected to the wider landscape by other hedgerows.
C	31	Amber	Hedgerow with trees between local road and grassland, connected to the wider landscape by hedgerows.
C	32	Red	Hedgerow with trees between grassland, with woodland at one end, connected to the wider landscape by hedgerows. Watercourses and waterbodies providing connectivity to the wider landscape.
C	33	Red	Hedgerow with trees between cropland, connected to the wider landscape by hedgerows.
C	34	Amber	Hedgerow with trees between cropland and local road, with woodland at one end and connected to the wider landscape by hedgerows.
C	35	Red	Line of deciduous trees connected to woodland at each end, and to the wider landscape by hedgerows.
C	36	Amber	Edge of mixed deciduous woodland located between grassland and connected to wider landscape by hedgerows. River Stour in proximity.
C	37	Red	Mixed woodland surrounded by cropland and grassland, connected to the wider landscape by hedgerows. River Stour in proximity of woodland.
C	38	Amber	Mixed deciduous hedgerow with trees between cropland and private gardens, connected to wider landscape by hedgerows.
C	39	Red	Edge of mixed deciduous woodland located between grassland and connected to the wider landscape by hedgerows. Black Brook and various waterbodies within woodland and wider landscape.
C	40	Amber	Hedgerow with trees between cropland, local road and private garden grassland, connected to the wider landscape by hedgerows.
C	41	Amber	Hedgerow with trees between cropland, local road and private garden grassland, connected to the wider landscape by hedgerows.
C	42	Amber	Hedgerow with trees between cropland, local road and railroad, connected to wider landscape by hedgerows.

Project Section	Location	RAG Rating	Habitat Description
C	43	Amber	Hedgerow with trees between cropland and grassland, connected to the wider landscape by hedgerows.
C	44	Amber	Hedgerow with trees between cropland and private gardens, with woodland at each end and connected to the wider landscape by hedgerows.
D	45	Amber	Edge of mixed deciduous woodland located between grassland, local road and cropland, connected to the wider landscape by hedgerows.
D	46	Amber	Line of deciduous trees along the local road and between cropland, connected to the wider landscape by hedgerows.
D	47	Red	Lind of scrub with trees, between cropland and grassland, connected to the wider landscape by hedgerows.
D	48	Amber	Hedgerow with trees between cropland and grasslands, with woodland at each end and connected to wider landscape by hedgerows.
D	49	Amber	Line of deciduous trees along the local road and between cropland, with woodland at one end and connected to the wider landscape by hedgerows.
D	50	Red	Edge of mixed deciduous woodland adjacent to cropland and grassland, connected to the wider landscape by hedgerows.
E	51	Red	Wide hedgerow with trees between cropland and grassland, connected to the wider landscape by hedgerows.
E	52	Red	Plantation of Alder *Alnus* sp. trees within deciduous woodland, surrounded by cropland, grassland and private gardens, connected to wider landscape by hedgerows. River Blackwater runs along the eastern edge of the woodland providing riparian connectivity.
E	53	Red	Edge of mixed deciduous woodland located between private gardens, local road and cropland, connected to wider landscape by hedgerows.
E	54	Red	Hedgerow with trees between cropland and grassland, with woodland at each end and connected to wider landscape by hedgerows.
E	55	Amber	Edge of mixed deciduous woodland located between grassland, local road and cropland, connected to the wider landscape by hedgerows.
E	56	Red	Edge of mixed woodland located between cropland, connected to the wider landscape by hedgerows. River Brain is a wooded riparian corridor.

Project Section	Location	RAG Rating	Habitat Description
E	57	Amber	Edge of mixed woodland located between grassland, local road and cropland, connected to the wider landscape by hedgerows.
F	58	Red	Edge of mixed woodland located between grassland and cropland, connected to the wider landscape by hedgerows.
F	59	Red	Edge of mixed woodland located between grassland, local road and cropland, connected to the wider landscape by hedgerows.
F	60	Amber	Line of deciduous trees along a stream and between cropland, with woodland at one end and connected to the wider landscape by hedgerows.
F	61	Red	Wide hedgerow with trees between local road adjacent to woodland and grassland, connected to the wider landscape by hedgerows.
F	62	Red	Wide hedgerow with trees between cropland, with woodland at each end and connected to the wider landscape by hedgerows.
F	63	Amber	Hedgerow with trees between cropland, with woodland at one end and connected to the wider landscape by hedgerows.
G and H[1]	64	Red	Wide hedgerow with trees along a ditch, between grassland with solar panels, connected to wider landscape by hedgerows.

1.3.9 An additional nine static detector locations (Locations 65-73) were subsequently scoped in following the above detailed scoping approach, following changes to the proposed Project and previous access restrictions. These are detailed in Table A8.10.3 and shown on Figure A8.10.1: Bat Static Deployment 2023-2025 in Annex A. Static detector surveys at these nine locations were undertaken over the 2025 bat survey season (May-September 2025).

Table A8.10.3 *Additional bat static locations 2025*

Project Section	Location	RAG Rating	Habitat Description
A	65	Red	Woodland band along brook. Well connected to wider landscape.
B	66	Red	Double line of trees along field boundary. Some habitat connections to wider landscape.
B	67	Amber	Hedgerow with trees between fields of cropland.
C	68	Amber	Hedgerow with occasional trees on either side of narrow lane.

[1] Only one static location across these two Project Sections, and therefore, these Project Sections have been combined.

Project Section	Location	RAG Rating	Habitat Description
C	69	Amber	Line of mature trees along side of road.
C	70	Red	Line of mature trees connected to block of woodland to the east.
C	71	Amber	Hedgerow and mature trees along Dedham Road.
E	72	Amber	Line of trees connected to woodland in the wider landscape.
F	73	Amber	Line of trees connected to woodland in the wider landscape.

Field Surveys

1.3.10 Based upon the scoping assessment, a total of 73 locations for static detectors (RAG Red or Amber) were identified in locations throughout the Project, with locations shown on Figure A8.10.1: Bat Static Deployment 2023-2025 in Annex A.

1.3.11 Of the 73 locations identified (RAG Red or Amber), 37 were Amber-rated and 36 Red-rated. When split by Project Section the total number of automated static detector locations in each section are:

- Section A: 16 Locations
- Section B: 17 Locations
- Section C: 18 Locations
- Section D: 6 Locations
- Section E: 8 Locations
- Section F: 7 Locations
- Section G and H: 1 Location.

1.3.12 The 'Song Meter SM4BAT full spectrum static detectors' were calibrated at the beginning of the surveys and deployed with omnidirectional microphones directed at an upward angle and at a height of approximately 2 m above ground level, recording for a minimum of 5 consecutive nights. The dates of static detector deployment can be found in Annex C: Static Detector Reference and Dates of the Static Detector Surveys.

1.3.13 The static detectors were deployed in accordance with Bat Conservation Trust (BCT) Survey Guidelines (Collins, J. (ed.) (2023)). The static detectors were set to begin recording 30 minutes prior to sunset and until 30 minutes after sunrise on an automatic trigger with standardised threshold ~~values at 'Crest Advantage', allowing for high sensitivity detection of bat calls~~. Settings can be viewed in Annex B: Bat Static Detector Settings.

Sound Analysis

1.3.14 All recordings were stored on secure digital memory cards and a secure server and subsequently analysed using Kaleidoscope Pro, an automated analysis software. For the purposes of analysis, a 'bat pass' is defined as a single sound file. Each sound file was analysed using Kaleidoscope Pro software to verify species.

1.3.15 Kaleidoscope Pro analysis software produces an output which presents the automated identification of each recording. When the recordings show bats to be present, Kaleidoscope Pro identifies the echolocation call down to species level. Kaleidoscope Pro analyses individual pulses and the overall bat sequence of pulses to make a classification.

1.3.16 The following outlines the process for analysing the bat calls:

- Bat calls were run through Kaleidoscope-Pro using the 'Auto-ID' function, which enables identification of species or species groups based on call parameters
- The auto analysed files were then manually identified as part of the Quality Assurance process by a competent ecologist experienced in the use of the Kaleidoscope Pro software. The calls were randomised and then the following percentage of calls were subject to further Quality Assurance review:
  - All unidentified (NOID)
  - 10% barbastelle
  - 5% all other calls (including Noise files)
- Where the Auto-ID label was incorrect, the correct species label was attributed to the call. Each file may contain calls of multiple bat species; however, the Auto-ID function is only capable of labelling one species. This was corrected during manual checks by duplicating the file and labelling each species separately
- If 50% of the 5% Noise files were bats, then all Noise files were manually reviewed.

1.3.17 Given barbastelle (Annex II species) is known to be present in the East Anglia area, the data collected from the automated static detectors was used to determine the likelihood of nearby roosting barbastelle bats, and trigger the need for further inspection of trees. 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. As a precautionary approach, all barbastelle passes within 60 minutes post sunset were therefore taken forward for review. This approach to further roost survey has been agreed in advance with Natural England.

Activity Normalisation

1.3.18 Prior to the static detector data being statistically analysed, the data was 'normalised' to allow activity levels between survey locations to be compared. Transforming the data to 'passes per hour' controls seasonal variation in night length, allowing for standardised data to provide an index of activity which can be compared across different static detector locations. The 'normalisation' of data was conducted by dividing the number of calls recorded by the number of hours that a static detector

was recording. This normalisation also controlled for the variation in the number of static detectors in each Project Section.

1.3.19 Data analysis was undertaken using 'R' script software that enabled comprehensive data analysis. This approach provides improvements in the depth of assessment and graphical representation of the data compared other statistical analysis.

1.3.20 All statistical analyses were undertaken using 'R' and included descriptive statistical measures including the mean and standard deviation to calculate the variability of the data sets. The results of these calculations provided foundational insights for further statistical analyses, including hypothesis testing and comparisons across data sets. One-way Analysis of Variance (ANOVA) was employed to determine whether there were statistical differences between data sets. A significance level of 0.05 was set for all statistical tests.

Assessing the Importance of the Bat Assemblage

1.3.21 Sites of importance to bats often support several species, and it can be helpful to consider the importance of the assemblage as well as the importance for individual bat species. Assigning a level of importance to an assemblage provides contextual information only; it is not expected that the assemblage would be assessed as a single biodiversity receptor. Table 3.3 within the UK Bat Mitigation Guidelines (2023) (reproduced in Annex F: Table 3.3 UK Bat Mitigation Guidelines) was used to assess the importance of the bat assemblage in a geographical context.

Dates of Survey and Personnel

1.3.22 The lead surveyors in the static detector surveys were experienced ecologists, competent at undertaking static detectors surveys that are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) or Institution of Environmental Sciences. Dates of the surveys and weather conditions are presented in Annex C: Static Detector Reference and Dates of the Static Detector Surveys and Annex D: Weather Conditions of the Static Detector Surveys.

1.3.23 The data was analysed by experienced ecologists that are members of CIEEM with at least 4 years of experience in data analysis.

Notes and Limitations

1.3.24 Records held by local environmental record centres are collected on a voluntary basis; the absence of records does not demonstrate the absence of species; it may simply indicate a gap in recording coverage. The data collection is not exhaustive and can be biased towards areas with public access or where surveys have taken place to inform other development projects. It is possible that bats are present within/adjacent to the Order Limits that were not identified during the data searches; undertaking the surveys outlined in this report ensures this is not a constraint to the impact assessment.

1.3.25 It should be noted that no transect surveys have been included as part of the bat survey work scope, this approach has been agreed in advance with Natural England. A summary of consultations can be found in Chapter 8: Ecology and Biodiversity (document reference 6.8) (Revision C ~~B~~).

1.3.26 Due to land access limitations, automated static detector surveys were not conducted at any static detector locations in May 2023. Surveys were conducted between June and September 2023 as access became available. It is considered that lack of survey data for May 2023 is not a significant limitation to the study, as baseline data was obtained from automated static detector surveys between May to September in both 2024 and 2025 in combination with the radio-tracking surveys and back-tracking surveys, which provide detailed information on targeted species activity and roosting behaviours where it was predicted that there was the potential for significant effects to roosting, foraging, and commuting.

1.3.27 As noted in the methodology, the data was standardised to bat passes per hour so that where less than five nights of data were collected due to access constraints or static detector malfunctions it would not significantly impact the baseline data, as shown in Table A8.10.4.

Table A8.10.4 Locations and dates where less than 5 nights of data were recorded

Project Section	Location	Date	Number of nights data recorded
A	3	May 2024	4 nights
		August 2023	2 nights
A	4	May 2024	4 nights
A	12	August 2023	2 nights
A	15	July 2024	4 nights
B	16	July 2024	4 nights
B	17	July 2024	4 nights
B	21	August 2023	3 nights
C	31	September 2024	4 nights
C	33	July 2023	3 nights
C	35	August 2023	4 nights
C	39	August 2023	4 nights
D	48	July 2023	4 nights
E	51	May 2024	0 nights (surveyed in May 2025)
F	61	May 2024	0 nights (surveyed in May 2025)
F	62	May 2024	4 nights
		August 2023	4 nights
G and H	64	June 2024	0 nights (surveyed in June 2025)
A	65	August 2025	4 nights
C	68	September 2025	0 nights

1.3.28 Echolocation calls from different species of bats vary and occur at different volumes such that some species are directional and usually very quiet, which makes them difficult to pick up on bat static detector surveys. Consequently, species, like brown long-eared and some *Myotis* bat species, are underrepresented in static detector studies. To reduce the significance of this limitation the Project has undertaken trapping surveys (see Appendix 6.8.A11: Bat Radio-tracking Report (document reference 6.8.A11) (Revision B) for further details).

1.3.29 Species of the genus *Myotis* can only be confidently identified to genus level using static detectors as *Myotis* bats have similar calls, structure and overlapping parameters that make species identification via call analysis difficult. Where it was not possible to differentiate calls to species level, the genus or likely bat species (based on other relevant observations) are documented instead.

1.3.30 Similarly, species of the genus *Nyctalus* have overlapping parameters that can make species identification difficult, particularly in closed habitat types. Additionally, Wildlife Acoustics (2024) gives an 43% True Positive Rate (TPR) for Leisler's bat *Nyctalus leisleri* on detectors with balanced recording settings. This means that Kaleidoscope Pro's AutoID function correctly identifies Leisler's bat less than 50% of the time. Given the low level of confidence in Auto ID and the consideration that the mitigation for both species of the *Nyctalus* genus will be the same, the *Nyctalus* genus has been grouped.

1.3.31 Likewise, *Pipistrellus sp*. were used to describe calls where it was not possible to distinguish between species within the respective genus due to overlapping parameters.

1.3.32 Barbastelle bats tend to have very low-intensity echolocation calls, and their flight is relatively fast (Collins, J. (ed.) (2023)), so recordings tend to be of short duration. As a result, the calls may be lost in background noise or by louder species calls. To reduce the significance of this limitation, the use of good quality auto-ID software which can readily identify this species as Barbastelle calls was used, as well as manually undertaking a Quality Assurance process of the auto-ID output. Wildlife Acoustics gives an 82% TPR for barbastelle species on detectors with balanced recording settings. This means that Kaleidoscope Pro's AutoID function correctly identifies barbastelle calls at a rate of 82%.

1.4 Results

Overview

1.4.1 This report presents the results of the automated static surveys undertaken in 2023, 2024 and 2025. Appendix 6.8.A9: Bat Roosting Report (document reference 6.8.A9) (Revision C ~~B~~) provides desk study records for bats.

1.4.2 Surveys were conducted in 2023, 2024 and 2025 using the methodology described in Section 3 to gather information at 73 locations and examine seasonal use of bat foraging and commuting habitat that may be impacted by the Project. The locations for the automated static surveys are shown on Figure A8.10.1: Bat Static Deployment 2023-2025 in Annex A.

1.4.3 A minimum of eight bat species were confirmed using habitats within the Survey Area during the automated static detector surveys. The following species and species groups were confirmed:

- Barbastelle
- *Nyctalus* spp
- Serotine ~~*Eptesicus serotinus*~~ *Cnephaeus serotinus*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle
- Nathusius's pipistrelle *Pipistrellus nathusii*
- *Pipistrellus* spp
- *Myotis* spp.
- Brown long-eared bat.

1.4.4 Due to design changes, eleven static locations, namely 7, 18, 20, 29, 37, 38, 51, 52, 55, 57 and 64 are no longer within the Order Limits. The results from these surveys have been retained in the report as they reveal the bat populations that are in the area and the results have informed the mitigation measures for the Project.

Field Survey Results

Barbastelle

Likelihood of Nearby Roosting Bats

1.4.5 There are 17 static locations with at least four barbastelle passes within 60 minutes post sunset Table A8.10.5 summarises the dates and number of passes recorded each night in these 17 locations. In line with the approach agreed with Natural England, given the number of barbastelle passes so close to sunset at these locations, there is the potential that a barbastelle maternity roost may be located close to these 17 locations, and a need for further roosting surveys to be undertaken.

Table A8.10.5 Number of barbastelle passes within 60 minutes of sunset

Project Section	Location	Date	Number of passes within 60 minutes of sunset
A	5	05 May 2024	4
		06 May 2024	8
A	7	11 May 2024	5
		08 August 2024	5
		09 August 2024	4
A	8	09 May 2024	11
		10 May 2024	6
		12 May 2024	8
A	14	10 August 2024	4
B	16	08 August 2024	7
B	20	28 May 2024	10
B	24	01 May 2024	4
		04 September 2024	4
B	26	02 May 2024	6
C	37	05 September 2023	4
		07 September 2023	4
		08 September 2023	4
		18 May 2024	8
		20 May 2024	4
C	38	22 July 2023	6
		20 September 2023	9
		21 September 2024	11
		22 September 2023	21
		23 September 2023	14
		24 September 2023	5
C	39	24 May 2024	7
D	50	04 September 2024	7
		05 September 2024	4
F	61	09 May 2025	5
F	62	30 July 2024	4

Project Section	Location	Date	Number of passes within 60 minutes of sunset
A	65	13 May 2025	5
C	69	12 May 2025	4
C	70	10 May 2025	7
		11 May 2025	6
		12 May 2025	6
		13 May 2025	7
		14 May 2025	12

1.4.6 Radio-tracking surveys were conducted at The Coombs and Glebe Reservoir (Section C). Location 37 was within The Coombs, Location 39 was in Glebe Reservoir, and Location 38 was situated between The Coombs and Glebe Reservoir. The radio-tracking surveys confirmed the presence of barbastelle roosts in these areas, Appendix 6.8.A11: Bat Radio-tracking Report (document reference 6.8.A11) (revision B) provides further detail of the results of the radio-tracking surveys. These radio-tracking surveys fulfil the need for further investigation for roosting barbastelle at static detector locations 37, 38 and 39.

1.4.7 The remaining 14 locations, where four or more barbastelle passes within 60 minutes after sunset were recorded, require further roosting surveys of any FAR[2] or PRF-M[3] trees identified within the Order Limits in the Ground Level Tree Assessment (GLTA). These surveys have been undertaken in 2025 to confirm the presence or absence of a barbastelle maternity roost and inform any licensing that may be required. The methodology and results for these surveys is set out in Appendix 8.9: Bat Roosting Report (document reference 6.8.A9) (Revision C ~~B~~). In summary no barbastelle bat roosts were found.

Spatial Variation

1.4.8 Barbastelle were not recorded at three of the 73 locations sampled (location 47 and 49 (Section D), and location 64 (Section G and H))

1.4.9 Annex E summarises barbastelle activity at each location. When barbastelle activity was compared across all locations, where it was recorded, there was a significant difference (Probability (P)<0.05). The location with the highest barbastelle activity was at Location 38 (Section C) (86.81 passes per hour (pph)).

1.4.10 Table A8.10.6 summarises barbastelle activity (pph) in each Project Section. The mean number of barbastelle pph across all of the Project Sections was 91.45 pph (standard deviation (Standard Deviation (SD)) =98.66). When comparing barbastelle activity there was no significant difference between activity across Project Sections (P>0.05). Section C had the highest activity of barbastelle with 247.21 pph.

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

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

Barbastelle activity at Section D, E, F, G and H was below the average mean across the Project.

Table A8.10.6 Passes per hour of barbastelle in each Project Section

Project Section	Passes per hour (pph)
A	151.08
B	210.35
C	247.21
D	12.18
E	72.34
F	38.46
G and H	0.00
Mean	**91.45**
SD	**98.66**

Seasonal Variation

1.4.11 When comparing barbastelle activity across all locations there was a significant difference between activity across the months (P=0.004). Table A8.10.7 summarises barbastelle activity (pph) across each month and Section. The highest average level of barbastelle activity was recorded in May (mean (*m*)=49.02 pph, SD=36.17). Across all sections barbastelle activity varied by month, with highest activity recorded in May (*m*= 49.02 pph) and September (*m*=37.28 pph) and lowest in June (*m*=3.58 pph), suggesting bimodal peaks in early and late season. The P-value for the month: section interaction P<0.05 meaning that the relationship between month and pph (dependant variable) was affected by Project Section. Section C had significantly higher barbastelle activity in September when compared with other Sections in each month, as shown on Image A8.10.1.

Table A8.10.7 Passes per hour of barbastelle in each month per Project Section

Project Section	Passes per hour (pph)						
	May	**June**	**July**	**August**	**September**	**Mean**	**SD**
A	76.82	9.60	21.61	23.40	19.65	**30.22**	**26.59**
B	66.56	6.17	37.20	49.40	51.02	**42.07**	**22.62**
C	84.88	4.35	27.64	5.93	124.41	**49.44**	**53.10**
D	1.48	0.00	0.26	0.33	10.12	**2.44**	**4.33**
E	58.15	0.69	7.45	2.68	3.38	**14.47**	**24.54**
F	6.23	0.69	14.60	1.83	15.12	**7.69**	**6.86**

Project Section	Passes per hour (pph)						
	May	June	July	August	September	Mean	SD
G and H	0.00	0.00	0.00	0.00	0.00	**0.00**	**0.00**
Mean	**49.02**	**3.58**	**18.13**	**13.93**	**37.28**	-	-
SD	**36.17**	**3.82**	**13.51**	**19.34**	**45.76**	-	-

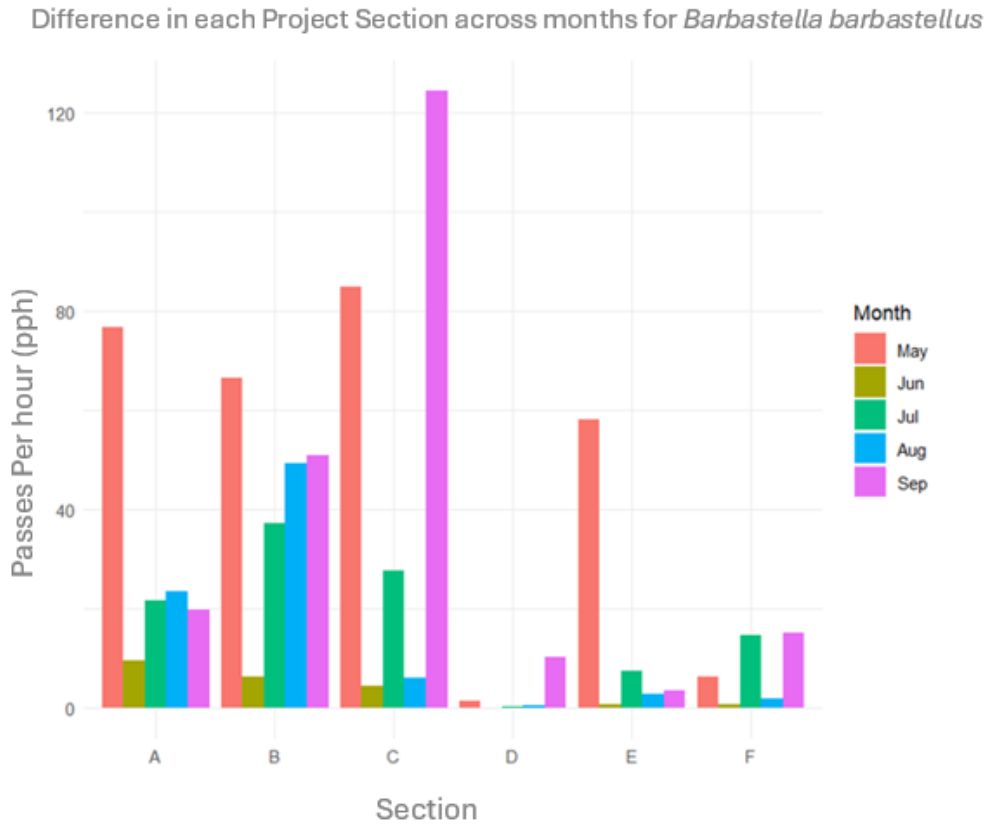


Image A8.10.1 Barbastelle activity in each Project Section across months

Big Bats (Nyctalus/ Eptesicus)

Spatial Variation

1.4.12 Table A8.10.8 summarises passes per hour for each *Nyctalus/ Eptesicus* species in each Project Section.

Table A8.10.8 Passes per hour of *Nyctalus/Eptesicus* in each Project Section

Project Section	Passes per hour (pph)	
	***Nyctalus* spp.**	**Serotine**
A	153.74	73.45
B	310.82	70.77
C	395.47	85.49
D	230.41	8.07
E	520.31	150.40
F	216.48	10.78
G and H	39.66	11.94
Mean	**266.70**	**58.70**
SD	**158.63**	**52.50**

Nyctalus spp.

1.4.13 *Nyctalus* spp. were recorded at all, but one of the 73 locations sampled (they were not recorded at location 6 in Section A).

1.4.14 Annex E summarises *Nyctalus* spp. activity at each location. When *Nyctalus* spp. activity was compared across all locations, where they were recorded, there was a significant difference (P<0.05). The location with the highest *Nyctalus* spp. activity was location 56 (198.17 pph) (Section E).

1.4.15 The mean number of *Nyctalus* spp. pph across the Project Sections was 266.70 pph (SD=158.63). When comparing *Nyctalus spp*. activity there was a significant difference between activity across Project Section (P<0.05). Section E had the highest activity level for *Nyctalus* spp. with 520.31 pph. *Nyctalus* spp. activity at Section A, D, F, G and H was below the average mean across the Project.

Serotine

1.4.16 Serotine was recorded at all, but three of the 73 locations sampled (it was not recorded at Location 22 (Section B), Location 43 (Section C), and Location 49 (Section D). Annex E summarises serotine activity at each static detector location.

1.4.17 The location with the highest serotine activity was Location 56 (146.42 pph) (Section E). When serotine activity was compared across all locations, where it was recorded, there was no significant difference (P=0.15).

1.4.18 The mean number of serotine pph across the Project was 58.70 pph (SD=52.50). When comparing serotine activity there was a significant difference between activity across Project Section (P<0.05). Section E had the highest activity level for serotine with 150.40 pph. Serotine activity at Section D, F, G and H was below the average mean across the Project.

1.4.19 Seasonal Variation

1.4.20 Table A8.10.Table A8.10.9 summarises *Nyctalus/ Eptesicus* activity (pph) across each month and Project Section.

Table A8.10.9 Passes per hour of Nyctalus/Eptesicus in each month per Project Section

Project Section	Species	Passes per hour (pph)						
		May	June	July	August	September	Mean	SD
A	*Nyctalus* spp.	15.12	55.24	23.46	35.04	24.88	**30.75**	**15.41**
	Serotine	11.75	7.83	6.12	30.94	16.81	**14.69**	**9.97**
B	*Nyctalus* spp.	72.02	87.74	49.70	67.14	34.22	**62.16**	**20.69**
	Serotine	18.45	7.26	8.38	28.73	7.95	**14.15**	**9.36**
C	*Nyctalus* spp.	177.97	34.12	113.82	44.82	24.73	**79.09**	**65.45**
	Serotine	23.33	4.26	29.64	13.12	15.15	**17.10**	**9.75**
D	*Nyctalus* spp.	106.93	5.22	78.92	15.43	23.92	**46.08**	**44.39**
	Serotine	0.68	0.14	1.02	1.77	4.47	**1.61**	**1.70**
E	*Nyctalus* spp.	142.62	107.94	70.82	154.96	43.97	**104.06**	**46.92**
	Serotine	92.73	16.91	7.36	32.96	0.45	**30.08**	**37.09**
F	*Nyctalus* spp.	65.20	72.10	53.78	8.61	16.79	**43.30**	**28.83**
	Serotine	4.45	1.37	2.70	1.81	0.43	**2.16**	**1.52**
G and H	*Nyctalus* spp.	26.62	8.49	2.63	0.33	1.58	**7.93**	**10.90**
	Serotine	0.00	11.38	0.12	0.44	0.00	**2.39**	**5.03**
Mean	*Nyctalus* spp.	**86.64**	**52.98**	**56.16**	**46.62**	**24.30**	-	-
SD		**59.55**	**39.19**	**36.61**	**53.00**	**13.28**	-	-
Mean	**Serotine**	**21.63**	**7.02**	**7.91**	**15.68**	**6.47**	-	-
SD		**32.58**	**5.84**	**10.09**	**14.87**	**7.11**	-	-

Nyctalus spp.

1.4.21 When comparing *Nyctalus* spp activity across all locations there was a significant difference between activity across the months (P<0.05). Table A8.10.9 summarises *Nyctalus* spp activity (pph) across each month and Section. The highest average

level of *Nyctalus* spp activity was recorded in May (*m*=86.64 pph, SD=59.55). The P-value for the month: section interaction P<0.05 meaning that the relationship between month and pph (dependant variable) was affected by Project Section. Section C in May (177.97 pph) and Section E in August (154.96 pph) had significantly higher *Nyctalus* spp activity when compared with other Project Sections in each month, as shown on Image A8.10.2: *Nyctalus* spp activity in each Project Section across months.

Serotine

1.4.22 When comparing serotine activity across all locations there was no significant difference between activity across the months (P=0.21) Table A8.10.9 summarises serotine activity (pph) across each month and Section. The highest average level of serotine activity was recorded in May (*m*=21.63 pph, SD=32.58). The P-value for the month: section interaction P<0.05 meaning that the relationship between month and pph (dependant variable) was affected by Project Section. Section E had significantly higher serotine activity in May (92.73 pph) when compared with other Sections in each month, as shown on Image A8.10.3.

Image A8.10.2 *Nyctalus* spp. activity in each Project Section across months

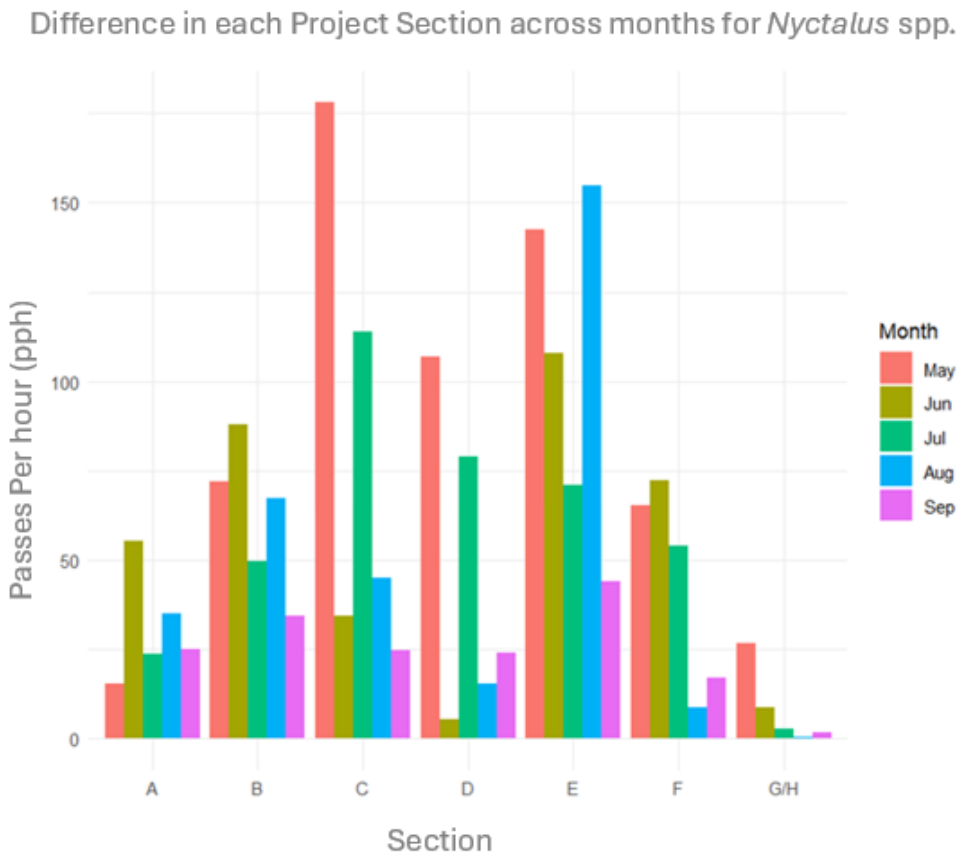
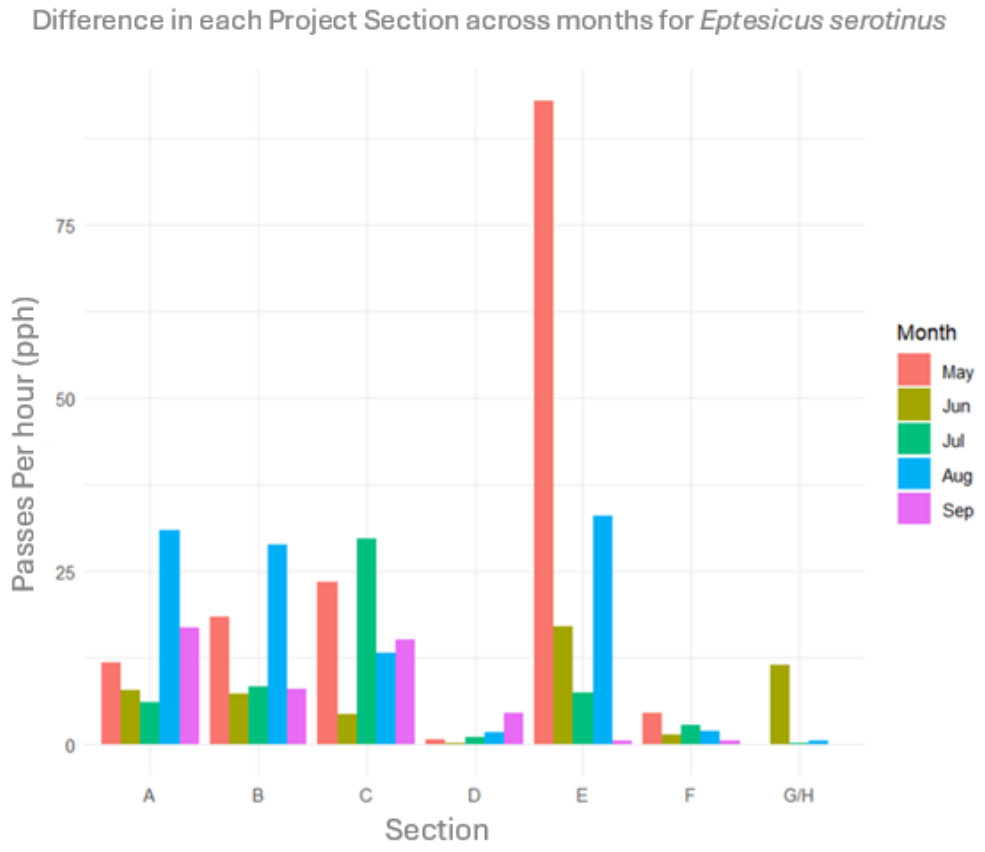


Image A8.10.3 Serotine activity in each Project Section across months



Pipistrellus species

Spatial Variation

1.4.23 Table A8.10.10 summarises passes per hour for each Pipistrellus species in each Project Section.

Table A8.10.10 Passes per hour of *Pipistrellus* species in each Project Section

Project Section	Passes per hour (pph)			
	Common pipistrelle	Soprano pipistrelle	Nathusius' pipistrelle	*Pipistrellus* spp.
A	9,899.82	934.97	207.09	9.18
B	12,641.93	1,471.73	332.85	17.33
C	6,575.36	6,099.09	145.54	80.54
D	1,259.32	2,696.96	6.63	2.45
E	2,590.02	2,941.23	20.25	6.24
F	4,576.59	2,798.68	29.67	2.21
G and H	366.51	46.72	36.00	0.00

Project Section	Passes per hour (pph)			
	Common pipistrelle	Soprano pipistrelle	Nathusius's pipistrelle	*Pipistrellus* spp.
Mean	5,414.65	2,427.05	111.15	16.85
SD	4,566.71	1,947.82	123.16	28.67

Common pipistrelle

1.4.24 Common pipistrelle was recorded at all 73 locations. Annex E summarises common pipistrelle activity at each static detector location.

1.4.25 When common pipistrelle activity was compared across all locations, there was a significant difference (P<0.05). The location with the highest common pipistrelle activity was Location 28 (Section B) (2,868.08 pph).

1.4.26 The mean number of common pipistrelle pph across the Project was 5,414.65 pph (SD=4,566.71). When comparing common pipistrelle activity there was a significant difference between activity across Project Section (P<0.05). Section B had the highest activity of common pipistrelle with 12,641.93 pph. Common pipistrelle activity at Section D, E, G and H is below the average mean across the Project.

Soprano pipistrelle

1.4.27 Soprano pipistrelle was recorded at all 73 locations. Annex E summarises soprano pipistrelle activity at each static detector location.

1.4.28 When soprano pipistrelle activity was compared across all locations, there was a significant difference (P<0.05). The location with the highest soprano pipistrelle activity was Location 52 (Section E) (2,065.81 pph).

1.4.29 The mean number of soprano pipistrelle pph across the Project is 2,427.05 pph (SD=1,947.82). When comparing soprano pipistrelle activity there was a significant difference between activity across Project Section (P<0.05). Section C has the highest activity of soprano pipistrelle with 6,099.09 pph. Soprano pipistrelle activity at Sections A, B, G and H is below the average mean across the Project.

