BT-NG-020621-545-0164

Bramford to Twinstead Reinforcement

Volume 6: Environmental Information

Document 6.3.7.7.1: ES Appendix 7.7 – Annex A Bat Draft Licence

Final Issue A
April 2023

Planning Inspectorate Reference: EN020002

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

nationalgrid

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Date: 17 April 2023
Our ref: 2023-63751-EPS-AD1
(NATIONALLY SIGNIFICANT INFRASTRUCTURE PROJECT)

Wildlife licensing
Natural England
Horizon House
Deanery Road
Bristol
BS1 5AH
Email:
wildlife@naturalengland.org.uk
Tel: 020 8026 1089

Mr John Bevan
National Grid
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA
Sent by e-mail only

Dear Mr Bevan,

DRAFT MITIGATION LICENCE APPLICATION STATUS: INITIAL DRAFT APPLICATION
LEGISLATION: THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017 (as amended)/THE WILDLIFE AND COUNTRYSIDE ACT 1981 (as amended)
NSIP: Bramford to Twinstead Reinforcement
SPECIES: Bats

Thank you for your initial draft bat mitigation licence application in association with the above NSIP site, received in this office on the 22 December 2022. As stated in our published guidance, once Natural England is content that the draft licence application is of the required standard, we will issue a 'letter of no impediment'. This is designed to provide the Planning Inspectorate and the Secretary of State with confidence that the competent licensing authority sees no impediment to issuing a licence in future, based on information assessed to date in respect of these proposals.

Assessment

Following our assessment of the submitted draft application documents, I can now confirm that, on the basis of the information and proposals provided, Natural England sees no impediment to a licence being issued, should the DCO be granted.

However, please note the following issues have been identified within the current draft of the method statement that will need to be addressed before the licence application is formally submitted. Our Senior Adviser, Helen Woolley, raised this matter with Cheryl White via e-mail correspondence on the 7 March 2023 where it was confirmed that the necessary amendments would be made. Please ensure that the method statement is revised to include these changes prior to formal submission. For clarity these include:

Application Form:
An ecologist has not been named on the application form, therefore, their experience cannot be assessed at this stage. A suitably experienced ecologist will need to be named within the full

licence application. Please note if the named ecologist has not held an EPS licence in the past three years for the same species and roost types applied for then full references will be required.

Surveys:
Activity surveys should be conducted at the 7 trees deemed unsafe to climb. Natural England would usually expect activity surveys to be conducted and as only 7 trees have been identified as unsafe to climb in our view it would not be disproportionate to undertake activity surveys, particularly as some of the trees are grouped together, to understand if any bat roosts are present and to avoid a 'worst case scenario' precautionary licence being issued.

Licensing Policy 4 can only be used if the following circumstances apply:

• the costs or delays associated with carrying out standard survey requirements would be disproportionate to the additional certainty that it would bring.
• the ecological impacts of development can be predicted with sufficient certainty.
• mitigation or compensation will ensure that the licensed activity does not detrimentally affect the conservation status of the local population of any EPS.

It is understood that this is a highly complex, large-scale site and having up to date surveys of every tree and building may not be practical. However, the use of Licencing Policy 4 cannot be used as a blanket approach across the entirety of the site and must be based on those roosts/species known to be or most likely to be impacted by the works. This usually based on at least an element of survey data.

If Licensing Policy 4 is to be used, much more information will need to be provided to enable NE to make an adequate assessment. For example, the amount of money a full survey programme would cost, relative to the scale of the project and the scale of potential impact. It is understood that surveying will continue throughout 2023, particularly within Hintlesham Woods, and this may go some way to help predict the ecological impacts of the development with sufficient certainty.

From a practical perspective, designing a licence that covers the worst-case scenario is – in most cases and certainly for bats – very difficult. It is almost impossible to cover all eventualities and the resulting licence is likely to be cumbersome and confusing for the licensee. Activity surveys will go a long way in narrowing down what species/roosts types are likely to be present.

Please be mindful that robust justification will be needed to demonstrate deviation from our best practice guidelines, or indeed if choosing to apply and Licensing Policy approach.

Impacts, Methodology and Mitigation:
Given the survey elements outlined above, it has not been possible to fully assess these sections at present.

In addition, full details of the proposed bat boxes and their locations will be required to form part of the full submission.

Next Steps

Should the DCO be granted then the mitigation licence application must be formally submitted to Natural England. At this stage any modifications to the timings of the proposed works, e.g. due to ecological requirements of the species concerned, must be made and agreed with Natural England before a licence is granted.

If other changes to the application are subsequently necessary, e.g. amendments to the work schedule/s then these should be outlined in a covering letter and must be reflected in the formal submission of the licence application. These changes must be agreed by Natural England before a licence can be granted. If changes are made to proposals or timings which do not

enable us to meet reach a ‘satisfied’ decision, we will issue correspondence outlining why the proposals are not acceptable and what further information is required. These issues will need to be addressed before any licence can be granted.

I should also be grateful if an open dialogue can be maintained with yourselves regarding the progression of the DCO application so that, should the Order be granted, we will be in a position to assess the final submission of the application in a timely fashion and avoid any unnecessary delay in issuing the licence.

I hope the above has been helpful. However, should you have any queries then please do not hesitate to contact me.

Yours sincerely

Scott Chapman
Senior Adviser
Tel: 020 8225 6338
E-mail: scott.chapman@naturalengland.org.uk

The Conservation of Habitats and Species Regulations 2017 (as amended)

Wildlife and Countryside Act 1981 (as amended)

Licence Application Form

Mitigation Licensing - Bats

Wildlife Licensing
Natural England
Horizon House
Deanery Road
Bristol
BS1 5AH
T. 020 802 61089
EPS.Mitigation@naturalengland.org.uk

- Please complete this application form using **dark ink** and BLOCK CAPITALS.
- Return the completed form to the address shown.
- All questions should be answered as appropriate. Questions marked with `*' are mandatory and failing to complete these may result in delays to your application.
- If there is insufficient space for completing answers on this form, please attach a separate sheet.
- Natural England will aim to determine the outcome of a completed licence application within its published service standards.
- If you experience any problems completing this application - please contact Wildlife Licensing.

For Office Use Only
Ref No:

1. Applicant Details

Please enter the details of the person or company who will become the licensee.

(a) Customer Details

Please note: If you are the agent / named ecologist registering on behalf of the applicant you will need to provide their full authorisation with this application.

*Title (please tick as appropriate) Mr ■ Mrs ☐ Mx ☐ Other ☐ Please Specify

*Forename: John
Middle Name:
*Surname: Bevan

*Email Address: john.bevan@nationalgrid.com
Professional Membership (eg, CIEEM, IEMA, etc.):

House Name / No.: National Grid House
*Address Line 1: Warwick Technology Park
*Address Line 2: Gallows Hill
Address Line 3:

Town	Warwick	*County	Warwickshire
*Postcode	CV34 6DA	Country	UK

Either `Telephone No.' or `Mobile No.' must be completed.

Telephone		Mobile	07807 519240
Fax			

*Customer Type *(eg, Farmer, Householder, Ecologist, etc.)* Electricity Owner and Maintainer

(b) If you are registering on behalf of an organisation please complete this section.

*Position: Senior Project Manager

*Organisation Name: National Grid

What is the size of your organisation?

- ☐ Micro (1 to 10 employees)
- ☐ Small (11 to 49 employees)
- ☐ Medium (50 to 249 employees)
- ☒ Large (250 employees or more)

What is the legal status of your organisation?
(eg. private limited company, registered charity,voluntary organisation, Government agency, Local Authority)

Private Limited Company

Companies House Registration or Registered Charity Number:

(c) Alternative Applicant Contact Details

In the event that the applicant is unavailable to discuss the application, it would be helpful if alternative contact details could be provided. By completing this section you are confirming that this contact is authorised to act on behalf of the applicant.

Name:	Laura Gore
Telephone number:	07866 02191
Email Address:	laura.gore@jacobs.com

2. Named Ecologist Details

Please enter the details of the named ecologist. Please note a named ecologist is required for all development and mitigation applications

(a) Ecologist Details

Please note: If you are the applicant registering on behalf of the agent/named ecologist you will need to provide their full authorisation with this application.

*Email Address

*Title (please tick as appropriate) Mr ☐ Mrs Mx ☐ Other ☐ (Please Specify)

*Forename: TBC

Middle Name:

*Surname:

Professional Membership (e.g. CIEEM, IEMA, etc)

If you represent an organisation please complete (I) (II) and (III)

(i) *Business Title

(ii) *Company

(iii) *Position

House Name / No.

*Address Line 1

*Address Line 2

Address Line 3

Town

*County

*Postcode

Country

Either 'Telephone No.' or 'Mobile No.' must be completed.

Telephone

Fax

Mobile

*Customer Type *(eg, Farmer, Householder, Ecologist, etc.)*

(b) If you are registering on behalf of an organisation please complete this section.

*Position: TBC

*Organisation Name: Jacobs UK Ltd

What is the size of your organisation?

- Micro (1 to 10 employees) ☐
- Small (11 to 49 employees) ☐
- Medium (50 to 249 employees) ☐
- Large (250 employees or more) ☒

What is the legal status of your organisation?
(eg, private limited company, registered charity, voluntary organisation, Government agency, Local Authority

Private Limited Company

Companies House Registration or Registered Charity Number:

(c) Alternative Named Ecologist Contact Details

In the event that the named ecologist is unavailable to discuss the application, it would be helpful if alternative contact details could be provided. By completing this section you are confirming that this contact is authorised to act on behalf of the named ecologist and has a detailed knowledge of the application.

Name: Laura Gore

Telephone Number: 07866 022191

Email Address: laura.gore@jacobs.com

3. Communication Preferences

Please indicate who should be contacted if we need to discuss this application:
(Please note more than one option can be selected for each question):

Applicant ☐ Named Ecologist ■

Please indicate to whom the outcome documentation for this application should be sent:

Applicant ■ Named Ecologist ■

Applicant Preferences: Email ■ Post ☐ Telephone ☐

If `Yes' for telephone, please provide a contact no.

Named Ecologist preferences: Email ■ Post ☐ Telephone ☐

If `Yes' for telephone, please provide a contact no.

4. Previous Applications

(a) * To your knowledge, have there been any previous applications or licence decisions concerning this site? ☐ Yes ■ No

If `No' please move to question 4(g). If `Yes' to (a), please complete the following.

(b) * Date of most recent application:

(c) * Which species was the subject of the previous application?

(d) * What was the application or licence reference number?

(e) * What was the outcome of the previous application? (Please select one of the following)

Granted ☐ Not Granted ☐ Advice Only ☐ Deferred ☐ Not yet known ☐

(f) To your knowledge, does this application relate to any previously licensed `mitigation' work for any species on the site being applied for? ☐ Yes ☐ No

If `Yes' to (f): Please provide application/ licence reference numbers, species details and outcome details.

(g) To your knowledge, is the site being applied for subject to any recent, concurrent, pending or future applications for licences for the same or other European protected species or other protected species? ☒ Yes ☐ No

If `Yes' to (g): Please provide application/ licence reference numbers and/or species information.