Nathusius's pipistrelle

1.4.30 Nathusius's pipistrelle was recorded at all, but four of the 73 locations sampled. It was not recorded at Location 4 and 12 (Section A); Location 35 (Section C); and Location 49 (Section D). Annex E summarises Nathusius's pipistrelle activity at each static detector location.

1.4.31 When Nathusius's pipistrelle activity was compared across all locations, there was a significant difference (P=0.02). The location with the highest Nathusius's pipistrelle activity was location 66 (Section B) (72.81 pph).

1.4.32 The mean number of Nathusius's pipistrelle pph across the Project was 111.15 pph (SD=123.16). When comparing Nathusius's pipistrelle activity there was a significant difference between activity across Project Section (P<0.05). Section B has the highest activity of Nathusius's pipistrelle with 332.85 pph. Nathusius's pipistrelle activity at Section D, E, F, G and H was below the average mean across the Project.

Seasonal Variation

1.4.33 Table A8.10.11 summarises pipistrelle activity (pph) across each month and Project Section.

Table A8.10.11 Passes per hour of *Pipistrellus* Species in each month per Project Section

Project Section	Species	Passes per hour (pph)						
		May	June	July	August	September	Mean	SD
A	Common pipistrelle	3065.74	805.33	1500.37	2178.94	2349.45	**1979.96**	**860.93**
	Soprano pipistrelle	227.28	52.39	87.20	352.18	215.92	**186.99**	**120.23**
	Nathusius's pipistrelle	121.89	45.31	33.40	2.77	3.72	**41.42**	**48.66**
	Pipistrellus spp.	1.51	5.47	0.00	2.20	0.00	**1.84**	**2.25**
B	Common pipistrelle	3683.13	1588.97	2733.05	2384.82	2251.96	**2528.39**	**767.28**
	Soprano pipistrelle	396.32	109.48	402.45	306.56	256.91	**294.35**	**120.22**
	Nathusius's pipistrelle	169.73	48.67	108.59	2.33	3.53	**66.57**	**72.16**
	Pipistrellus spp.	0.27	0.67	16.02	0.37	0.00	**3.47**	**7.02**
C	Common pipistrelle	2711.52	337.66	2204.91	623.17	698.09	**1315.07**	**1067.31**
	Soprano pipistrelle	1253.16	529.54	2147.20	910.59	1258.60	**1219.82**	**598.91**
	Nathusius's pipistrelle	55.27	3.29	80.12	1.32	5.54	**29.11**	**36.34**
	Pipistrellus spp.	1.51	22.59	4.83	51.60	0.00	**16.11**	**21.80**
D	Common pipistrelle	252.38	123.50	467.82	143.48	272.14	**251.86**	**137.18**
	Soprano pipistrelle	510.65	544.96	873.22	270.39	497.74	**539.39**	**215.87**
	Nathusius's pipistrelle	4.00	0.00	0.77	0.00	1.86	**1.33**	**1.68**
	Pipistrellus spp.	0.00	2.45	0.00	0.00	0.00	**0.49**	**1.10**

Project Section	Species	Passes per hour (pph)						
		May	June	July	August	September	Mean	SD
E	Common pipistrelle	777.48	186.68	459.13	486.05	680.68	**518.00**	**228.07**
	Soprano pipistrelle	402.25	387.93	850.04	547.37	753.65	**588.25**	**207.54**
	Nathusius's pipistrelle	6.91	3.29	7.94	0.11	2.01	**4.05**	**3.30**
	Pipistrellus spp.	0.14	1.48	3.60	1.02	0.00	**1.25**	**1.45**
F	Common pipistrelle	1562.55	295.81	972.15	622.24	1123.84	**915.32**	**483.55**
	Soprano pipistrelle	1372.16	225.58	340.46	264.61	595.86	**559.74**	**476.49**
	Nathusius's pipistrelle	24.74	0.82	1.47	0.00	2.64	**5.93**	**10.56**
	Pipistrellus spp.	0.00	0.00	1.87	0.34	0.00	**0.44**	**0.81**
G and H	Common pipistrelle	75.46	105.43	58.91	75.98	50.74	**73.30**	**20.98**
	Soprano pipistrelle	3.35	5.07	2.85	33.69	1.75	**9.34**	**13.66**
	Nathusius's pipistrelle	4.89	26.60	0.00	0.00	4.51	**7.20**	**11.10**
	Pipistrellus spp.	0.00	0.00	0.00	0.00	0.00	**0.00**	**0.00**
Mean	**Common pipistrelle**	**1732.61**	**491.91**	**1199.48**	**930.67**	**1060.98**	-	-
SD		**1438.66**	**538.87**	**990.73**	**949.58**	**913.03**	-	-
Mean	**Soprano pipistrelle**	**595.03**	**264.99**	**671.92**	**383.63**	**511.49**	-	-
SD		**517.39**	**224.34**	**732.66**	**277.15**	**415.56**	-	-
Mean	**Nathusius's pipistrelle**	**55.35**	**18.28**	**33.18**	**0.93**	**3.40**	-	-
SD		**65.80**	**21.65**	**44.13**	**1.21**	**1.34**	-	-
Mean	***Pipistrellus* spp.**	**0.57**	**5.44**	**4.39**	**9.26**	**0.00**	-	-
SD		**0.73**	**8.62**	**6.01**	**20.76**	**0.00**	-	-

Common pipistrelle

1.4.34 When comparing common pipistrelle bat activity across all locations there was a significant difference between activity across the months (P<0.05) Table A8.10.11 summarises common pipistrelle activity (pph) across each month and Section. The highest average level of common pipistrelle bat activity was recorded in May (*m*=1,732.61 pph, SD=1,438.66). The P-value for the month: section interaction P<0.05 meaning that the relationship between month and pph (dependant variable) was affected by Project Section. Section B had significantly higher common pipistrelle activity in May when compared with other Sections in each month, as shown on Image A8.10.4.

Soprano pipistrelle

1.4.35 The highest average level of soprano pipistrelle bat activity was recorded in July (*m*=671.92 pph, SD=732.66). When comparing soprano pipistrelle bat activity across all locations there was no significant difference between activity across the months (P=0.16) Table A8.10.11 summarises soprano pipistrelle activity (pph) across each month and Project Section. The P-value for the month: section interaction P<0.05 meaning that the relationship between month and pph (dependant variable) was affected by Project Section. Section C had significantly higher soprano pipistrelle activity in July when compared with other Sections in each month, as shown Image A8.10.5.

Nathusius's pipistrelle

1.4.36 When comparing Nathusius's pipistrelle bat activity across all locations there was a significant difference between activity across the months (P=0.003) Table A8.10.11 summarises Nathusius's pipistrelle activity (pph) across each month and Section. The highest average level of Nathusius's pipistrelle bat activity was recorded in May (*m*=55.35 pph, SD=65.80). The P-value for the month: section interaction P>0.05 meaning that the relationship between month and pph (dependant variable) was not affected by Project Section, as shown on Image A8.10.6.

Image A8.10.4 Common pipistrelle activity in each Project Section across months

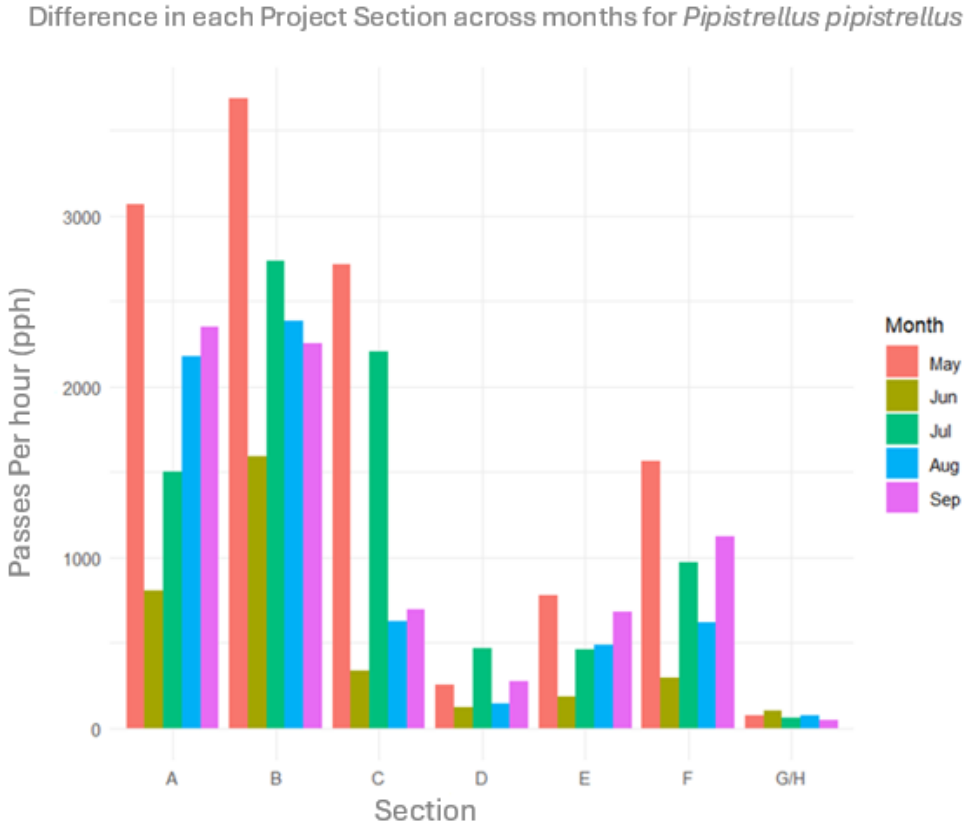


Image A8.10.5 Soprano pipistrelle activity in each Project Section across months

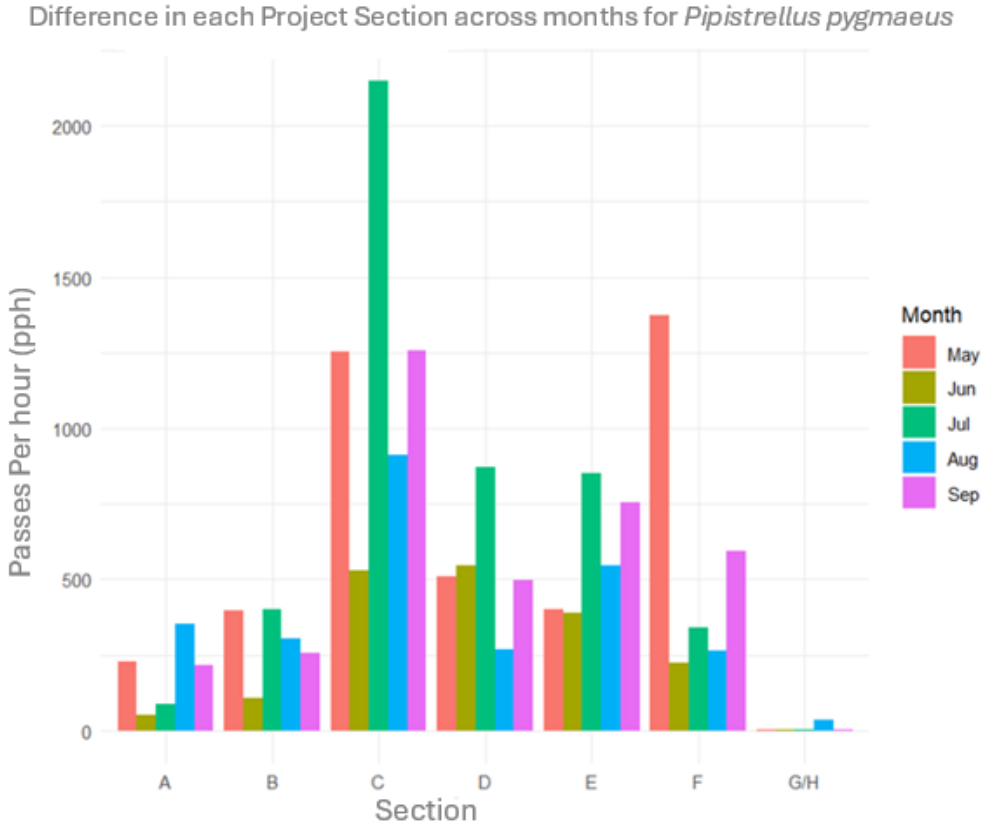
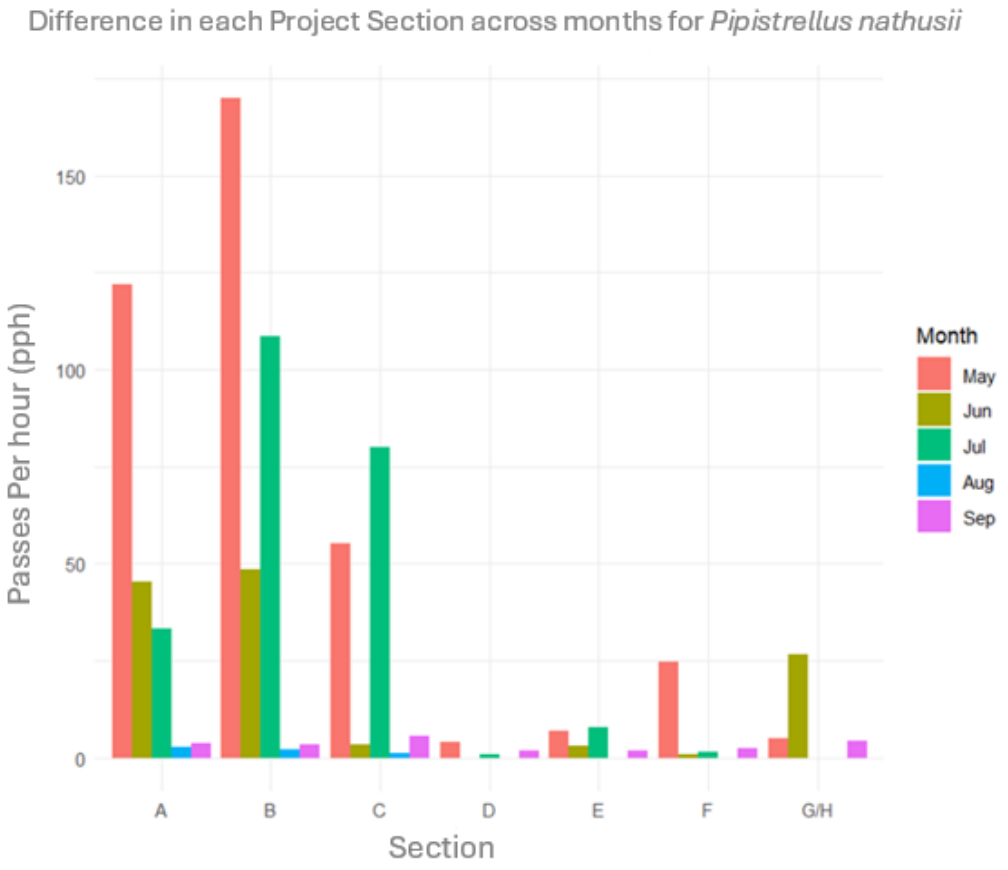


Image A8.10.6 Nathusius's pipistrelle activity in each Project Section across months



Myotis species

Spatial Variation

1.4.37 *Myotis* spp. were recorded at all 73 locations. Annex E summarises *Myotis* spp. activity at each static detector location.

1.4.38 The location with the highest *Myotis* spp. activity was Location 37 (Section C) (71.52 pph). When *Myotis* spp. activity was compared across all locations, there was no significant difference (P=0.06).

1.4.39 Table A8.10.12 summarises *Myotis* spp. activity (pph) in each Section. The mean number of *Myotis* spp across the Project is 79.11 pph (SD=84.02). When comparing *Myotis* spp. activity there was a significant difference between activity across Project Section (P<0.05). Section C has the highest activity of *Myotis* spp. with 243.52 pph. *Myotis* spp. activity at Section A, D, E, F and G and H was below the average mean across the Project.

Table A8.10.12 Passes per hour of *Myotis* spp. in each Project Section

Project Section	Passes per hour (pph)
A	76.78
B	126.63
C	243.52

Project Section	Passes per hour (pph)
D	8.15
E	60.23
F	35.08
G and H	3.38
Mean	**79.11**
SD	**84.02**

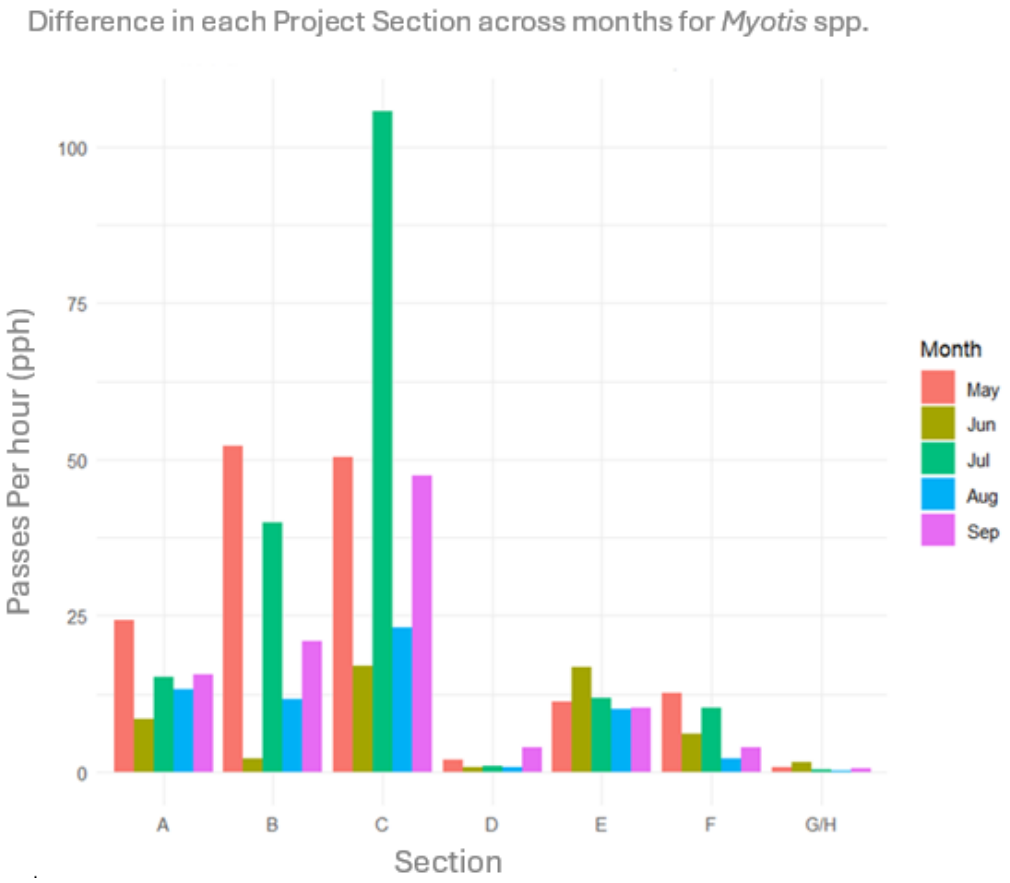
Seasonal Variation

1.4.40 When comparing *Myotis* spp. bat activity across all locations there was a significant difference between activity across the months (P<0.05). Table A8.10.13 summarises *Myotis* spp. bat activity (pph) across each month and Project Section. The highest average level of *Myotis* spp. bat activity was recorded in July (*m*=26.27 pph, SD=37.37). The P-value for the month: section interaction P>0.05 meaning that the relationship between month and pph (dependant variable) was not affected by Project Section, as shown on Image A8.10.7.

Table A8.10.13 Passes per hour of *Myotis* spp in each month per Project Section

Project Section	Passes per hour (pph)						
	May	**June**	**July**	**August**	**September**	**Mean**	**SD**
A	24.20	8.51	15.22	13.21	15.63	**15.36**	**5.70**
B	52.08	2.19	39.88	11.65	20.83	**25.33**	**20.43**
C	50.40	17.03	105.57	23.06	47.46	**48.70**	**35.00**
D	1.95	0.68	0.90	0.77	3.85	**1.63**	**1.34**
E	11.28	16.76	11.75	10.13	10.30	**12.05**	**2.72**
F	12.63	6.18	10.19	2.14	3.95	**7.02**	**4.34**
G and H	0.77	1.51	0.36	0.22	0.53	**0.68**	**0.51**
Mean	**21.90**	**7.55**	**26.27**	**8.74**	**14.65**	-	-
SD	**21.49**	**6.95**	**37.37**	**8.32**	**16.15**	-	-

Image A8.10.7 Myotis spp. activity in each Project Section across months



Brown long-eared bat

Spatial Variation

1.4.41 Brown long-eared bat was recorded at recorded at all 73 locations, with the exception of location 45 (Section D). Annex E summarises brown long-eared bat activity at each static detector location.

1.4.42 The location with the highest brown long-eared bat activity was Location 37 (Section C) (17.90 pph). Brown long-eared bat activity was compared across all locations, there was no significant difference (P=0.13).

1.4.43 Table A8.10.14 summarises brown long-eared bat activity (pph) in each Section. The mean number of brown long-eared bats across the Project Sections was 48.30 pph (SD=38.87). When comparing brown long-eared bat activity there was no significant difference between activity across Project Sections (P=0.13). Section C had the highest activity of brown long-eared bat with 102.95 pph. Brown long-eared bat activity at Section D, E, F, G and H was below the average mean across the Project.

Table A8.10.14 Passes per hour of brown long-eared in each Project Section

Project Section	Passes per hour (pph)
A	64.25
B	92.87

Project Section	Passes per hour (pph)
C	102.95
D	14.79
E	35.11
F	24.02
G and H	4.13
Mean	**48.30**
SD	**38.87**

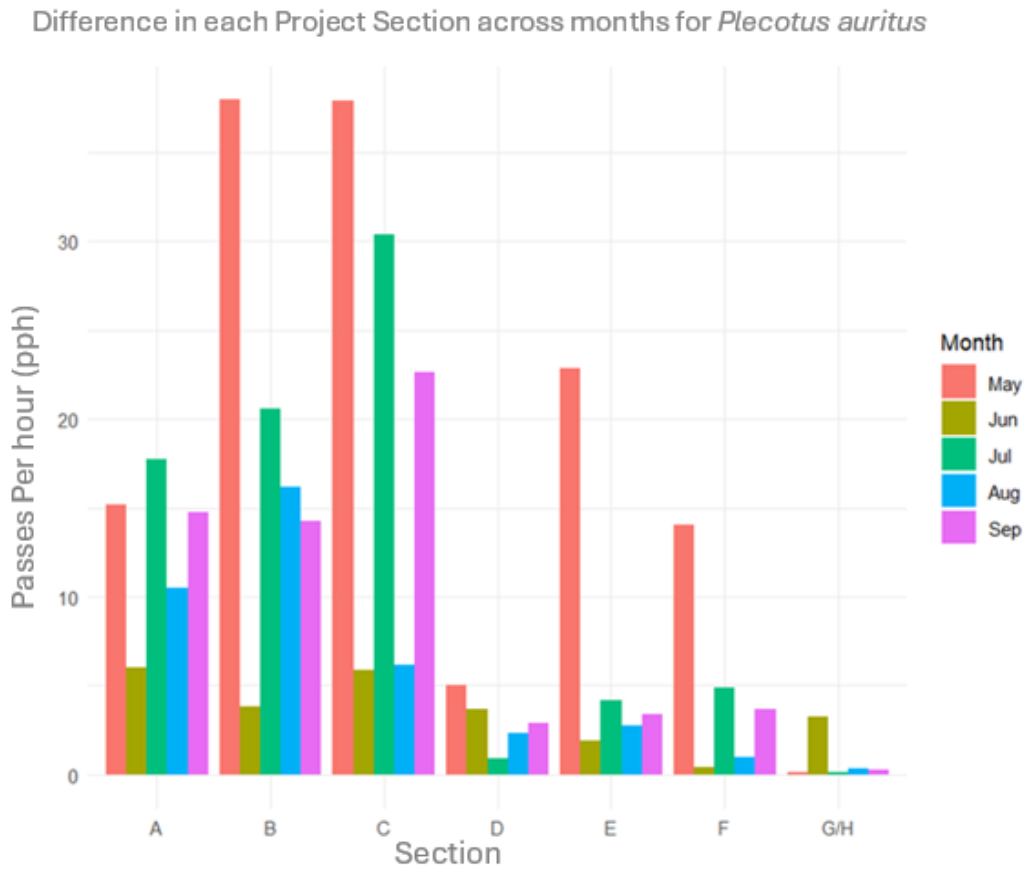
Seasonal Variation

1.4.44 When comparing brown long-eared bat activity across all locations there was a significant difference between activity across the months ($P<0.05$). Table A8.10.15 summarises brown long-eared bat activity (pph) across each month and Project Section. The highest average level of brown long-eared bat activity was recorded in May (*m*=19.00 pph, SD=14.84). The P-value for the month: section interaction $P<0.05$ meaning that the relationship between month and pph (dependant variable) was affected by Project Section. Section B and C had significantly higher brown long-eared activity in May when compared with other Sections in each month, as shown on Image A8.10.8.

Table A8.10.15 Passes per hour of brown long-eared in each month per Project Section

Project Section	Passes per hour (pph)						
	May	**June**	**July**	**August**	**September**	**Mean**	**SD**
A	15.18	6.04	17.73	10.53	14.77	**12.85**	**4.60**
B	37.94	3.84	20.60	16.20	14.30	**18.57**	**12.45**
C	37.89	5.85	30.38	6.17	22.66	**20.59**	**14.36**
D	5.01	3.69	0.89	2.31	2.88	**2.96**	**1.53**
E	22.83	1.92	4.21	2.76	3.39	**7.02**	**8.87**
F	14.05	0.41	4.86	0.98	3.72	**4.80**	**5.49**
G and H	0.13	3.29	0.12	0.33	0.26	**0.83**	**1.38**
Mean	**19.00**	**3.58**	**11.26**	**5.61**	**8.85**	-	-
SD	**14.84**	**2.01**	**11.67**	**5.85**	**8.38**	-	-

Image A8.10.8 Brown long-eared activity in each Project Section across months



1.5 Conclusion

Likelihood of Nearby Roosting Barbastelle Bats

1.5.1 There were 17 static survey locations with four or more barbastelle passes within 60 minutes after sunset and therefore required further roosting surveys to be undertaken in line with the approach agreed with Natural England. These were:

- Section A (Location 5, 7, 8, 14, 65)
- Section B (Location 16, 20, 24, 26)
- Section C (Location 37, 38, 39, 69, 70)
- Section D (Location 50)
- Section F (Location 61, 62).

1.5.2 Radio-tracking surveys were conducted at The Coombs and Glebe Reservoir. Location 37 (Section C) was within The Coombs, Location 39 (Section C) was in Glebe Reservoir and Location 38 (Section C) was situated between The Coombs and Glebe Reservoir. The radio-tracking surveys confirmed the presence of barbastelle roosts in proximity to these static detector locations. Appendix 6.8.A11: Bat Radio-tracking Report (document reference 6.8.A11) (Revision B) provides further detail of the results of the radio-tracking surveys. These radio-tracking surveys (document reference 6.8.A11) (Revision B) fulfil the need for further investigation for roosting barbastelle at static detector location 7, 38 and 39.

1.5.3 The remaining 14 locations, where four or more barbastelle passes within 60 minutes after sunset were recorded, required roosting surveys of any FAR or PRF-M trees identified within the Order Limits in the GLTA. These surveys have been undertaken in 2025 to confirm the presence or absence of a barbastelle maternity roost and inform any licensing that may be required. The methodology and results for these surveys is set out in Appendix 8.9: Bat Roosting Report (document reference 6.8.A9) (Revision C ~~B~~).

Spatial Variation

1.5.4 The assessment of spatial variation in overall bat activity shows that serotine, unidentified *Pipistrellus* spp., *Myotis* spp. and brown long-eared bat were recorded consistently across the Order Limits with no significant difference in bat activity between individual locations. Significant differences in bat activity for *Nyctalus* spp., common pipistrelle, soprano pipistrelle and Nathusius's pipistrelle, was recorded between individual locations.

1.5.5 A significant difference in bat activity between Project Sections was identified for each species group, with the exception of barbastelle and brown long-eared bat. The Project Sections with the highest bat activity for each species group is as below:

- Section B (common pipistrelle, Nathusius's pipistrelle)
- Section C (soprano pipistrelle, *Myotis* spp.)
- Section E (*Nyctalus* spp., serotine)

Seasonal Variation

1.5.6 When bat activity for each species was compared over the survey months, a significant difference was found for each species, indicating that the importance of the habitats within the Order Limits varies across the bat activity season.

1.5.7 The exception to this was soprano pipistrelle and serotine. Soprano pipistrelle and serotine activity did not significantly vary over the months recorded, indicating that the importance of the habitats within the Order Limits does not vary across the bat activity season for these two species.

1.5.8 Barbastelle, *Nyctalus* spp, common pipistrelle, Nathusius's pipistrelle and brown long-eared had significantly higher levels of activity in May. *Myotis* spp. had significantly higher levels of activity in July. These months are the core maternity months when pups are born and begin to fly independently suggesting there is habitat within the Project that supports breeding bat populations for these species.

1.5.9 Additionally, the data indicates that the activity (pph) per month was affected by Project Section for some species. The following Project Sections had significantly higher levels of activity in the following months, dependant on Project Section, for the following species:

- Barbastelle (Section C in September)
- *Nyctalus* spp. (Section C in May)
- Serotine (Section E in May)
- Common pipistrelle (Section B in May)
- Soprano pipistrelle (Section C in July)
- Brown long-eared (Section B/C in July)

1.5.10 This indicates that the habitats in Project Sections B, C and E may be better quality or more abundant to support maternity colonies for these species. Section C had the highest level of barbastelle activity in September indicating that habitats in Section C were of better quality or more abundant to support mating and swarming barbastelle.

Assessment of Bat Assemblage

1.5.11 The overall assessment of bat assemblage across the Project is the same for all Project Sections, refer to Table A8.10.16. Given the scale of the Project, it is appropriate to consider the assessment of importance for each individual static detector location.

1.5.12 When assessing individual static detector locations for their bat assemblage importance all were assessed as being of National importance, except for Location 40, 43, 44, 46, 47 and 64 (Regional importance) and Location 49 (County importance), as shown in Annex G.

1.5.13 As such the assessment of bat assemblage across the Project has been assessed as County to National Importance.

Table A8.10.16 Assessment of importance of bat assemblage for the Project overall

Rarity Category	South-eastern/ East Anglia to The Wash	Total Score	Comments
Widespread all geographies [score 1]	*P.pip* *P.pyg* *P.aur*	3	All species recorded with confidence during automated static surveys.
Widespread in many geographies, but not as abundant in all [score 2]	*M.dau* *M.nat* *N.nyc*	6	*Myotis* species were grouped during sonogram analysis. Both Daubenton's bat and Natterer's bat were identified during the radio-tracking surveys (Essex), historical records were returned for these species in Essex, Suffolk and Norfolk. Presence of these species within the Order Limits is likely.
Rarer or restricted distribution [score 3]	*M.mys* *M.bra* *E.ser* *N.lei* *P.nat*	15	Whiskered bat and Brandt's bat were not identified during radio-tracking (Essex) and no records of these species were returned from Essex Field Club (EFC). Norfolk Biodiversity Information Service (NBIS) and Suffolk Biodiversity Information Service (SBIS) returned records of Whiskered and Brandt's bat. A score of 22 would still be met when excluding the presence of Whiskered/Brandt's bat from all Project Sections in Essex.
Rarest Annex II species and very rare [score 4]	*B.bar*	4	Barbastelle confirmed in at least 1 location in every Section.
County importance threshold: 45%		13	
Regional importance threshold: 55%		15	
National importance threshold: 70%		20	
Total		**28**	
Importance		**County to National**	

Assessment of Bat Activity

1.5.14 The Project spans a large area (approximately 180 km), and the data recorded over the 2023 and 2025 period provides a robust baseline of bat activity across the East Anglia region. To assess the importance of sampled features for foraging and

commuting bats, each species group at each location has been assigned a level of activity; high, moderate or low.

1.5.15 The parameters used to determine the activity levels for each species 'group' was calculated in 'R' and calculates the upper, lower and interquartile range, as shown below:

- High activity- highest 25% of activity (>Q3)
- Moderate activity- the middle 50% of activity (interquartile range) (Q3-Q1)
- Low activity- lowest 25% of activity (<Q1).

1.5.16 The parameters used to determine the activity levels for each species 'group' are provided in Table A8.10.17 below.

Table A8.10.17 Parameters of activity levels for each bat group

Statistical Information	*Barbastella barbastellus*	*Nyctalus* spp.	*Eptesicus* sp.	*Pipistrelle* spp.	*Myotis* spp.	*Plecotus auritus*
Q1	1.50	7.94	0.60	331.83	1.97	1.28
Median	4.97	12.55	1.62	580.36	4.23	2.99
Q3	10.42	32.76	4.26	999.53	7.62	7.83

1.5.17 The overall assessment of bat activity is provided in Table A8.10.18. The average activity (pph) for each species 'group' is given at each location and the colour depicts the level of activity (red= high activity, orange= moderate activity, green= low activity). An assessment of impacts and any additional mitigation requirements is presented in Chapter 8: Ecology and Biodiversity (document reference 6.8) (Revision C ~~B~~).

1.5.18 Features with 'high activity' indicate these are the most frequently used by local bat populations and may indicate high importance for that species group. Conversely, features with 'low activity' indicate these are used least frequently and may not be as integral for commuting and foraging bats in the area.

Table A8.10.18 Assessment of activity at each static detector location by bat group

Location	Project Section	Passes per hour (pph)					
		Barbastella barbastellus	*Nyctalus* spp.	*Eptesicus* sp.	*Pipistrelle* spp.	*Myotis* spp.	*Plecotus auritus*
1	A	0.39	2.80	0.84	131.68	1.47	9.04
2	A	2.20	9.11	0.96	134.52	7.34	6.58
3	A	7.16	8.66	6.04	524.99	2.45	0.86
4	A	0.25	4.33	1.33	620.02	1.97	3.42

Location	Project Section	Passes per hour (pph)					
		Barbastella barbastellus	*Nyctalus* spp.	*Eptesicus* sp.	*Pipistrelle* spp.	*Myotis* spp.	*Plecotus auritus*
5	A	37.80	22.47	38.32	709.08	4.40	1.55
6	A	0.17	0.00	0.47	747.46	2.30	0.40
7	A	6.87	1.74	2.63	1313.02	3.59	7.37
8	A	13.01	1.14	1.86	742.48	6.48	1.28
9	A	3.11	1.06	0.36	391.44	1.03	3.72
10	A	4.13	8.58	1.02	1677.82	5.93	2.29
11	A	5.08	3.14	0.95	573.81	2.21	1.05
12	A	1.13	1.22	1.63	84.83	1.80	1.99
13	A	0.57	9.16	0.85	288.34	1.78	1.66
14	A	24.65	35.82	6.66	1875.31	23.10	9.41
15	A	6.96	30.65	1.92	657.75	2.36	4.53
16	B	9.03	15.44	1.12	327.67	1.88	5.95
17	B	2.78	3.81	1.68	484.03	0.96	1.47
18	B	10.77	20.70	20.08	786.67	9.13	13.25
19	B	4.27	0.88	0.57	1129.08	6.46	0.54
20	B	6.22	12.01	1.80	452.62	15.29	8.05
21	B	13.14	77.23	4.41	1949.83	1.74	7.42
22	B	2.20	6.09	0.00	1055.28	2.98	0.20
23	B	0.71	13.77	0.35	66.98	5.01	0.13
24	B	26.04	4.19	0.39	332.14	20.09	2.99
25	B	13.03	13.41	1.69	140.37	4.01	1.23
26	B	14.18	3.29	4.12	137.98	11.94	13.84
27	B	3.26	12.11	9.85	1302.31	5.76	6.57

Location	Project Section	Passes per hour (pph)					
		Barbastella barbastellus	*Nyctalus* spp.	*Eptesicus* sp.	*Pipistrelle* spp.	*Myotis* spp.	*Plecotus auritus*
28	B	8.07	62.09	2.19	2882.24	4.92	1.73
29	B	6.57	8.84	2.54	290.29	2.97	2.43
30	B	9.35	14.13	12.63	996.27	3.15	4.46
31	C	7.51	9.86	3.67	845.55	6.46	2.62
32	C	2.75	90.98	4.51	552.30	37.98	10.15
33	C	1.93	50.05	0.71	409.29	2.40	1.18
34	C	6.00	36.21	0.66	251.1	6.55	9.50
35	C	2.07	17.03	8.56	1229.29	5.32	2.73
36	C	2.67	2.69	4.49	909.01	5.26	4.01
37	C	7.15	36.16	33.65	1951.81	71.52	17.91
38	C	86.81	12.56	1.86	74.73	7.91	7.62
39	C	3.96	10.22	1.52	975.99	1.34	2.23
40	C	0.56	3.92	1.09	429.72	0.54	1.44
41	C	5.53	25.81	2.75	1000.35	7.21	1.96
42	C	9.01	34.43	3.02	269.34	19.17	11.69
43	C	1.27	11.68	0.00	580.70	1.36	0.89
44	C	0.26	11.11	1.06	1104.31	1.63	0.60
45	D	1.50	35.57	0.37	319.37	0.68	0.00
46	D	2.20	9.04	0.97	482.00	1.85	0.98
47	D	0.00	31.29	0.58	332.03	0.52	0.43
48	D	0.25	11.73	0.13	767.96	0.11	2.05
49	D	0.00	10.51	0.00	284.54	0.76	0.21
50	D	8.23	132.42	6.03	1781.91	4.23	11.12

Location	Project Section	Passes per hour (pph)					
		Barbastella barbastellus	*Nyctalus* spp.	*Eptesicus* sp.	*Pipistrelle* spp.	*Myotis* spp.	*Plecotus auritus*
51	E	12.49	138.14	1.68	383.61	13.58	12.25
52	E	4.97	71.40	0.25	2338.27	21.75	2.30
53	E	2.28	53.67	0.23	379.44	2.50	4.00
54	E	3.41	7.61	0.43	477.91	9.54	1.56
55	E	0.28	15.70	0.13	326.32	1.25	0.32
56	E	0.82	198.17	146.42	1074.96	5.37	8.58
57	E	6.17	17.22	0.60	359.37	1.47	1.13
58	F	14.21	27.01	1.53	855.09	8.32	3.14
59	F	3.59	89.45	1.97	1511.87	6.74	3.97
60	F	0.38	29.34	5.36	787.09	7.18	8.93
61	F	1.87	7.94	0.12	373.45	3.88	1.27
62	F	10.08	43.65	1.45	1812.64	3.08	0.84
63	F	1.09	10.86	0.12	811.75	2.08	3.29
64	G and H	0.00	39.66	11.94	449.22	3.38	4.13
65	A	37.66	13.97	7.63	584.02	8.59	9.13
66	B	68.03	34.24	5.90	1852.64	6.08	12.31
67	B	12.75	8.78	1.49	285.08	24.32	10.36
68	C	1.08	7.04	2.91	136.72	2.11	2.55
69	C	38.56	17.04	1.64	440.70	19.02	8.81
70	C	31.55	14.57	9.94	803.67	21.01	12.48
71	C	38.58	4.39	3.50	943.07	26.86	4.64
72	E	41.93	18.62	0.77	220.73	4.79	4.99
73	F	7.26	8.38	0.24	1258.25	3.82	2.60

Assessment of Potential Effects on Bats

1.5.19 The general approach to impact assessment for bats is to ensure that effects to bats are avoided, where practicable, minimised and/or mitigation provided to maintain the FCS of species present that utilise the habitats across the Project.