A draft dormouse EPS licence and a draft badger sett closure licence applications are being submitted for this project.

For applications which are part of the Pre-Submission Screening Service:

More information on Natural England's Pre-Submission Screening Service can be found here.

Is this a first draft application? ☒ Yes ☐ No Is this a subsequent draft? ☐ Yes ☐ No

Are you aware if your case has been seen or reviewed by Natural England? ☒ Yes ☐ No ☐ Not sure

If yes, who provided the advice and when?

DAS advice 16955/375747
Sam Kench - Lead Advisor / Emma Hurrell

Any further information you would like to provide:

Is this a formal application? ☐ Yes ■ No

Please provide any earlier reference numbers

For applications which are part of Nationally Significant Infrastructure Projects:

Is this a first draft application? ■ Yes ☐ No Is this a subsequent draft? ☐ Yes ☐ No

Is this a formal application? ☐ Yes ■ No

Please provide any earlier reference numbers

5. Purpose

(a) * Brief Description of Proposal
eg, Construction of a new road, maintenance of a bridge, construction of five flats with access road and car parking area.

Construction of a new 400kV electricity transmission line over a distance of approximately 29km to include underground cable sections.

(b) * Please tell us why you need a licence.
eg. A day roost will be damaged, a night roost will be destroyed, a maternity roost will be modified and a day roost will be destroyed.

No confirmed bat roosts will be lost but seven trees with high or moderate bat roosting potential unable to be safely surveyed have the potential to support a range of bat species and roost types and could be lost

(c) * Please confirm the purpose of the application:

- ■ Imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment under section 55(2)(e)
- ☐ Preserving public health or public safety, under section 55(2)(e)
- ☐ Preventing the spread of disease, under section 55(2)(f)
- ☐ Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber, fisheries or inland waters, or any other form of property under section 55(2)(g)
- ☐ A purpose not specified in Regulation 55(2) that is consistent with Article 16(1)(e) of the Habitats Directive, under section 55(4)

(d) * Please confirm the category most appropriate to your proposed work
(Please select one of the following): :

- ☐ Agriculture / Farming/ Fishing / Forestry/ Nature conservation
- ☐ Archaeological investigation
- ☐ Barn conversion
- ☐ Commercial - eg, office, retail
- ☐ Communications
- ☐ Energy generation/Energy supply
- ☐ Flood and coastal defences
- ☐ Health and safety
- ☐ Heritage/Historical (eg, National Trust, listed building, scheduled monument)
- ☐ Householder home improvement (eg, loft conversion, extension, garage, conservatory, repairs)
- ☐ Housing (non-householder) (eg, residential development, repairs/maintenance, non-householders)
- ☐ Industrial/Manufacturing
- ☐ Mineral extraction/Quarrying
- ■ Nationally Significant Infrastructure Projects
- ☐ Places of worship
- ☐ Public buildings and land (eg, schools, universities, hospitals, care facilities, military, prisons)
- ☐ Tourism/leisure eg, golf courses, country parks, holiday camps
- ☐ Transport/Highways
- ☐ Water management
- ☐ Water supply and treatment/water environment
- ☐ Other

If other, please provide details here:

(e) * Is the proposed work part of a phased or a multi-plot development? ☐ Yes ■ No

If `Yes' to (e): You must submit a species specific master plan and Habitat Management and Maintenance Plan with this application, as a separate document. Guidance on what should be included in a master plan can be found at - https://webarchive.nationalarchives.gov.uk/ukgwa/20140605090108/http:/www.naturalengland.org.uk/Images/WML-G11_tcm6-9930.pdf

6. Site Details

*Is the address for the site to be licensed different to the applicant's address? ■ Yes ☐ No

If `Yes': For the Site/Location to be licensed, please complete **all** of the following details:
If `No': Please complete Site/Location Name and OS Grid Reference boxes only.
(For linear projects, please add the start and end points separately)

Site Details

*Site / Location Name:	Bramford to Twinstead Reinforcement
House Number:	-
Address Line 1:	-
Address Line 2:	-
Address Line 3:	-
Town:	-
*County:	Suffolk and Essex
Postcode:	-
*OS Grid Reference: *(In format XX123456)*	TM102461 (western end of the project) to TL820369 (eastern end of the project)

7. Conservation Considerations

(a) *Will any part of the proposed activity fall in and/or adjacent to a Designated Site? ■ Yes ☐ No ☐ N/A

If `Yes' to (a) please complete the table below. If `No', please go to the next section.

Please indicate whether the activity will fall on and/or adjacent to a designated site:	Designated Site Name	Type of Designated Site *Eg National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar Site, Ancient Monument, Marine Nature Reserve (MNR), Area of Outstanding Natural Beauty (AONB)*
On ■ Adjacent to ☐	Hintlesham Woods SSSI	Site of Special Scientific Interest
On ■ Adjacent to ☐	Hadleigh Railway Walk	Local Nature Reserve / County Wildlife Site (Suffolk)
On ■ Adjacent to ☐	Ansell's Grove/Ash Ground Alphamstone Complex, Alphamstone Meadows, Twinstead Marsh, Loshes Meadow Complex	Local Wildlife Sites (Essex)
On ■ Adjacent to ☐	The Dollops Valley Farm Wood Valley Farm Meadow, Layham Pit Woodland and Meadow	County Wildlife Sites (Suffolk)

Please indicate whether the activity will fall on and/or adjacent to a designated site:	Designated Site Name	Type of Designated Site *Eg National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI), Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar Site, Ancient Monument, Marine Nature Reserve (MNR), Area of Outstanding Natural Beauty (AONB)*
On ☐ Adjacent to ☐		
On ☐ Adjacent to ☐		

(b) Have you consulted with Natural England for advice on the implications of the application on the designated site? ■ Yes ☐ No ☐ Not known

(c) Please give either the outcome of your consultations or the reason why you have not consulted us. Please provide any relevant correspondence and the name of the local Natural England adviser or reserve manager consulted.

Statutory consultation response letter from Sam Kench at Natural England on 21/03/22 and DAS advice on 14/12/21 (DAS/16955/375746). Consultation is ongoing and a SLA is also in place.

8. Authorisation

(a) *Is the applicant the owner/occupier of the land? ☐ Yes ■ No ☐ N/A

If `Yes' to (a) please go to the next section. If `No' to (a) please answer (b).

(b) Have you received the owner occupier's permission to apply? ■ Yes ☐ No

Please note that it is your responsibility as the applicant to obtain the owner or occupier's permissions to act under licence on their property.

You may be asked to provide documentation which confirms that you have owner or occupier's permissions and we will contact you if this is necessary

9. Application Details

(a) Please add details for all licensable actions you wish to perform. Please complete one column per species. You may enter more than one Activity and/or Method or Field Technique per species. **All the data entered here MUST be accurately reflected in your accompanying method statement**.

- *Please see annex for guidance on bat roost definitions.*
- *If you require additional rows, please attach extra sheets to your application, presenting the information in the same table format.*

Application Subject	Bats	Bats	Bats	Bats	Bats
*Species	Unconfirmed species (trees not surveyed) Common pipistrelle, so				
*Activity	Capture Take ☒ Disturb ☒ Transport ☐ Damage Breeding Site ☐ Destroy Breeding Site ☒ Damage Resting Place ☐ Destroy Resting Place ☒	Capture Take ☐ Disturb ☐ Transport ☐ Damage Breeding Site ☐ Destroy Breeding Site ☐ Damage Resting Place ☐ Destroy Resting Place ☐	Capture Take ☐ Disturb ☐ Transport ☐ Damage Breeding Site ☐ Destroy Breeding Site ☐ Damage Resting Place ☐ Destroy Resting Place ☐	Capture Take ☐ Disturb ☐ Transport ☐ Damage Breeding Site ☐ Destroy Breeding Site ☐ Damage Resting Place ☐ Destroy Resting Place ☐	Capture Take ☐ Disturb ☐ Transport ☐ Damage Breeding Site ☐ Destroy Breeding Site ☐ Damage Resting Place ☐ Destroy Resting Place ☐
*Method or Field Technique	By hand ☒ By static hand-held net ☐ Temporary exclusion ☐ Permanent exclusion ☒ Destructive search by soft demolition ☒ Mechanical demolition ☐ Disturbance by illumination (intentional by torch) ☐ Disturbance by noise or vibration ☐ Temporary obstruction of roost access ☐ Endoscopes ☐	By hand ☐ By static hand-held net ☐ Temporary exclusion ☐ Permanent exclusion ☐ Destructive search by soft demolition ☐ Mechanical demolition ☐ Disturbance by illumination (intentional by torch) ☐ Disturbance by noise or vibration ☐ Temporary obstruction of roost access ☐ Endoscopes ☐	By hand ☐ By static hand-held net ☐ Temporary exclusion ☐ Permanent exclusion ☐ Destructive search by soft demolition ☐ Mechanical demolition ☐ Disturbance by illumination (intentional by torch) ☐ Disturbance by noise or vibration ☐ Temporary obstruction of roost access ☐ Endoscopes ☐	By hand ☐ By static hand-held net ☐ Temporary exclusion ☐ Permanent exclusion ☐ Destructive search by soft demolition ☐ Mechanical demolition ☐ Disturbance by illumination (intentional by torch) ☐ Disturbance by noise or vibration ☐ Temporary obstruction of roost access ☐ Endoscopes ☐	By hand ☐ By static hand-held net ☐ Temporary exclusion ☐ Permanent exclusion ☐ Destructive search by soft demolition ☐ Mechanical demolition ☐ Disturbance by illumination (intentional by torch) ☐ Disturbance by noise or vibration ☐ Temporary obstruction of roost access ☐ Endoscopes ☐
* Maximum number of bats to be licensed at the time that works are proposed	Min:1 to Max: 31 (BTHK)				
* Number of breeding sites to be impacted	Unknown - up to 23				
* Number of resting sites to be impacted	Unknown - up to 23				

Expected roost type affected	Hibernation confirmed ☐ Day ☒ Transitional/ Occasional ☒ Feeding perch ☒ Night ☒ Satellite ☒ Swarming or mating ☐ Maternity ☒ Underground - mines, caves, cellars, tunnels or bridges (number & type) ☐	Hibernation confirmed ☐ Day ☐ Transitional/ Occasional ☐ Feeding perch ☐ Night ☐ Satellite ☐ Swarming or mating ☐ Maternity ☐ Underground - mines, caves, cellars, tunnels or bridges (number & type) ☐	Hibernation confirmed ☐ Day ☐ Transitional/ Occasional ☐ Feeding perch ☐ Night ☐ Satellite ☐ Swarming or mating ☐ Maternity ☐ Underground - mines, caves, cellars, tunnels or bridges (number & type) ☐	Hibernation confirmed ☐ Day ☐ Transitional/ Occasional ☐ Feeding perch ☐ Night ☐ Satellite ☐ Swarming or mating ☐ Maternity ☐ Underground - mines, caves, cellars, tunnels or bridges (number & type) ☐	Hibernation confirmed ☐ Day ☐ Transitional/ Occasional ☐ Feeding perch ☐ Night ☐ Satellite ☐ Swarming or mating ☐ Maternity ☐ Underground - mines, caves, cellars, tunnels or bridges (number & type) ☐

Please enter the proposed start date of action below. *Please note this refers to the date of the first licensable action, not necessarily when the development commences.*

*Proposed Date From:	Spring 2024				
*Proposed Date To:	March 2029				

(b) * Have you sent your records to the Local Records Centre? ☐ Yes ☒ No

Please note: You must send survey data and habitat assessment data to your Local Records Centre (LRC). It is a condition of survey licences that records are sent to LRCs annually or to other organisations as specified on a particular survey licence (e.g. People's Trust for Endangered Species).

(c) * Have surveys been conducted within the current or most recent optimal season and undertaken in accordance with the most up to date edition of the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists - Good Practice Guidelines* and the *Bat Mitigation Guidelines*? ☒ Yes ☐ No

If `No', please confirm that full justification has been provided in section C5a in the Method Statement template. **Please note that inadequate or insufficient survey information is likely to cause a delay to your licence application and possibly result in a Further Information Request.** ☒ Yes, I confirm

10. Experience

Please note: For guidance in completing this section please refer to the Experience in Bat Mitigation document at http:// webarchive.nationalarchives.gov.uk/20140605090108/http://www.naturalengland.org.uk/Images/bat-mitigation- guidance_tcm6-10534.pdf

(a) * Has the named ecologist associated with this application held or been named on a bat mitigation licence in the past three years for the same species and in relation to a project of similar scale, methodology and mitigation?

☐ Yes ☐ No

If `Yes' to (a):

(b) * Please provide the name of the issuing authority, the licence reference number, date of issue and the species and roost types of licences held

TBC - named ecologist will be suitably experienced and licenced.

If `No' to (a) please complete the following section. If "Yes" to (a) go to the next section.

(c) * Does the named ecologist currently hold a valid personal survey licence or are they registered to use a minimum of Level 2 Bat class survey licence?

☐ Yes

☐ No

If `Yes' complete **all** of the following.

If `No' go to (f)

(d) * What is/are the survey licence reference number(s)?

(e) * Number of years the survey licence(s) have been held (minimum of 2 years):

(f) * Please give brief details of the named ecologist's current science, education or conservation licence or any other licences issued to the ecologist in the last three years relevant to the species relating to this application:

(g) * Please give brief details of the named ecologist's experience on mitigation projects (a minimum of 3 projects) relevant to the species relating to this application, including in what capacity they acted. State the site names and reference numbers of licences and the type of mitigation involved:

(h) * Please provide details of the named ecologist's Qualifications, including any Continual Professional Development (CPD) training relevant to the species relating to this application:

Please note: If you have not held a mitigation licence in the last three years you will need to provide written references from two people who are familiar with the named ecologist's work. Please attach these references with your application. References provided in support of your licence application should:

- Vouch for the named ecologist's suitability and competence to prepare and deliver mitigation projects;
- State how long referees have known the named ecologist and in what capacity;
- Provide details of the named ecologist's mitigation experience with the relevant species or a related species; and
- Provide details of the referees' own mitigation experience and mitigation licence held (if appropriate): at least one referee must have held a mitigation licence within the last 3 years.

(i) * Are you providing references? ☐ Yes ☐ No

If `Yes' to (i): Please provide details of the referees. We may need to contact these referees to verify their statements.

1st Referee:

2nd Referee:

11. Consent Status

(a) * Is any consent required for your proposed project and the subject of this licence application?

☐ 1. Planning-related consent required (e.g. Planning permission, listed building consent, etc)

☐ 2. Demolition consent (under Building Act 1984) including prior notice to demolish.

☒ 3. Other type of consent required (e.g. Minerals consents, Highway Act consents, Secretary of State Decision Letter, Compulsory Purchase Order, Environment Agency Consent, etc.)

☐ 4. Permitted Development (under Town and Country Planning Act 1990) - no specific consent required.

☐ 5. No consent required (e.g. Public Health and safety issues)

If `3' is selected (b) * Please provide details of these consents: Development Consent Order - examination period begins in 2023

If `5' is selected (c) * Please explain why no consent is required

If `1', `2' or `3' is selected

(d) Have you obtained the necessary consent(s) to allow the proposed activity to be commenced? ☐ Yes ■ No

- *If `No' to (d), please complete `Consent Not Obtained'*
- *If `Yes' to (d), please complete `Consent Obtained'*

* Please confirm that you will submit copies of any consent(s) or extracts that are relevant to the proposed activity and this licence application if applicable: ☐ Yes, I confirm

Consent not obtained

Please note: If you have not held a mitigation licence in the last three years you will need to provide written references from two people who are familiar with the named ecologist's work. Please attach these references with your application. References provided in support of your licence application should:

(e) * Please provide details of the outstanding consents to be obtained and the likely time scales for their determination/issue.

Development Consent Order - examination period begins in 2023

Pre-submission Screening Service:

We will provide advice on draft applications, prior to consents being in place and prior to a formal licence application being submitted. We **strongly** advise customers to use this service rather than trying to pursue a licence under Exceptional Circumstances, particularly where there are concerns about financial implications resulting from delays in obtaining a licence once planning consents are in place. Please see our website for further advice about this.

Consent obtained

(f) * Please confirm details of all the consents that have been granted relevant to the proposed activity and this licence application.

Full Planning Permission	☐	Outline Planning Permission	☐
Demolition consent (under Building Act 1984) including prior notice to demolish	☐	Conservation Area Consent	☐
Listed Building Consent	☐	Tree Preservation Order	☐
Highways Act Consent	☐	Utilities Consent	☐
Mineral Consent	☐	Mineral Consent with Review of Mineral Planning Permission	☐
Mineral Consent (Review of Mineral Planning Permission submitted to Mineral Planning)	☐	Other consent type	☐

If Other, please provide details here:

(g) * Please provide consent reference number(s)

Please submit copies of the consents (or extracts) that are relevant to the proposed activity and this licence application, if applicable

(h) For all consents that have been granted, have all conditions or Reserved Matters relating to wildlife species and habitat issues (which are intended to be and are capable of being discharged before development begins) been discharged? ☐ Yes ☐ No

If `No' to (i), please answer **all** of the following. If `Yes', please skip to (j).

Please note: If it is not possible or not intended for the conditions to be discharged before development commences then please complete the questions below.

(i) Please give details of those conditions that are still to be discharged and explain why they have not been discharged.

(j) Is the site subject to any commitment that affects the protected species named in this application? ☐ Yes ☐ No

For example a Section 106 Agreement (Town and Country Planning act 1990) or other commitments made at a Public Inquiry or in an Environmental Statement.

If `Yes' to (j) Has the commitment been met? Please also explain what has been done.

If `Yes' to (j) What work is outstanding and when will it be completed?

(k) Is the site subject to any such commitment that affects other European Protected Species or other protected species? *Eg, a Section 106 Agreement (Town and Country Planning Act 1990) or other commitments made at a Public Inquiry or in an Environmental Statement.* ☐ Yes ☐ No

If `Yes' to (k) Has this been met?

If `Yes' to (k) When will this be complete?

Reasoned Statement & Supporting Documents

A Reasoned Statement and supporting documents may be required in support of this application

Copies of the latest version of the Reasoned Statement template which sets out when a Reasoned Statement is required and further guidance to help are available on our website.

Please confirm that you have read and understood the Reasoned Statement template and advice note/guidance

☒ Yes, I confirm

(I) *Does your application require a Reasoned Statement? ☒ Yes ☐ No

If `No' to (I) *Please confirm the exception that applies

☐ Applications for home improvements and small scale housing developments:

- Repairs and maintenance
- Roof replacements, loft conversions and extensions
- Renovations of existing domestic dwellings and associated structures, such as garages
- Housing developments of less than 1 hectare, including:
  - existing buildings and associated structures that may need to be demolished before redevelopment takes place (whether domestic dwellings or other types of buildings)
  - barn conversions for domestic dwellings (this doesn't include conversions for commercial use, such as holiday lets)

☐ Applications to conserve and protect listed buildings, scheduled monuments or places of worship:

- listed buildings
- scheduled monuments
- registered places of worship or a place of worship belonging to the Church of England for:
  - repairs and maintenance (including roof replacement)
  - restoration
  - essential works to:
    - prevent serious damage to buildings and structures (including contents
    - preserve public health and safety
    - enable continued appropriate use of the building or structure

☐ Applications to maintain, repair, improve public buildings or develop public land

Public buildings and public land includes buildings and land owned or leased by the government, their departments, agencies and arm's length bodies, such as:

- schools (state funded and academies only)
- hospitals
- prisons
- courts
- airfields

You don't need to include a reasoned statement where bats and their roosts will be affected by:

- repairs and maintenance
- restoration
- renovation

- redevelopment of an existing building(s), which may include demolition before redevelopment, as long as it remains in use as a public building
- extending or adding new buildings within the grounds of the existing developed site
- essential works to:
  - prevent serious damage to buildings (including contents)
  - preserve public health and safety
  - allow the building to be continued to be used as it was intended

Extending public buildings beyond existing boundaries, changing them to private use, or developing land for private use will need a reasoned statement with your application.

If you have selected one of the above exceptions, please provide details of how the proposed works meet the exception criteria:

(m) Does your application affect a regionally or nationally important population of a European Protected Species? ☐ Yes ■ No

*If `Yes' to (m) **and** a Reasoned Statement is **not required ...*** (n) You must consult Natural England for advice before making an application. Please give either the outcome of your consultation (with details of who you consulted) or the reason why you have not consulted us

12. Consenting Authority

Please provide the Local Planning Authority/Authorities that have granted consent for the proposed project and the subject of this licence application. Please then provide contact details for the responsible officer.
If consent is granted by another body (e.g. Secretary of State, Natural England, Environment Agency, Utilities Consent, Highways Consent, etc) then please provide details for it as appropriate.
If no consent is required (e.g. Public health and safety issues) then please leave the remaining fields blank.

*Consenting Authority Name: Secretary of State for Business, Energy and Industrial Strategy

*Title	*Forename	*Surname	*Position

Email Address:

Telephone Number

Address	

13. Method Statement

A Method Statement must be provided to support this application, along with other supporting documents, which may include some or all of the following:

- Maps
- Figures
- Habitat management and maintenance plans
- Master plan
- Appended survey results
- A work schedule

Please note: The Method Statement should be prepared by a consultant ecologist or another suitably qualified person because compiling the content requires specific species and site-related knowledge.

14. Supplementary Information

Please provide any additional information you may have to support your application.

15. Charge Screening

15a. Applicant Screening

Natural England will use this section to assess whether you need to pay for your licence. If you do not complete your form correctly, your request might take longer.

Charge screening relating to modifications to a wildlife licence granted before 22 April 2019 only

Enter your licence reference number

15b. Is there a charge for your licence?

Your answers must not conflict with the questions 5, 9 and 11. If you are going to conserve a bat roost in situ, you must give evidence in your method statement.