1.5.20 Natural England defines FCS (Hanna, J. (2021)) as the situation in which a habitat or species is thriving throughout its natural range and is expected to continue to thrive into the future. Favourable conservation status encompasses all occurrences of a habitat or species within its natural range, both in the wider environment and in protected sites. For species, FCS means:

- More than avoiding extinction or conserving one viable population
- Securing the underlying inherent diversity (genetic and phenotypic) of a species by maintaining thriving populations across its natural range, as far as possible by the restoration of natural ecosystem function. The contribution from individual sites may be dynamic in terms of the occurrence of species at any one point in time.

1.5.21 Table A8.10.19 presents 12 principles that have been established by Natural England to guide the definition of FCS. Not all the principles will be equally applicable to all features and deviations from some principles may be justified based on the character of the habitat or species.

Table A8.10.19 Natural England principles with regards to favourable conservation status

Principle	Details
Principle 1	The overall objective of favourable conservation status is to conserve biodiversity
Principle 2	A definition of favourable conservation status is based on the best available evidence on the ecology of the habitat or species
Principle 3	A definition of favourable conservation status will reflect the ecological requirements for favourable conservation status in England
Principle 4	Economic and technical factors do not play a role in defining favourable conservation status
Principle 5	The definition of favourable conservation status should be practical for the different situations and scales in which the concept is used
Principle 6	Favourable conservation status is ultimately achieved at the level of the natural range of a feature
Principle 7	All parts of the natural range and distribution in England should contribute towards favourable conservation status
Principle 8	The natural range and distribution of the feature within England is defined first

Principle 9	Favourable conservation status is not automatically determined by a historical value or a reference year
Principle 10	Favourable conservation status is not necessarily the maximum ecological potential of a feature
Principle 11	The contribution of a habitat patch to favourable conservation status is based on ecological potential
Principle 12	The favourable conservation status definition should expect and accept natural fluctuation

1.5.22 To inform the impact assessment the bat species present within the Survey Area have been grouped based on their national distribution and 'functional groups' defined in Table A8.10.20.

Table A8.10.20 Functional groups of UK bat species (taken directly from Elmeros et al., (2016)) – taken from Table 8.1 of the UK Bat Mitigation Guidelines (2023)

Principle		Details
Group A	Extremely manoeuvrable bats, which often fly within foliage, or close to vegetation, surfaces and structures at variable flight heights. When commuting, they often follow linear and longitudinal landscape elements. Low-flying (typically <2 m) when commuting over open gaps.	Lesser horseshoe bat Natterer's bat Bechstein's bat Brown long-eared bat Grey long-eared bat
Group B	Very manoeuvrable bats that most often fly near vegetation, walls, etc, at variable heights but occasionally hunt within the foliage. When commuting, they often follow linear and longitudinal landscape elements. Flying at low to medium height when commuting over open gaps (typically < 5 m).	Greater horseshoe bat Daubenton's bat Brandt's bat Whiskered bat Alcathoe bat
Group C	Bats with medium manoeuvrability. They often hunt and commute along vegetation or structures at variable heights, but rarely close to or within the vegetation. May also hunt in open areas. Commuting over open stretches generally takes place at low to medium height (typically 2 to 10 m) with no clear tendency to lower flight.	Greater mouse-eared bat Common pipistrelle Soprano pipistrelle Nathusius' pipistrelle
Group D	Bats with medium manoeuvrability. With a [more direct] flight pattern that bats in Category C. They hunt and commute away from vegetation and structures [at] at variety of flight heights. May occasionally fly but never hunt within vegetation. Commuting over open	Serotine Barbastelle

Principle		Details
	stretches tends to occur at medium heights (2 to 10 m) with no clear tendency to lower flight.	
Group E	Less manoeuvrable bats that most often fly high and in the open airspace away from vegetation and other structures. These bats generally commute over open stretches at medium heights or higher (10 m and often higher). It must be stressed that even these species may fly quite low over open areas under certain conditions, e.g. when hunting insects over warm (road) surfaces, or when they emerge from a roost site.	Noctule Leisler's bat

Abbreviations

Abbreviation	Full Reference
ANOVA	Analysis of Variance
BCT	Bat Conservation Trust
CIEEM	Chartered Institute of Ecology and Environmental Management
CSE	Cable Sealing End
CWS	County Wildlife Site
DCO	Development Consent Order
EFC	Essex Field Club
EIA	Environmental Impact Assessment
EPS	European Protected Species
ES	Environmental Statement
FCS	Favourable Conservation Status
GLTA	Ground Level Tree Assessment
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographic Information for the Countryside
NBIS	Norfolk Biodiversity Information Service
NERC	Natural Environment and Rural Communities Act 2006
RAG	Red-Amber-Green
SAC	Special Area of Conservation
SBIS	Suffolk Biodiversity Information Service
SD	Standard Deviation
SSSI	Site of Special Scientific Interest
TPR	True Positive Rate
WCA	Wildlife and Countryside Act 1981 (as amended)

Glossary

Term	Description
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.
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.
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.
Mitigation	The action of reducing the severity and magnitude of change (impact) to the environment.
Order Limits	The maximum extent of land within which the authorised development may take place.
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.

Term	Description
Species	A group of living organisms consisting of similar individuals capable of exchanging genes or interbreeding.
Zone of Influence	The defined geographic area within which the project's environmental receptors are located.

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Annex A. Figures

Annex A
Figures

Figure A8.10.1 Bat Static Deployment 2023-2025

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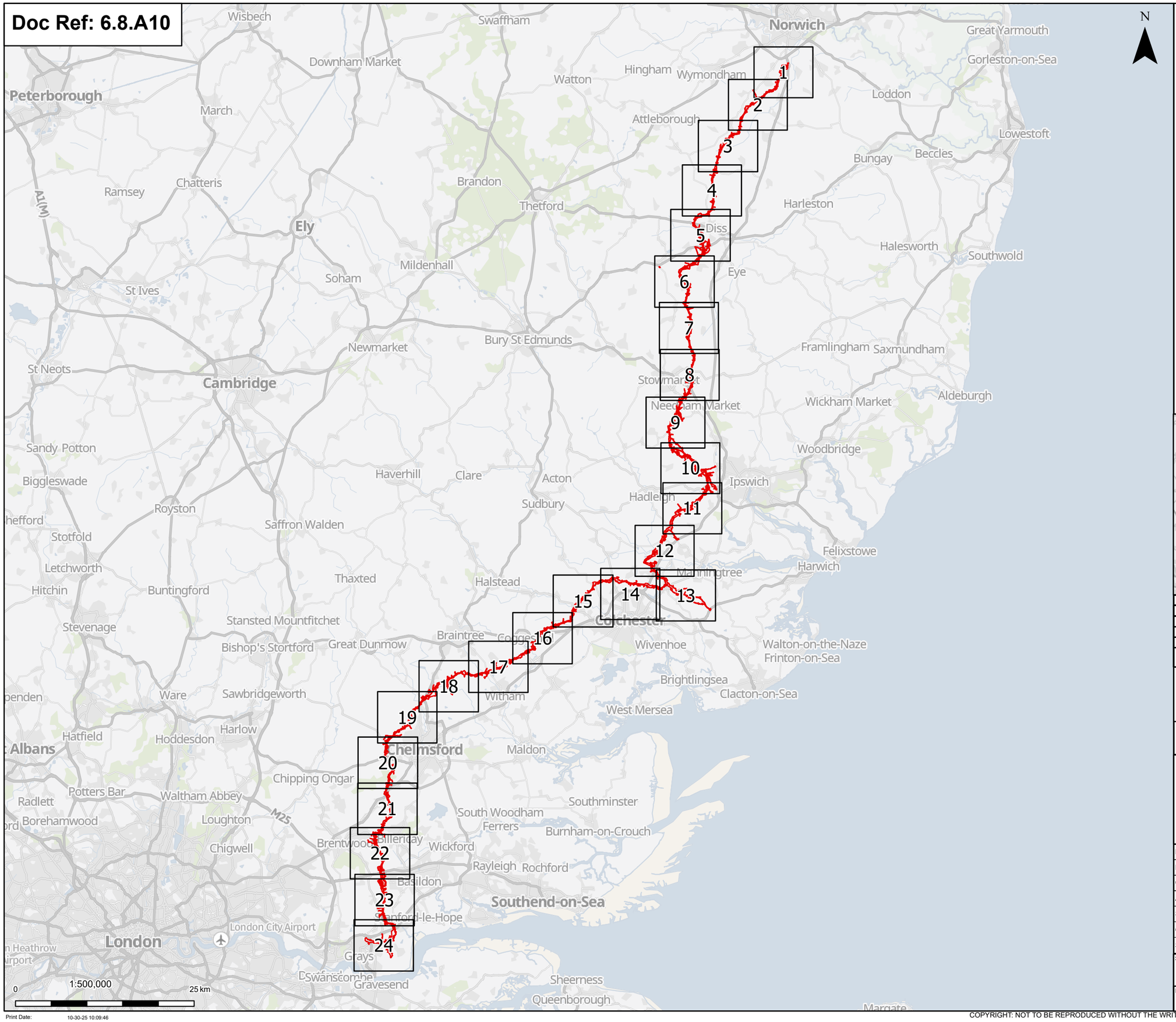

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Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025 Overview

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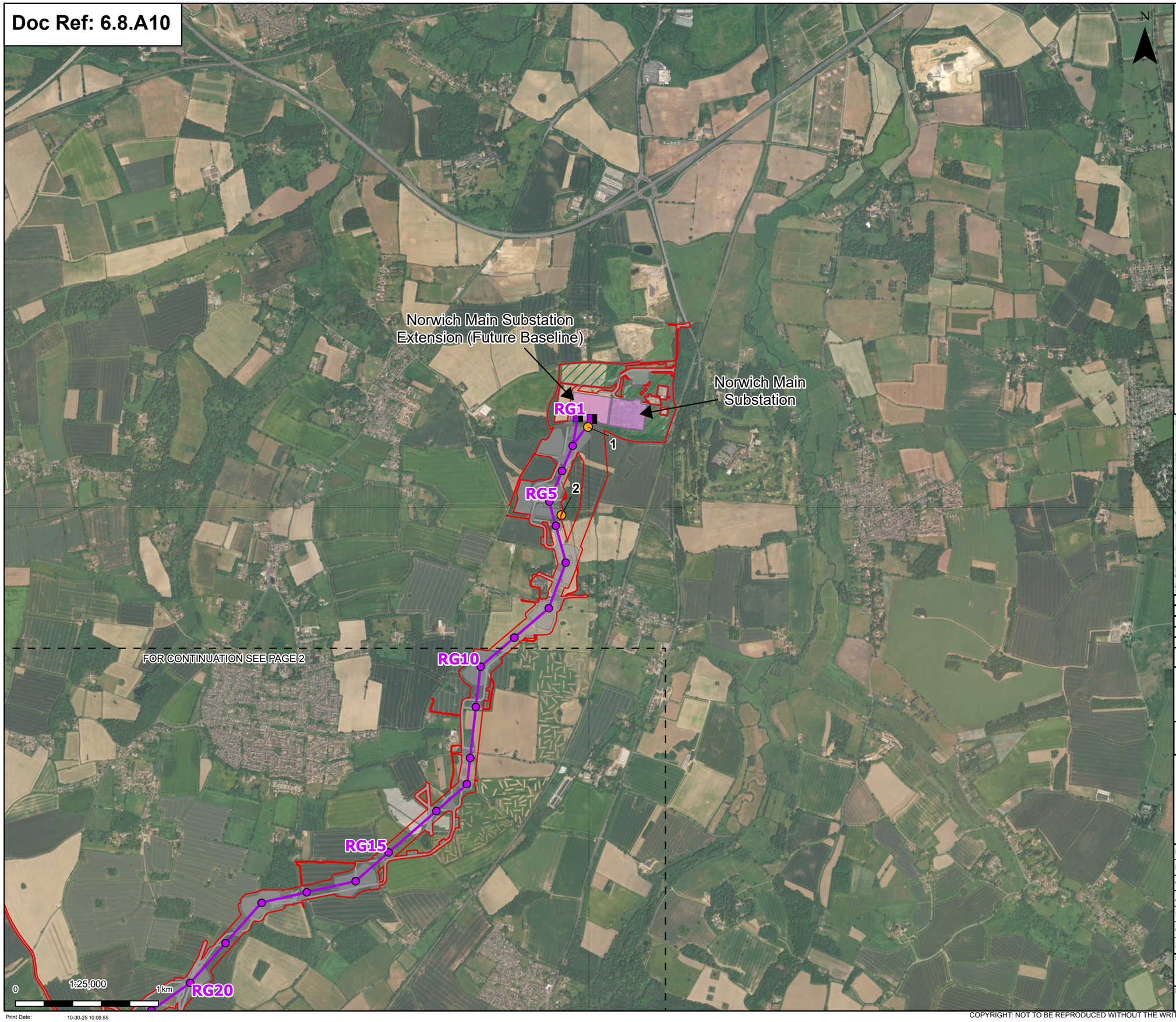

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Proposed project design details

- 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

Discipline specific constraints

Bat statics locations

- Amber

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 A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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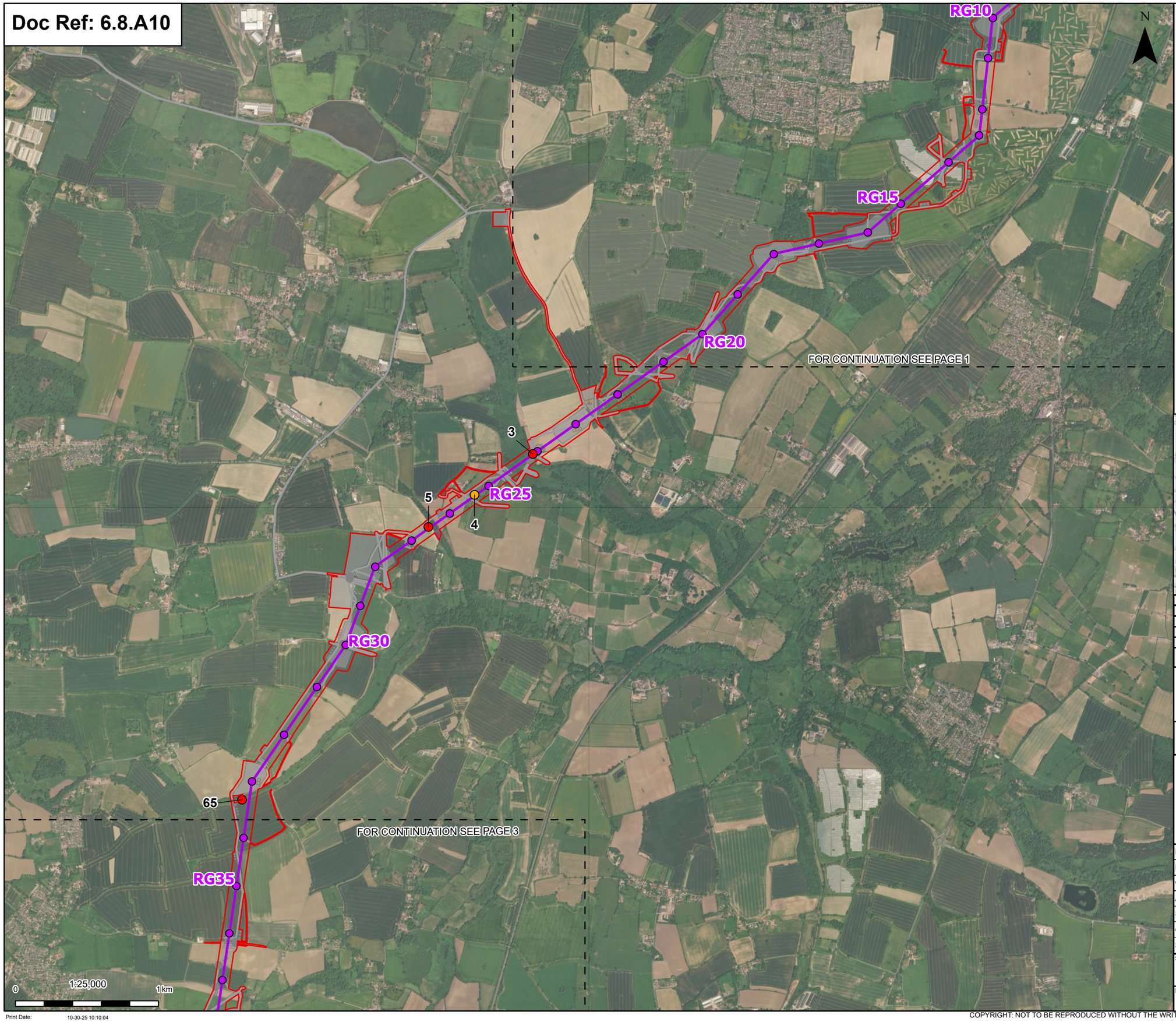

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Proposed overhead line alignment

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Red

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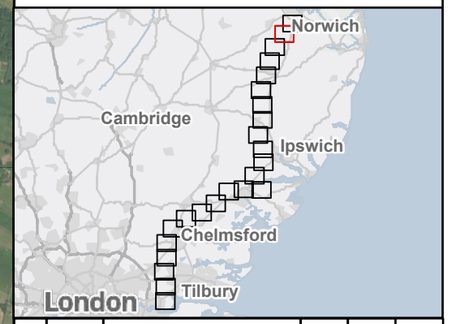

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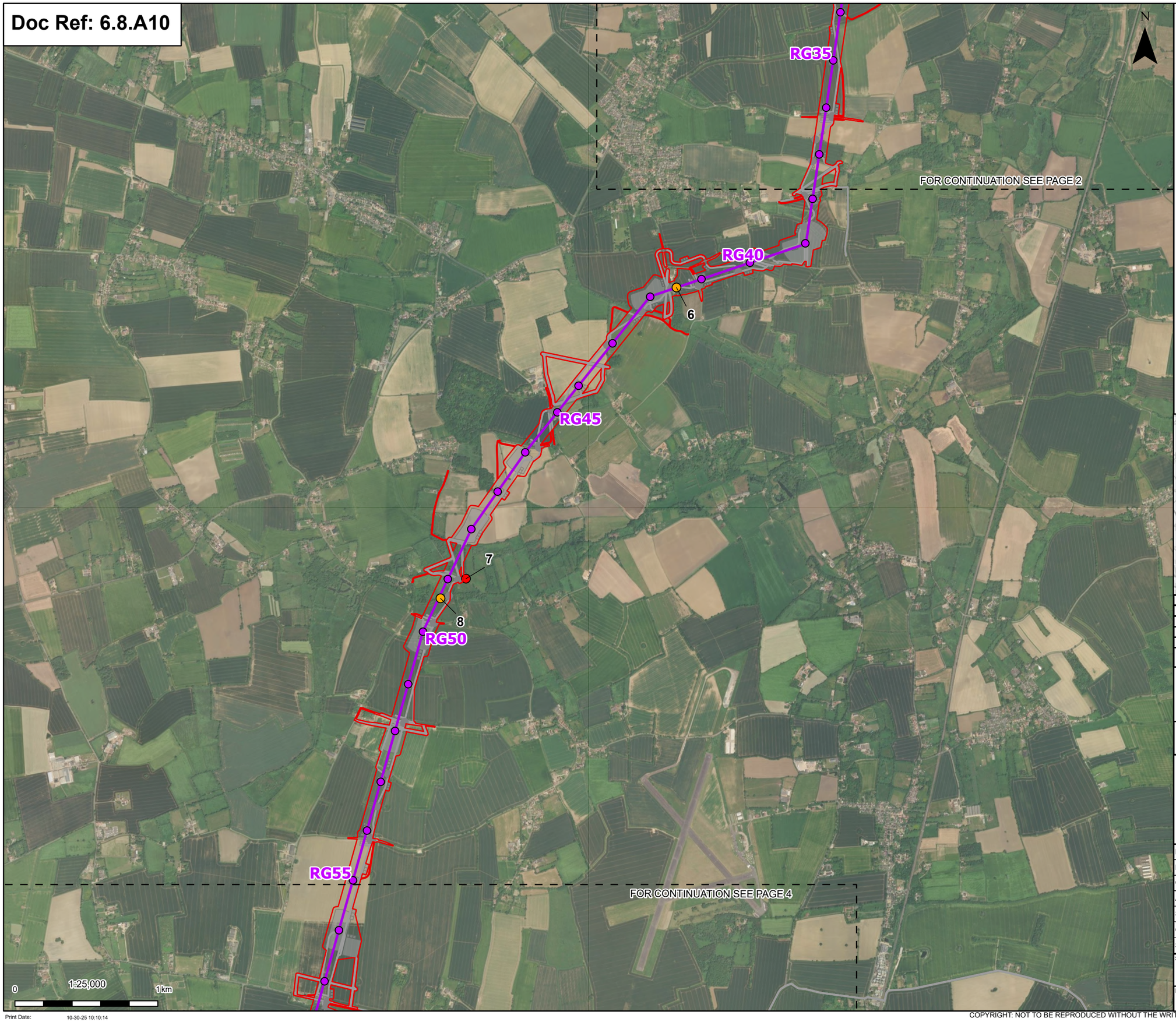

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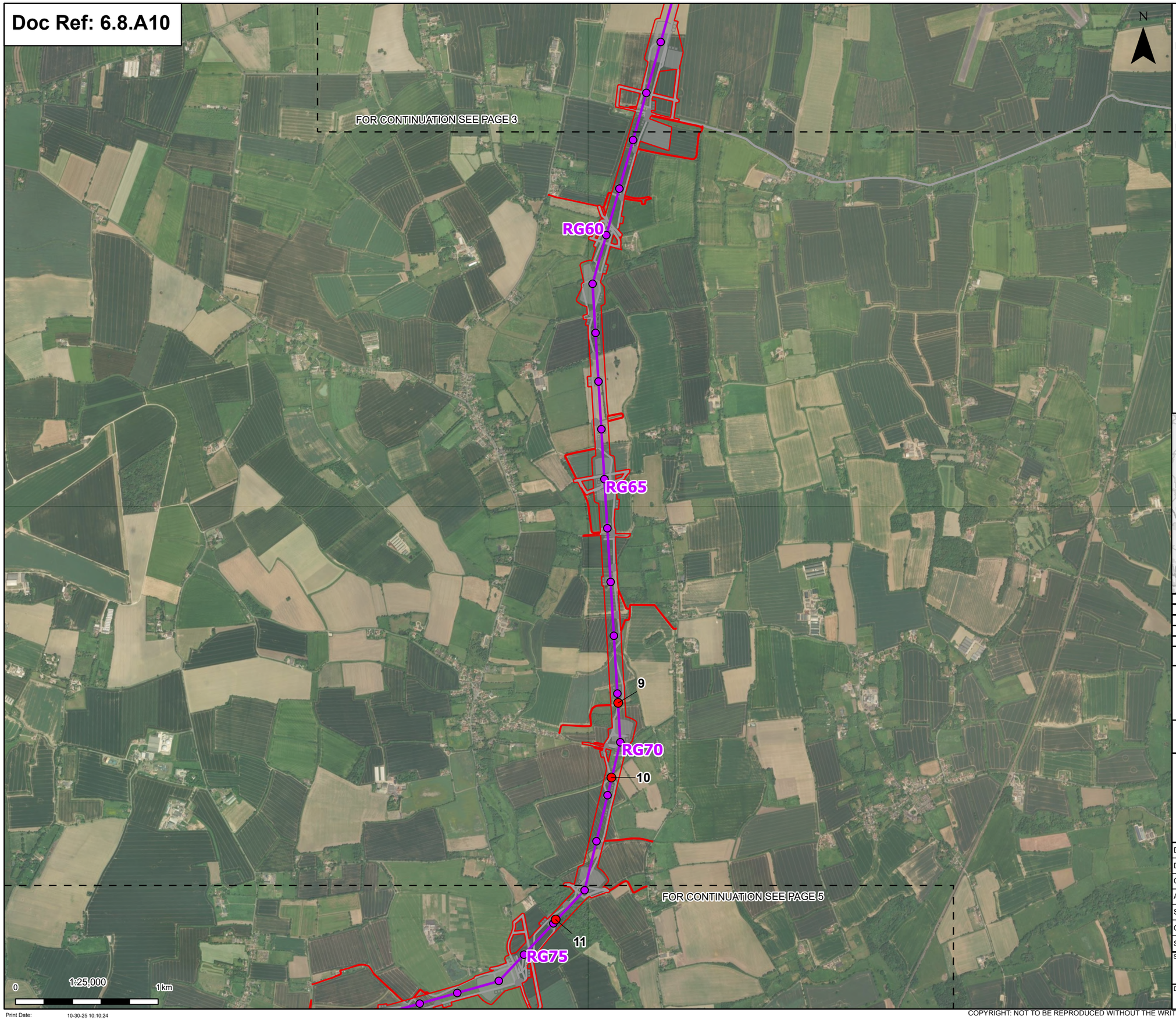

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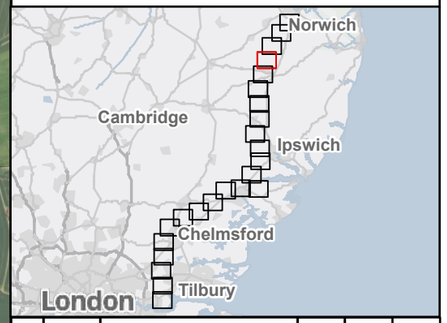

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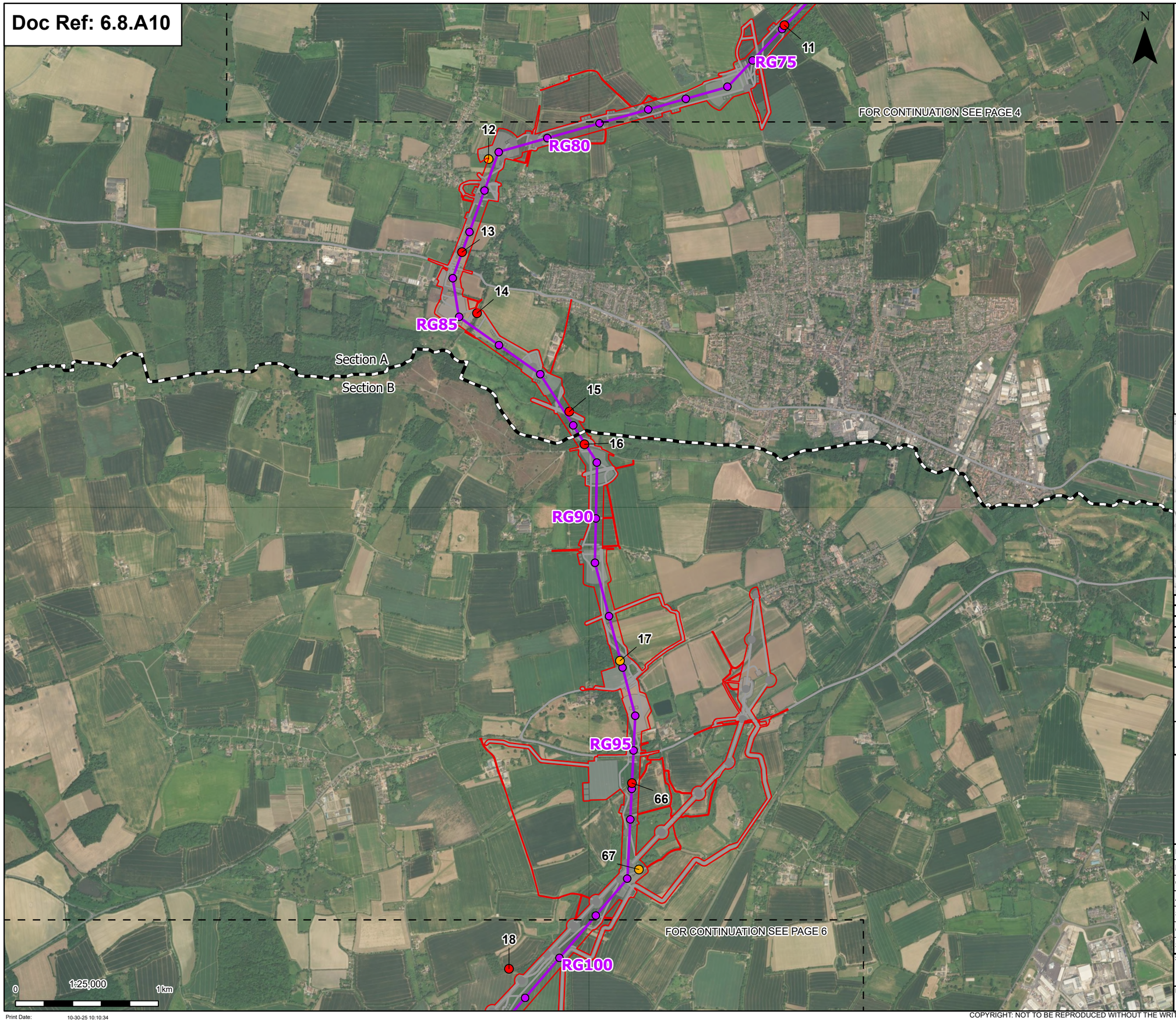

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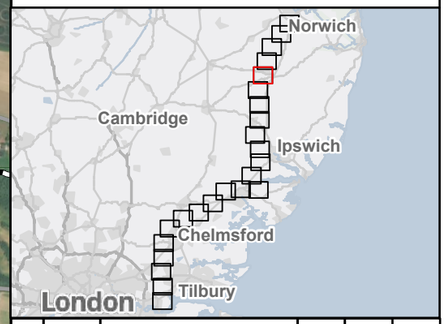

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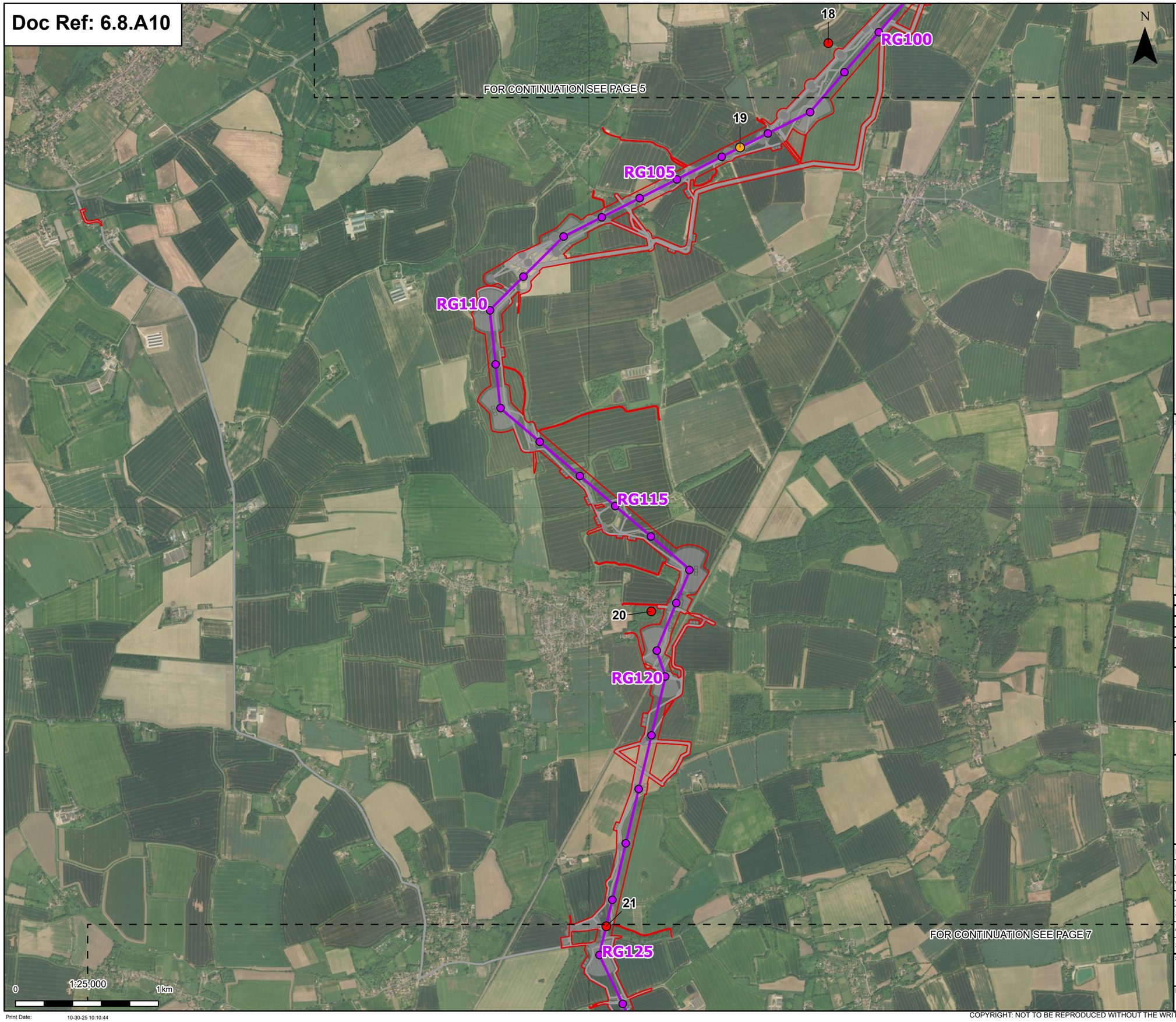

Order limits

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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

Bat statics locations

Amber

Red

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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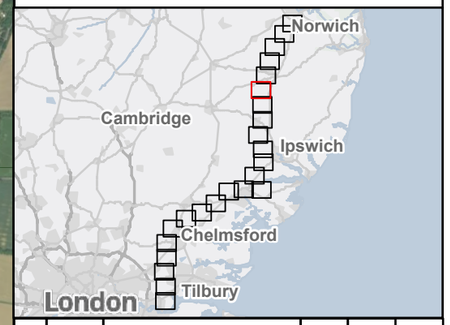

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PROJECT:
Norwich to Tilbury

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

Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Drawn	M. Pawaskar	Date	21 Aug 25
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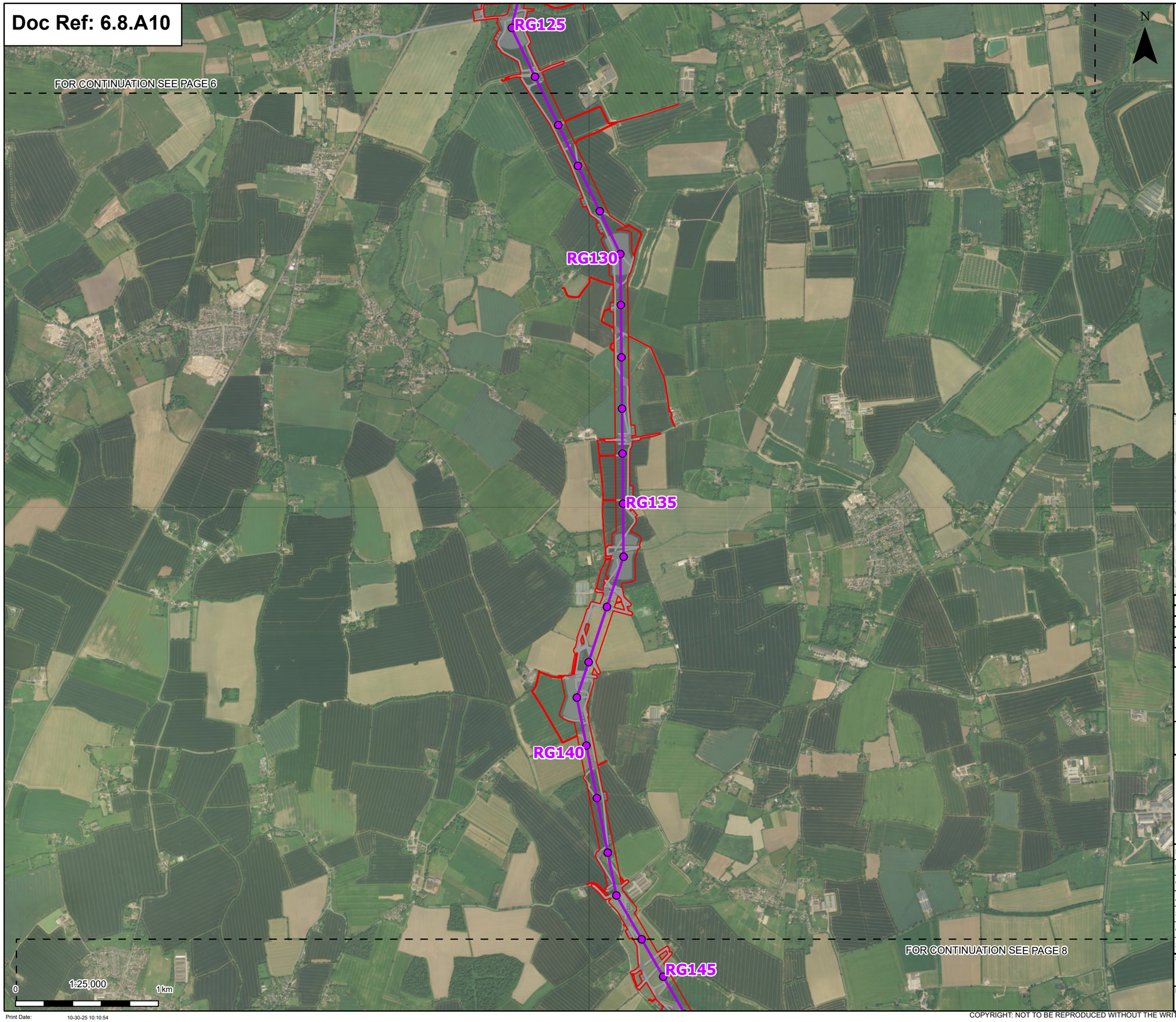