The main purpose of my licence application is:

- ☐ To prevent the spread of disease
- ☐ To prevent serious damage to property
- ☐ To preserve public health or public safety - but not for imperative reasons of overriding public interest of a social or economic nature
- ☐ To conserve an important bat roost in situ - where the roost will not be altered

For the conservation of:

- ☐ a scheduled monument,
- ☐ a listed building
- ☐ a registered place of worship
- ☐ a traditional farm building in a Stewardship agreement

For a householder home improvement project to a single home (such as an extension, a garage, or a car port, a wall or fence) for which you

- ☐ have received planning consent through a householder planning application
- ☐ do not need planning consent (permitted development).

If you have ticked any of the purposes above, you may be exempt from licence charges.

If your application is to conserve a bat roost in situ, you are only exempt from charges if you can select all of the following factors:

- ☐ The proposed works do not affect the roost
- ☐ The roost is a maternity, swarming or hibernation roost **or** the roost is a day roost containing 3 or more bats at one time
- ☐ The roosting space(s) and pre-emergent flight areas will stay accessible to bats and keep the same length, height and width
- ☐ Access points will not be changed
- ☐ For roof roosts, the roof timbers must not be changed
- ☐ No more than 5% of the building materials in the roost space will be replaced
- ☐ The temperature and humidity of the roost must not be changed
- ☐ Light levels inside and outside the roost and flight paths to and from the roost will not be affected

If your licence is exempt from charges, you do not need to complete the rest of this section 15.

15c. Invoice Details

Only complete this section if your licence is charged for.

Please note:

- if the section below needs to be completed and is left blank, the form will be returned to you for completion. Licence assessment will not commence until these details are provided
- requests for changes to invoice details made after an invoice has been issued (including missing purchase order numbers) will be subject to a £101 administration charge.

☐ Contact details are the same as applicant details

Company name: National Grid

Address including postcode: National Grid House, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

Telephone number: 01926 653000

Mobile number: 07514 726455

Email address for invoices: Sally.Rotherham@nationalgrid.com

Contact name for invoices: Sally Rotherham

Email address (if different from invoice email address):

Do you use a purchase number for company invoices?

○ Yes

◉ No

If yes, enter the purchase order number, if available

15d. Licence Cost

The cost of the A13 licence is either:

- a fixed price of £500
- a variable price depending on the time taken to assess your application

Can I pay a fixed price for my licence?

Your answers must be supported by evidence in your licence application (questions 5, 7, 9) and method statement.

The project:

- is not a phased or multi-plot development
- will not impact on a Site of Special Scientific Interest, a Special Protection Area or a Special Area of Conservation

☐ yes

☒ no

The application is for:

☐ common pipistrelle, soprano pipistrelle, whiskered, Brandt's, Natterers, Daubenton's or brown long-eared bats **AND** is only for a day roost, night roost, feeding perch or transitional / occasional roosts

☐ serotine bats **AND** is only for a day roost, night roost, feeding perch or transitional / occasional roosts **AND** is in one of the following counties: Kent, East Sussex, West Sussex, Surrey, Greater London, Hertfordshire, Essex, Buckinghamshire, Berkshire, Oxfordshire, Hampshire, Wiltshire, Somerset, Dorset and Devon

☐ lesser horseshoe bats **AND** is for a day roost or transitional / occasional roost **AND** is in one of the following counties: Cornwall, Devon, Somerset, Bristol, Wiltshire, Dorset, Gloucestershire and Herefordshire

If you have answered yes and have selected one of the species, roost and location combinations above, you can pay the fixed price for your licence.

If your licence is not eligible for the fixed price, you will need to pay a variable price.

Variably priced licences

The variable price is calculated to the nearest quarter of an hour, based on an hourly rate of **£101** plus a £183 compliance check.

Likely costs are:

- new licences between £500 and £2000
- modifications between £100 and £1800
- resubmissions between £500 and £1500

Complex cases are likely to cost more, such as:

- works on multiple buildings with a number of roosts and different species
- works during sensitive times for bat species, for example during the maternity period to a maternity roost
- rarer bat species
- railway tunnels and mines with swarming sites or hibernation roosts
- linear infrastructure that could lead to habitat fragmentation
- where other local projects may cause cumulative effects on bat species (this is easier to assess if you provide evidence with your application)
- projects using unusual, new or contentious methods
- applications or project plans that have incomplete or inaccurate details
- applications or project plans with unnecessary additional information
- issues with ecologist experience or poor references
- surveys that do not follow guidance or are limited or constrained
- phased or multi-plot developments
- use of licensing policies
- applications where compliance issues have been identified or have previous police involvement
- applications without relevant planning permissions (or other consents) in place; that do not have conditions or reserved matters fully discharged; or that propose the use of exceptional circumstances
- applications that affect a protected site

16. Using and Sharing Your Information

How we use your personal information is set out in the Wildlife Licensing privacy notice which can be found here

https://www.gov.uk/government/publications/natural-england-privacy-notices

Important Advice:

- If your application is made under the Wildlife and Countryside Act 1981 (as amended) or the Conservation of Habitats and Species Regulations 2017 (as amended), any person who in order to obtain a licence knowingly or recklessly makes a statement or representation, or furnishes a document or information which is false in a material particular, shall be guilty of an offence and may be liable to criminal prosecution. Any person found guilty of such an offence is liable, on summary conviction, to imprisonment for a term not exceeding six months or to a fine not exceeding level 5 on the standard scale, or to both. Regarding other wildlife legislation, we will look to provisions in the Fraud Act 2006 (as amended) in respect of applicants making any false representations.

- Natural England or the Secretary of State can modify or revoke at any time any licence that is issued, but this will not be done unless there is good reason for doing so. Any licence that is issued is likely to be revoked immediately if it discovered that false information has been provided that resulted in the issue of a licence.

17. Declaration

17a. Applicant Declaration

*Have you or any person listed in the application been convicted of any wildlife-related or animal welfare offence? ☐ Yes ■ No

If `Yes' to (16a) Please provide details of the convictions: *(including dates)*

The offences we are referring to relate to persons convicted on or after 1 January 2010 of an offence under the Wildlife and Countryside Act 1981, the Conservation (Natural Habitats &c.) Regulations 1994, the Conservation of Habitats and Species Regulations 2017 (as amended), the Protection of Badgers Act 1992, the Deer Act 1991, the Hunting Act 2004, the Wild Mammals (Protection) Act 1996, the Animal Welfare Act 2006 and the Protection of Animals Act 1911 (all as amended). You do not have to declare conviction if the person concerned is: (1) a rehabilitated person for the purposes of the Rehabilitation of Offenders Act 1974 and their conviction is treated as spent; or (2) in respect of such an offence, a court has made an order discharging them absolutely.

17b. Applicant Declaration

☐ I have read and understood the privacy notice above.

- Where required, I undertake to obtain permission from landowners / occupiers of land to exercise any licence resulting from this application, and to allow any employee or representative of Natural England to monitor or inspect the work described in this application.
- I have read and understood the guidance provided in the application form and on the Wildlife Licensing Internet guidance pages.
- I have read and understood the Terms and Conditions for payment in respect of Wildlife Licence Applications and agree to pay all the relevant charges due.
- I declare the particulars given are correct to the best of my knowledge and belief, and I apply for a licence in accordance with the information I have provided.
- I confirm that there is no satisfactory alternative to meet the need/resolve the problem detailed in this application.

☐ I agree to the declaration above.

Signature of applicant:

For electronic applications, please insert an electronic signature above or tick this box to confirm with the declaration. ☐

Name: *(In BLOCK letters)*

Date:

17c. Ecologist Declaration

☐ I have read and understood the privacy notice above.

- I confirm that I have visited the site(s).

- I confirm that I have visited the site(s).
- I have designed and inputted into the licence proposal.
- I confirm that there is no satisfactory alternative to meet the need/resolve the problem detailed in this application
- I am satisfied that the proposal will result in no adverse impact on the species concerned
- I declare the particulars given are correct to the best of my knowledge and belief, and the applicant may apply for a licence in accordance with information I have provided
- I have documentary evidence that I am authorised to act on behalf of the applicant that I will supply to Natural England on request.

☐ I agree to the declaration above.

Signature of ecologist:

For electronic applications, please insert an electronic signature above or tick this box to confirm with the declaration. ☐

Name: *(In BLOCK letters)*

Date:

18. Application Notes

Applicant

The applicant is the person submitting the application (usually the landowner or occupier) who, if the licence was granted, would become the licensee. The applicant may appoint agents to produce the application pack and act on their behalf. A person with specific skills and knowledge of the species concerned, such as a consultant ecologist, must be appointed to assist in the preparation and the delivery of the proposals that ensure the species protection requirements can be met.

Licensee

The "Licensee" named on the licence is responsible for ensuring that all activities carried out on site in relation to the licence comply with the terms and conditions of the licence. However, all persons authorised to act under the licence must comply with the licence and its conditions (see Regulation 60(1) of the 2017 Regulations (as amended)). This means that all authorised persons have a responsibility for ensuring that the licence terms and conditions, including any special conditions, are understood and complied with. Failure to do so could lead to prosecution.

Consultant/Named Ecologist

The "Named Ecologist" is a professional ecological consultant who has satisfied Natural England that they have the relevant skills, knowledge and experience of the species concerned and is responsible for undertaking and/or overseeing the work undertaken in respect of the licensed species. The `Named Ecologist' has a responsibility for ensuring that the licence is complied with. They are responsible for advising the licensee on the suitability and competence of any Accredited Agents or Assistants employed on site to undertake the required duties and may include the direct supervision of Assistants where appropriate. More information about the experience required to become a named ecologist can be found at: http://webarchive.nationalarchives.gov.uk/20140605090108/http:/www.naturalengland.org.uk/Images/bat- mitigation-guidance_tcm6-10534.pdf

Accredited Agent

An "Accredited Agent" is a suitably trained and experienced person who is able to carry out work under a licence without the personal supervision of the Named Ecologist. Any Accredited Agent must be appointed by the Licensee and be in possession of a letter signed by the Licensee confirming their appointment. Agents shall carry a copy of the said letter when acting under the licence and shall produce it to any police or Natural England officer on request.

Assistants

An "Assistant" is a person assisting a Named Ecologist or Accredited Agent. Assistants are only authorised to act under this licence whilst they are under the direct supervision of either the Named Ecologist or an Accredited Agent.

Bat Roost Definitions

Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.

Mating sites: where mating takes place from later summer and can continue through winter.

Maternity roost: where female bats give birth and raise their young to independence.

Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.

Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Other - if applicable this will be specified in special condition 7.

For the purpose of this licence the following licensed methods are defined as:
Destructive search by soft demolition: the taking apart of a bat structure in a controlled and careful manner by hand, or in some instances with the assistance of hand-held tools and machinery, under direct ecological supervision. Only the Named Ecologist, Accredited Agent or a directly supervised Assistant may take any bats found.

Mechanical demolition: destruction of a structure that previously supported a bat roost using mechanical means after the structure has been declared free of bats by the Named Ecologist or Accredited Agent. Mechanical demolition usually is preceded by a soft demolition exercise or completion of an exclusion process.