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Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

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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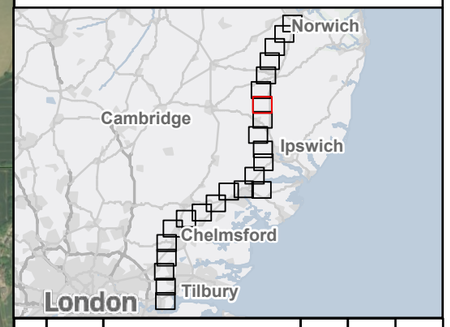

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PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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RG145

RG150

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22

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0 1:25,000 1km

N

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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

Bat statics locations

Amber

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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PROJECT:
Norwich to Tilbury

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Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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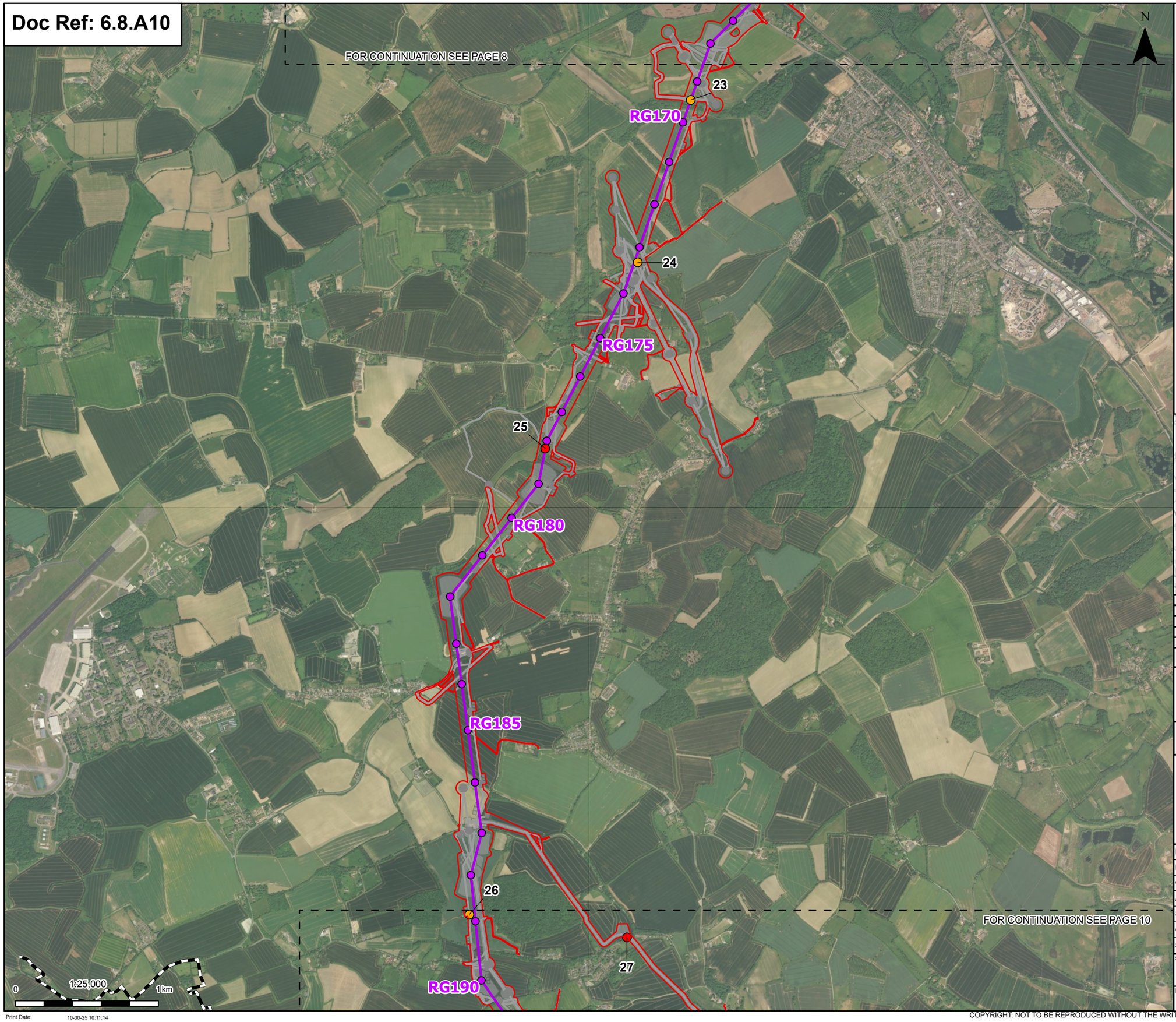

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Proposed standard lattice pylon location
Proposed overhead line alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber
Red

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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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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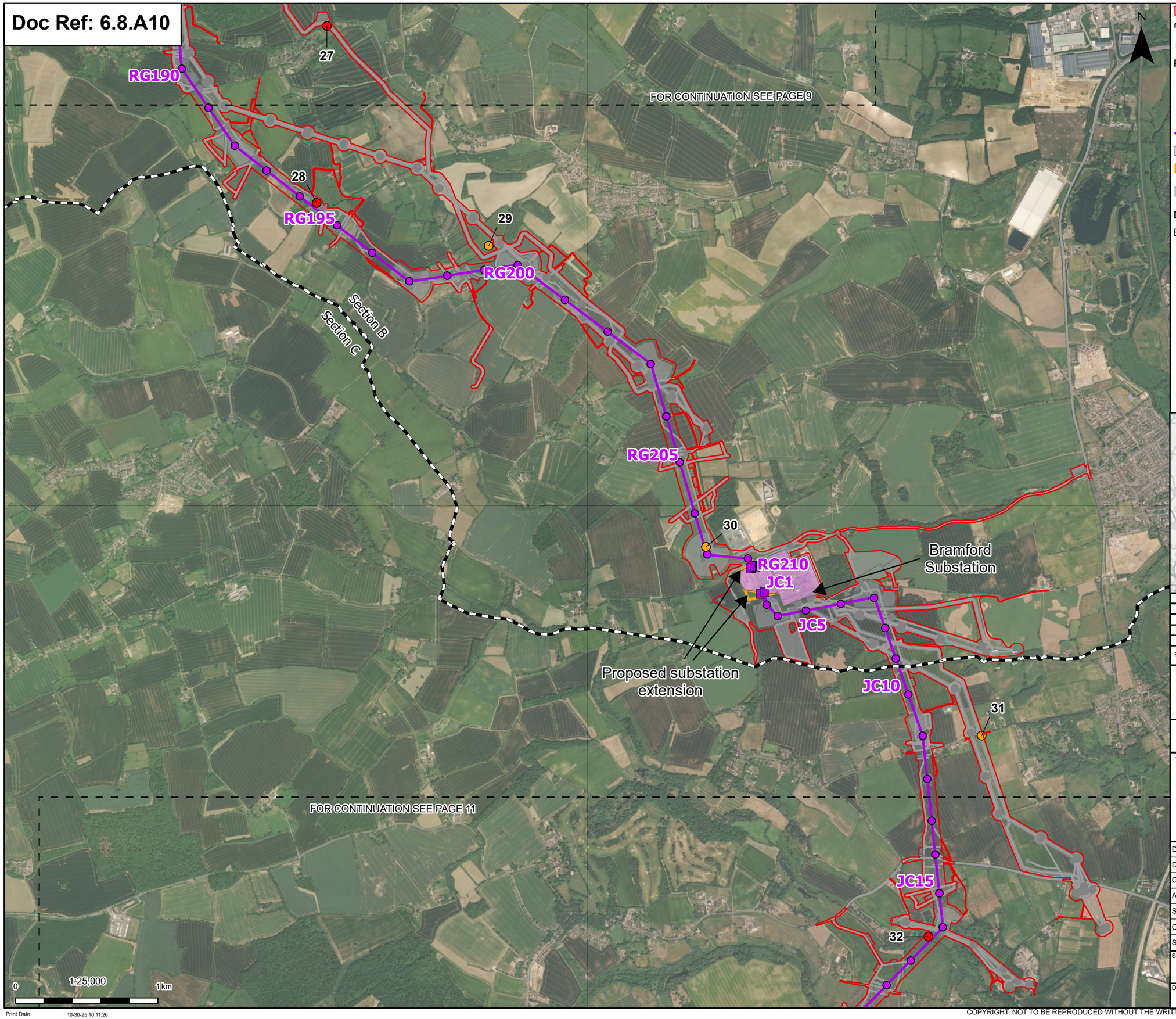

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- Order limits
- Sheet index cutline
- Project section line

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

Bat statics locations

- Amber
- Red

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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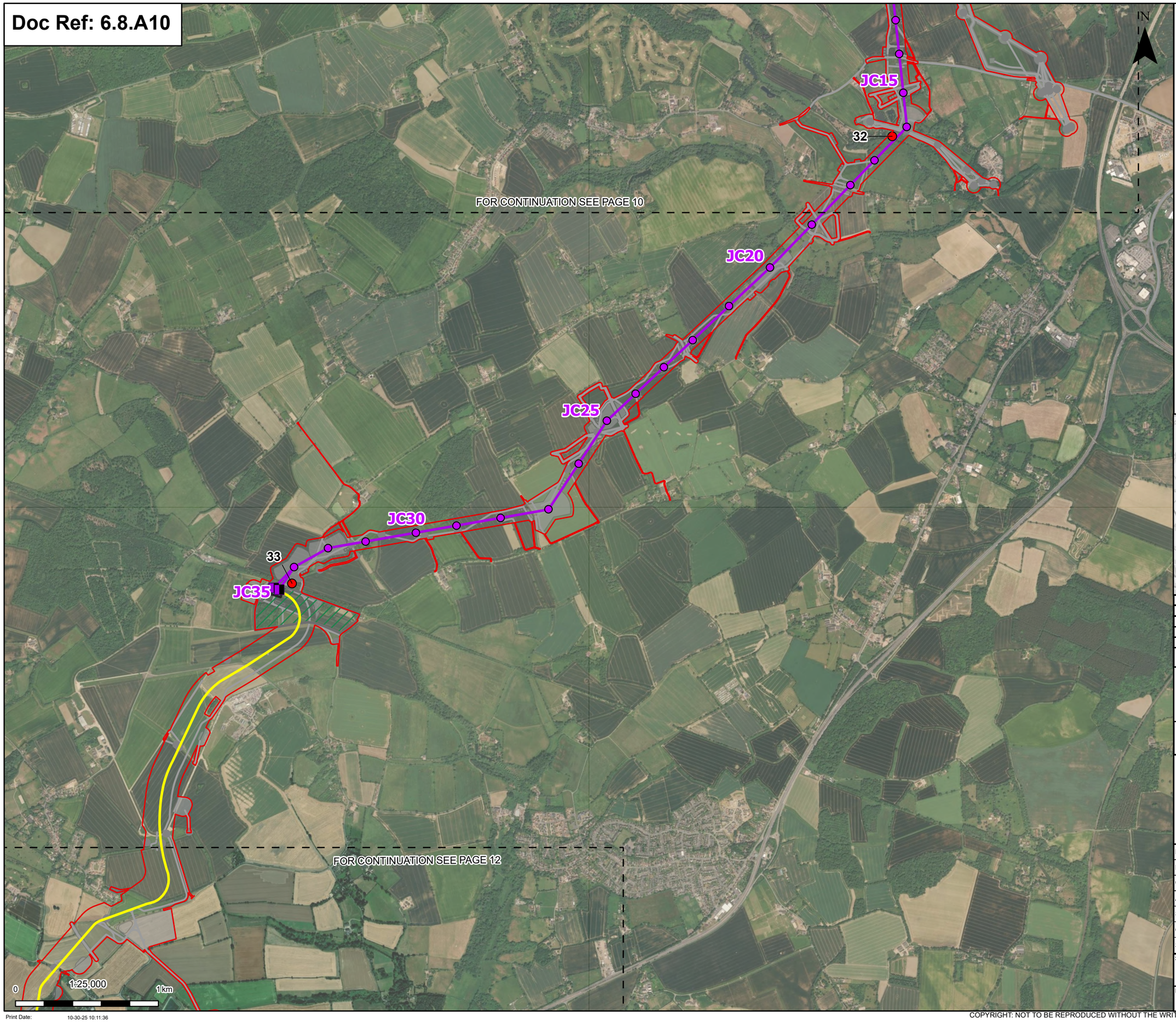

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Proposed project design details

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

Bat statics locations

Red

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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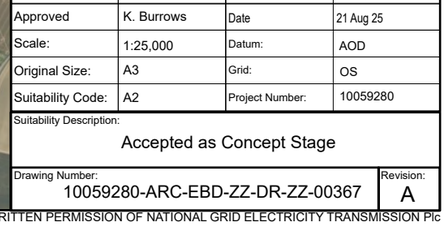

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PROJECT:
Norwich to Tilbury

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Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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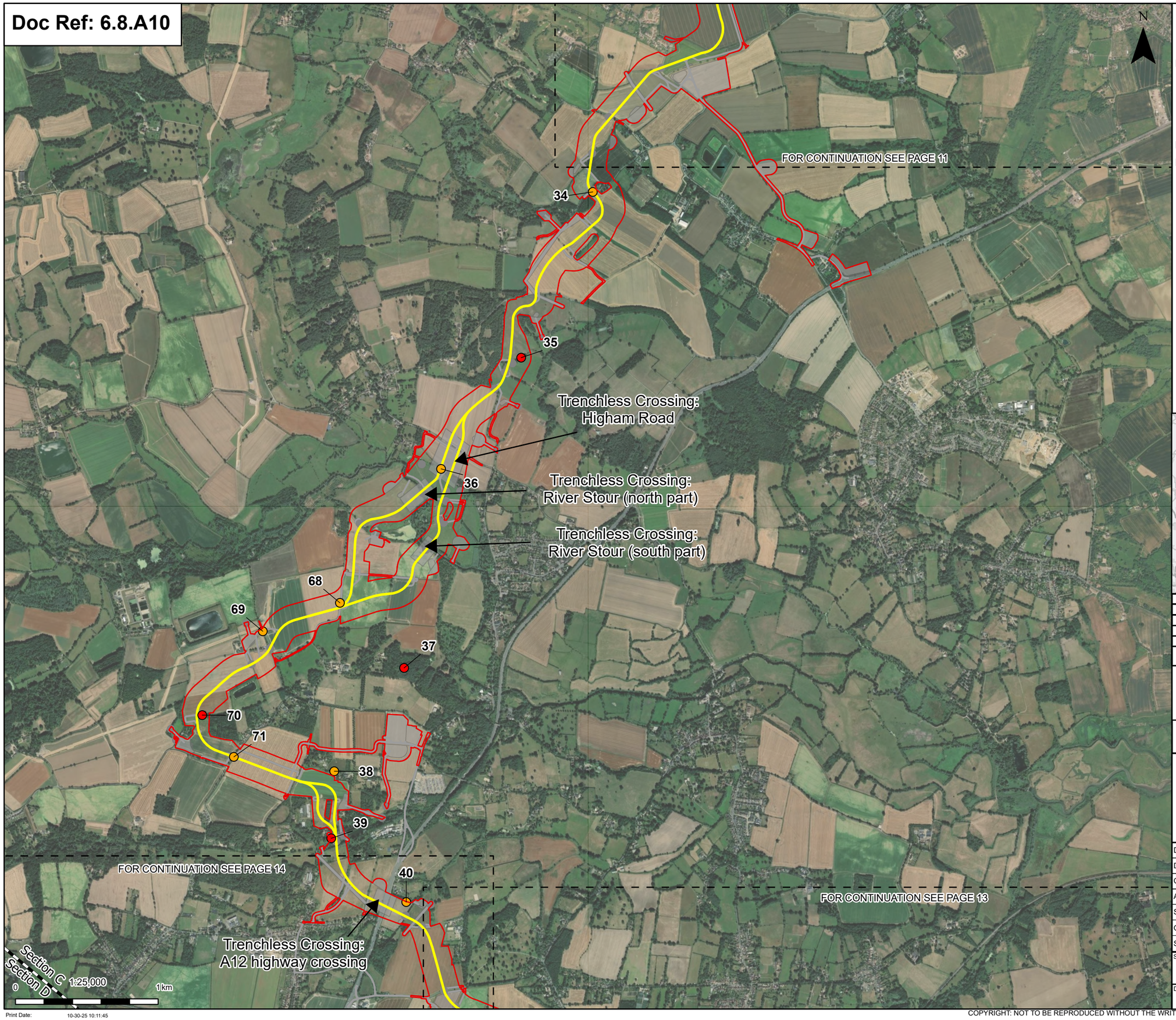

Order limits

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Project section line

Proposed project design details

Proposed underground cable alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber

Red

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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PROJECT:
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Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Trenchless Crossing:
Railway crossing (east of Ardleigh)

TB10

TB15

42

TB5

43

44

TB1

Proposed
EACN
Substation

Section D

Section C

0 1:25,000 1km

N

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 DNO Substation
Proposed East Anglia Connection Node Substation (EACN)
Environmental area
Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber

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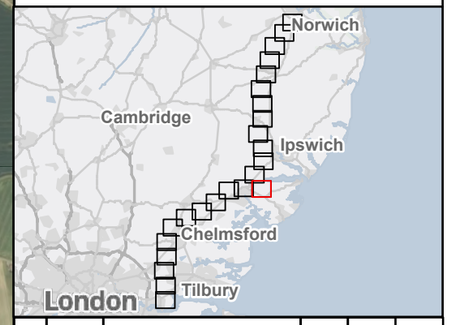

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PROJECT:
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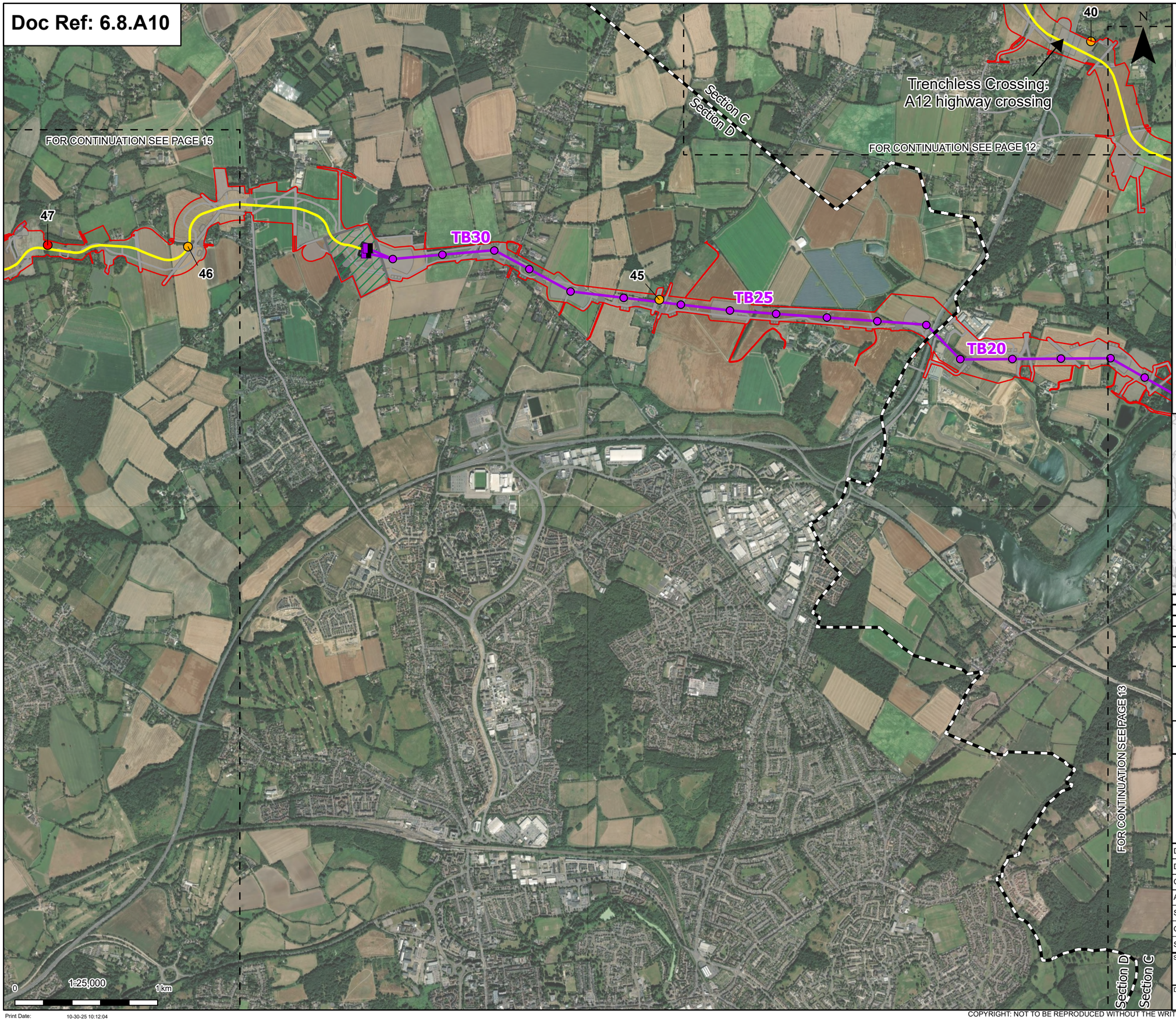

Order limits
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Proposed project design details

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

Bat statics locations

Amber
Red

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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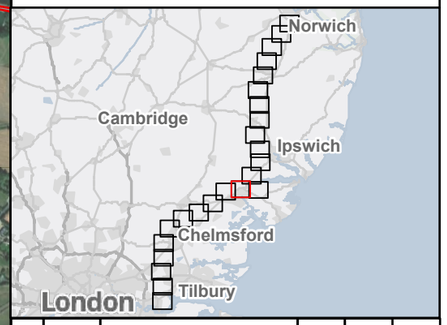

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PROJECT:
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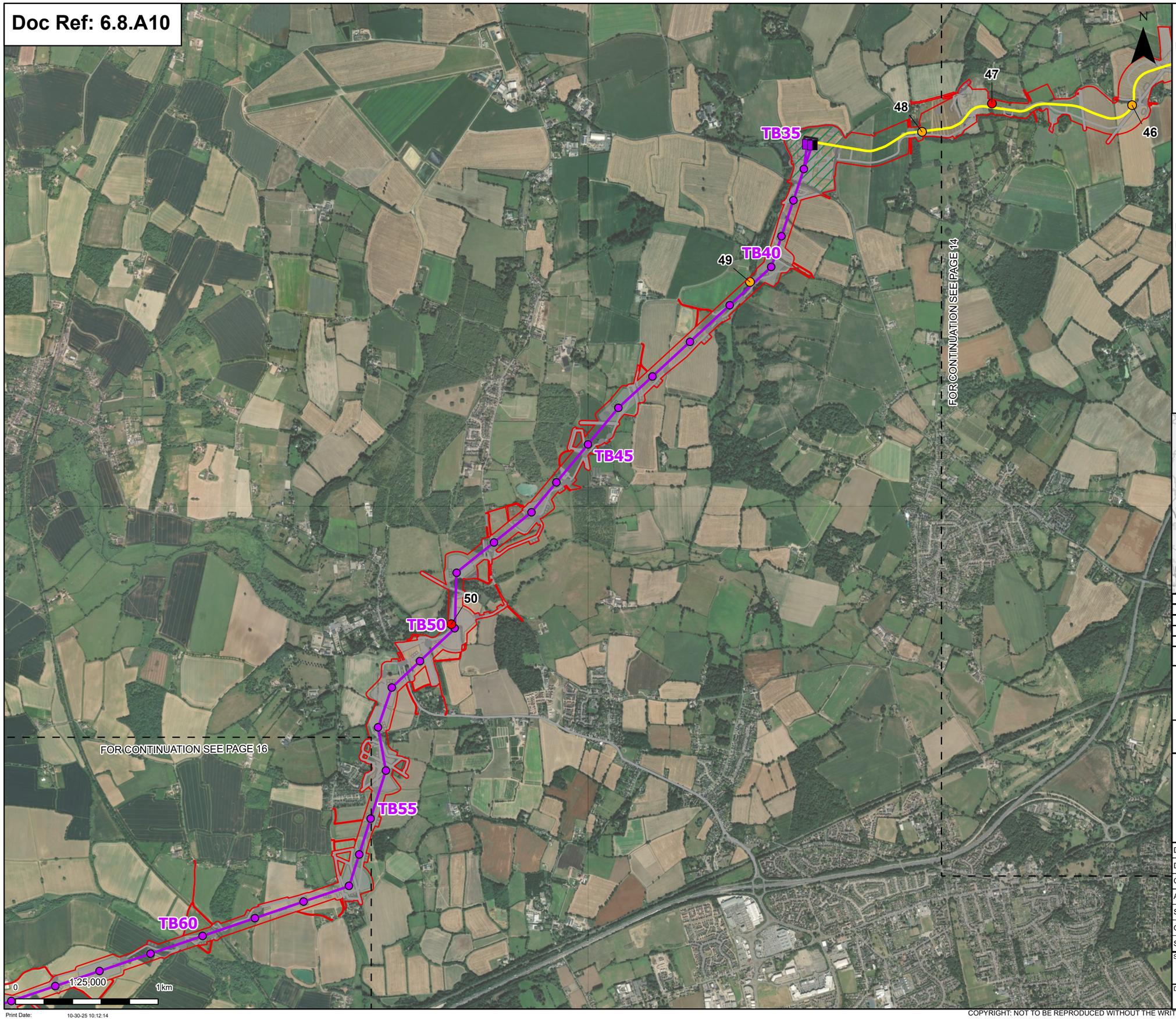

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

- Amber
- Red

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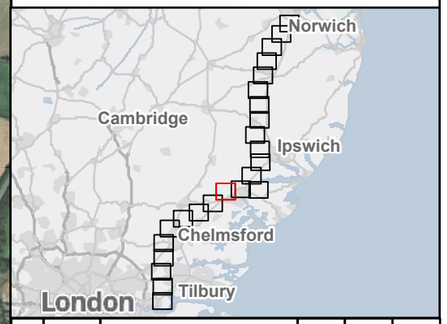

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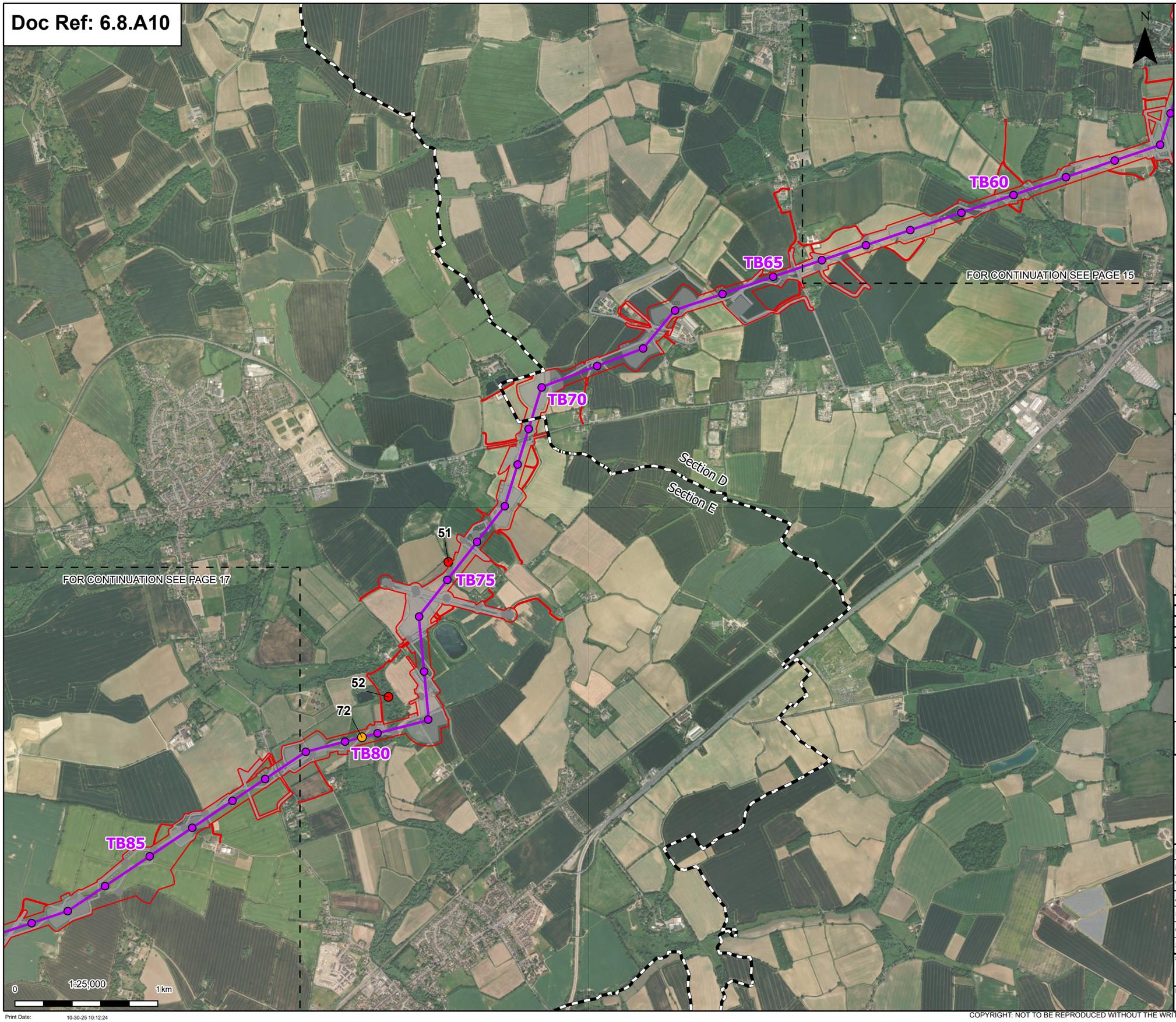

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

Amber
Red

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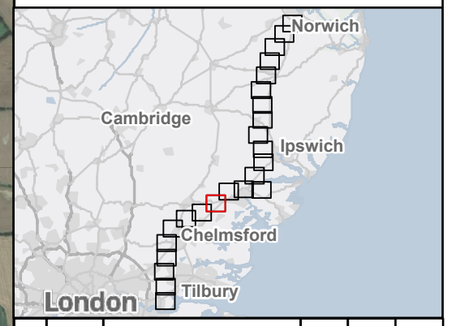

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PROJECT:
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Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Approved	K. Burrows	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280

Suitability Description:
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Revision: A

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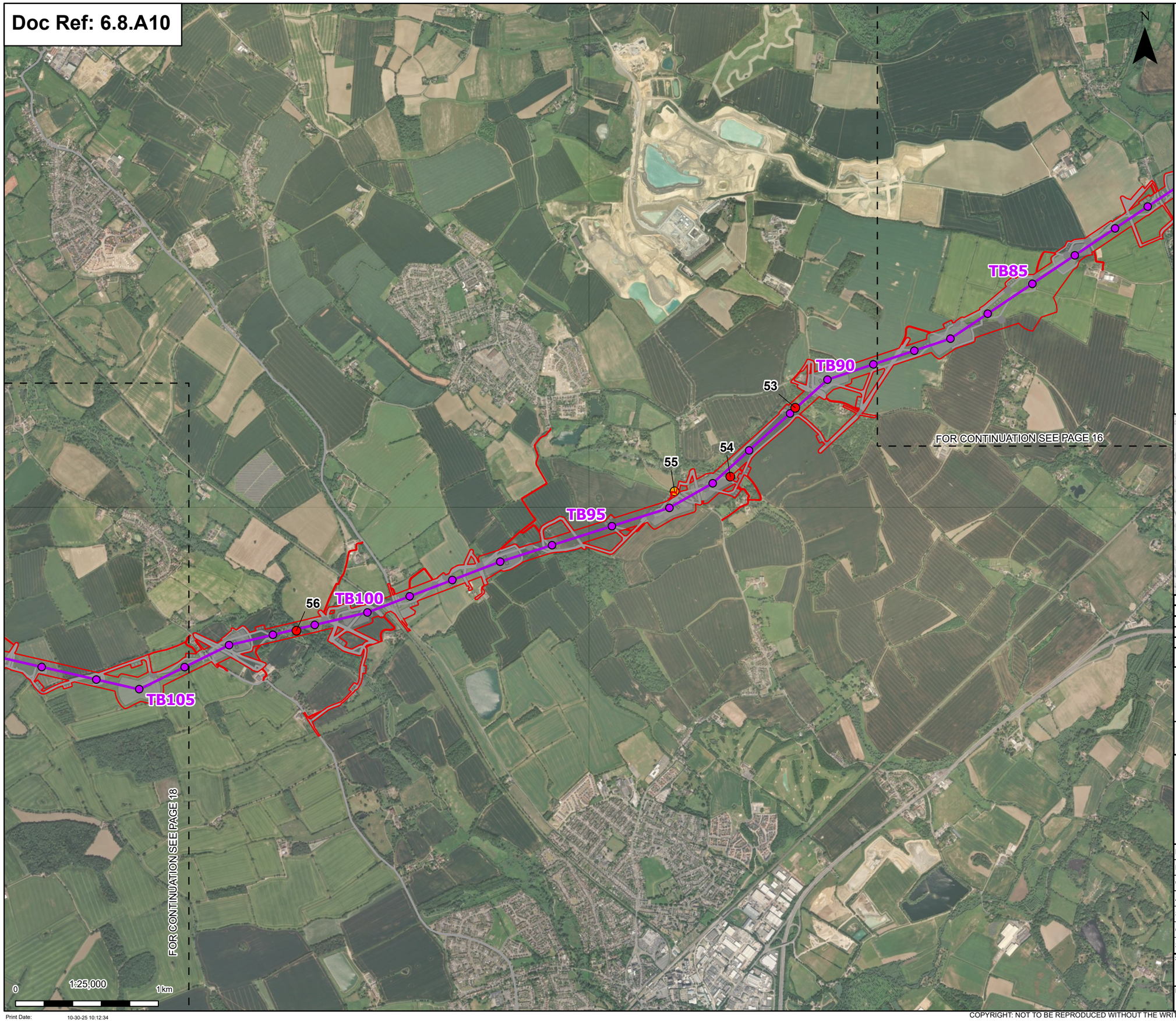

Order limits

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

Bat statics locations

Amber

Red

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	MP	AF	KB

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PROJECT:
Norwich to Tilbury

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

Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
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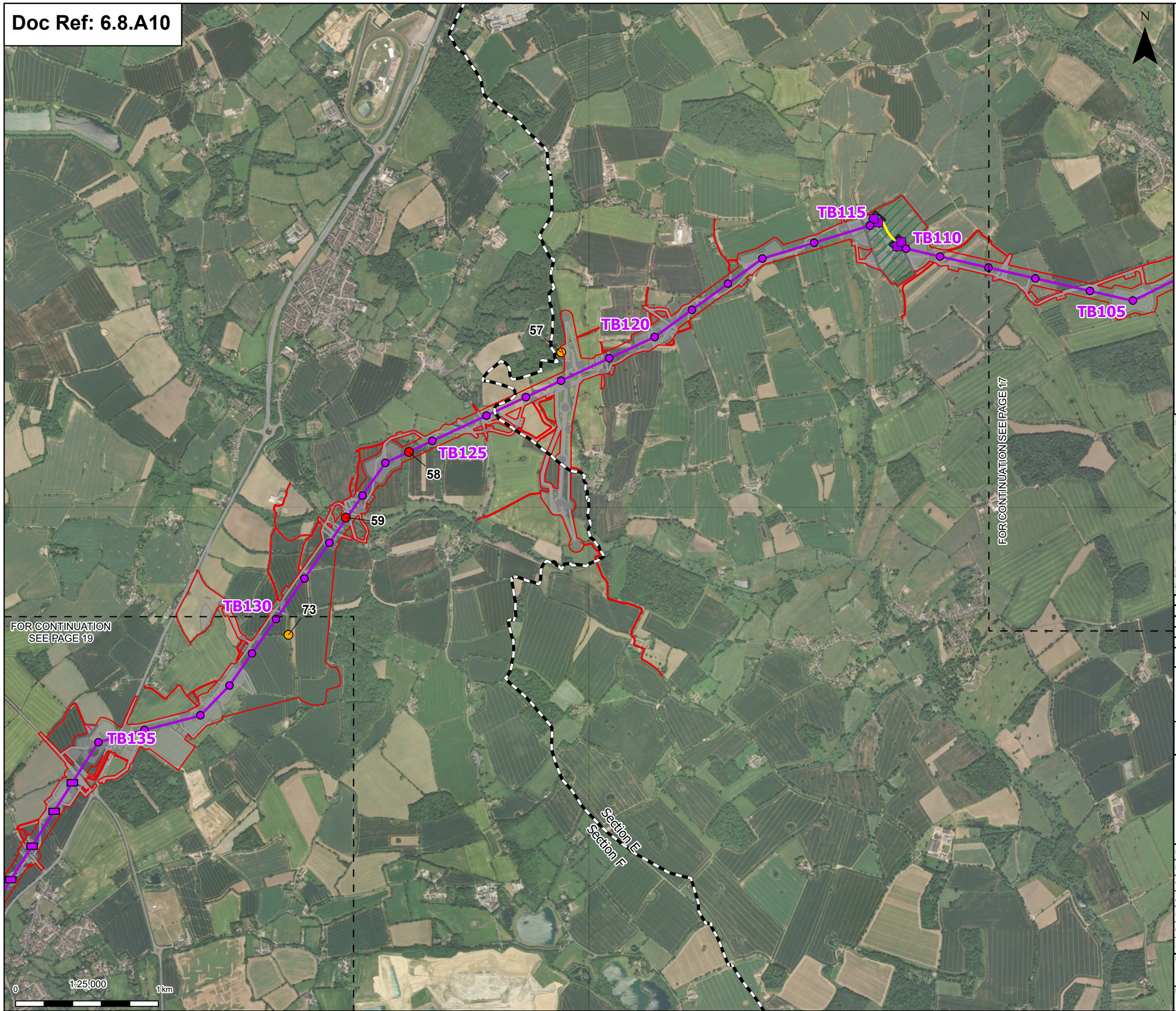

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Order limits
Sheet index cutline
Project section line

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

Bat statics locations

Amber
Red

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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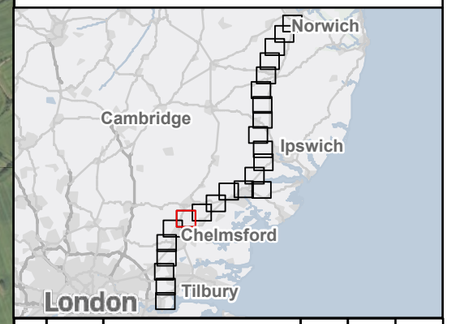

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A	Aug 2025	FOR DCO APPLICATION	MP	AF	KB

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PROJECT:
Norwich to Tilbury

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Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
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Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
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Original Size:	A3	Grid:	OS
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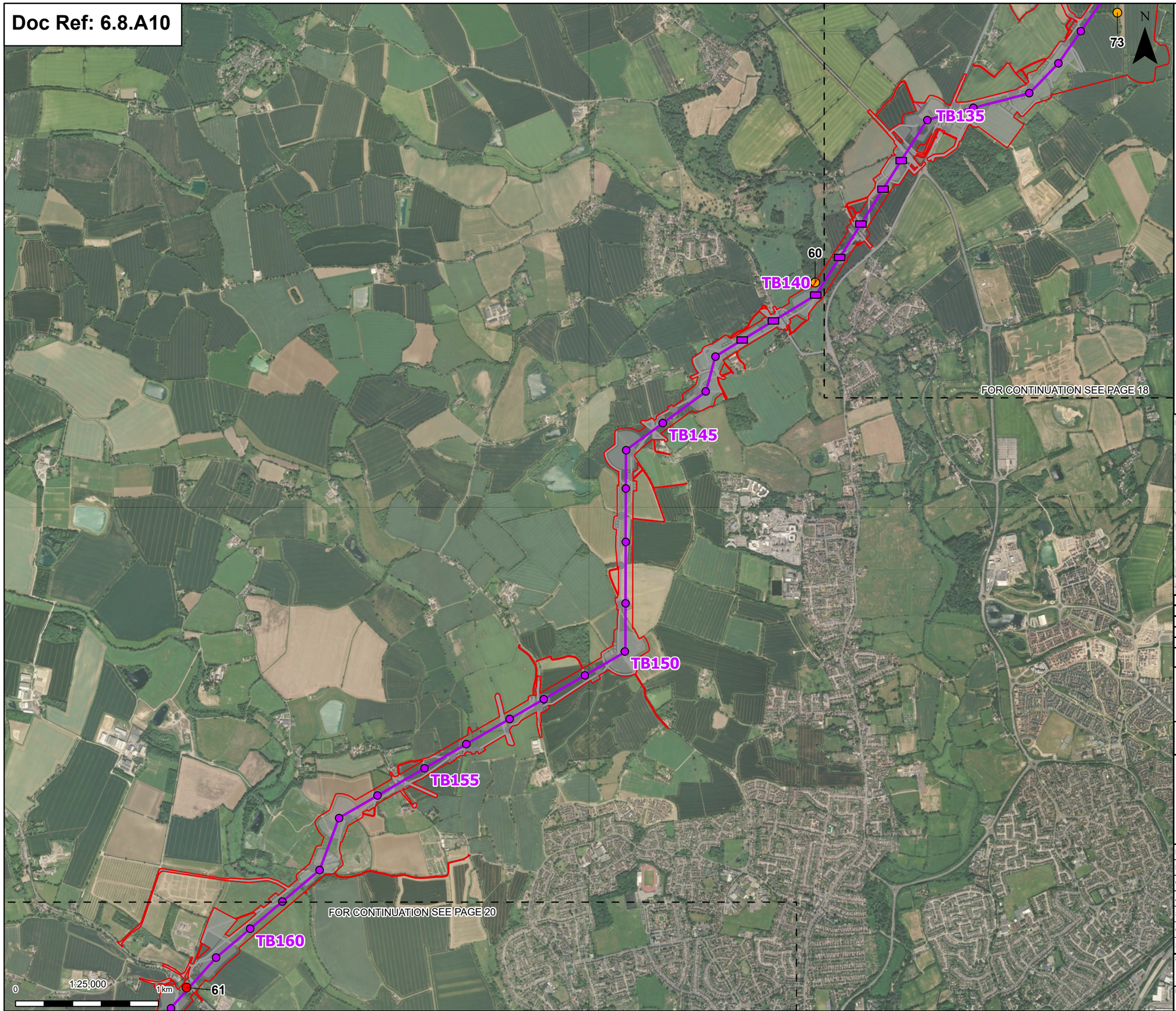

Order limits

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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

Bat statics locations

Amber

Red

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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PROJECT:
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Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	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
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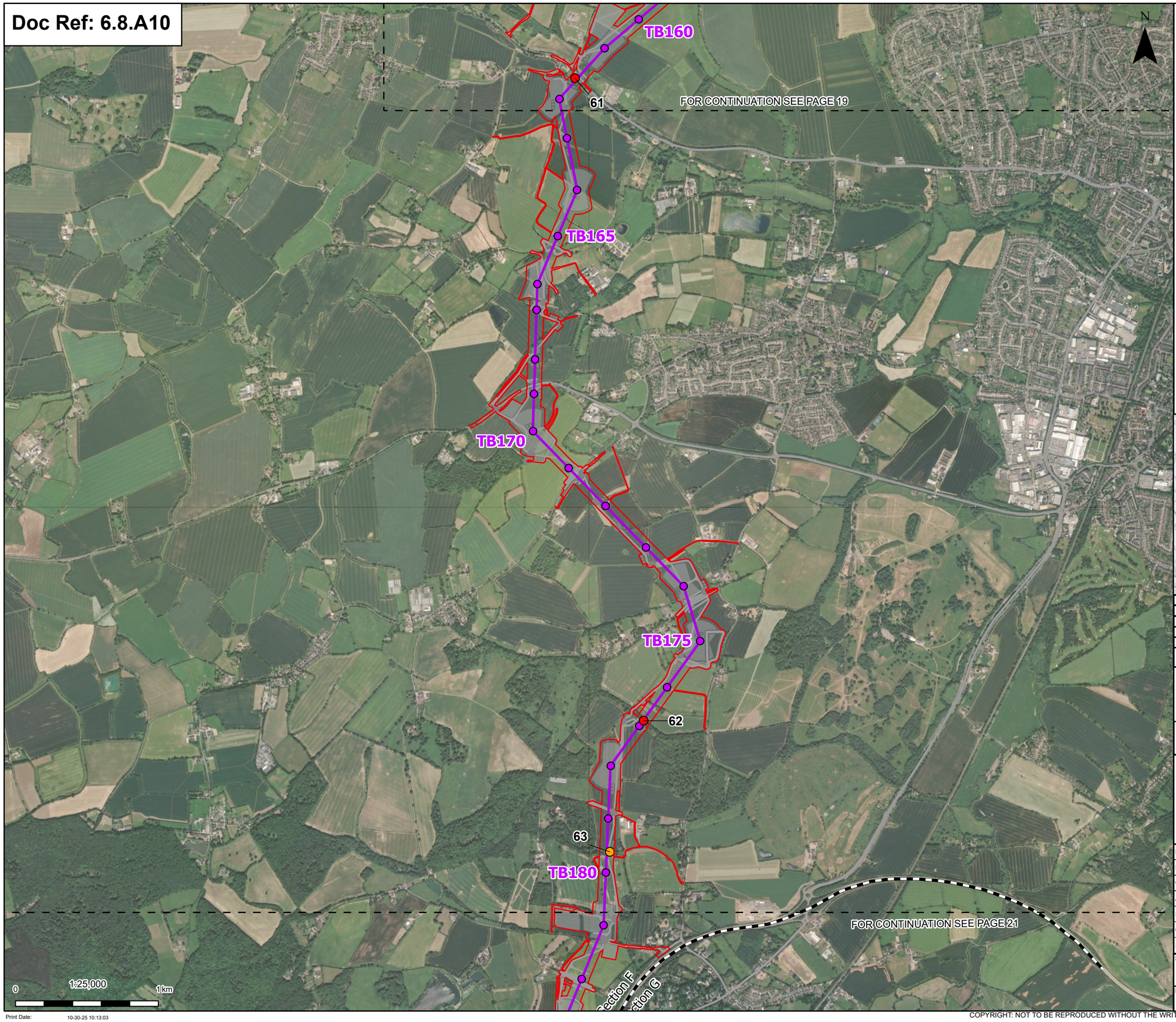

Order limits
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Project section line

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

Bat statics locations

Amber
Red

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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PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	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
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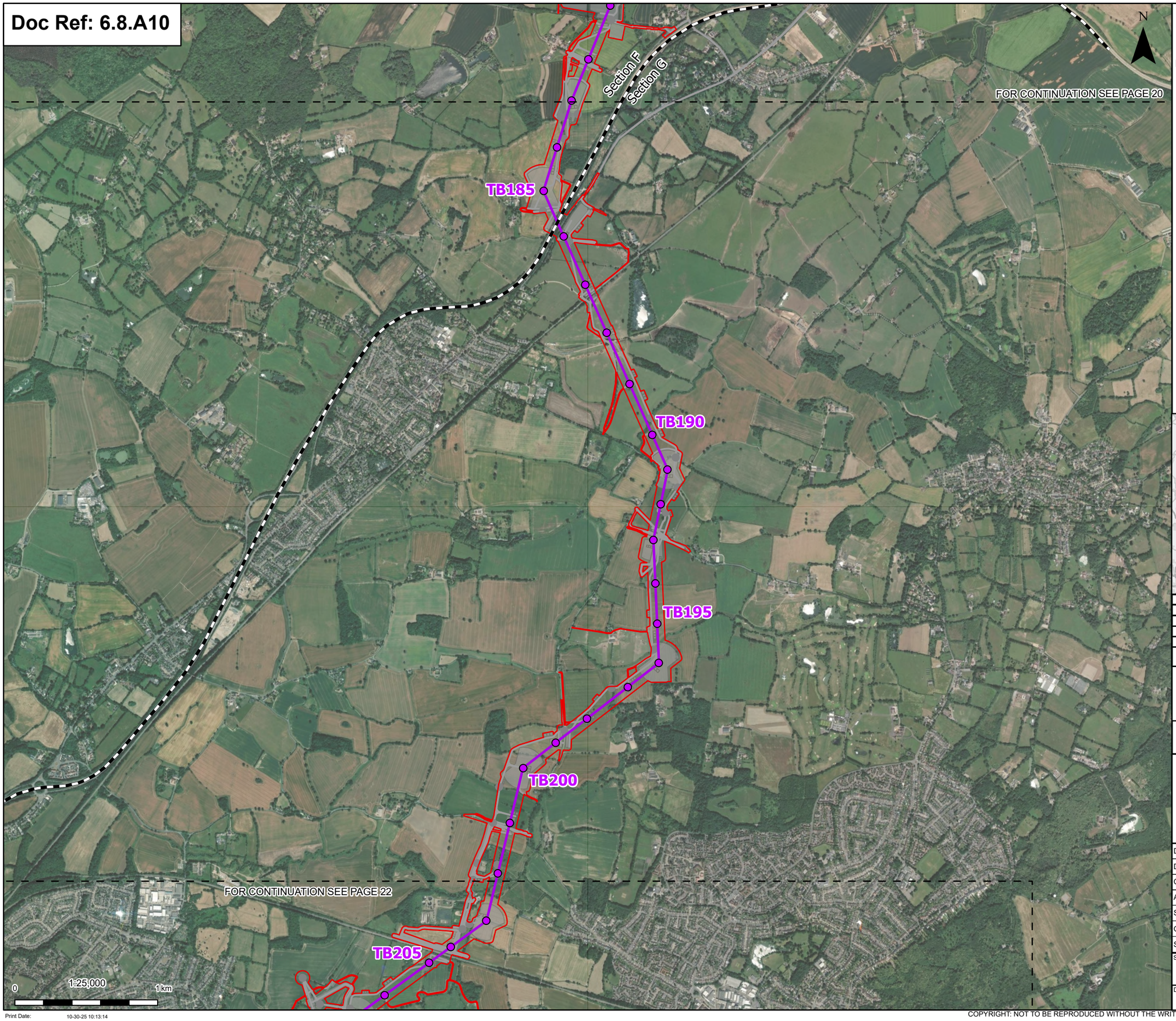

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Project section line

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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PROJECT:
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Regulation 5(2)(a)

Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:25,000	Datum:	AOD
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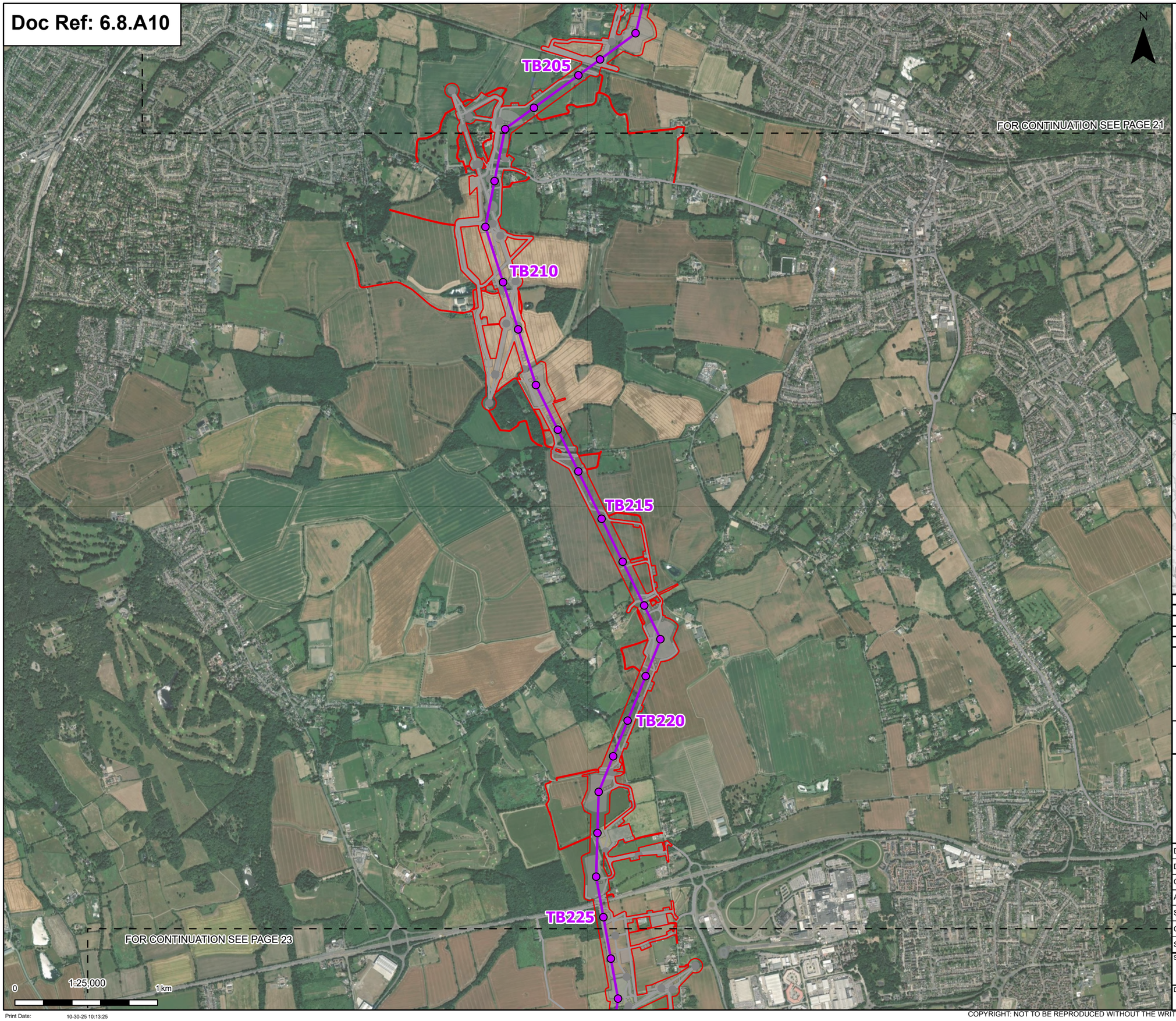

Order limits

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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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PROJECT:
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Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	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
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Suitability Description:
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Revision: A

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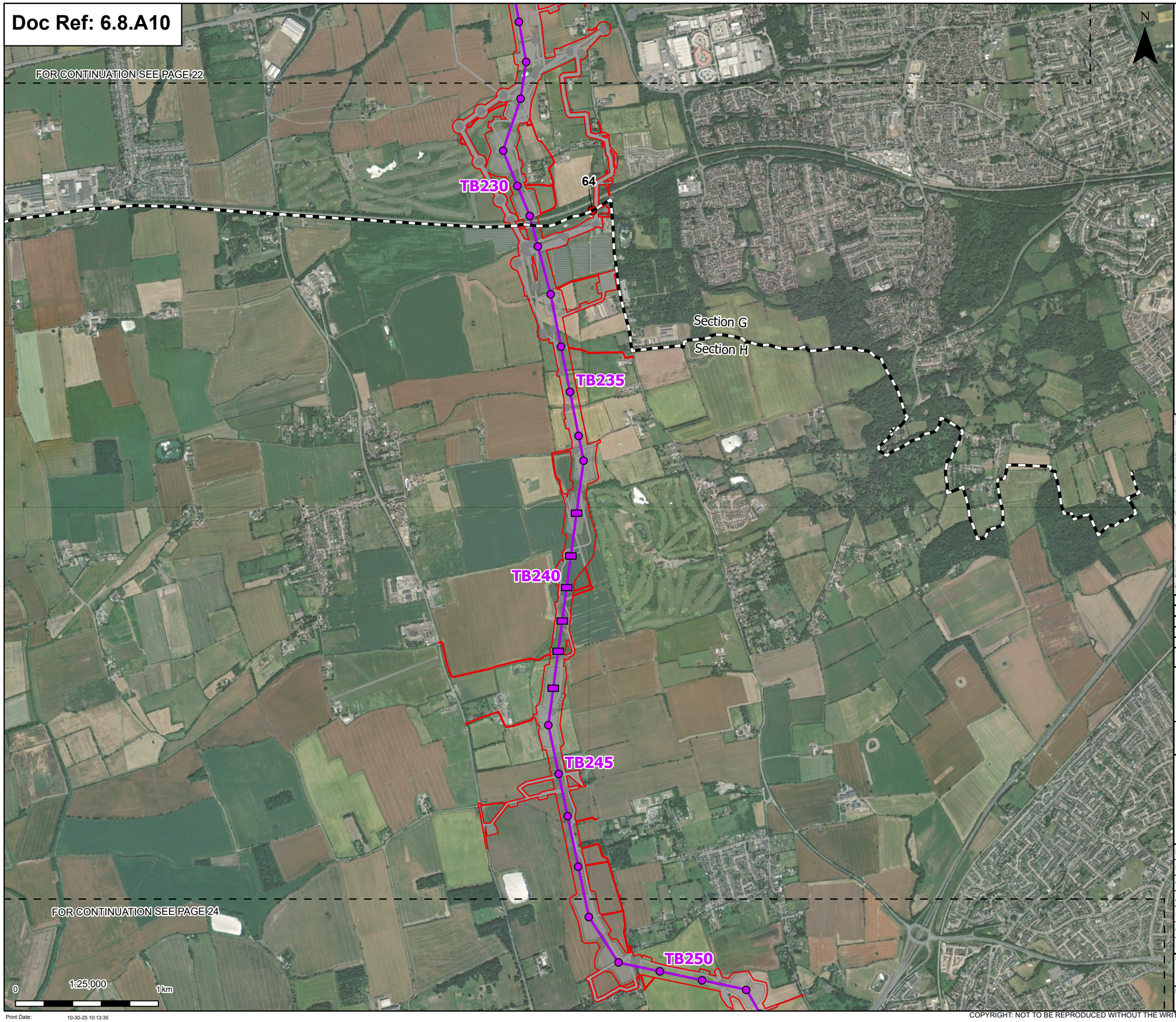

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- Order limits
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Proposed project design details

- Proposed 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

Bat statics locations

- Red

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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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	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-00367
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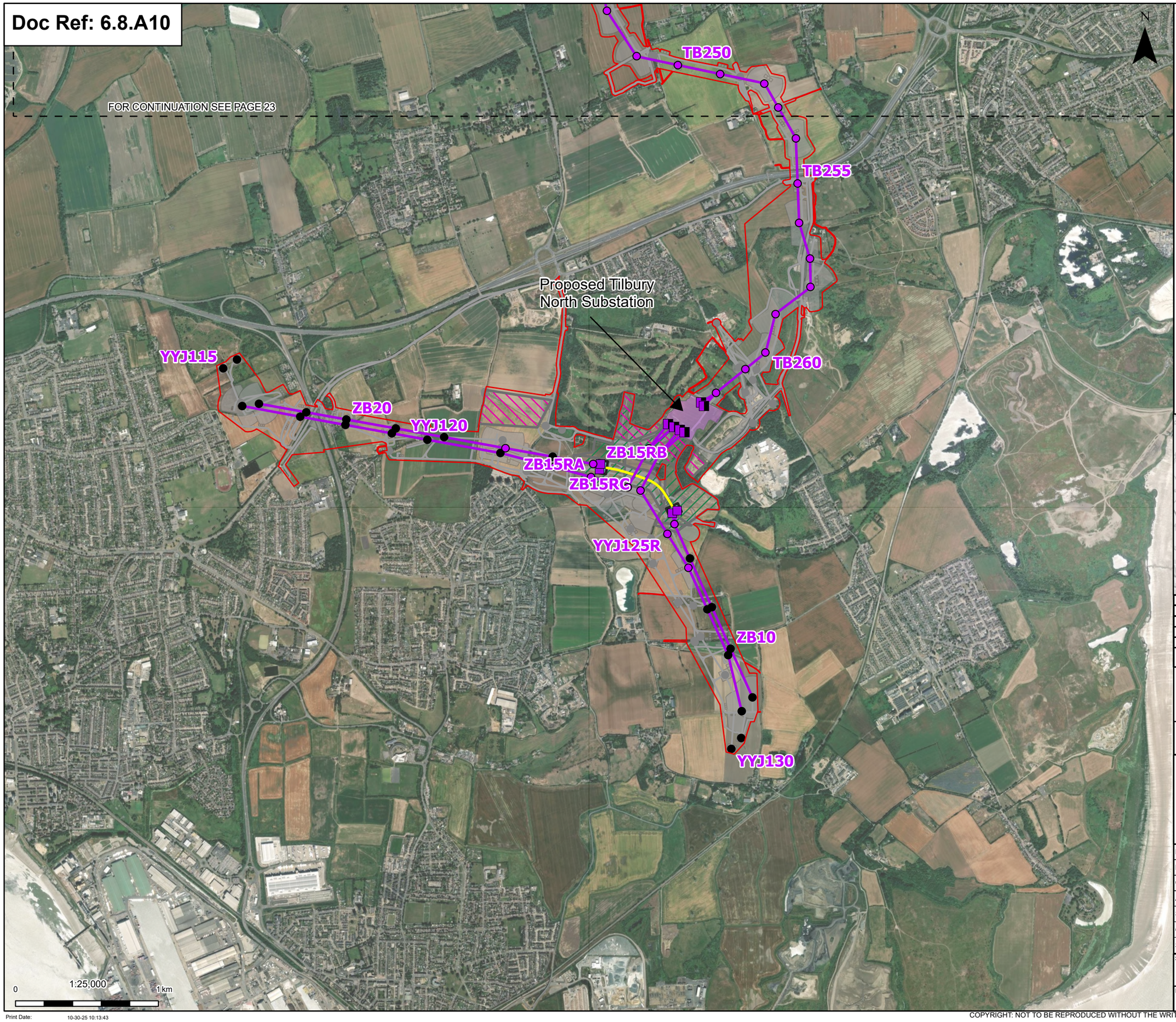

- Order limits
- Sheet index cutline

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

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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PROJECT:
Norwich to Tilbury

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

Title:

Figure A8.10.1 - Ecology and Biodiversity - Bat Static Deployment 2023-2025
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Designed	S. Davies	Date	21 Aug 25
Drawn	M. Pawaskar	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

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Figure A8.10.2 Potential Bat Flyway Locations (Rev B)

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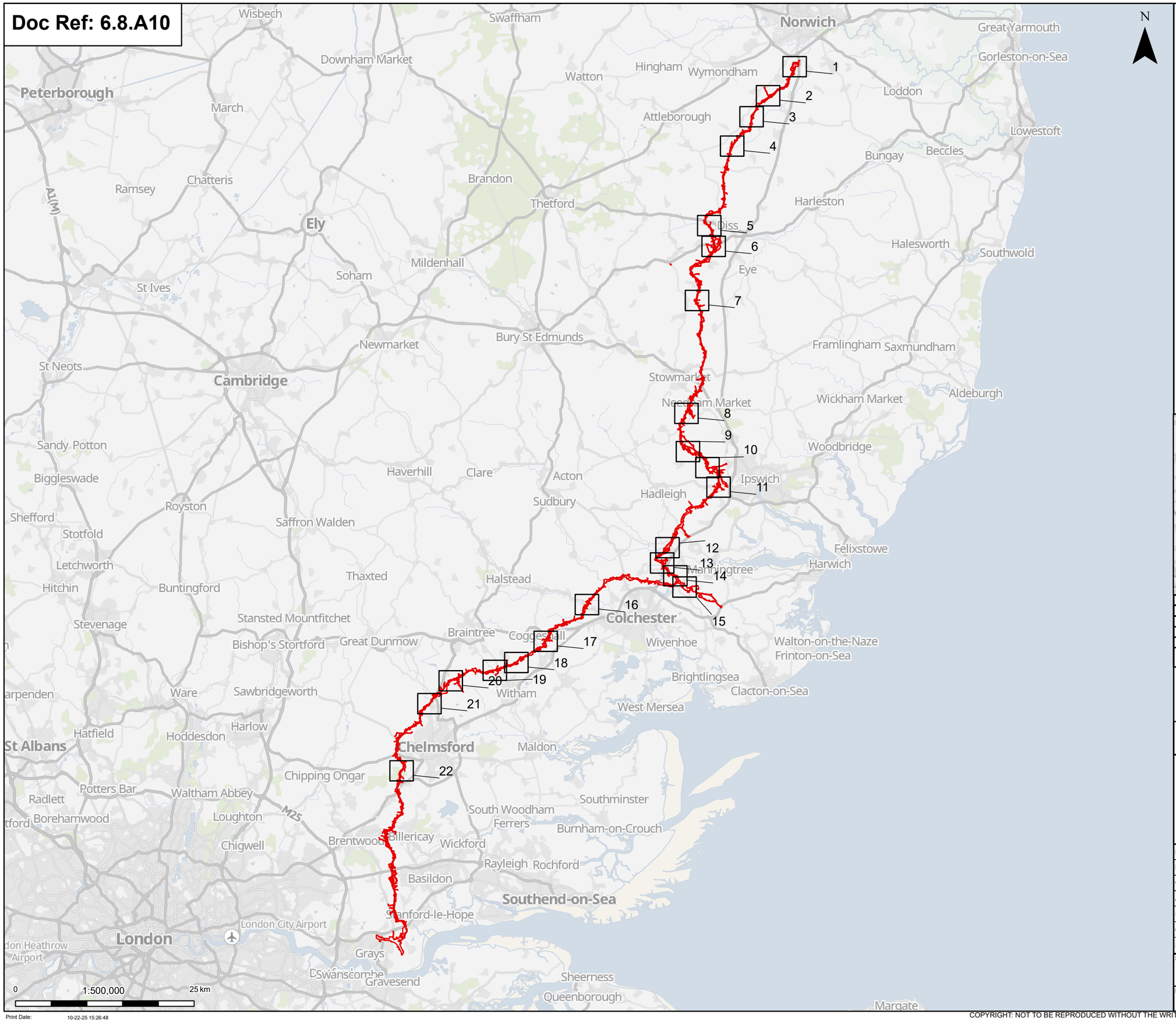

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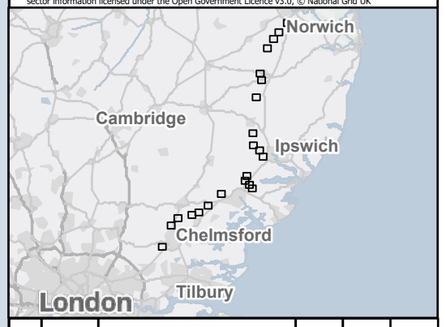

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B	Oct 2025	FOR DCO APPLICATION	KF	AF	KB
A	Aug 2025	FOR DCO APPLICATION	MP	AF	KB

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PROJECT: Norwich to Tilbury

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

Title:

Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations Overview

Designed	S. Davies	Date	October 25
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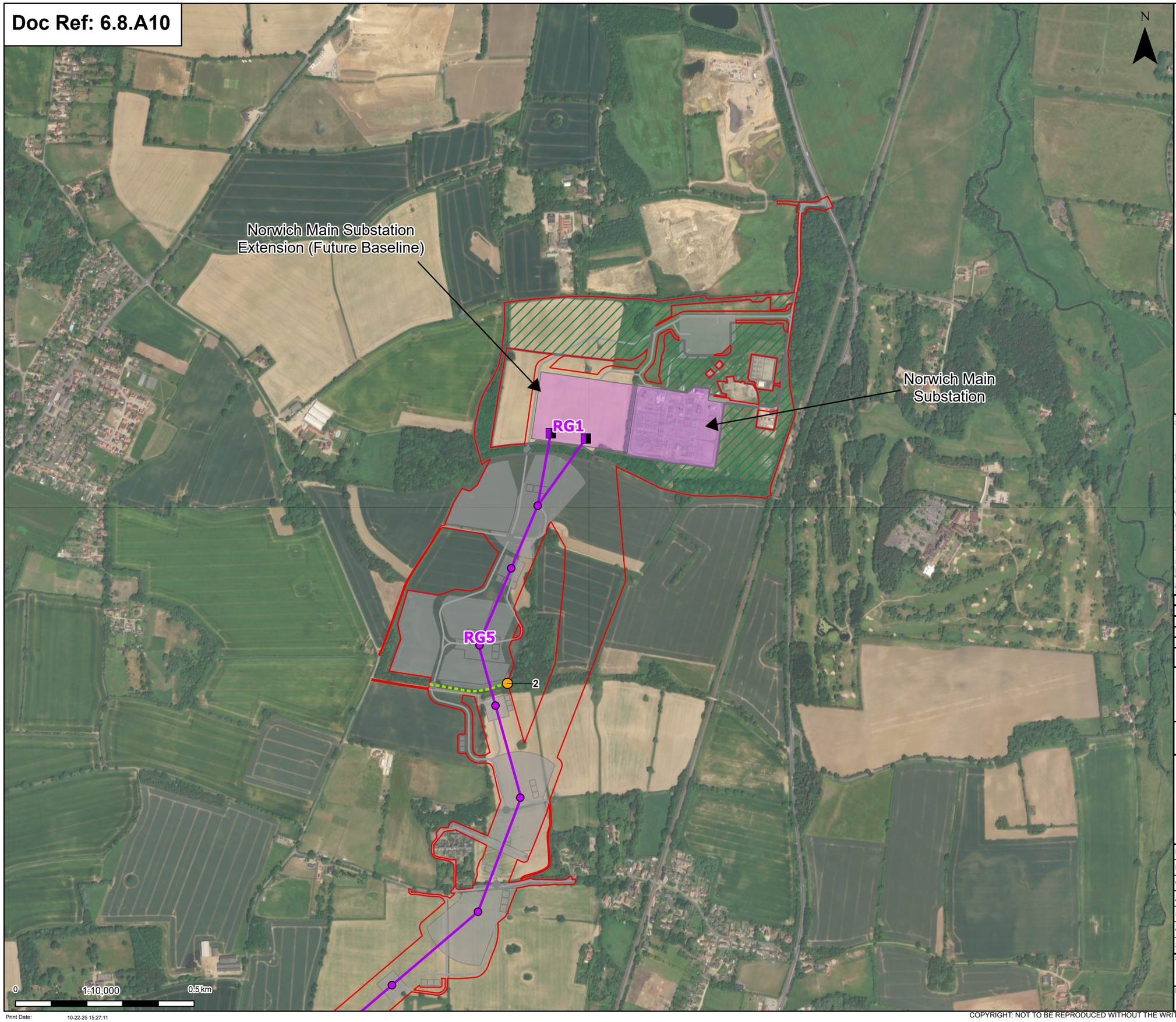

- Order limits
- Sheet index cutline

Proposed project design details

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

Discipline specific constraints

Bat statics locations

- Amber
- Potential bat flyway location

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).

The locations of potential bat flyways is dependant on the amount of vegetation that is required for removal and will be designed to ensure that there is a gap no larger than 10 m at each of these locations

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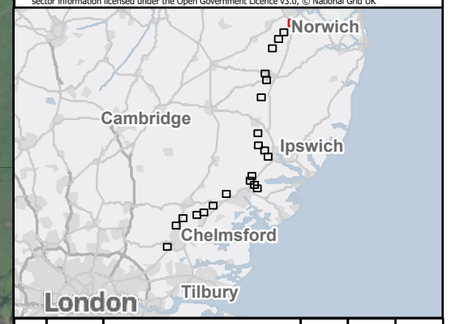

Rev	Date	Description	Drawn	Check	Approv
B	Oct 2025	FOR DCO APPLICATION	KF	AF	KB
A	Aug 2025	FOR DCO APPLICATION	MP	AF	KB

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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Designed	S. Davies	Date	October 25
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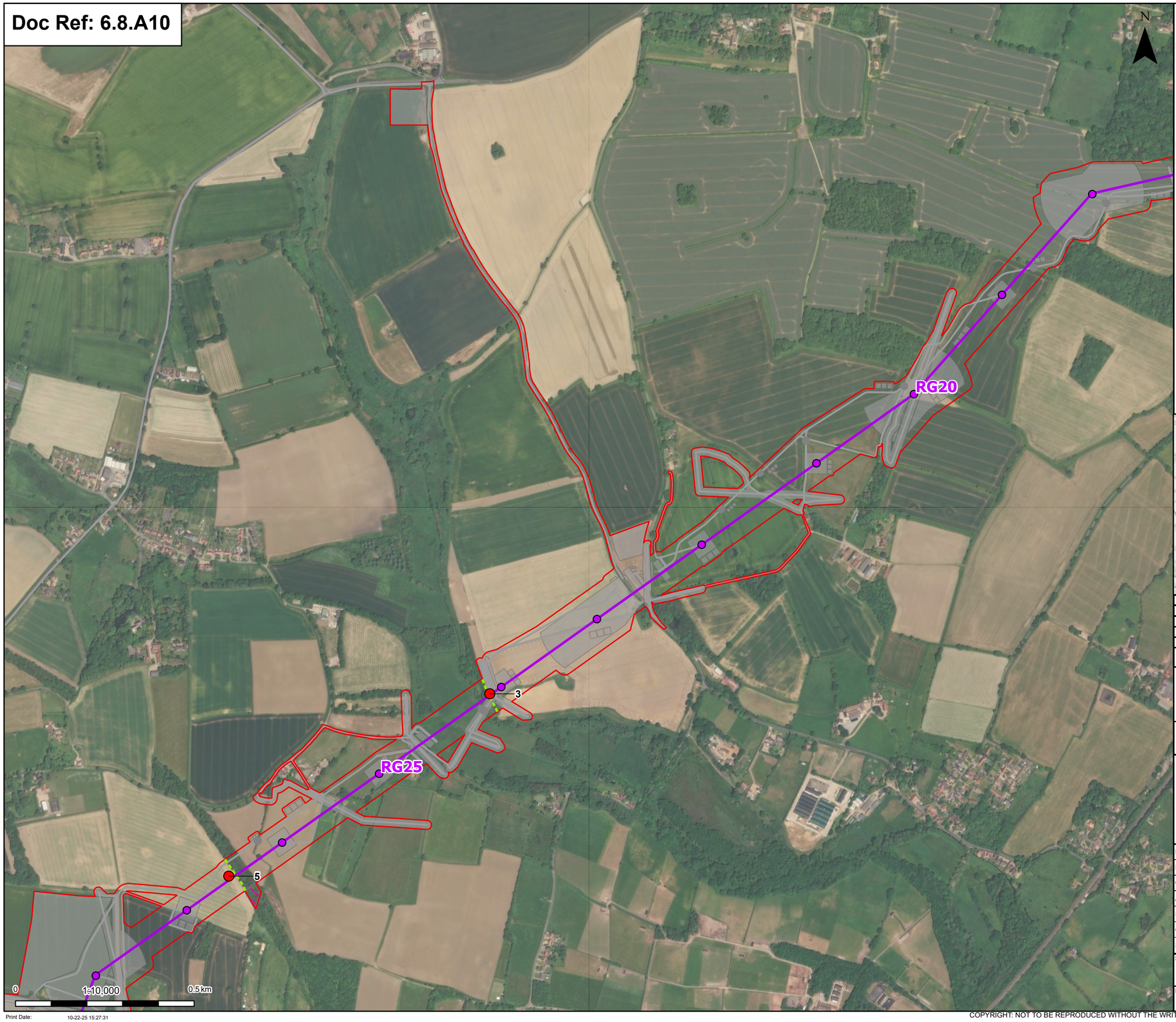

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Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

Potential bat flyway location

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).