The Conservation of Habitats and Species Regulations 2017 (as amended)

Wildlife and Countryside Act 1981 (as amended)

European Protected Species Mitigation Licensing - Reasoned Statement for the purpose of Imperative Reasons of Overriding Public Interest (IROPI)

- The information provided in this form will be used by Natural England to determine whether the proposed activity affecting the European Protected Species meets the requirements of Regulation 55(2)(e) and 55(9)(a) within The Conservation of Habitats and Species Regulations 2017 (as amended), and Section 16(3)(j) and 16(3B)(a) in the Wildlife and Countryside Act 1981 (as amended). These are known as the '**purpose**' and '**no satisfactory alternatives**' tests.
- This form should only be used for licence applications for the purpose of Imperative Reasons of Overriding Public Interest.
- In some circumstances you do not need to complete a reasoned statement. Read the guidance on GOV.UK for more detail on when you do or do not need a reasoned statement – Protected species licences: when to include a reasoned statement.
- If your application is for the purpose of preserving public health and safety (PHS), you must use the separate PHS reasoned statement form.

Important Note: Detailed information on the proposal is required to demonstrate that it will meet the tests set out under the legislation. If you encounter difficulty answering the questions or providing the evidence required, it may suggest that your proposal is insufficiently advanced to satisfy the licensing tests. In that case, you should consider delaying your application until this information is available.

Please read the following and complete:

- ***Section A: Purpose test***
  "*Imperative reasons of overriding public interest" (IROPI) including those of a social or economic nature and beneficial consequences of primary importance for the environment"; "overriding public interest"*

- ***Section B: No Satisfactory Alternative test***

The tests are applied proportionately, so the strength of the evidence required to meet each will need to be sufficient to justify the impact upon the protected species. You need to provide clear, concise information for us to be able to meet the licensing tests.

When providing **supporting evidence** please provide clear referencing, such as page numbers and paragraphs of specific documents, so these can easily be cross-referenced. Please only provide the relevant extracts that help to demonstrate your reasoning rather than including lengthy documents in their entirety. Please do not provide website links to separate documentation, unless you identify where exactly in the linked document or web page the evidence referred to is located. Please note that it may take longer to determine your application if the evidence is submitted as individual documents in their entirety or website links.

Section A: Purpose Test

A1 Please select against all of the following below which apply to your proposal. You are asked to indicate against those that apply whether the projected benefits are primary or secondary or not applicable to your proposal.

Please note: A primary benefit is considered to be the key social, economic or environmental benefit brought about from the proposal. A secondary benefit is considered to be an additional benefit, but not the main reason for the proposal. There may be more than one secondary benefit but supporting evidence should be provided in Section A3 where applicable, for each benefit selected.

Does your proposal:	
Provide housing in an area where shortfalls have been clearly identified?	☐ Primary benefit ☐ Secondary benefit ☒ N/A
Create, repair or enhance essential infrastructure at a local, regional or national level?	☒ Primary benefit ☐ Secondary benefit ☐ N/A
Provide care facilities or another essential public service in an area where it is known to be required?	☐ Primary benefit ☐ Secondary benefit ☒ N/A
Address another clearly identified social, religious or cultural need?	☐ Primary benefit ☐ Secondary benefit ☒ N/A
Create long term employment opportunities in an area of high unemployment?	☐ Primary benefit ☐ Secondary benefit ☒ N/A
Deliver other economic benefits or otherwise contribute in some way to the wider economy?	☐ Primary benefit ☒ Secondary benefit ☐ N/A
Contribute to addressing problems associated with climate change or promote sustainable energy use	☒ Primary benefit ☐ Secondary benefit ☐ N/A
Conserve a place of environmental interest?	☐ Primary benefit ☐ Secondary benefit ☒ N/A
Provide alternative sources of energy?	☒ Primary benefit ☐ Secondary benefit ☐ N/A
Deliver other benefits from those specified above?	☐ Primary benefit ☐ Secondary benefit ☒ N/A
If 'Other benefits' is selected, please provide details here:	

A2 In relation to the primary and secondary benefits identified in A1, to help demonstrate the need for the proposal, please provide the evidence and details for all the benefits ticked above.

Important note: Reference the supporting evidence upon which your reasoning is based and include the relevant extracts. This evidence must link back to the tick boxes selected above. Failure to do so will lead to us having to come back to you for further information.

Supporting evidence can usefully include some or more of the following: Local planning polices and plans, planning permission, policy documents, specialist reports, feasibility studies, extracts from relevant legislation, photographs, media articles or related correspondence. **Where applicable, please ensure that planning officer or committee reports, and design and access statements are included as supporting evidence.**

A2 (i) Please provide full details of the proposal in the box below.

National Grid Electricity Transmission plc (here on referred to as National Grid) intends to submit an application for an order granting development consent to reinforce the electricity transmission network between the existing Bramford Substation in Suffolk, and Twinstead Tee in Essex. This would be achieved by the construction and operation of a new electricity transmission line over a distance of approximately 29km.

The reinforcement would comprise approximately 18km of overhead line (consisting of approximately 50 new pylons, and conductors) and 11km of underground cable system (with associated joint bays and above ground link pillars).

Four Cable Sealing End (CSE) Compounds would be required to facilitate the transition between the overhead and underground cable technology. The CSE would be within a fenced compound, and contain electrical equipment, support structures, a small control building and a permanent access track.

It is proposed that approximately 27km of existing overhead line and associated pylons would be removed as part of the proposals (25km of existing 132kV overhead line between Burstall Bridge and Twinstead Tee, and 2km of the existing 400kV overhead line to the south of Twinstead Tee) so that the alignment can be used by the proposed new 400kV overhead line to reduce impacts.

To facilitate the overhead line removal, a new grid supply point (GSP) substation is required at Butler's Wood, east of Wickham St Paul, in Essex. The GSP substation would include associated works, including replacement pylons, a single circuit sealing end compound and underground cables to tie the substation into the existing 400kV and 132kV networks.

Some aspects of the project, such as the underground sections and the GSP substation, constitute 'associated development' under the Planning Act 2008. Other ancillary activities would be required to facilitate construction and operation of the project, including (but not limited to):

- Modifications to, and realignment of sections of the existing overhead lines, including pylons.
- Temporary land to facilitate construction activities including temporary amendments to the public highway, public rights of way, working areas for construction equipment and machinery, site offices, welfare, storage and access.
- Temporary infrastructure to facilitate construction activities such as amendments to the highway, pylons and overhead line diversions, scaffolding to safeguard existing crossings, watercourse crossings.
- Diversion of third-party assets and land drainage from the construction and operational footprint.

- Land required for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process, and National Grid's commitments to Biodiversity Net Gain.

The reinforcement and Order Limits are broken down in seven separate sections and a brief description of each is provided.

- Section AB: Bramford Substation/Hintlesham (overhead line)
- Section C: Brett Valley (overhead line)
- Section D: Polstead (overhead line and underground cables)
- Section E: Dedham Vale Area of Outstanding Natural Beauty (AONB) (underground cable)
- Section F: Leavenheath/Assington (overhead line)
- Section G: Stour Valley (overhead line and underground cables)
- Section H: GSP substation

A2 (ii) (a) Explain why your proposal is considered to be imperative (essential).
For example, if your development proposal is for a housing development reference the local housing need as set out in the area plan and explain how your proposal contributes to meeting this need, or how the requirement for the proposed new public service, care facility or infrastructure project was identified.

The UK has set a world-leading target to tackle climate change, which includes an ambition to deliver 50 gigawatt (GW) of offshore wind farms connected to the electricity transmission network by 2030 and achieve net zero emissions by 2050. This has led to a shift towards offshore renewable generation of power (60% of which is expected to come ashore along the East Coast) away from coal powered generation in the north and the Midlands. The UK is also transporting more power with countries across the North Sea, using interconnectors. These factors have driven a change in the energy landscape across the UK and in particular, East Anglia where reinforcement of the transmission network is required to deliver this change.

The existing electricity transmission network in East Anglia was developed in the 1960s and has historically been able to meet demand. However, due to the changes noted above in terms of delivering net zero emissions, the existing network in East Anglia does not have the capability to reliably and securely transport all the energy that will be connected by 2030, whilst operating to the standards it is required to.

There are a limited number of physical routes for power to flow in and out of the region which limits the amount of additional generation that can currently be accommodated. There are three existing electricity transmission lines feeding into the existing Bramford Substation from the north and east, carrying power from the existing Sizewell B nuclear power station and offshore wind farms, whereas west of Bramford, out to Twinstead Tee, there is currently only one electricity transmission line taking that power out to the wider network. This creates a bottleneck which significantly constrains the amount of power that can currently be carried westward on the network from Bramford.

Reinforcing the network between Bramford and Twinstead would create two independent double circuit transmission routes west of Bramford – one from Bramford to Pelham, and one from Bramford to Braintree to Rayleigh to Tilbury. While additional network reinforcement will be needed elsewhere in East Anglia, it is essential that the network between Bramford and Twinstead Tee is reinforced to provide the vital capacity needed. Other reinforcements will not take away the need to add capacity to this part of the network.

The network is currently capable of transferring 3.5GW of power out of the region. By 2030, around 24.5GW of generation is contracted to connect from offshore wind farms, new nuclear and interconnectors with countries across the North Sea. This means that there needs to be up to 17.9GW of transfer capability out of the region by 2030. Upgrading the existing network by adding power control devices, uprating and rewiring existing lines, only increases the transfer capability of the existing network to around 6GW. Adding to the network is therefore necessary to deliver the capability needed to carry cleaner greener energy on to homes and businesses across the country. The network reinforcement between Bramford and Twinstead Tee is critical in all future energy scenarios and it needs to be in place by 2028.

The network reinforcement would also provide greater security to the network in the region and reduce the risk of outages (a period of interruption to electricity supply) from limited network availability. If the network is not reinforced, outages could result in a greater risk of widespread supply interruptions. The transmission network needs to be able to maintain a minimum level of security of supply, as defined within the National Electricity Transmission System Security and Quality of Supply Standards (NETS SQSS). The principle underlying the NETS SQSS is that the network should have sufficient spare capability or 'redundancy' such that credible planned or unplanned outage conditions do not result in widespread supply interruptions.

There is a clear need for the project, driven by the change in energy generation across the region in order to meet Government net zero targets. In addition, the reinforcement of the network would reduce the risk of outages, which could result in widespread disruptions. This will maintain NETS SQSS compliance and provide a secure supply of energy into the future.

A2 (ii) (b) Please provide details of supporting evidence. See guidance on page 1 and above in A2

Which of the following are you providing to support the statement you have made above?	
☒ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:* Section 1: Preliminary Environmental Information Report
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*
☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

A2 (ii) (c) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application.	Yes ☒ N/A ☐

A3 There must be a <u>Public Interest</u>. You need to demonstrate that your proposal will deliver a public benefit rather than a solely private interest.
Note: Planning consent (or its equivalent) is considered evidence of public interest so please ensure to reference here but only include details in the application form.

A3 (a) Indicate the scale of these benefits:	Local ☐ Regional ☐ National ☒

A3 (b) Where possible, explain the scale of the primary and secondary benefits that will be achieved from your proposal, in quantifiable terms, as indicated above.
For example, this could be the number of new houses provided in proportion to the identified need (including the number of affordable units) at a local and regional scale; the number of long term employment opportunities that will be created at a local level; the level of reduced Co2 emissions at an 'X' level and any other economic benefits for the local area.