The locations of potential bat flyways is dependant on the amount of vegetation that is required for removal and will be designed to ensure that there is a gap no larger than 10 m at each of these locations

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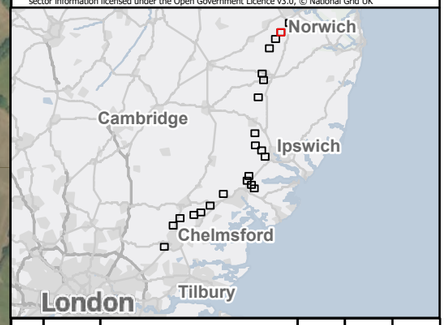

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PROJECT:
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Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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Approved	K. Burrows	Date	October 25
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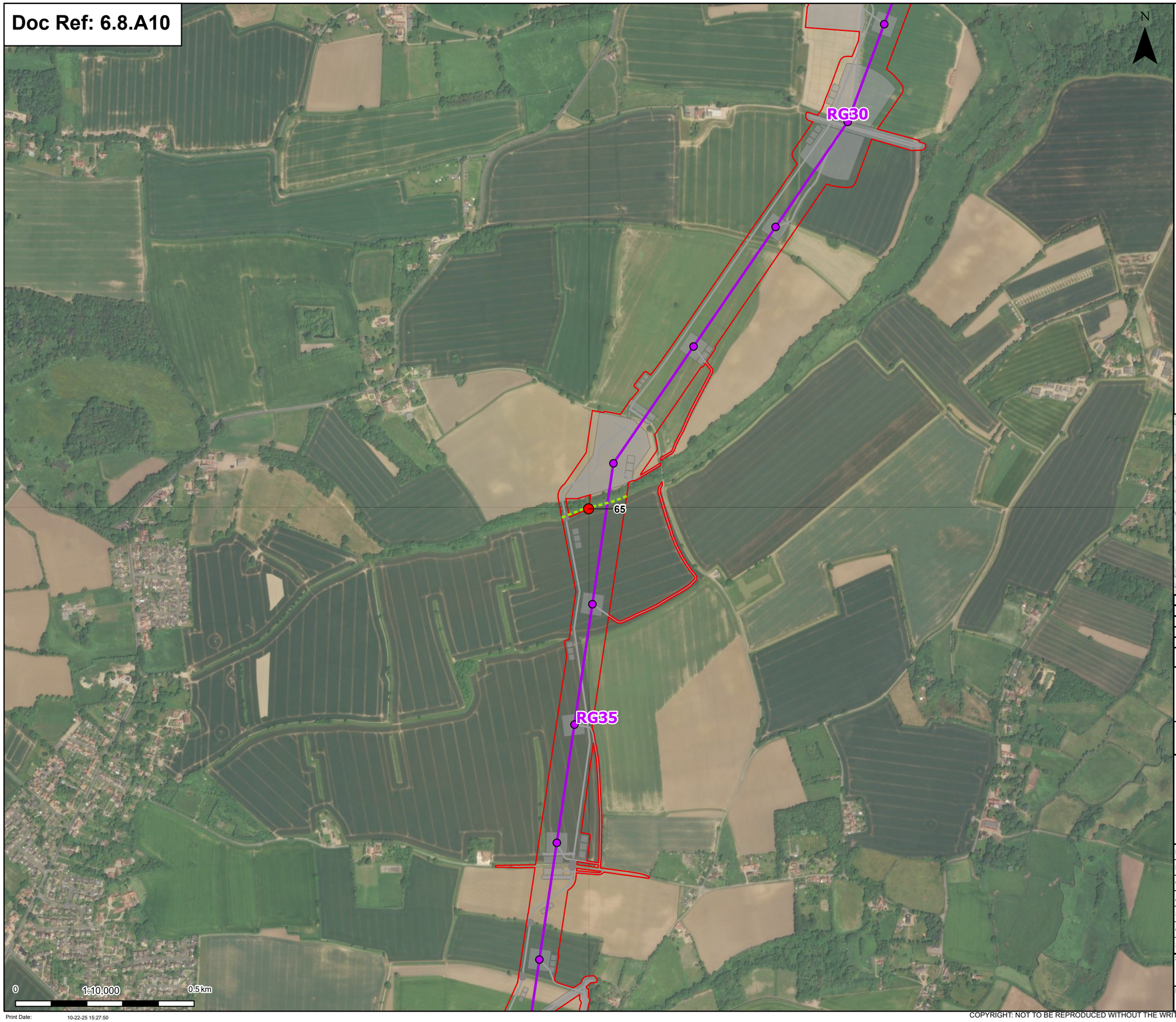

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Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

Potential bat flyway location

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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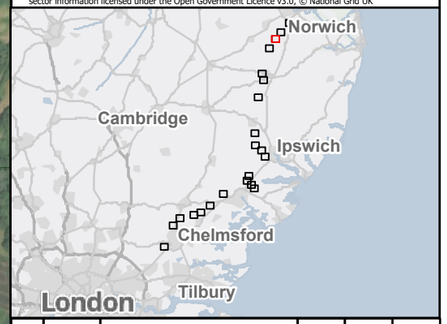

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B	Oct 2025	FOR DCO APPLICATION	KF	AF	KB
A	Aug 2025	FOR DCO APPLICATION	MP	AF	KB

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PROJECT:
Norwich to Tilbury

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

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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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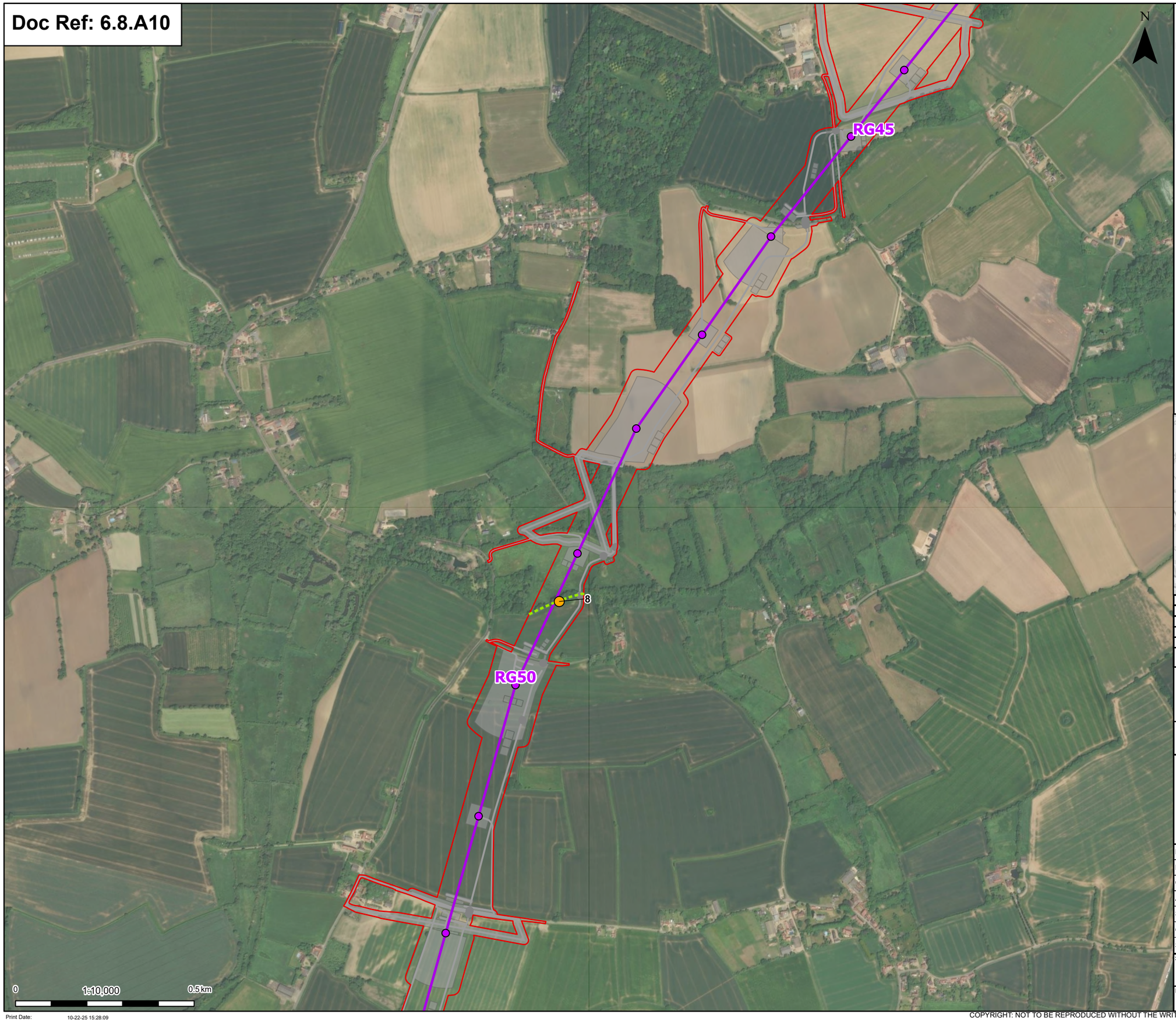

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Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber

Potential bat flyway location

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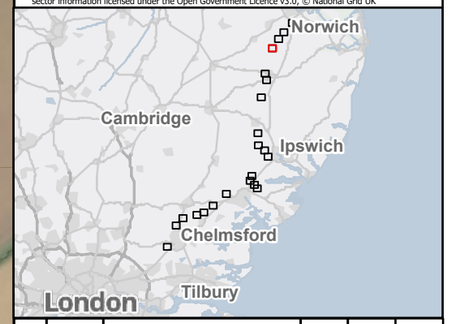

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PROJECT:
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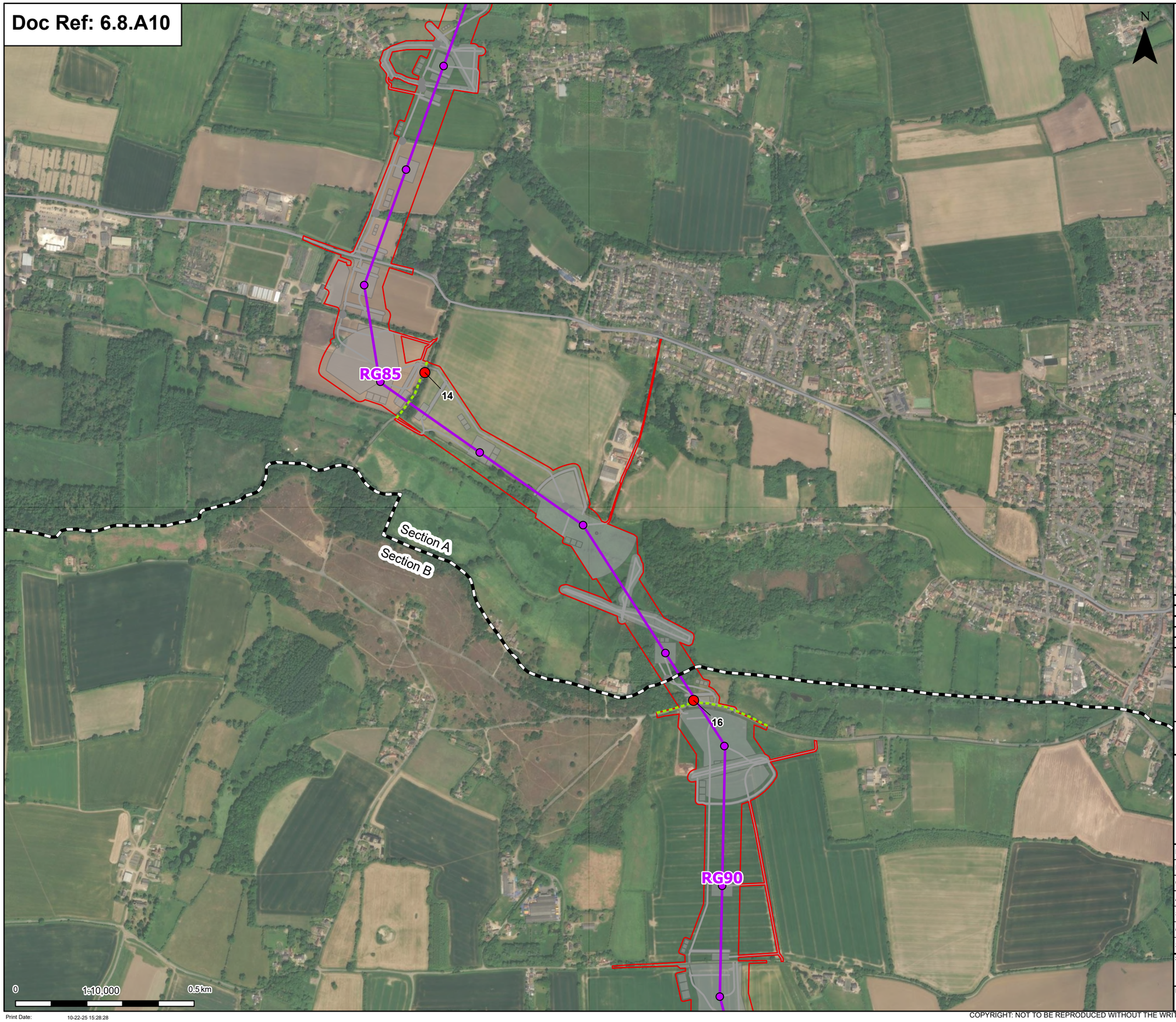

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Proposed standard lattice pylon location
Proposed overhead line alignment
Environmental mitigation
Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red
Potential bat flyway location

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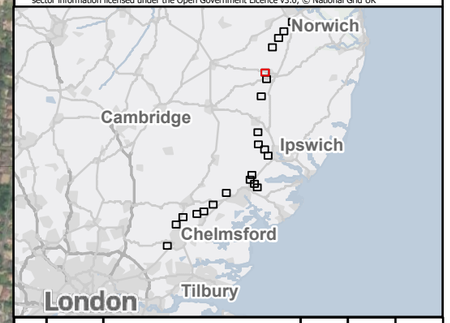

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PROJECT:
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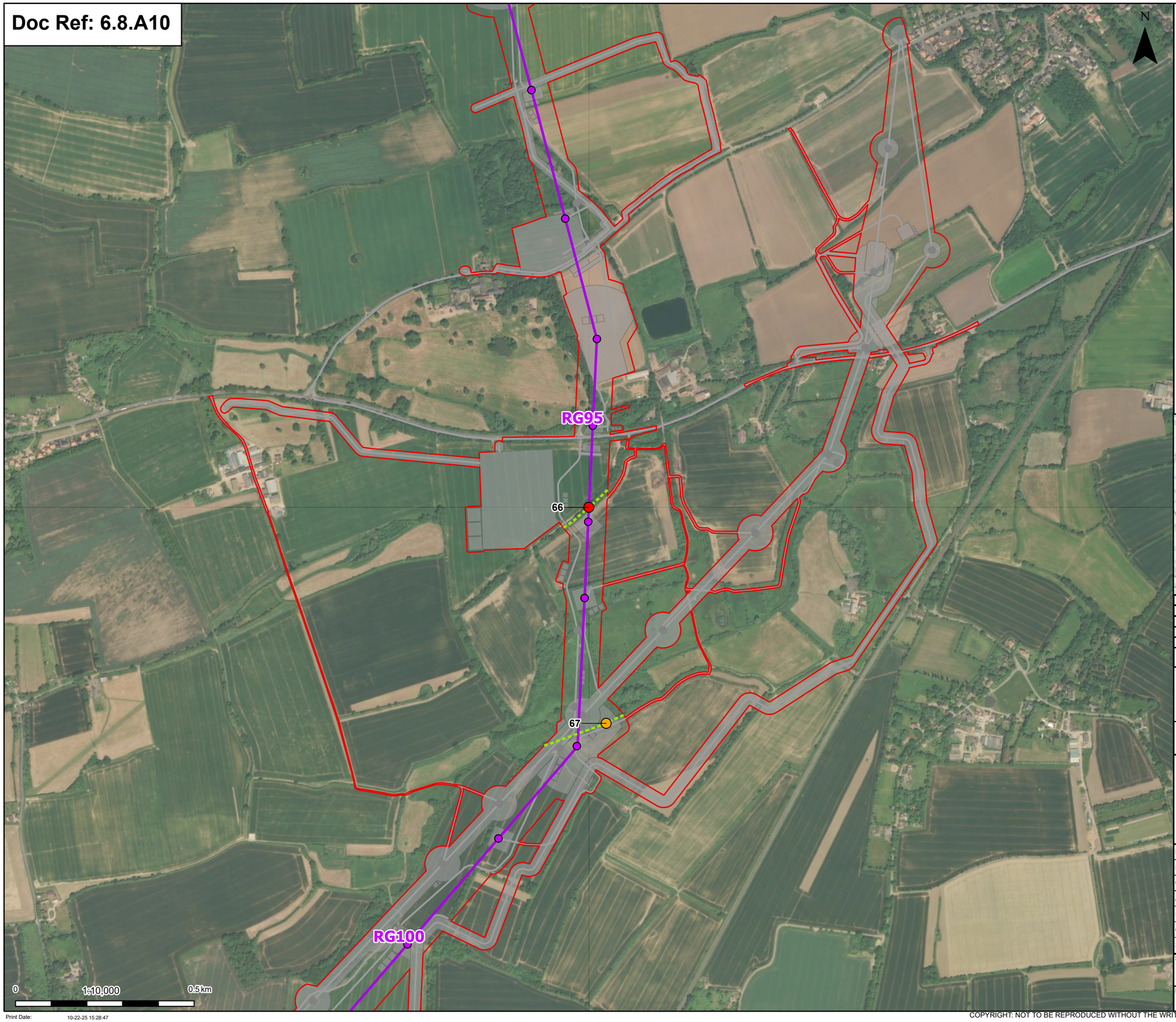

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Proposed project design details

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Proposed overhead line alignment

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Discipline specific constraints

Bat statics locations

Amber

Red

Potential bat flyway location

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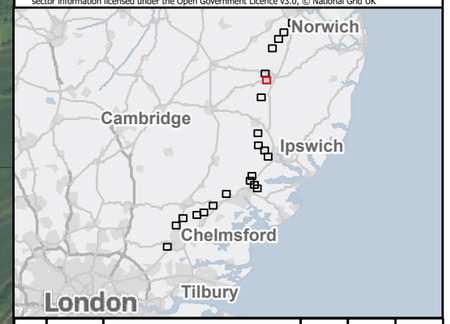

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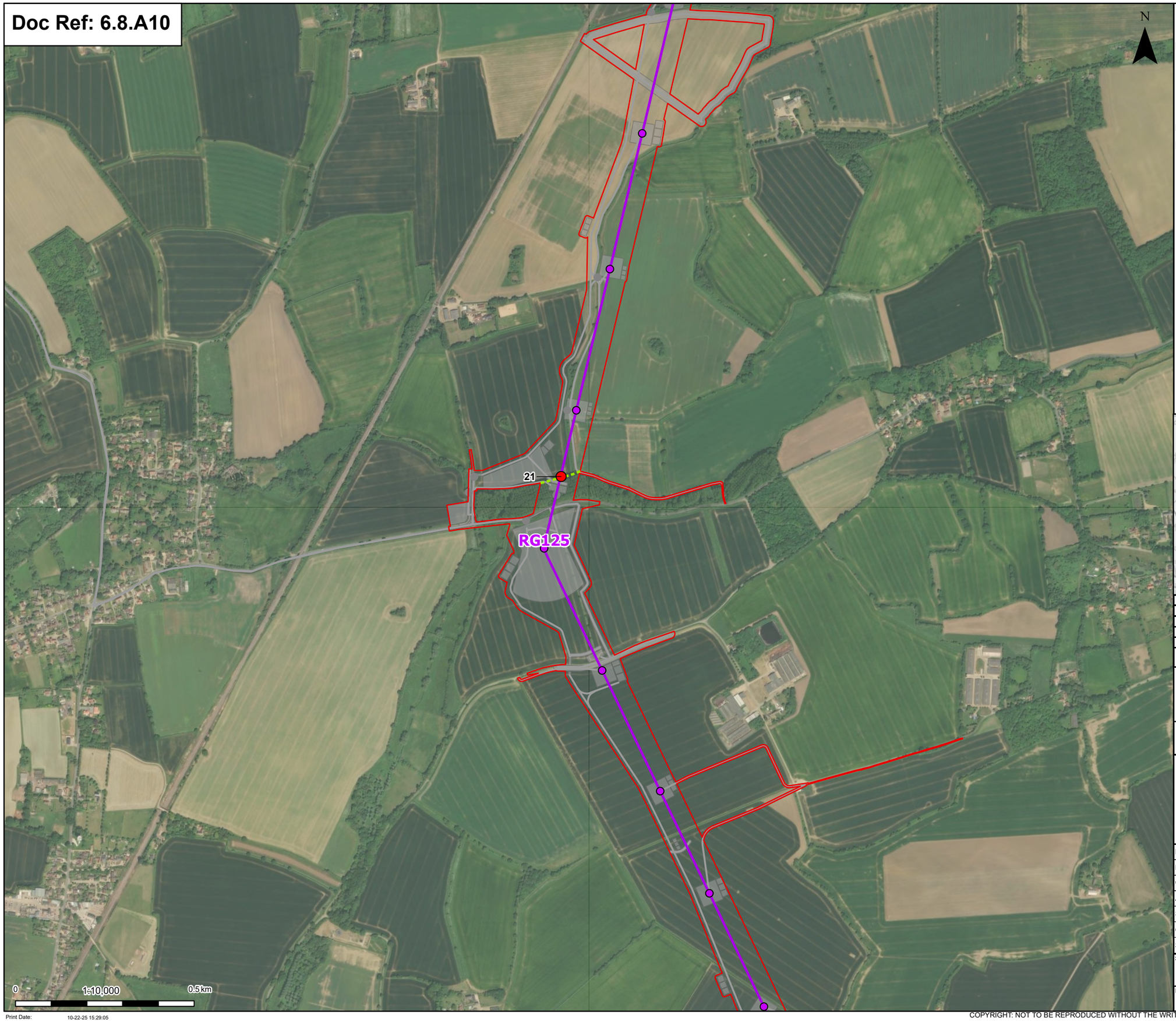

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Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

Potential bat flyway location

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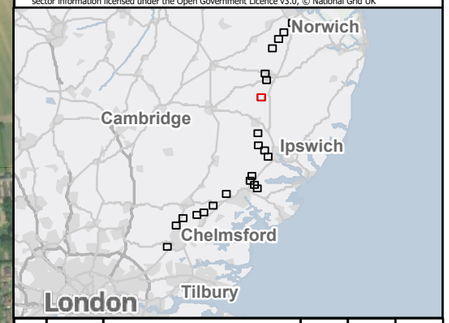

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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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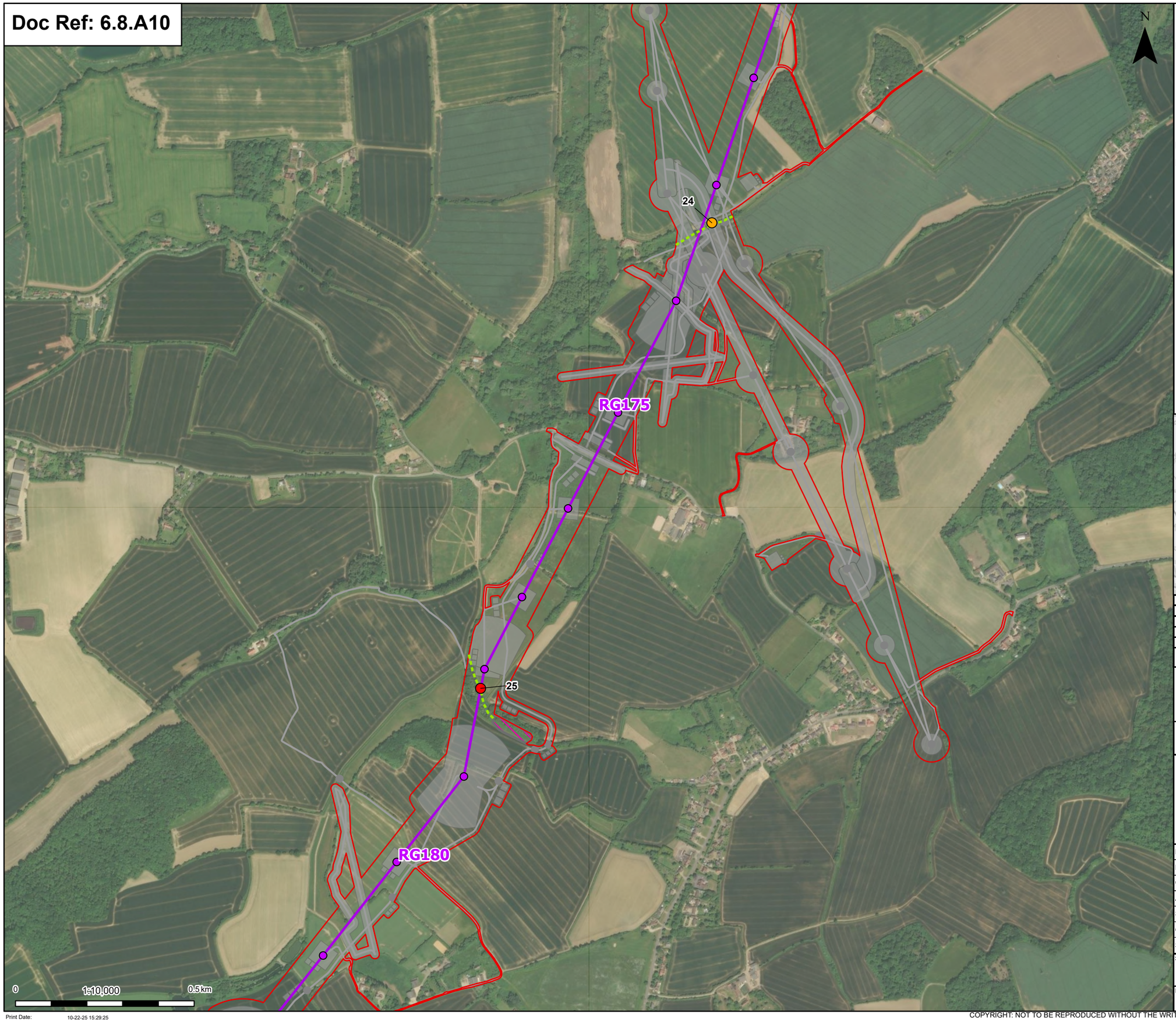

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

- Amber
- Red
- Potential bat flyway location

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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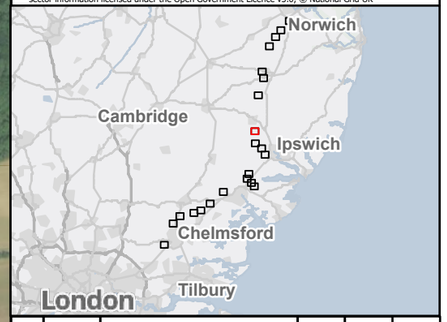

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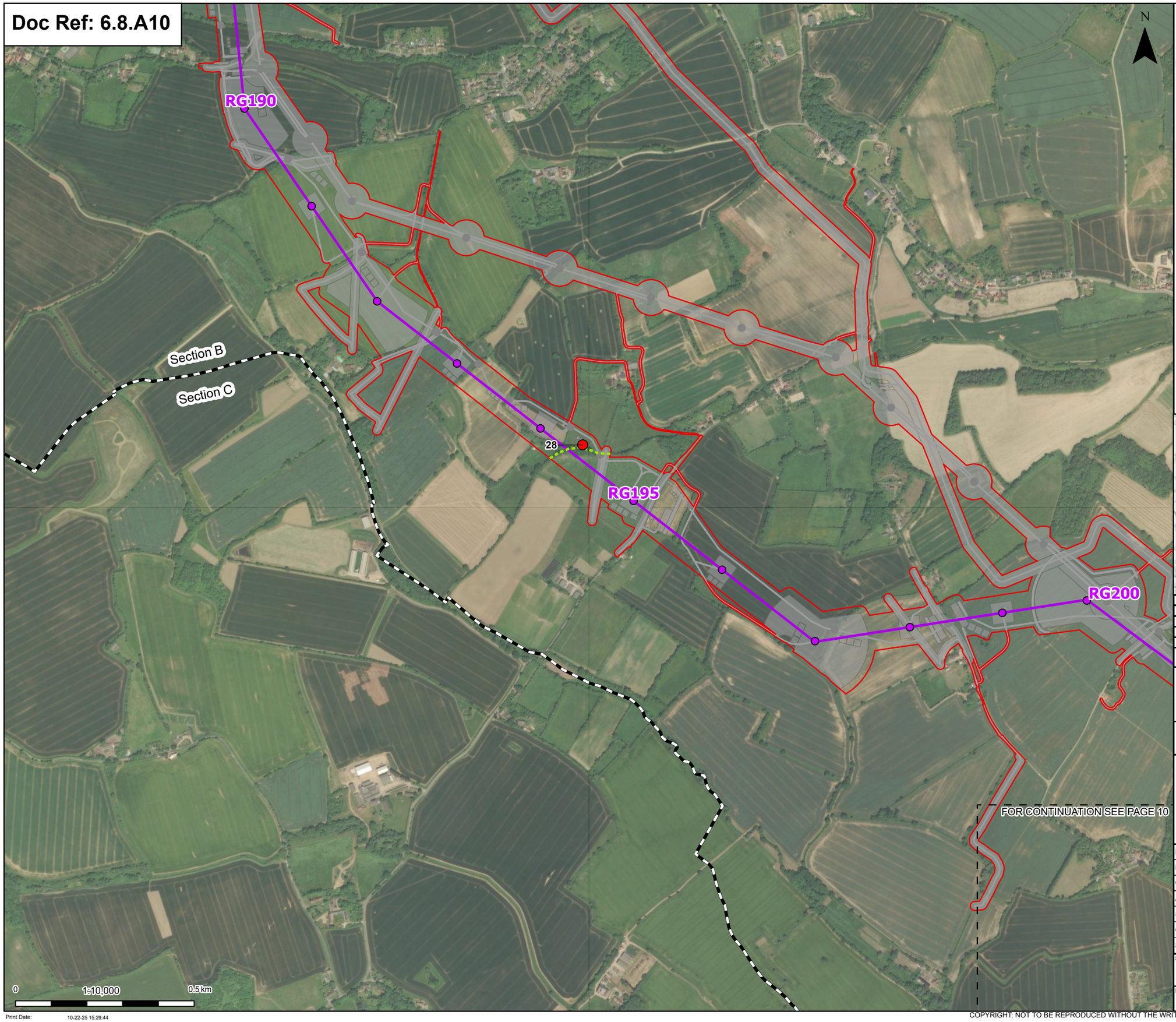

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

- Red
- Potential bat flyway location

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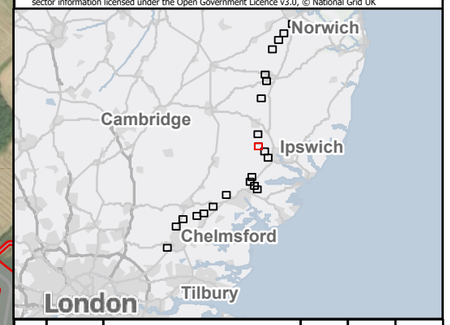

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PROJECT:
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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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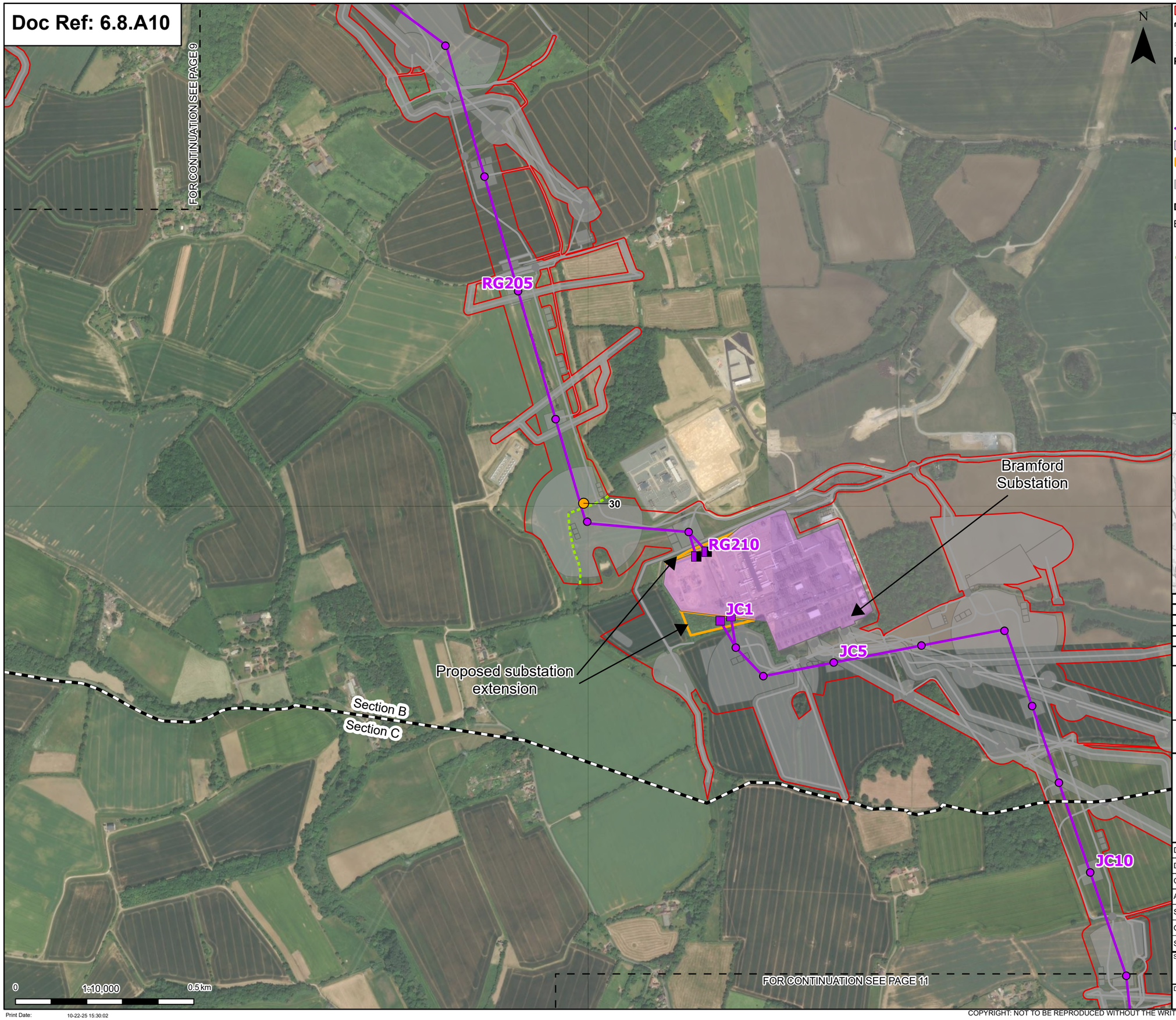

- Order limits
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Proposed project design details

- 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

Bat statics locations

- Amber
- Potential bat flyway location

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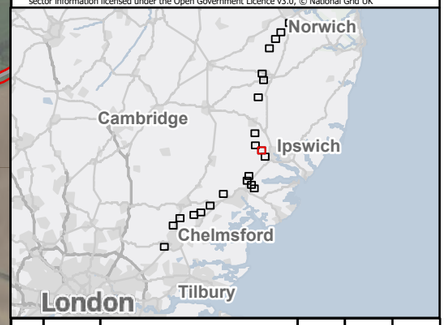