The project will provide essential electricity transmission network infrastructure in East Anglia. The network reinforcement would also provide greater security to the network in the region and reduce the risk of outages (a period of interruption to electricity supply) from limited network availability.

Offshore renewable generation is expected to grow in East Anglia and more interconnectors will be commissioned in the south coast and East Anglia. Combined with the increase in renewable generation in other parts of the country, we expect that the main driver of constraints in the long term will be the north-to south flows through the region, as well as the flows through and across the East Anglia area. A new double circuit in East Anglia, supports the export of power out of the area and reinforces the south-east area. The reinforcement continues to be 'critical' in all scenarios due to high exports from East Anglia.

A3 (c) Please provide details of supporting evidence. See guidance on page 1 and above in A2

Which of the following are you providing to support the statement you have made above?	
☒ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:* Section 1: Preliminary Environmental Information Report
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*
☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

A3 (d) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application. Yes ☒ N/A ☐

A4 (a) Explain why the benefits of your proposal (as detailed above in A3) override any harm to the protected species.
The benefit/s arising from the proposal must outweigh the harm (or risk of harm) to the protected species. Generally, this means long-term public benefits rather than short term benefits (i.e. creation of permanent employment opportunities rather than temporary employment or creation of infrastructure that helps to provide long-term solutions to clearly identified national problems associated with energy demands). Please ensure you reference the species concerned i.e. the population size or common/rare species of bat and if the proposed mitigation/compensation will ensure the work is not detrimental to their population and will maintain or increase the favourable conservation status (FCS) of the species impacted by works.

The existing network in East Anglia does not have the capability to reliably and securely transport all the electricity produced by energy generating stations that will be connected to the transmission network by 2030, whilst operating to the standards it is required to. There are therefore long term public benefits in terms of this reinforcement providing a long-term solution to energy demands.

Mitigation and good practice measures undertaken would protect bats from harm and not compromise Favourable Conservation Status of the species. Hedgerow fragmentation would be temporary and dead hedging would be used for the underground cable section (where up to 60m wide lengths of each hedgerow will require full removal) to maintain habitat connectivity while new planting establishes.

Barbastelle bats have been identified in Hintlesham Woods with the likely presence of a maternity roost. The proposals will not impact any known barbastelle roosts or trees with features suitable to support the species. Additionally, no fragmentation or isolation impacts on barbastelle bats are anticipated.

It is therefore considered that the FCS will be maintained and may be increased in those areas where planting for mitigation creates new links between retained areas of woodland and hedgerows.

A4 (b) Please provide details of supporting evidence to verify the above, (this can be documents you are providing in relation to the FCS and Population Status tests). See guidance on page 1 and above in A2

Which of the following are you providing to support the statement you have made above?	
☒ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:* Section 1: Preliminary Environmental Information Report
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*
☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

A4 (c) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application

Yes ☒ N/A ☐

SECTION B: No Satisfactory Alternative Test (NSA)

Please explain why there is no satisfactory alternative to your proposal.

A "satisfactory alternative" is a different way of achieving the objective of the activity (i.e. meeting your need) which has a *less negative impact on the protected species*. If there is a less damaging satisfactory alternative available that is feasible, then legally, a licence cannot be granted.

You are expected to have considered all reasonable alternative solutions when developing your proposal(s) and to have suitable grounds (and evidence) for discounting each against the proposed solution to meet the need. There are technical and non-technical elements to consider for this test and this part of your application will consider the non-technical elements – focussing on delivering the need. Alternatives can include different locations, routes, designs and construction methods. The Method Statement focusses on the technical elements of this test – i.e. reducing the impact on the species (see 'Important Note' below).

Important Note: Alternative mitigation (including timing of licensable works) and compensation solutions are considered as part of the FCS and Population Status tests and should be included in the relevant species Method Statement submitted with your application and not here.

B1 (a) Firstly, please explain why the current situation (i.e. the status quo) isn't acceptable or feasible, e.g. The consequences of doing nothing.

The consequence of doing nothing would be a breach of National Grid's licence obligation to provide electricity connections. The existing network in East Anglia does not have the capability to reliably and securely transport all the energy that will be connected by 2030, whilst operating to the standards it is required to.

B1 (b) Please provide details of supporting evidence. See guidance on page 1 and above in A2.

Which of the following are you providing to support the statement you have made above?	
☒ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:* Bramford to Twinstead Reinforcement: Project Development Options Report
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*
☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

B1 (c) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application	Yes ☒ N/A ☐

Please use the tables below to describe each alternative considered.
Please use a separate line for each and tick the relevant reason(s) why it was dismissed. It is important to explain why each alternative was judged to be unsatisfactory or unfeasible to meet the need for the proposal put forward in your application and to provide concise supporting evidence as appropriate (*Please insert additional rows as required).* All three sections (B2, B3 & B4) need to be completed even if you think that the alternative is not applicable; you must provide an explanation as to why an alternative is not applicable and provide supporting evidence.

B2 (a) Set out <u>what</u> alternative locations and/or routes (for linear schemes) were considered and indicate how and why they were not acceptable.			
☐ **'Not applicable to situation'** **If you have ticked *'Not applicable to situation'*, please explain why here and include supporting evidence in B2 (b):**			
Otherwise please complete this table as appropriate	Won't deliver need	Not feasible	Greater impact on species
Location or route 1: PSO 1 Do nothing	☒	☐	☐
Describe the location or route considered	Doing no physical works and instead making constraints payments to generators to reduce their output, therefore reducing the flows across the region.		
Clearly set out how and why the alternative location/route was discounted.	This would be expensive and would make it difficult to meet the Government's legislated target of net zero carbon emissions by 2050		
Location or route 2: PSO4	☐	☒	☐
Describe the location or route considered	Uprating 275kV lines to operate at 400kV		
Clearly set out how and why the alternative location/route was discounted.	There are no 275kV lines within the region		
Location or route 3: PS05 and PSO6	☐	☒	☐
Describe the location or route considered	Uprating existing 400kV lines to operate at 800kV		
Clearly set out how and why the alternative location/route was discounted.	The UK does not currently have equipment approved for use to operate at this voltage. This would also require new pylons, substations and other equipment designed to operate at the higher voltage		
Location or route 4: PSO7	☐	☒	☐
Describe the location or route considered	Replace the conductors to the highest rated system		
Clearly set out how and why the alternative location/route was discounted.	This is already a commitment in accordance with National Grid's commitment to maximise the capability of existing routes before building new ones and does not alone generate enough capacity		
Location or route 5: PSO8	☐	☒	☐
Describe the location or route considered	Add further circuits to transmission pylons		

Clearly set out how and why the alternative location/route was discounted.	Whilst four circuit pylons have been built elsewhere in the world, no such pylons are approved for use in the UK. This option would also fail to address planning standards, which require that the network is designed to withstand the loss of a transmission route.		
Location or route 6: PS09	☒	☐	☐
Describe the location or route considered	New connection from the Bramford to Norwich Main Overhead Line.		
Clearly set out how and why the alternative location/route was discounted.	This does not provide any additional circuits from Bramford and therefore would not resolve the current technical constraints on the network.		
Location or route 7: PSO10	☐	☒	☐
Describe the location or route considered	New double circuit connection from Bramford to Burwell Main.		
Clearly set out how and why the alternative location/route was discounted.	The new connection would be approximately 60km in length and would require additional work to the network from Burwell Main. This would result in high capital costs and potential high environmental effects		
Location or route 8: PSO11	☐	☒	☐
Describe the location or route considered	Southwards extension of the double circuit connection from Bramford to Rayleigh Main.		
Clearly set out how and why the alternative location/route was discounted.	This new connection would be approximately 80km in length and would require additional work to the network between Rayleigh and Tilbury. This would result in high capital costs and potential high environmental effects		
Location or route 9: PSO12	☒	☐	☐
Describe the location or route considered	Connect to Rayleigh Main via Bradwell.		
Clearly set out how and why the alternative location/route was discounted.	This is associated with a likely requirement for a tunnel under the River Blackwell and would still require work to be completed between Bramford to Twinstead. This would result in high capital costs and potential high environmental effects		
Location or route 10: PSO13 and PSO14	☐	☒	☐
Describe the location or route considered	Connection at Tilbury		
Clearly set out how and why the alternative location/route was discounted.	This new connection would be approximately 90km in length and would require a tunnel beneath the River Blackwater. This would result in high capital costs and potential high environmental effects		

Location or route 11: PSO15 – PSO17	☐	☒	☐
Describe the location or route considered	PSO 15 to PSO 17 all sought to bypass Bramford and connect sources to locations beyond Bramford.		
Clearly set out how and why the alternative location/route was discounted.	These new connections would range between 45-70km in length and would require additional reinforcement works to maintain the network. This would result in high capital costs and potential high environmental effects		
Location or route 12: PSO18	☒	☐	☐
Describe the location or route considered	Providing an additional single circuit from Bramford to Twinstead Tee.		
Clearly set out how and why the alternative location/route was discounted.	A single circuit does not increase boundary capability sufficiently enough to avoid overloads from Bramford under fault conditions.		
Location or route 14: PSO20 and PSO21	☐	☒	☐
Describe the location or route considered	Providing an additional double circuit between Bramford and Pelham (PSO 20) and Braintree (PSO 21) substations.		
Clearly set out how and why the alternative location/route was discounted.	Both would require the same infrastructure as PSO 19 but require additional infrastructure at a higher cost and with additional environmental effects		
Location or route 15: PSO22	☐	☒	☐
Describe the location or route considered	Providing an additional connection between Bramford and Twinstead Tee that is fully undergrounded.		
Clearly set out how and why the alternative location/route was discounted.	Although an underground option is more expensive, this could have lower visual effects that an overhead line. This was discounted due to cost and technical grounds as well as greater ecological and archaeological impacts		
Location or route 16: PSO22	☐	☒	☒
Describe the location or route considered	Providing a new connection between Bramford and Waltham Cross.		
Clearly set out how and why the alternative location/route was discounted.	This new connection would be approximately 85km in length and work to substations in urban areas. This would result in high capital costs and potential high environmental effects.		
Location or route 17: Route Corridor 1	☐	☒	☐

Describe the location or route considered	A new line parallel to the existing 400kV overhead line between Bramford and Twinstead approximately 26km in length		
Clearly set out how and why the alternative location/route was discounted.	Identified as the lowest cost option but the introduction of a third overhead line through Dedham Vale AONB was considered to weigh significantly against the option.		
Location or route 18: Route Corridor 3	☐	☒	☐
Describe the location or route considered	New Route Corridor (direct option to the north of Hadleigh) approximately 26.5km in length		
Clearly set out how and why the alternative location/route was discounted.	This corridor was considered in response to seeking to avoid impacts on Dedham Vale AONB. However, it would introduce a new overhead line into an area regarded locally as high quality landscape, where there is presently no existing electricity infrastructure, and would involve a longer overhead line than the chosen route. The review concluded that although the route corridor avoid the AONB, it was not unconstrained in terms of planning policy and environmental sensitivities and this resulted in several of the statutory consultees and members of the public raising clear objections to this route corridor.		
Location or route 19: Route Corridor 4	☐	☒	☐
Describe the location or route considered	New Route Corridor (northerly option) approximately 30km in length		
Clearly set out how and why the alternative location/route was discounted.	This corridor was considered in response to seeking to avoid impacts on Dedham Vale AONB. However, it would introduce a new overhead line into an area regarded locally as high quality landscape, where there is presently no existing electricity infrastructure, and would involve a longer overhead line than the chosen route. The review concluded that although the route corridor avoid the AONB, it was not unconstrained in terms of planning policy and environmental sensitivities and this resulted in several of the statutory consultees and members of the public raising clear objections to this route corridor.		