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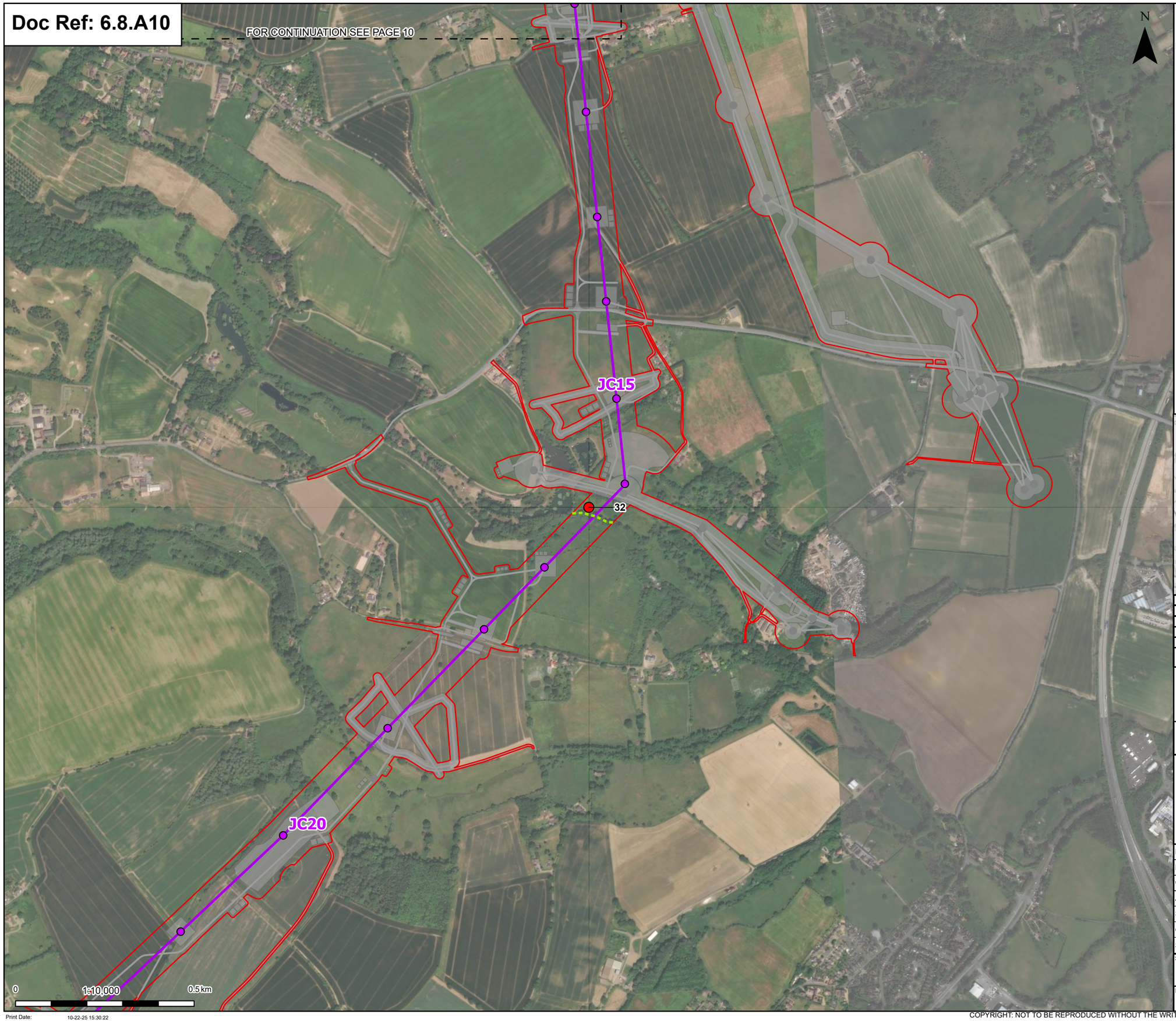

Order limits

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Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

Potential bat flyway location

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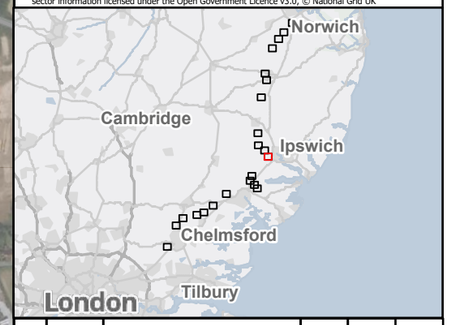

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Discipline specific constraints

Bat statics locations

Amber

Red

Potential bat flyway location

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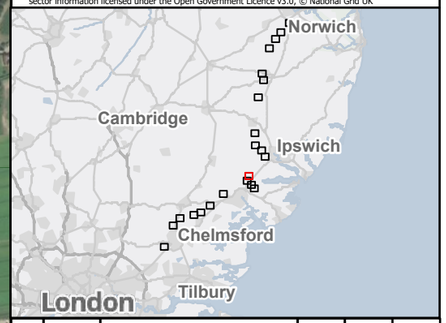

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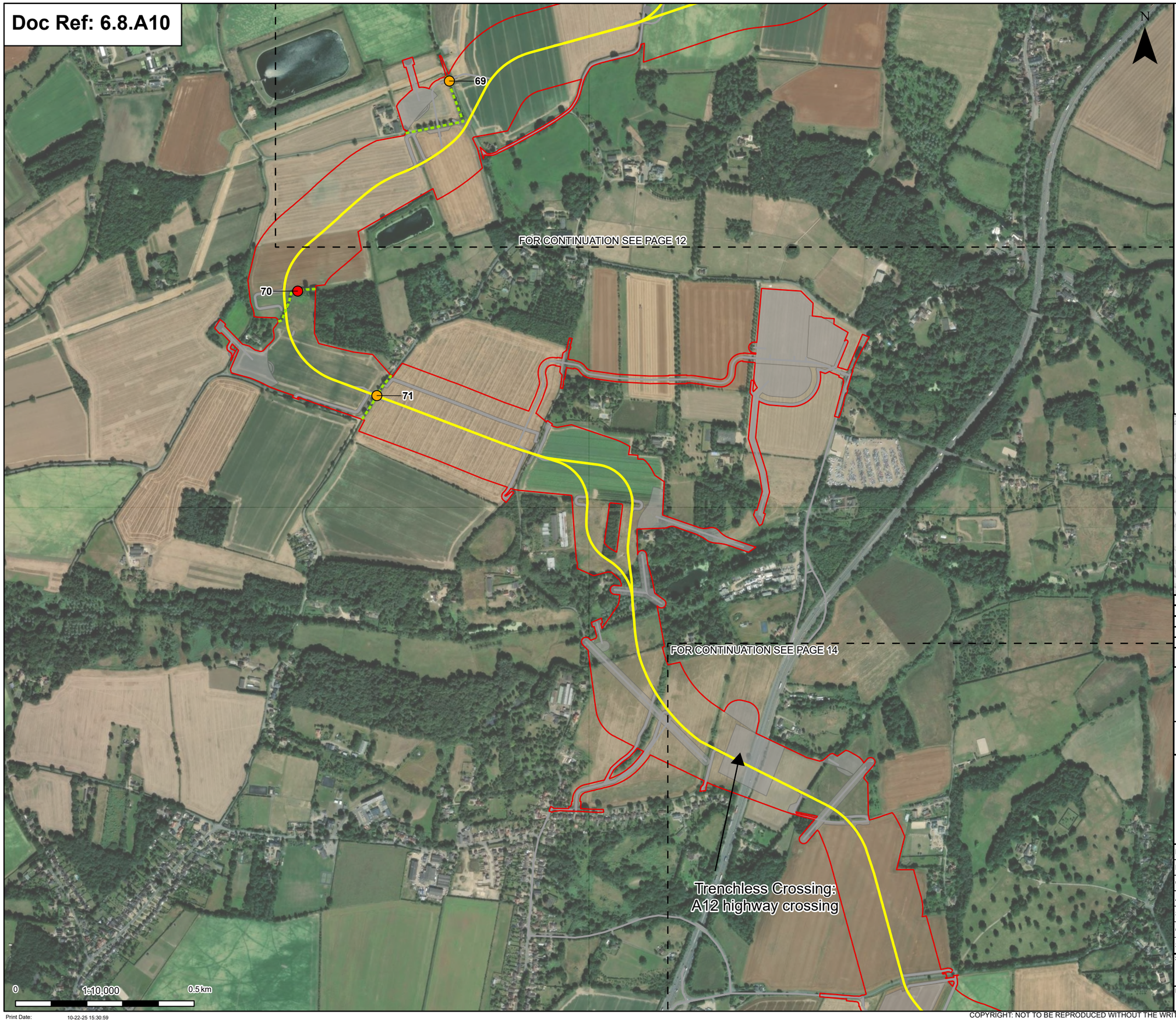

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Proposed project design details

Proposed underground cable alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber

Red

Potential bat flyway location

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).

The locations of potential bat flyways is dependant on the amount of vegetation that is required for removal and will be designed to ensure that there is a gap no larger than 10 m at each of these locations

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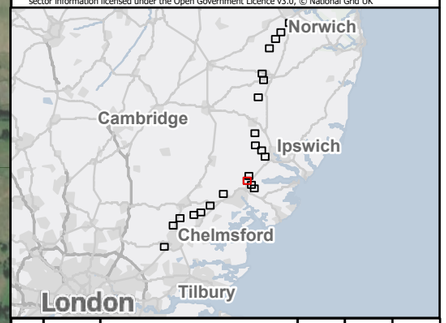

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B	Oct 2025	FOR DCO APPLICATION	KF	AF	KB
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PROJECT:
Norwich to Tilbury

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

Title:

Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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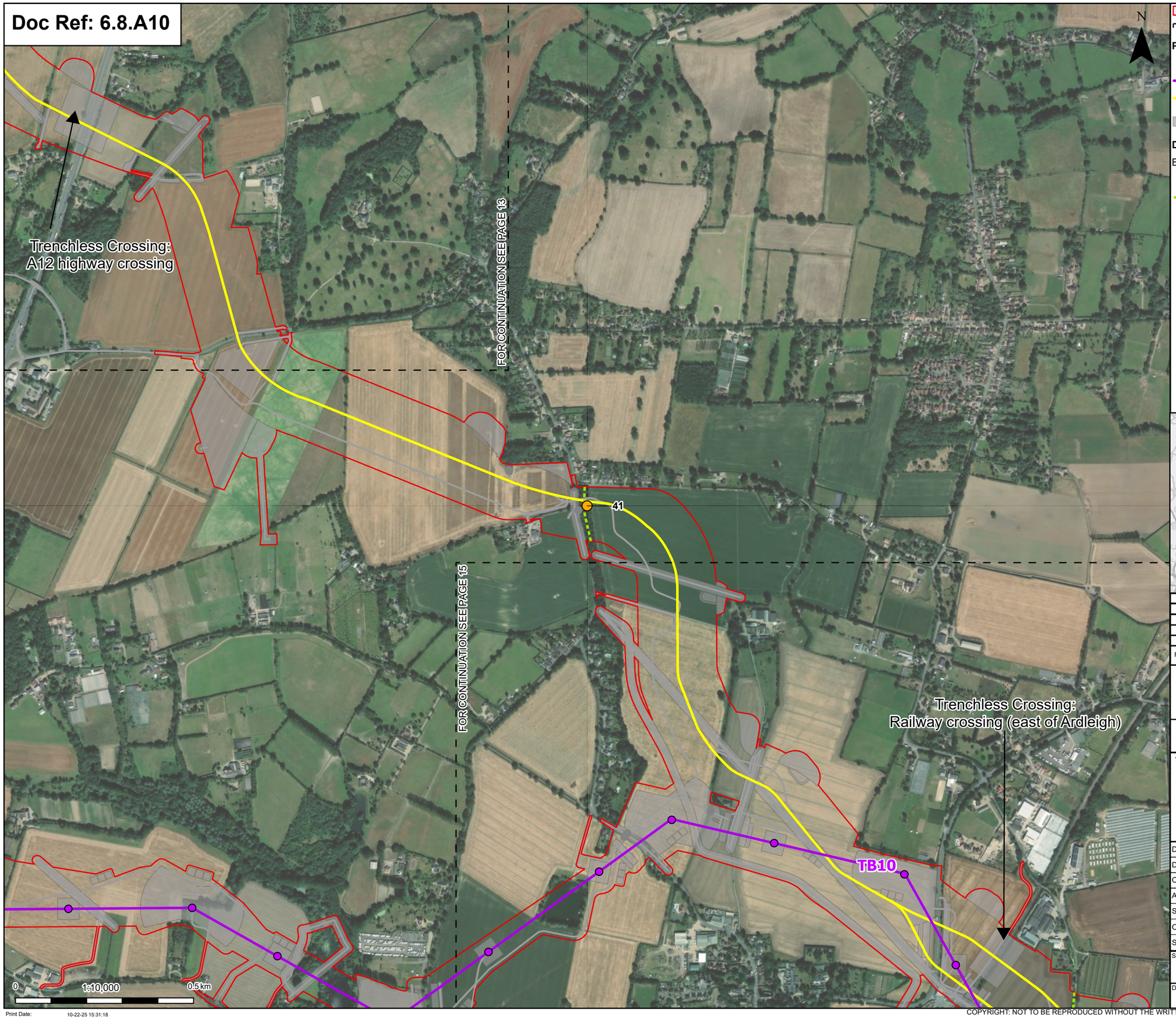

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Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber

Potential bat flyway location

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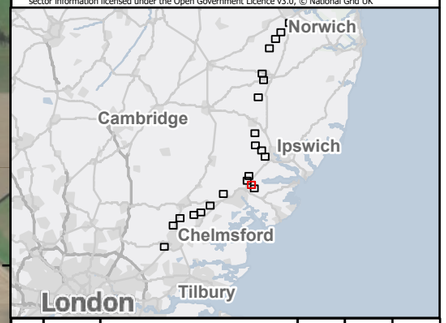

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PROJECT:
Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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Trenchless Crossing:
Railway crossing (east of Ardleigh)

TB10

TB5

TB1

42

Proposed
EACN
Substation

FOR CONTINUATION SEE PAGE 14

N

0 1:10,000 0.5 km

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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 DNO Substation

Proposed East Anglia Connection Node Substation (EACN)

Environmental area

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Amber

Potential bat flyway location

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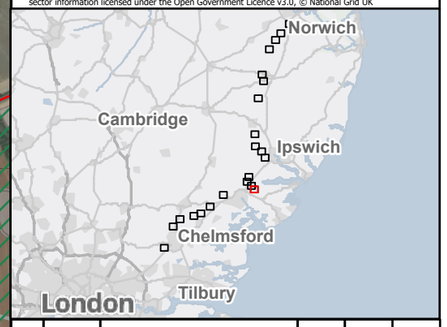

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PROJECT:
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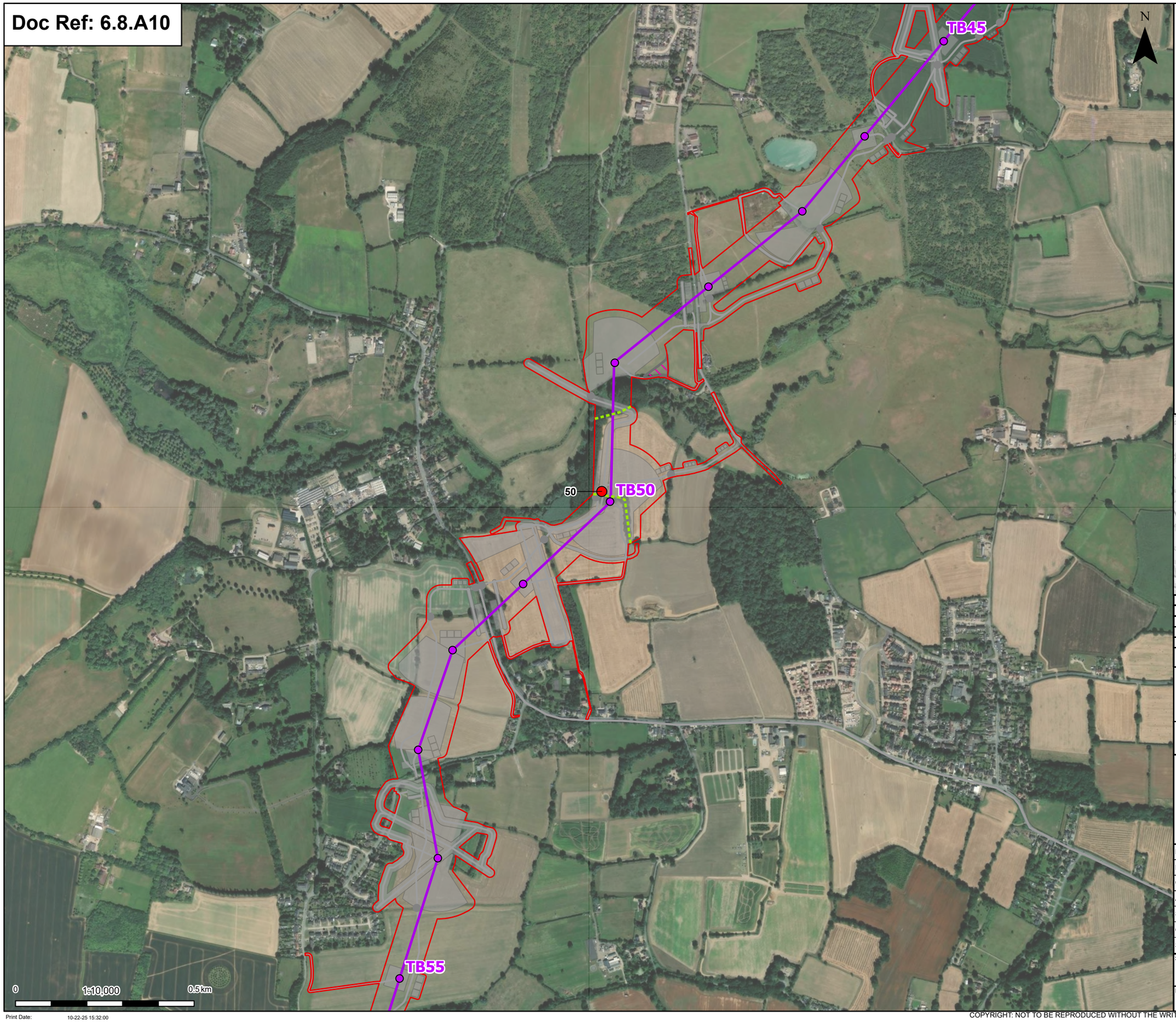

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Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

Potential bat flyway location

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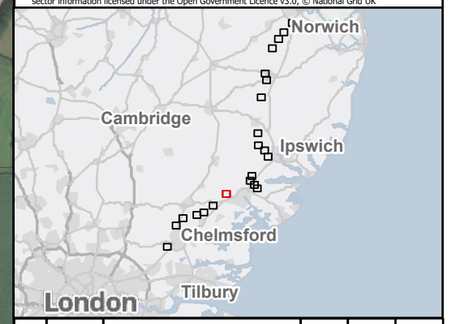

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

Amber
Red
Potential bat flyway location

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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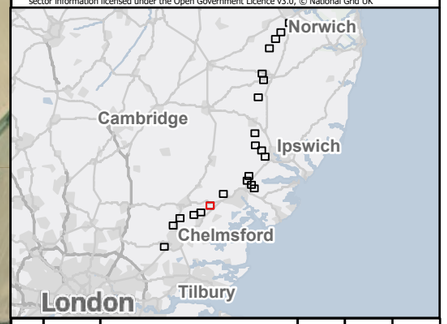

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PROJECT:
Norwich to Tilbury

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

- Red
- Potential bat flyway location

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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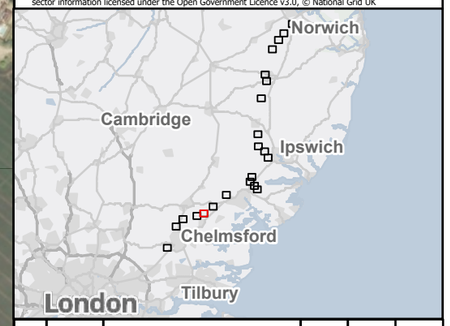

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PROJECT: Norwich to Tilbury

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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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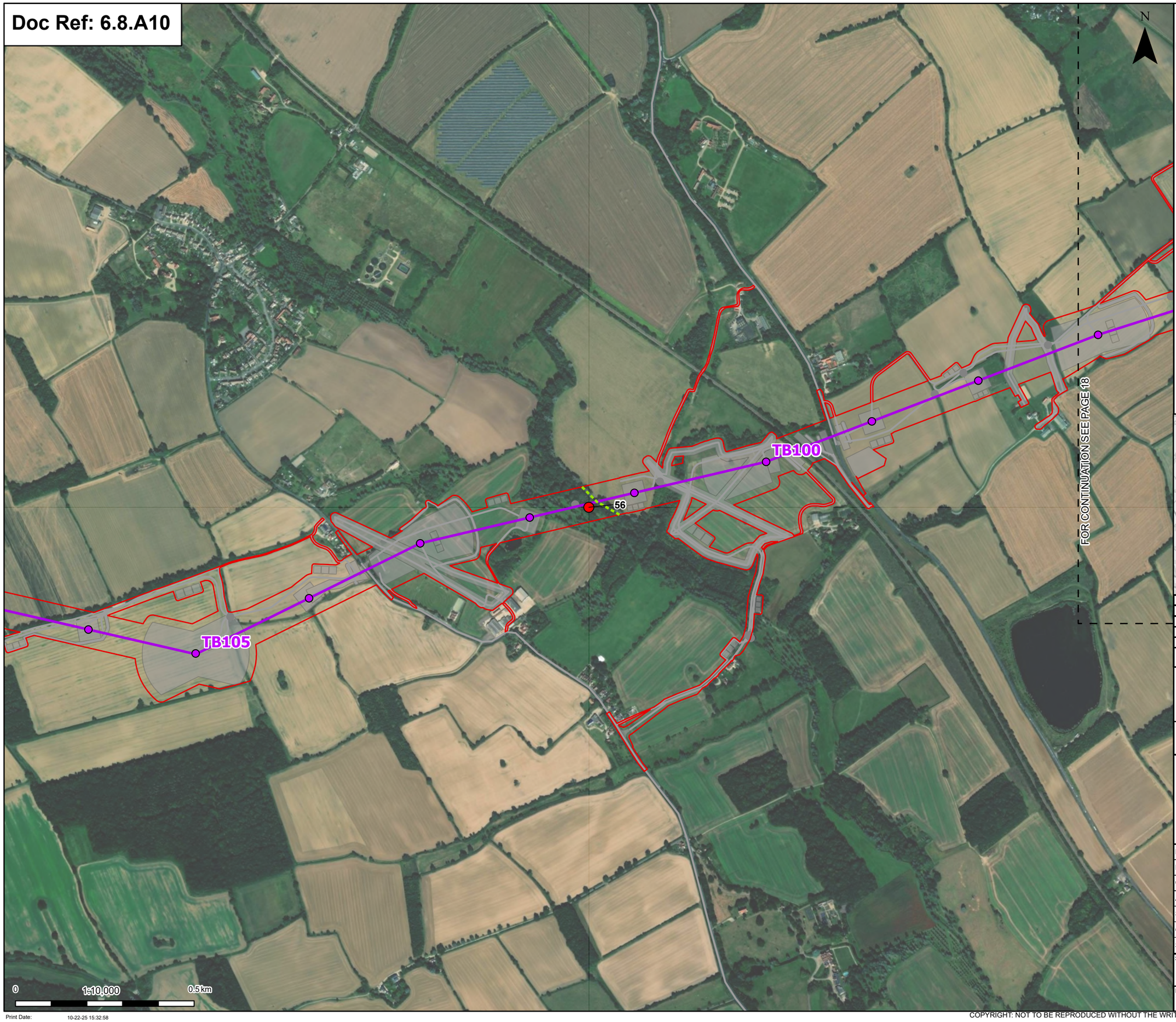

Order limits

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Proposed project design details

Proposed standard lattice pylon location

Proposed overhead line alignment

Other temporary and permanent construction and operational works

Discipline specific constraints

Bat statics locations

Red

Potential bat flyway location

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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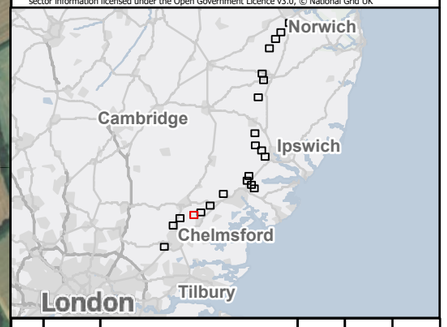

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PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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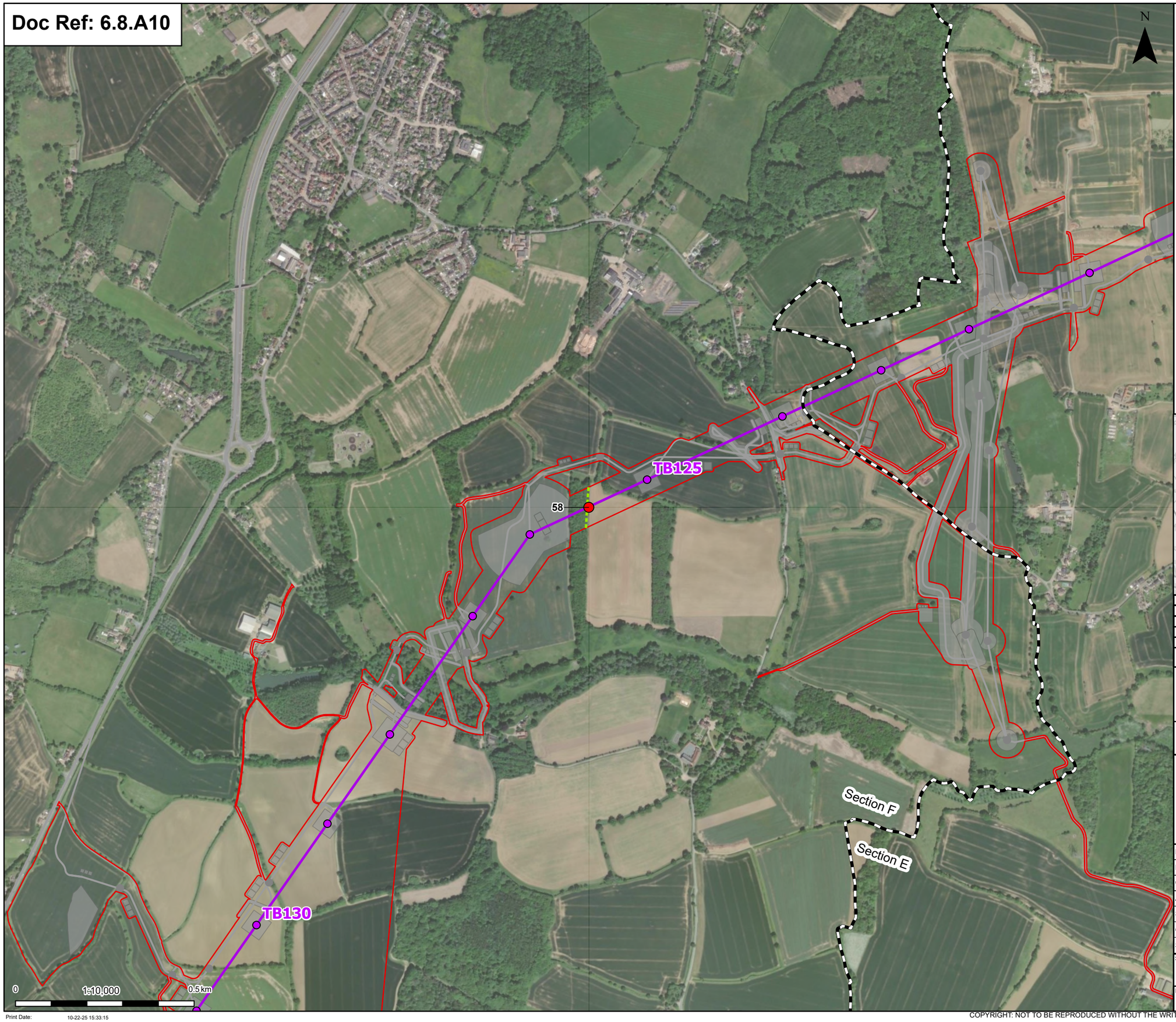

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

Red
Potential bat flyway location

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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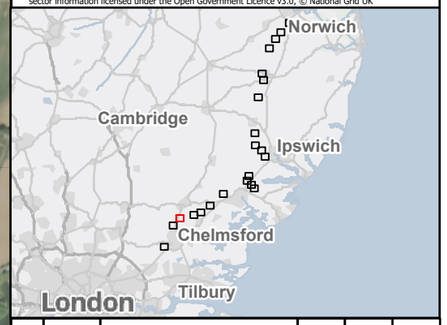

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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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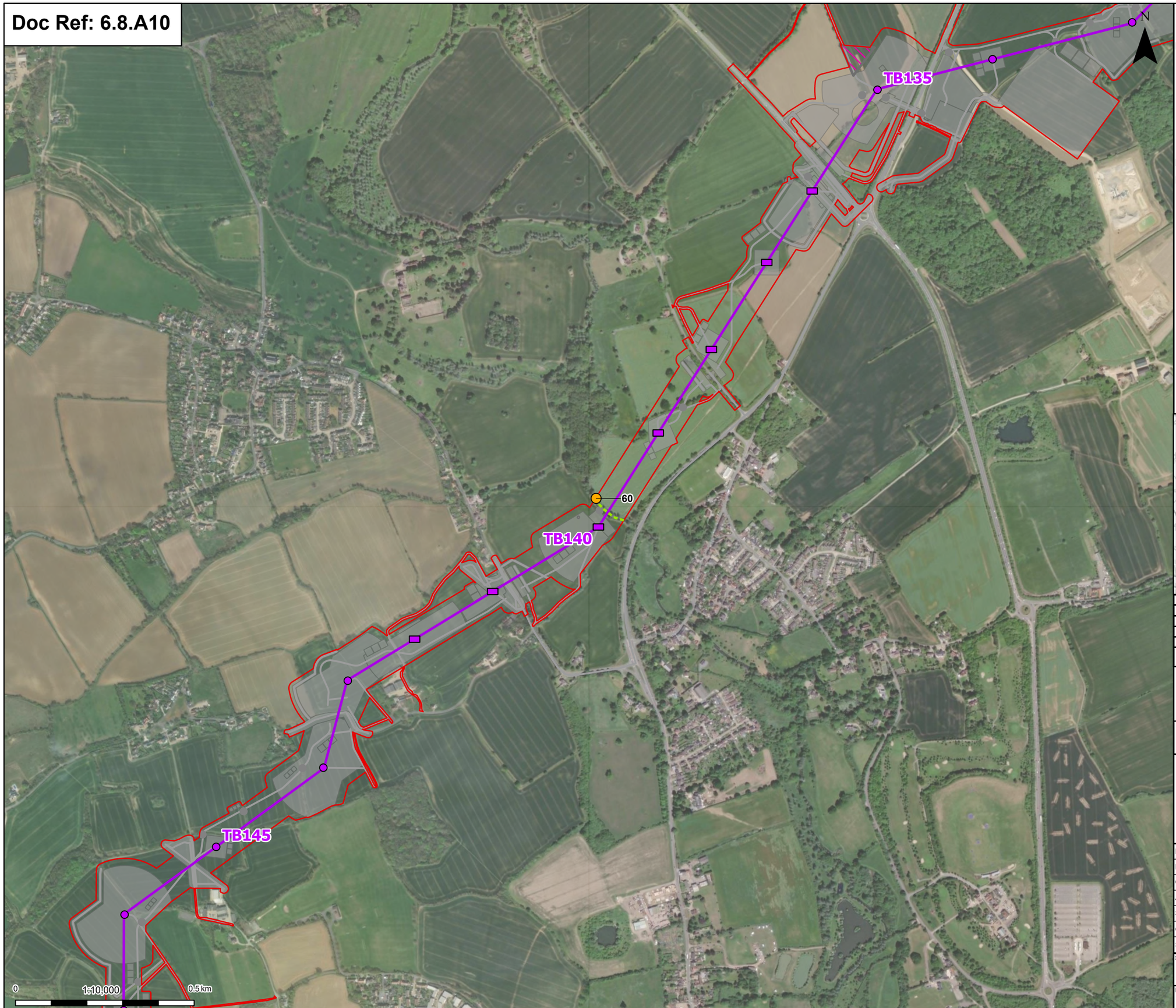

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Proposed project design details

- 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

Bat statics locations

- Amber
- Potential bat flyway location

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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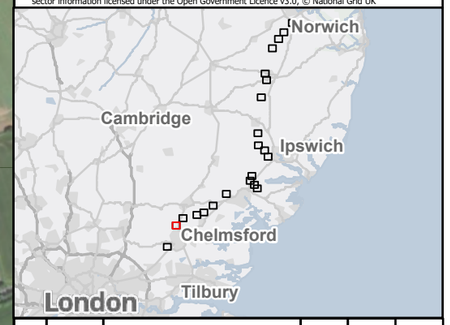

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Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations

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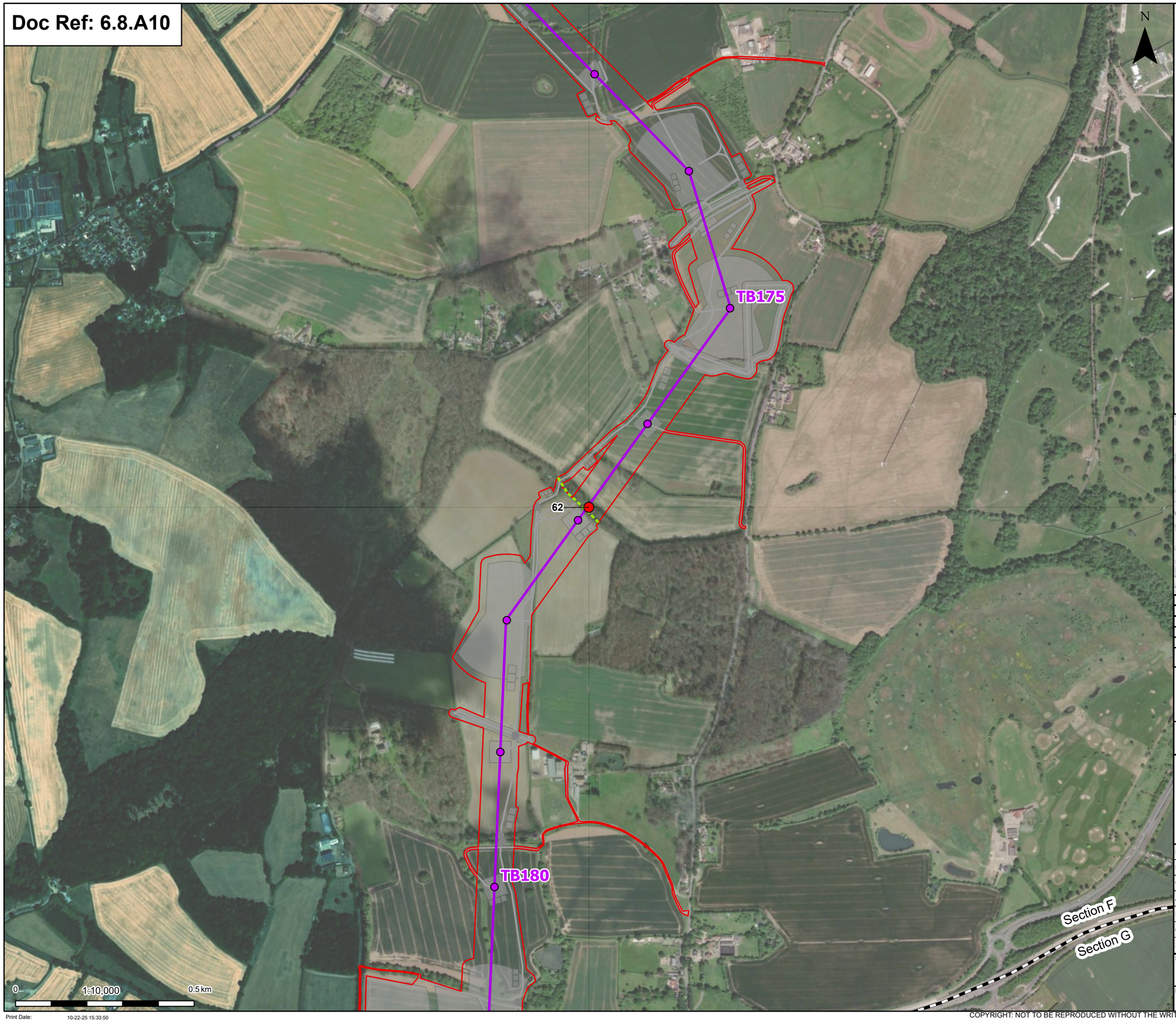

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Proposed project design details

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

Discipline specific constraints

Bat statics locations

- Red
- Potential bat flyway location

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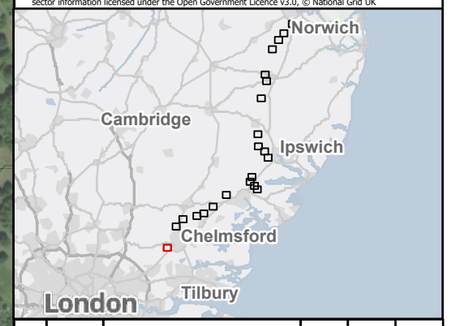

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Planning Inspectorate App Number: EN020027
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Title:

Figure A8.10.2- Ecology and Biodiversity - Potential Bat Flyway Locations
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Annex B. Bat Static Detector Settings

Annex B
Bat Static Detector Settings

Deployment Scenario		Reason
SM4BAT-FS		
Start dd/mm/yy hh:mm:ss	Ignore	
Slot A	128GB	
Slot B	128GB	
Mic 0:	SMM-U1	
Trig Ratio (%)	10% (default)	
Battery (Wh)	72 Wh (default)	
Setting		
Prefix	SM4-FS-001 (to 030)	
Gain	12dB	
Timezone	UTC+01 (= *BST. Need to change to UTC when the clock go back*	
Lat:	xx.xxN	Add appropriate value
Lon:	yy.yyW	Add appropriate value
16 kHz HPF	Off	
Sample rate	256kHz	
Call duration min	0.5ms	
Call duration max	Off	
Call frequency min	10kHz (*default is 16kHz*)	
Trigger level	*Use default (12dB)*	
Trigger window	3s	
Trigger max time	00:15	
Sunrise/sunset		
LED delay off		
Schedule		
Start	Set - 00:30	
Duty	always	
End	Rise + 00:30	

Annex C. Static Detector Reference and Dates of the Static Detector Surveys

Annex C
Static Detector Reference and Dates of the Static Detector Surveys

Table A8.10.21 Static detector reference and dates of the static detector surveys

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
A	1	Amber	03 July 2023 (summer) 21 September 2023 (autumn) 01 May 2024 (spring)
A	2	Amber*	03 July 2023 (summer) 04 September 2023 (autumn) 01 May 2024 (spring)
A	3	Red	19 June 2023 04 July 2023 08 August 2023 20 September 2023 04 May 2024
A	4	Amber	17 July 2023 (summer) 19 September 2023 (autumn) 04 May 2024 (spring)
A	5	Red	20 June 2023 03 July 2023 07 August 2023 04 September 2023 03 May 2024
A	6	Amber	04 July 2023 (summer) 20 September 2023 (autumn) 09 May 2024 (spring)
A	7	Red	20 June 2023 03 July 2023 20 September 2023 09 May 2024 07 August 2024
A	8	Amber	07 August 2023 (summer) 21 September 2023 (autumn) 09 May 2024 (spring)
A	9	Red	21 June 2023

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
			05 July 2023 08 August 2023 04 September 2023 10 May 2024
A	10	Red	09 August 2023 21 September 2023 10 May 2024 13 June 2024 01 July 2024
A	11	Red	19 June 2023 04 July 2023 08 August 2023 25 September 2023 15 May 2024
A	12	Amber	08 August 2023 (summer) 19 September 2023 (autumn) 16 May 2024 (spring)
A	13	Red	21 June 2023 04 July 2023 08 August 2023 25 September 2023 15 May 2024
A	14	Red	16 May 2024 13 June 2024 01 July 2024 07 August 2024 02 September 2024
A	15	Red	16 May 2024 13 June 2024 01 July 2024 07 August 2024 02 September 2024
B	16	Red	16 May 2024 13 June 2024 01 July 2024 07 August 2024 02 September 2024
B	17	Amber	22 May 2024 (spring)

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
			01 July 2024 (summer) 02 September 2024 (autumn)
B	18	Red	21 June 2023 05 July 2023 09 August 2023 25 September 2023 22 May 2024
B	19	Amber	23 May 2024 (spring) 02 July 2024 (summer) 02 September 2024 (autumn)
B	20	Red	19 June 2023 05 July 2023 09 August 2023 05 September 2023 24 May 2024
B	21	Red	21 June 2023 05 July 2023 09 August 2023 05 September 2023 24 May 2024
B	22	Amber	19 September 2023 (autumn) 01 May 2024 (spring) 02 July 2024 (summer)
B	23	Amber	05 July 2023 (summer) 25 September 2023 (autumn) 10 May 2024 (spring)
B	24	Amber	01 May 2024 (spring) 02 July 2024 (summer) 03 September 2024 (autumn)
B	25	Red	21 June 2023 05 July 2023 09 August 2023 20 September 2023 02 May 2024
B	26	Amber	02 May 2024 (spring) 03 July 2024 (summer) 03 September 2024 (autumn)
B	27	Red	02 May 2024

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
			12 June 2024 02 July 2024 08 August 2024 03 September 2024
B	28	Red	09 August 2023 04 September 2023 09 May 2024 12 June 2024 04 July 2024
B	29	Amber	09 May 2024 (spring) 04 July 2024 (summer) 03 September 2024 (autumn)
B	30	Amber	18 July 2023 (summer) 19 September 3023 (autumn) 09 May 2024 (spring)
C	31	Amber	09 May 2024 (spring) 10 July 2024 (summer) 03 September 2024 (autumn)
C	32	Red	21 June 2023 05 July 2023 09 August 2023 04 September 2023 09 May 2024
C	33	Red	21 June 2023 05 July 2023 09 August 2023 20 September 2023 16 May 2024
C	34	Amber	19 July 2023 (summer) 19 September 2023 (autumn) 16 May 2024 (spring)
C	35	Red	21 June 2023 05 July 2023 09 August 2023 21 September 2023 16 May 2024
C	36	Amber	19 July 2023 (summer) 20 September 2023 (autumn)

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
			17 May 2024 (spring)
C	37	Red	19 June 2023 05 July 2023 08 August 2023 04 September 2023 17 May 2024
C	38	Amber	19 July 2023 (summer) 20 September 2023 (autumn) 16 May 2024 (spring)
C	39	Red	21 June 2023 05 July 2023 08 August 2023 20 September 2023 24 May 2024
C	40	Amber	19 July 2023 (summer) 19 September 2023 (autumn) 25 May 2024 (spring)
C	41	Amber	25 May 2024 (spring) 10 July 2024 (summer) 04 September 2024 (autumn)
C	42	Amber	29 May 2024 (spring) 10 July 2024 (summer) 04 September 2024 (autumn)
C	43	Amber	17 July 2023 (summer) 20 September 2023 (autumn) 24 May 2024 (spring)
C	44	Amber	17 July 2023 (summer) 20 September 2023 (autumn) 24 May 2024 (spring)
D	45	Amber	17 July 2023 (summer) 20 September 2023 (autumn) 02 May 2024 (spring)
D	46	Amber	17 July 2023 (summer) 19 September 2023 (autumn) 02 May 2024 (spring)
D	47	Red	19 June 2023 05 July 2023

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
			08 August 2023 05 September 2023 02 May 2024
D	48	Amber	18 July 2023 (summer) 19 September 2023 (autumn) 02 May 2024 (spring)
D	49	Amber	18 July 2023 (summer) 19 September 2023 (autumn) 02 May 2024 (spring)
D	50	Red	09 May 2024 12 June 2024 10 July 2024 08 August 2024 04 September 2024
E	51	Red	10 June 2024 11 July 2024 09 August 2024 04 September 2024 11 May 2025
E	52	Red	19 June 2023 03 July 2023 07 August 2023 05 September 2023 09 May 2024
E	53	Red	07 August 2023 19 September 2023 09 May 2024 14 June 2024 11 July 2024
E	54	Red	21 June 2023 05 July 2023 07 August 2023 05 September 2023 09 May 2024
E	55	Amber	03 July 2023 (summer) 05 September 2023 (autumn) 09 May 2024 (spring)
E	56	Red	20 June 2023

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
			03 July 2023 07 August 2023 19 September 2023 16 May 2024
E	57	Amber	16 May 2024 (spring) 11 July 2024 (summer) 12 September 2024 (autumn)
F	58	Red	16 May 2024 14 June 2024 11 July 2024 09 August 2024 14 September 2024
F	59	Red	16 May 2024 14 June 2024 26 July 2024 16 August 2024 16 September 2024
F	60	Amber	18 July 2023 (summer) 19 September 2023 (autumn) 24 May 2024 (spring)
F	61	Red	20 June 2023 03 July 2023 07 August 2023 26 September 2023 09 May 2025
F	62	Red	20 June 2023 09 August 2023 25 September 2023 25 May 2024 26 July 2024
F	63	Amber	25 September 2023 (autumn) 25 May 2024 (spring) 27 July 2024 (summer)
G and H	64	Red	25 May 2024 26 July 2024 09 August 2024 14 September 2024 14 June 2025

Project Section	Static GIS Reference Number (as shown on Figure A8.10.1: Bat Static Deployment 2023-2025, Annex A)	RAG Status	Static Deployment Date
A	65	Red	10 May 2025 14 June 2025 10 July 2025 08 August 2025 05 September 2025
B	66	Red	10 May 2025 14 June 2025 10 July 2025 09 August 2025 04 September 2025
B	67	Amber	10 May 2025 (spring) 10 July 2025 (summer) 04 September 2025 (autumn)
C	68	Amber	10 May 2025 (spring) 10 July 2025 (summer)
C	69	Amber	10 May 2025 (spring) 10 July 2025 (summer) 04 September 2025 (autumn)
C	70	Red	10 May 2025 14 June 2025 11 July 2025 10 August 2025 05 September 2025
C	71	Amber	10 May 2025 (spring) 11 July 2025 (summer) 05 September 2025 (autumn)
E	72	Amber	11 May 2025 (spring) 11 July 2025 (summer) 05 September 2025 (autumn)
F	73	Amber	09 May 2025 (spring) 11 July 2025 (summer) 05 September 2025 (autumn)

Annex D. Weather Conditions of the Static Detector Surveys

Annex D
Weather Conditions of the Static Detector Surveys

Table A8.10.22 Weather conditions of the static detector surveys

Survey Visit	Date	Weather Conditions
June 2023	19 June 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 15 - 55% Temp 17ºC
	20 June 2023	Rain – 0, Wind – Moderate breeze, Cloud cover – 60 - 100% Temp 16ºC
	21 June 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 20 - 70% Temp 19ºC
	22 June 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 20 - 70% Temp 16ºC
	23 June 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 10% Temp 19ºC
	24 June 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 20 - 70% Temp 20ºC
	25 June 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 20 - 70% Temp 20ºC
July 2023	03 July 2023	Rain – 0, Wind – Moderate Breeze, cover – 40 - 100% Temp 11ºC
	04 July 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 30 to 100% Temp 13ºC
	05 July 2023	Rain – 0, Wind – Moderate Breeze, Cloud cover – 40 to 100% Temp 13ºC
	06 July 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 40 to 100% Temp 15ºC
	07 July 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 40 to 100% Temp 17ºC
	08 July 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 40 to 100% Temp 20ºC
	09 July 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 40 to 100% Temp 18ºC
	17 July 2023	Rain – 0, Wind – Moderate Breeze, Cloud cover – 30 - 80% Temp 15ºC
	18 July 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 85 - 100% Temp 16ºC
	19 July 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 90 - 100% Temp 12ºC

Survey Visit	Date	Weather Conditions
	20 July 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 90 - 100% Temp 15ºC
	21 July 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 10% Temp 13ºC
	22 July 2023	Rain – Light rain, Wind – Gentle Breeze, Cloud cover – 10-80% Temp 16ºC
	23 July 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 10% Temp 16ºC
August 2023	07 August 2023	Rain – 0, Wind – Moderate Breeze, Cloud cover – 20 - 80% Temp 12ºC
	08 August 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 20 - 100% Temp 14ºC
	09 August 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 5 - 80% Temp 16ºC
	10 August 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 5 - 80% Temp 18ºC
	11 August 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 5 - 80% Temp 20ºC
	12 August 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 5 - 80% Temp 17ºC
	13 August 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 5 - 80% Temp 16ºC
September 2023	04 September 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 0% Temp 13ºC
	05 September 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 0% Temp 16ºC
	06 September 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 0% Temp 17ºC
	07 September 2023	Rain – 0, Wind – Calm, Cloud cover – 0% Temp 16ºC
	08 September 2023	Rain – 0, Wind – Calm, Cloud cover – 0% Temp 17ºC
	09 September 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 0% Temp 19ºC
	19 September 2023	Rain – 0, Wind – Fresh Breeze, Cloud cover – 100% Temp 18ºC
	20 September 2023	Rain – 0, Wind – Strong Breeze, Cloud cover – 50 - 100% Temp 14ºC
	21 September 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 0% Temp 11ºC

Survey Visit	Date	Weather Conditions
	22 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0% Temp 10ºC
	23 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0% Temp 12ºC
	24 September 2023	Rain – 0, Wind – Light Breeze, Cloud cover – 0% Temp 16ºC
	25 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 10 – 40% Temp 14ºC
	26 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 10 – 40% Temp 15ºC
	27 September 2023	Rain – 0, Wind – Fresh Breeze, Cloud cover – 10 – 40% Temp 18ºC
	28 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 30 – 60% Temp 16ºC
	29 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 10 – 40% Temp 11ºC
	30 September 2023	Rain – 0, Wind – Gentle Breeze, Cloud cover – 10 – 40% Temp 15ºC
May 2024	01 May 2024	Rain – 0, Wind – Gentle Breeze, Cloud cover – 50% Temp 10ºC
	02 May 2024	Rain – 0, Wind – Gentle Breeze, Cloud cover – 40% Temp 10ºC
	03 May 2024	Rain – Light rain, Wind – Gentle Breeze, Cloud cover – 10% Temp 10ºC
	04 May 2024	Rain – 0, Wind – Light Breeze, Cloud cover – 10% Temp 9ºC
	05 May 2024	Rain – 0, Wind – Light Breeze, Cloud cover – 10% Temp 9ºC
	06 May 2024	Rain – 0, Wind – Light Breeze, Cloud cover – 10% Temp 11ºC
	07 May 2024	Rain – 0, Wind – Gentle Breeze, Cloud cover – 30% Temp 10ºC
	08 May 2024	Rain – 0, Wind – Gentle Breeze, Cloud cover – 10% Temp 10ºC
	09 May 2024	Rain – 0, Wind – Light Breeze, Cloud cover – 10% Temp 12ºC
	10 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 10ºC
	11 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 30% Temp 10ºC

Survey Visit	Date	Weather Conditions
	12 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 13ºC
	13 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 15ºC
	14 May 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 10% Temp 12ºC
	15 May 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 13ºC
	16 May 2024	Rain – 0, Wind –Light air, Cloud cover – 10-30% Temp 12ºC
	17 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 30% Temp 12ºC
	18 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 80% Temp 12ºC
	19 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 10ºC
	20 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 12ºC
	22 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 13ºC
	23 May 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 9ºC
	24 May 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 10ºC
	25 May 2024	Rain – Light rain, Wind –Light Breeze, Cloud cover – 10-30% Temp 11ºC
	26 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 12ºC
	27 May 2024	Rain – Light rain, Wind –Light Breeze, Cloud cover – 10% Temp 10ºC
	28 May 2024	Rain – Light rain, Wind –Moderate Breeze, Cloud cover – 80% Temp 15ºC
	29 May 2023	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 13ºC
	30 May 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 12ºC
	31 May 2204	Rain – 0, Wind –Gentle Breeze, Cloud cover – 80% Temp 12ºC
June 2024	01 June 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 12ºC

Survey Visit	Date	Weather Conditions
	02 June 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 11ºC
	10 June 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 7ºC
	11 June 2024	Rain – 0, Wind – Calm, Cloud cover – 10-30% Temp 10ºC
	12 June 2024	Rain – 0, Wind – Calm, Cloud cover – 10-30% Temp 10ºC
	13 June 2024	Rain – Light rain, Wind – Gentle Breeze, Cloud cover – 10-30% Temp 12ºC
	14 June 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 12ºC
	15 June 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 12ºC
	16 June 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 12ºC
	17 June 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 14ºC
	18 June 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 80% Temp 14ºC
July 2024	01 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 80% Temp 14ºC
	02 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 60% Temp 13ºC
	03 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 16ºC
	04 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 15ºC
	05 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 80% Temp 15ºC
	06 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 11ºC
	07 July 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 11ºC
	08 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 17ºC
	10 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 15ºC
	11 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 80% Temp 13ºC

Survey Visit	Date	Weather Conditions
	12 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 18% Temp 12ºC
	13 July 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 13ºC
	14 July 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 14ºC
	15 July 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 80% Temp 16ºC
	26 July 2024	Rain – 0, Wind –Calm, Cloud cover – 10% Temp 15ºC
	27 July 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 16ºC
	28 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 15ºC
	29 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 17ºC
	30 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 16ºC
	31 July 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 16ºC
August 2024	07 August 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 17ºC
	08 August 2024	Rain – Light rain, Wind –Moderate Breeze, Cloud cover – 80% Temp 19ºC
	09 August 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 16ºC
	10 August 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 17ºC
	11 August 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 17ºC
	12 August 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 10% Temp 23ºC
	13 August 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 20ºC
	16 August 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 15ºC
	17 August 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 13ºC
	18 August 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 16ºC

Survey Visit	Date	Weather Conditions
	19 August 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 10% Temp 17ºC
	20 August 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 15ºC
September 2024	02 September 2024	Rain – Drizzle, Wind –Light Breeze, Cloud cover – 10% Temp 19ºC
	03 September 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 17ºC
	04 September 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 14ºC
	05 September 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10% Temp 18ºC
	06 September 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 19ºC
	07 September 2024	Rain – Drizzle, Wind –Light Breeze, Cloud cover – 10% Temp 17ºC
	08 September 2024	Rain – 0, Wind –Light Breeze, Cloud cover – 10-30% Temp 15ºC
	12 September 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 10% Temp 7ºC
	13 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 8ºC
	14 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10% Temp 12ºC
	15 September 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 80% Temp 15ºC
	16 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 80% Temp 14ºC
	17 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 80% Temp 16ºC
	18 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 50% Temp 17ºC
	19 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 10-30% Temp 16ºC
	20 September 2024	Rain – 0, Wind –Gentle Breeze, Cloud cover – 80% Temp 16ºC
	21 September 2024	Rain – Light rain, Wind –Gentle Breeze, Cloud cover – 80% Temp 16ºC
May 2025	09 May 2025	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0% Min Temp 7ºC, Max Temp 14ºC

Survey Visit	Date	Weather Conditions
	10 May 2025	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0% Min Temp 8ºC, Max Temp 16ºC
	11 May 2025	Rain – Light rain, Wind – Gentle Breeze, Cloud cover – 30-37% Min Temp 11ºC, Max Temp 21ºC
	12 May 2025	Rain – Light rain, Wind – Light Breeze, Cloud cover – 30-37% Min Temp 8ºC, Max Temp 20ºC
	13 May 2025	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0% Min Temp 6ºC, Max Temp 15ºC
	14 May 2025	Rain – 0, Wind – Moderate Breeze, Cloud cover – 30-37% Min Temp 9ºC, Max Temp 16ºC
	15 May 2025	Rain – 0, Wind – Moderate Breeze, Cloud cover – 30-37% Min Temp 8ºC, Max Temp 13ºC
June 2025	14 June 2025	Rain – 0, Wind – Moderate Breeze, Cloud cover – 0-30% Min Temp 11ºC, Max Temp 19ºC
	15 June 2025	Rain – 0, Wind – Moderate Breeze, Cloud cover – 0-30% Min Temp 11 C, Max Temp 19ºC
	16 June 2025	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0-30% Min Temp 13ºC, Max Temp 19ºC
	17 June 2025	Rain – 0, Wind – Gentle Breeze, Cloud cover – 0-30% Min Temp 13ºC, Max Temp 21ºC
	18 June 2025	Rain – 0, Wind – Light Breeze, Cloud cover – 0-30% Min Temp 13ºC, Max Temp 18ºC
July 2025	10 July 2025	Rain – 0, Wind – Light Breeze, Cloud cover – 0-30% Min Temp 14ºC, Max Temp 20ºC
	11 July 2025	Rain – Light, Wind – Light Breeze, Cloud cover – 0-30% Min Temp 14ºC, Max Temp 23ºC
	12 July 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 13ºC, Max Temp 23ºC
	13 July 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 17ºC, Max Temp 25ºC
	14 July 2025	Rain – 0 – Gentle Breeze, Cloud cover – 0-30% Min Temp 12ºC, Max Temp 21ºC
	15 July 2025	Rain – Light – Gentle Breeze, Cloud cover – 0-30% Min Temp 13ºC, Max Temp 17ºC
August 2025	08 August 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 11ºC, Max Temp 18ºC
	09 August 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 12ºC, Max Temp 22ºC
	10 August 2025	Rain – 0 – Gentle Breeze, Cloud cover – 0-30% Min Temp 15ºC, Max Temp 19ºC

Survey Visit	Date	Weather Conditions
	11 August 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 17ºC, Max Temp 19ºC
	12 August 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 14ºC, Max Temp 21ºC
	13 August 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 19ºC, Max Temp 25ºC
	14 August 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 17ºC, Max Temp 24ºC
September 2025	04 September 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 10ºC, Max Temp 17ºC
	05 September 2025	Rain – Scattered – Light Breeze, Cloud cover – 0-30% Min Temp 10ºC, Max Temp 19ºC
	06 September 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 13ºC, Max Temp 20ºC
	07 September 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 12ºC, Max Temp 22ºC
	08 September 2025	Rain – 0 – Light Breeze, Cloud cover – 0-30% Min Temp 8ºC, Max Temp 22ºC
	09 September 2025	Rain – Scattered – Light Breeze, Cloud cover – 0-30% Min Temp 11ºC, Max Temp 18ºC

Annex E. Summary of Bat Activity and Each Static Detector Location

Annex E
Summary of Bat Activity at Each Static Detector Location

Table A8.10.23 Summary of bat activity at each static detector location

Project Section	Location	Passes per hour (pph)								
		Barbastella barbastellus	*Nyctalus* spp.	~~*Eptesicus serotinus*~~ *Cnephaeus serotinus*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Pipistrellus nathusii*	*Pipistrellus* spp.	*Myotis* spp.	*Plecotus auritus*
A	1	0.39	2.80	0.84	95.14	35.72	0.82	0.00	1.47	9.04
A	2	2.20	9.11	0.96	95.16	19.28	20.08	0.00	7.34	6.58
A	3	7.16	8.66	6.04	476.12	35.36	13.11	0.40	2.45	0.86
A	4	0.25	4.33	1.33	498.71	121.31	0.00	0.00	1.97	3.42
A	5	37.80	22.47	38.32	635.76	58.86	14.46	0.00	4.40	1.55
A	6	0.17	0.00	0.47	689.40	5.14	52.27	0.64	2.30	0.40
A	7	6.87	1.74	2.63	1249.90	58.57	4.54	0.00	3.59	7.37
A	8	13.00	1.14	1.86	705.74	34.90	0.24	1.61	6.48	1.28
A	9	3.11	1.06	0.36	387.48	3.13	0.83	0.00	1.03	3.72
A	10	4.13	8.58	1.02	1666.27	6.52	5.02	0.00	5.93	2.29
A	11	5.08	3.14	0.95	538.67	9.86	22.08	3.20	2.21	1.05
A	12	1.13	1.22	1.63	73.63	11.11	0.00	0.09	1.80	1.99
A	13	0.57	9.16	0.85	200.39	84.62	0.08	3.25	1.78	1.66

Project Section	Location	Passes per hour (pph)								
		Barbastella barbastellus	*Nyctalus* spp.	~~*Eptesicus serotinus*~~ *Cnephaeus serotinus*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Pipistrellus nathusii*	*Pipistrellus* spp.	*Myotis* spp.	*Plecotus auritus*
A	14	24.65	35.82	6.66	1623.56	219.95	31.80	0.00	23.10	9.41
A	15	6.96	30.65	1.92	518.22	138.50	1.04	0.00	2.36	4.53
B	16	9.03	15.44	1.12	302.69	17.39	7.60	0.00	1.88	5.95
B	17	2.78	3.81	1.68	412.77	10.62	60.63	0.00	0.96	1.47
B	18	10.77	20.70	20.08	616.77	138.21	15.75	15.94	9.13	13.25
B	19	4.27	0.88	0.57	759.29	367.11	2.67	0.00	6.46	0.54
B	20	6.22	12.01	1.80	360.92	87.25	3.44	1.02	15.29	8.05
B	21	13.14	77.23	4.41	1854.00	33.08	62.47	0.28	1.74	7.42
B	22	2.20	6.09	0.00	999.90	33.14	22.24	0.00	2.98	0.20
B	23	0.71	13.77	0.35	62.85	3.88	0.25	0.00	5.01	0.13
B	24	26.04	4.19	0.39	162.20	146.58	23.35	0.00	20.09	2.99
B	25	13.03	13.41	1.69	131.63	5.80	2.93	0.00	4.01	1.23
B	26	14.18	3.29	4.12	124.83	6.74	6.42	0.00	11.94	13.84
B	27	3.26	12.11	9.85	1074.81	187.05	40.46	0.00	5.76	6.57
B	28	8.07	62.09	2.19	2868.09	8.50	5.65	0.00	4.92	1.73
B	29	6.57	8.84	2.54	283.58	4.36	2.35	0.00	2.97	2.43
B	30	9.35	14.13	12.63	918.06	77.27	0.94	0.00	3.15	4.46

Project Section	Location	Passes per hour (pph)								
		Barbastella barbastellus	***Nyctalus* spp.**	***~~Eptesicus serotinus~~ Cnephaeus serotinus***	***Pipistrellus pipistrellus***	***Pipistrellus pygmaeus***	***Pipistrellus nathusii***	***Pipistrellus* spp.**	***Myotis* spp.**	***Plecotus auritus***
C	31	7.51	9.86	3.67	720.24	60.66	64.66	0.00	6.46	2.62
C	32	2.75	90.98	4.51	284.19	261.67	6.33	0.11	37.98	10.15
C	33	1.93	50.05	0.71	246.83	159.98	2.34	0.14	2.40	1.18
C	34	6.00	36.21	0.66	141.58	105.82	0.13	3.57	6.55	9.50
C	35	2.07	17.03	8.56	600.14	628.43	0.00	0.72	5.32	2.73
C	36	2.67	2.69	4.49	88.28	820.61	0.12	0.00	5.26	4.01
C	37	7.15	36.16	33.65	463.63	1422.00	0.63	65.55	71.52	17.91
C	38	86.81	12.56	1.86	48.52	25.73	0.49	0.00	7.91	7.62
C	39	3.96	10.22	1.52	545.72	427.88	2.05	0.33	1.34	2.23
C	40	0.56	3.92	1.09	297.48	118.04	14.20	0.00	0.54	1.44
C	41	5.53	25.81	2.75	452.09	532.39	15.87	0.00	7.21	1.96
C	42	9.01	34.43	3.02	133.40	133.37	2.57	0.00	19.17	11.69
C	43	1.27	11.68	0.00	340.65	237.28	0.13	2.64	1.36	0.89
C	44	0.26	11.11	1.06	1046.84	54.45	0.13	2.89	1.63	0.60
D	45	1.50	35.57	0.37	82.14	237.10	0.13	0.00	0.68	0.00
D	46	2.20	9.04	0.97	309.03	172.36	0.11	0.50	1.85	0.98
D	47	0.00	31.29	0.58	89.55	241.13	0.28	1.07	0.52	0.43

Project Section	Location	Passes per hour (pph)								
		Barbastella barbastellus	*Nyctalus* spp.	~~*Eptesicus serotinus*~~ *Cnephaeus serotinus*	*Pipistrellus pipistrellus*	*Pipistrellus pygmaeus*	*Pipistrellus nathusii*	*Pipistrellus* spp.	*Myotis* spp.	*Plecotus auritus*
D	48	0.25	11.73	0.13	274.18	490.65	2.37	0.76	0.11	2.05
D	49	0.00	10.51	0.00	123.02	161.39	0.00	0.12	0.76	0.21
D	50	8.23	132.42	6.03	382.12	1396.04	3.74	0.00	4.23	11.12
E	51	12.49	138.14	1.68	255.04	124.48	4.09	0.00	13.58	12.25
E	52	4.97	71.40	0.25	269.76	2065.81	1.08	1.62	21.75	2.30
E	53	2.28	53.67	0.23	335.81	35.91	7.71	0.00	2.50	4.00
E	54	3.41	7.61	0.43	220.90	253.39	0.23	3.38	9.54	1.56
E	55	0.28	15.70	0.13	159.91	165.20	0.19	1.02	1.25	0.32
E	56	0.82	198.17	146.42	901.83	171.92	0.98	0.22	5.37	8.58
E	57	6.17	17.22	0.60	312.39	44.00	2.98	0.00	1.47	1.13
F	58	14.21	27.01	1.53	617.55	233.88	3.66	0.00	8.32	3.14
F	59	3.59	89.45	1.97	558.07	951.78	2.02	0.00	6.74	3.97
F	60	0.38	29.34	5.36	398.69	376.61	11.79	0.00	7.18	8.93
F	61	1.87	7.94	0.12	213.13	159.15	1.18	0.00	3.88	1.27
F	62	10.08	43.65	1.45	1421.79	386.81	2.00	2.04	3.08	0.84
F	63	1.09	10.86	0.12	634.30	175.67	1.70	0.08	2.08	3.29
G and H	64	0.00	39.66	11.94	261.22	46.72	36.00	0.00	3.38	4.13

Project Section	Location	Passes per hour (pph)								
		Barbastella barbastellus	***Nyctalus* spp.**	~~***Eptesicus serotinus***~~ *Cnephaeus serotinus*	***Pipistrellus pipistrellus***	***Pipistrellus pygmaeus***	***Pipistrellus nathusii***	***Pipistrellus* spp.**	***Myotis* spp.**	***Plecotus auritus***
A	65	37.66	13.97	7.63	450.65	92.55	40.82	0.00	8.59	9.13
B	66	68.03	34.24	5.90	1488.82	290.91	72.81	0.11	6.08	12.31
B	67	12.75	8.78	1.49	227.47	54.52	3.10	0.00	24.32	10.36
C	68	1.08	7.04	2.91	61.54	74.71	0.47	0.00	2.11	2.55
C	69	38.56	17.04	1.64	148.36	283.00	9.34	0.00	19.02	8.81
C	70	31.55	14.57	9.94	389.18	388.88	21.00	4.61	21.01	12.48
C	71	38.58	4.39	3.50	570.63	367.28	5.17	0.00	26.86	4.64
E	72	41.93	18.62	0.77	135.53	82.20	3.00	0.00	4.79	4.99
F	73	7.26	8.38	0.24	734.90	515.91	7.35	0.09	3.82	2.60
Mean		10.02	25.57	5.63	519.31	232.73	10.66	1.62	7.59	4.63
SD		15.47	34.48	17.91	495.57	352.25	17.18	7.86	10.56	4.20
P-Value		0.00	0.00	0.15	0.00	0.00	0.02	0.99	0.06	0.055

Annex F. Table 3.3 UK Bat Mitigation Guidelines

Annex F
Table 3.3 UK Bat Mitigation Guidelines

Rarity category (points/species)	South-west England & South Wales		Southern England		South-eastern/East Anglia to The Wash		North/mid-Wales		Central England/Mid-lands	
Widespread all geographies [score 1]	*Ppip* *Ppyg* *Paur*	Score 3	*Ppip* *Ppyg* *Paur*	Score 3	*Ppip* *Ppyg* *Paur*	Score 3	*Ppip* *Ppyg* *Paur*	Score 3	*Ppip* *Ppyg* *Paur*	Score 3
Widespread in many geographies, but not as abundant in all [score 2]	*Mmys* *Mbra* *Mdau* *Mnat* *Nnyc*	Score 10	*Mmys* *Mbra* *Mdau* *Mnat* *Nnyc*	Score 10	*Mdau* *Mnat* *Nnyc*	Score 6	*Mmys* *Mbra* *Mdau* *Mnat* *Nnyc*	Score 10	*Mmys* *Mbra* *Mdau* *Mnat* *Nnyc*	Score 10
Rarer or restricted distribution [score 3]	*Rhip* *Eser* *Nlei* *Pnat*	Score 12	*Malc* *Eser* *Nlei* *Pnat*	Score 12	*Mmys* *Mbra* *Eser* *Nlei* *Pnat*	Score 15	*Rhip*	Score 3	*Eser* *Nlei* *Pnat*	Score 9
Rarest Annex II species and very rare [score 4]	*Rfer* *Mbec* *Bbar* *Paus*	Score 16	*Rfer* *Rhip* *Mbec* *Bbar* *Paus*	Score 20	*Bbar*	Score 4	*Rfer* *Bbar* *Eser* *Nlei* *Pnat*	Score 20	*Bbar*	Score 4
Thresholds	Maximum possible	41	Maximum possible	45	Maximum possible	28	Maximum possible	36	Maximum possible	26
County importance threshold: 45%	County	18	County	20	County	13	County	16	County	12
Regional importance threshold: 55%	Regional	23	Regional	25	Regional	15	Regional	20	Regional	14
National importance threshold: 70%	National	29	National	32	National	20	National	25	National	18

Rarity category (points/species)	Northern England		Southern Scotland		Northern Scotland		Northern Ireland	
Widespread all geographies [score 1]	*Ppip* *Ppyg* *Paur*	Score 3	*Ppip* *Ppyg*	Score 2	*Ppip* *Ppyg*	Score 2	*Ppip* *Ppyg* *Paur*	Score 3
Widespread in many geographies, but not as abundant in all [score 2]	*Mmys* *Mbra* *Mdau* *Mnat* *Nnyc*	Score 10	*Mdau* *Mnat* *Paur*	Score 6	*Mdau* *Mnat* *Paur*	Score 6	*Mdau* *Mnat* *Nlei*	Score 6
Rarer or restricted distribution [score 3]	*Malc* *Nlei* *Pnat*	Score 9	*Mmys* *Nnyc* *Nlei* *Pnat*	Score 12	*Pnat*	3	*Mmys* *Pnat*	Score 6
Rarest Annex II species and very rare [score 4]			*Mbra*	Score 4				
Thresholds	Maximum possible	22	Maximum possible	24	Maximum possible	11	Maximum possible	15
County importance threshold: 45%	County	10	County	11	County	5	County	7
Regional importance threshold: 55%	Regional	12	Regional	13	Regional	6	Regional	8
National importance threshold: 70%	National	15	National	17	National	8	National	11

Annex G. Assessment of Bat Assemblage Importance at Each Static Detector Location

Annex G
Assessment of Bat Assemblage Importance at Each Static Detector Location

Table A8.10.24 Assessment of bat assemblage importance at each static detector location

Project Section	Location	Widespread all geographies [score 1]	Widespread in many geographies, but not as abundant in all [score 2]	Rarer or restricted distribution [score 3]	Rarest Annex II species and very rare [score 4]	Total	Importance
		P.pip P.pyg P.aur	M.dau M.nat N.nyc	M.mys M.bra E.ser N.lei P.nat	B.bar		
A	1	3	6	15	4	28	National
A	2	3	6	15	4	28	National
A	3	3	6	15	4	28	National
A	4	3	6	9	4	22	National
A	5	3	6	15	4	28	National
A	6	3	4	12	4	23	National
A	7	3	6	15	4	28	National
A	8	3	6	15	4	28	National
A	9	3	6	15	4	28	National
A	10	3	6	15	4	28	National

Project Section	Location	Widespread all geographies [score 1]	Widespread in many geographies, but not as abundant in all [score 2]	Rarer or restricted distribution [score 3]	Rarest Annex II species and very rare [score 4]	Total	Importance
		P.pip P.pyg P.aur	M.dau M.nat N.nyc	M.mys M.bra E.ser N.lei P.nat	B.bar		
A	11	3	6	15	4	28	National
A	12	3	6	9	4	22	National
A	13	3	6	15	4	28	National
A	14	3	6	15	4	28	National
A	15	3	6	15	4	28	National
B	16	3	6	15	4	28	National
B	17	3	6	15	4	28	National
B	18	3	6	15	4	28	National
B	19	3	6	15	4	28	National
B	20	3	6	15	4	28	National
B	21	3	6	15	4	28	National
B	22	3	6	12	4	25	National
B	23	3	6	15	4	28	National
B	24	3	6	15	4	28	National

Project Section	Location	Widespread all geographies [score 1]	Widespread in many geographies, but not as abundant in all [score 2]	Rarer or restricted distribution [score 3]	Rarest Annex II species and very rare [score 4]	Total	Importance
		P.pip P.pyg P.aur	M.dau M.nat N.nyc	M.mys M.bra E.ser N.lei P.nat	B.bar		
B	25	3	6	15	4	28	National
B	26	3	6	15	4	28	National
B	27	3	6	15	4	28	National
B	28	3	6	15	4	28	National
B	29	3	6	15	4	28	National
B	30	3	6	15	4	28	National
C	31	3	6	15	4	28	National
C	32	3	6	15	4	28	National
C	33	3	6	12	4	25	National
C	34	3	6	15	4	28	National
C	35	3	6	12	4	25	National
C	36	3	6	15	4	28	National
C	37	3	6	9	4	22	National
C	38	3	6	9	4	22	National

Project Section	Location	Widespread all geographies [score 1]	Widespread in many geographies, but not as abundant in all [score 2]	Rarer or restricted distribution [score 3]	Rarest Annex II species and very rare [score 4]	Total	Importance
		P.pip P.pyg P.aur	M.dau M.nat N.nyc	M.mys M.bra E.ser N.lei P.nat	B.bar		
C	39	3	6	9	4	22	National
C	40	3	6	6	4	19	Regional
C	41	3	6	9	4	22	National
C	42	3	6	9	4	22	National
C	43	3	6	3	4	16	Regional
C	44	3	6	6	4	19	Regional
D	45	2	6	9	4	22	National
D	46	3	6	6	4	19	Regional
D	47	3	6	6	0	15	Regional
D	48	3	6	9	4	22	National
D	49	3	6	3	0	12	County
D	50	3	6	9	4	22	National
E	51	3	6	9	4	22	National
E	52	3	6	9	4	22	National

Project Section	Location	Widespread all geographies [score 1]	Widespread in many geographies, but not as abundant in all [score 2]	Rarer or restricted distribution [score 3]	Rarest Annex II species and very rare [score 4]	Total	Importance
		P.pip P.pyg P.aur	M.dau M.nat N.nyc	M.mys M.bra E.ser N.lei P.nat	B.bar		
E	53	3	6	9	4	22	National
E	54	3	6	9	4	22	National
E	55	3	6	9	4	22	National
E	56	3	6	9	4	22	National
E	57	3	6	9	4	22	National
F	58	3	6	9	4	22	National
F	59	3	6	9	4	22	National
F	60	3	6	9	4	22	National
F	61	3	6	9	4	22	National
F	62	3	6	9	4	22	National
F	63	3	6	9	4	22	National
G and H	64	3	6	9	0	18	Regional
A	65	3	6	9	4	22	National
B	66	3	6	9	4	22	National

Project Section	Location	Widespread all geographies [score 1]	Widespread in many geographies, but not as abundant in all [score 2]	Rarer or restricted distribution [score 3]	Rarest Annex II species and very rare [score 4]	Total	Importance
		P.pip P.pyg P.aur	M.dau M.nat N.nyc	M.mys M.bra E.ser N.lei P.nat	B.bar		
B	67	3	6	9	4	22	National
C	68	3	6	9	4	22	National
C	69	3	6	9	4	22	National
C	70	3	6	9	4	22	National
C	71	3	6	9	4	22	National
E	72	3	6	9	4	22	National
F	73	3	6	9	4	22	National

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