**Please note: you can add more rows to the table: Right click in the bottom row > Choose Insert > Insert rows below.*

B2 (b) Please provide details of supporting evidence. See guidance on page 1 and above in A2.

Which of the following are you providing to support the statement you have made above?	
☒ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:* Bramford to Twinstead Reinforcement: Project Development Options Report (Sections 4.1 – 4.2)
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*

☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

B2 (c) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application	Yes ☒ N/A ☐

B3 (a) Set out <u>which</u> alternative development scales or designs were considered for the chosen plot or route.			
Important note: If new infrastructure is to be created explain why the need cannot be met by expanding existing infrastructure.			
☐ **'Not applicable to situation'** **If you have ticked *'Not applicable to situation'*, please explain why here and include supporting evidence in B3 (b):**			
Otherwise please complete this table as appropriate	Won't deliver need	Not feasible	Greater impact on species
Development scale or Design 1:	☐	☐	☒
Describe the development scale or design considered.	Project entirely underground		
Clearly explain how and why the different development scale or design considered was discounted.	Although this option would avoid the landscape and visual effects of an overhead line it was discounted in terms of National Policy and duties placed upon National Grid to be economic and efficient, it would also have further/ different environmental effects including that on ecology and archaeology.		
Development scale or Design 2:	☐	☒	☒
Describe the development scale or design considered.	All underground sections open cut (without the use of trenchless construction methods)		
Clearly explain how and why the different development scale or design considered was discounted.	This was dismissed because of impacts to sensitive features such as woodland to the south of Ansell's Grove, River Stour and River Box.		
Development scale or Design 3:	☐	☒	☒
Describe the development scale or design considered.	Standard open cut techniques (non-ducted) for underground cable sections.		
Clearly explain how and why the different development scale or design considered was discounted.	This was dismissed as the cable trenches would be open for a longer duration during construction than a ducted solution, with longer duration of effects on habitats and species.		
Development scale or Design 4:	☐	☐	☒
Describe the development scale or design considered.	An alternative has been considered at Hintlesham Woods SSSI (Option 2). The proposed 400kV line would parallel the existing 400kV overhead line to the south, with pylons located outside of the woodland.		

Clearly explain how and why the different development scale or design considered was discounted.	This was dismissed due to the impact on a SSSI, its interest features and a barbastelle maternity roost.

*****Please note: you can add more rows to the table: Right click in the bottom row > Choose Insert > Insert rows below*

B3 (b) Please provide details of supporting evidence. See guidance on page 1 and above in A2.

Which of the following are you providing to support the statement you have made above?	
☒ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:* Bramford to Twinstead Reinforcement: Project Development Options Report (Section 5)
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*
☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

B3 (c) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application.	Yes ☒ N/A ☐

B4 (a) Other alternative activities, processes or construction methods considered which would achieve the design but reduce the impact upon the species
Important note – detailed timings of licensable works, alternative mitigation and compensation which will reduce the degree of harm are to be considered within the Method Statement and not here.
☐ **'Not applicable to situation'** **If you have ticked 'Not applicable to situation', please explain why here and include supporting evidence in B4 (b):**

Otherwise please complete this table as appropriate	Won't deliver need	Not feasible	Greater impact on species
Alternative activity, process or method 1:	☐	☒	☐
Describe the alternative activity, process or method considered.	Avoiding the clearance of hedgerow, scrub and woodland in areas proposed to avoid impact of loss of habitat.		
Clearly explain why this alternative was discounted.	Discounted as vegetation clearance is essential to create easement to facilitate the construction works.		
Alternative activity, process or method 2:	☐	☒	☐
Describe the alternative activity, process or method considered.	Undertaking some construction works by hand as opposed to by heavy plant to limit disturbance of bat roosts		

Clearly explain why this alternative was discounted.	Due to the large scale of construction works required on this project this method using hand-held machinery would not be feasible and this alternative method was discounted.		
Alternative activity, process or method 3:	☐	☒	☐
Describe the alternative activity, process or method considered.	Translocation of vegetation proposed to be removed to reduce impact of loss of habitat.		
Clearly explain why this alternative discounted.	Vegetation clearance would be coppicing where possible, giving the opportunity for reestablishment. Roosting features would be saved and relocated on retained trees where practicable.		
Alternative activity, process or methods 4:	☐	☐	☐
Describe the alternative activity, process or method considered.			
Clearly explain why this alternative was discounted			

**Please note: you can add more rows to the table: Right click in the bottom row > Choose Insert > Insert rows below*

B4 (b) Please provide details of supporting evidence. See guidance on page 1 and above in A2

Which of the following are you providing to support the statement you have made above?	
☐ Relevant extracts from specific documents	*Reference the document name/s, relevant page/paragraph number/s and insert extracts here:*
☐ Individual documents in their entirety	*List the document name/s attached to your application and provide the relevant page/paragraph number/s here:*
☐ Website links	*Insert website links here and specify where exactly in the linked document or web page the evidence referred to is located:*

B4 (c) If you have not inserted the relevant extracts in the table above, please confirm the above cited supporting evidence is attached to your application.	Yes ☐ N/A ☐

WML-A13a-E5a&b – WORK SCHEDULE FOR BAT LICENCE

Site name and address (as stated on the application form or licence granted): Bramford to Twinstead Reinforcement

Please ensure that the work schedules are S.M.A.R.T and appropriate timescales are provided for each activity, to fit with order of events. Complete these schedules to show timings for all categories of work (mitigation and compensation measures), and to show the main construction period. The most common activities are listed here, and you can add up to 6 more if needed. Leave blank if not applicable. Enter timing by stating **start and end dates, to nearest month and year** (see first lines for examples). Enter comments if you need to clarify timings. For very complex schemes (e.g. high impact or phased development schemes) if additional lines are needed please do add in. This work schedule will form part of any bat licence.

E5a

PLEASE INCLUDE DATE OF SUBMISSION (e.g. 01 July 2016). This will be referenced in the annex →		**April 2023**
Activity	**Timing**	**Comments**
Pre- development activity		
Example: Bat house creation (in advance of licence)	***Sept-14 to Nov-14***	***Also put up 3 bat boxes before end of December 2015, in advance of works commencing***
Creation of standalone bat feature/s (state completed and fit for purpose if created before licensable works due to commence)		
Installation of bat boxes pre-development works (state completed and fit for purpose if created before licensable works due to commence)	Autumn 2024	Bat boxes to be installed on retained trees prior to felling of specified trees
Permanent exclusion measures (e.g. use of one-way excluders prior to permanent blocking of access points or destruction of roost)		
Mid-development activity		

Example: Capture exercise (e.g. by hand /hand-held nets, etc)	***Sept-2016***	***By hand***
Pre-works inspection by Named Ecologist or Accredited Agent	September and October 2024	Pre-construction survey in the preceding season (2023/4). Additional pre-works inspection immediately prior to tree felling - Sept and Oct 2024
Installation of protective measures (e.g. separation membranes whilst working in lofts)		
Disturbance by noise, illumination or vibration (please specify)		
Temporary exclusion measures (e.g. use of one-way excluders with access re-instated following works)		
Permanent exclusion measures (e.g. use of one-way excluders prior to permanent blocking of access points or destruction of roost)	Late Aug-Oct 2024	Avoiding mid-May to mid-Aug when pregnant females or non-flying young may be present
Capture exercise (e.g. by hand / hand-held nets, etc – please state)		
Destructive search by soft demolition	September - October 2024	Soft and sectional felling of trees with bat roosts
During development		
Example: Mechanical demolition	***Oct-2016***	***Buildings X and Y will be knocked down after sign off from Named Ecologist***
Mechanical demolition of all or part of structures (once declared free of bats by Named Ecologist or Accredited Agent) – please state		
Construction period start and end dates	2024 to 2028	
Site checks and maintenance during construction	2024 to 2028	Site checks made during construction - by an ecologist
Post construction mitigation/compensation on 'development' site or other (provide details below)		
Example: Installation of access points and bat boxes	***Feb-2017***	***Access points will be installed after completion of new roof structure; remaining 3 x bat boxes installed by end of this month.***
Creation of mitigation/compensation post development (e.g. installation of bat tubes, bricks, boxes, access points, etc – specify in comments section)		

Habitat reinstatement or restoration (following temporary impacts)	Autumn 2027 to Spring 2029	Dependent on on construction phasing
Hedgerow or woodland planting (please specify)	November 2027 to March 2029	Dependent on on construction phasing

E5b) Post-development works - type a "Y" where each activity will occur for a given year and leave blank for no activity.

Year:	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Monitoring									Y	Y	Y	Y
Habitat management												
Site maintenance									Y	Y	Y	Y

Year:	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Monitoring	Y	Y	Y	Y	Y	Y						
Habitat management		Y	Y	Y	Y	Y						
Site maintenance	Y	Y	Y	Y	Y	Y						

The Conservation of Habitats and Species Regulations 2017

Wildlife and Countryside Act 1981 (as amended)

Bats – Method Statement template to support a licence application

The Method Statement will be used to determine the impact of the proposal on the favourable conservation status (FCS) and population survival of the species concerned (Regulation 55(9)(b) and Section 16(3B)(b))
You are strongly advised to refer to the Bat Mitigation Guidelines.
Please use recent photographs to support your application.

Wildlife Licensing
Natural England
Horizon House
Deanery Road
Bristol
BS1 5AH.
T. 020802 61089
EPS.Mitigation@naturalengland.org.uk

Important advice:

The format below must be used. Please enter text below each heading keeping information as concise as possible.

All maps/figures that will become part of any annexed licence granted must be submitted as separate documents (with the site name and date included on the map/figure. See section I for list – all others may be included within the Method Statement document (e.g. survey maps/figures) if preferred).

A separate work schedule must also be submitted on form WML-A13a-E5a&b to accompany the Method Statement.

A Executive summary

Provide an overview (no more than 1 side of A4) of what works are proposed and how the impacts identified will be addressed in order to ensure no detriment to the maintenance of the population at a favourable conservation status.

This is a draft bat licence application to be submitted in support of the Bramford to Twinstead Reinforcement. This document is provided to Natural England to agree the approach to bat licence mitigation and support the issue of a Letter of No Impediment (LONI).

National Grid Electricity Transmission plc (here on referred to as National Grid) is proposing to reinforce the transmission network between the existing Bramford Substation in Suffolk, and Twinstead Tee in Essex. This would be achieved by the construction and operation of a new electricity transmission line over a distance of approximately 29km comprising of overhead lines, underground cables and grid supply point (GSP) substation. It also includes the removal of 25km of the existing distribution network and various ancillary works

The project is located within a largely rural landscape passing through farmland, with hedgerows and belts of trees bordering the fields. Scattered areas of woodland and scrub are present in adjacent habitats along the length of the project. All combine to provide suitable habitats for foraging, commuting and roosting bat species.

The desk study identified 170 records of bats within 2km of the project, comprising nine different species of which confirmed roosts were identified for brown long-eared bat, common pipistrelle, soprano pipistrelle and Natterer's bat. Ground based bat roost assessment identified 139 trees that met the criteria for further bat survey across the Order Limits plus a 50m survey area. Where these tree roosting features could be safely inspected from the ground or aerially, they were surveyed with reference to Bat Conservation Trust (BCT) survey guidelines. Seven trees with moderate or high roosting potential could not be safely surveyed via direct inspection. An alternative approach to establishing any likely bat roost in these trees is presented in Appendix 7.7 Bat Survey Report. Licensing Policy 4 is applied here in respect to these trees.

No confirmed bat roosts will be lost. Seven trees with high or moderate bat roosting potential were unable to be safely surveyed (170_T003, 122_T002, 132_T008, 140_T001, 140_T002, 109_T029 and 3_T001) and have the potential to support a range of bat species and roost types and could be lost. No bat roosts in buildings would be affected.

In the absence of mitigation, the potential impacts on bats from construction of the project are roost loss and temporary fragmentation of foraging and commuting routes. No operational impacts are anticipated.

Trees with bat roosts would be appropriately excluded and felled within specified seasonal timeframes. Mitigation for the loss of bat roosts comprise installation of bat boxes. In addition, further bat boxes would be installed for the loss of high and moderate suitability bat roosting features, with two artificial bat boxes deployed on retained trees to every one tree with high or moderate bat roosting potential lost. All hedgerows would be reinstated post construction but to mitigate temporary fragmentation during construction, dead hedges would be installed to reconnect habitats which would be left in situ until the reinstatement had established.

Good practice measures will be employed during construction to avoid disturbance (lighting, noise and visual) to retained roosts.

Overall, with the implementation of these measures, the project would result in no detriment to the maintenance of favourable conservation status for bats.

B Introduction

B1 Background to activity/development:

Include a brief summary of:

- Why the activity and a licence are necessary (*e.g. bridge structure repairs are required and will affect a known maternity roost of Daubenton's bats, which will be temporarily lost whilst works are being undertaken; renovation works to an office building will result in the permanent loss of three day roosts of common pipistrelle bats; demolition of an existing hospital to be replaced with flats will result in the loss of a brown-long eared bat maternity roost*).

The works described in this method statement are based on the Proposed Alignment that would be submitted as part of the application for development consent. As the project is a Nationally Significant Infrastructure Project (NSIP), National Grid is applying for Order Limits and Limits of Deviation within which the final alignment would lie. For the purposes of this draft licence, the Proposed Alignment has been assumed. If consent was granted, the final licence would reflect the final alignment that would be built.

The Project

The project is located in the east of England. The project involves the reinforcement of the electricity transmission network between Bramford Substation in Suffolk and Twinstead Tee in Essex. This would be achieved by the construction and operation of a new electricity transmission line over a distance of approximately 29km.

The reinforcement would comprise approximately 18km of overhead line (consisting of approximately 50 new pylons, and conductors) and 11km of underground cable system (with associated joint bays and above ground link pillars).

The project crosses a county administrative boundary defined by the River Stour, with Suffolk County to the east of the river and Essex County to the west. The project lies within three local planning authority areas: the eastern part of the project lies in Mid Suffolk District (Suffolk); the central parts of the project lie in Babergh District (Suffolk); and the western part of the project lies in Braintree District (Essex).
Please see Figure C5a.

Four cable sealing end (CSE) compounds would be required to facilitate the transition between the overhead and underground cable technology, one at the end of each underground cable section, i.e. Dedham Vale East, Dedham Vale West, Stour Valley East and Stour Valley West. The CSE would be within a fenced compound, and contain electrical equipment, support structures, control building and a permanent access track.

There is an existing 400kV overhead line operated by National Grid between Bramford and Twinstead Tee, where the circuits split and one continues to Pelham and the other continues to Braintree and Rayleigh. There is also an existing 132kV overhead line that is operated by the Distribution Network Operator, which is UK Power Networks (UKPN) in the east of England. UKPN distributes electricity at lower voltages to industrial, commercial and domestic users.

Approximately 27km of existing overhead line and associated pylons would be removed as part of the proposals (25km of existing 132kV overhead line between Burstall Bridge and Twinstead Tee, and 2km of the existing 400kV overhead line to the south of Twinstead Tee). To facilitate the overhead line removal, a new GSP substation is required at Butler's Wood, east of Wickham St Paul, in Essex. The GSP substation would include associated works, including replacement pylons, a single circuit sealing end compound and underground cables to tie the substation into the existing 400kV and 132kV networks.

Other ancillary activities would be required to facilitate construction and operation of the project, including (but not limited to):

- Modifications to, and realignment of sections of existing overhead lines, including pylons;
- Temporary land to facilitate construction activities including temporary amendments to the public highway, public rights of way, working areas for construction equipment and machinery, site offices, welfare, storage and access;
- Temporary infrastructure to facilitate construction activities such as amendments to the highway, pylons and overhead line diversions, scaffolding to safeguard existing crossings and watercourse crossings;
- Diversion of third-party assets and land drainage from the construction and operational footprint; and
- Land required for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process, and National Grid's commitments to Biodiversity Net Gain.

Testing would occur once the project was constructed and prior to operation. Land would be reinstated as soon as reasonably practicable and mitigation planting may continue beyond the construction phase, based on seasonal constraints.

GSP substation

National Grid is proposing to remove the existing 132kV overhead line between Burstall Bridge and Twinstead Tee, a distance of approximately 25km. This requires alternative arrangements to be put in place to secure the supply of the local electricity distribution network. This would be achieved by establishing a new GSP substation, between Butler's Wood and Waldegrave Wood, to the east of Wickham St Paul.

No tree clearance is required but gaps in hedgerows would be required for permanent access off the A131 and Old Road to provide access for the bellmouths and temporary gaps for underground cable installation to the south of the GSP substation. No trees with bat roosting potential are located within these hedgerows. Piling works would be required at the GSP substation which could cause disturbance to bats roosting in trees. No tree removal is proposed in either Butler's or Waldegrave Woods and a ditch around each woodland effectively restricts the roots extending into the Order Limits. There may be some trimming of the upper branches to maintain safety clearances and allow for operational conductor swing.

Summary

The works associated with the project may result in the permanent loss of trees and therefore also any bat roosts in those trees.

Disturbance to bat roosts may also occur where located in retained trees or buildings within 50m of underground cabling and pylon base pile driving works during the construction phase of the project (the requirement for piling will be determined as part of the detailed design once ground investigations have been undertaken).

Roosts within or close to the Order Limits are unlikely to be impacted by fragmentation.

It is anticipated that most vegetation clearance associated with construction activities would take place between autumn 2024 and May 2025.

- Include current status of planning permission (if applicable) *e.g. full planning permission with all relevant wildlife conditions discharged; permitted development; demolition with prior notification of demolition issues resolved*. If the proposal is for demolition only of a structure supporting a bat roost/s, please confirm whether there are plans to develop the site in the future and if so when.

N/A – Nationally Significant Infrastructure Project.

B2 Relationship with other nearby development and cumulative impacts

B2.1 Is the current application part of a larger development project? For example, is it part of a phased or multi-plot housing development that will require more than one bat licence? Enter Yes, No or N/A in the text box below. If yes, note a separate ***master plan*** document will be required.

No

Important Advice: If yes to the above, please note that sections in this Method Statement on impact assessment and mitigation measures must explicitly relate *only* to impacts from the works currently proposed.

A project-wide master plan must detail the overall impact assessment and mitigation and explain where, and why, each of the bat licences will be required. The master plan must be included as a separate document to this application: see https://webarchive.nationalarchives.gov.uk/ukgwa/20140605090108/http:/www.naturalengland.org.uk/Images/WML-G11_tcm6-9930.pdf for details that are to be included in this separate document. The separate master plan is expected to take due regard of the overall project to ensure that in-combination effects are considered, and mitigation and compensation measures are both sufficient and coherent.

If the current development is part of a larger development project, summarise very briefly here how the current application relates to the larger project and how the in-combination effects are considered and mitigation/compensation is sufficient.

N/A

Important Advice: to accompany this Method Statement also include Figure. B2.1 for a Master plan overview - and see section I "Map checklist" at the end of this document.

B2.2 Apart from any mention in B2.1, please inform us of any past or future development or other projects (in the last 5 years or next 5 years) in the vicinity which may have significantly impacted or are likely to significantly impact on the same population/s of bats as this application (e.g. loss of maternity or hibernation roosts). You must make reasonable efforts to establish this, including discussions with your client and the Local Planning Authority – stating below what you undertook. A brief summary of the project/s should be provided including the site name and location, dates and if known the licence reference number(s).

Please note we are not expecting details of every licence/planning permission issued within the vicinity of the site – we are only concerned with projects that have the potential to significantly impact or have impacted on same population of bats (maternity and hibernation roosts). Note: Natural England is aiming to make available licensing records from the last 5 years publically available.

A search of the Multi Agency Geographic Information for the Countryside (MAGIC) (magic.defra.gov.uk) website for granted bat European protected species (EPS) licences within 2km of the project was undertaken in August 2022. The following licences were identified and are shown in Figure B2.2:

- **2014-4374-EPS-MIT**– Destruction of a resting place for brown long-eared bat (*Plecotus auritus*) c. 600m south of the project west of Chattisham (TM08594190). Licence valid 21/01/2015-01/01/2020.
- **2016-19650-EPS-MIT**– Destruction of, or damage to, a resting place for brown long-eared bat and common pipistrelle (*Pipistrellus pipistrellus*) c. 500m south of the project at Lower Goulds Farm (TL87273419). Licence valid 05/02/2016 - 31/01/2021.
- **2017-31391-EPS-MIT**– Damage of a breeding site and destruction of a resting place for brown long-eared bat and common pipistrelles c. 200m south of the project at Twinstead (TL86203650). Licence valid 27/10/2017- 31/10/2027.
- **2018-37898-EPS-MIT**– Destruction of a resting place for brown long-eared bat, common pipistrelle, and soprano pipistrelle c. 800m north of the project at Little Henny (TL85963850). Licence valid 28/11/2018 - 31/03/2024.
- **2020-49650-EPS-MIT**– Destruction of a resting place for common pipistrelle and soprano pipistrelle c. 1km south of the project at Raydon Great Wood just north of Wenham Grove (TM05994040). Licence valid 11/11/2020-30/11/2025.
- **2020-44900-EPS-MIT**– Destruction of a resting place for brown long-eared bat c. 1.9km north of the project at Hadleigh (TM02594271). Licence valid 16/03/2020 – 30/06/2025.

It is possible that the destruction and damage to breeding sites and resting places in the licences listed above may have impacted on the same population of bats as this application. However, as the field surveys undertaken in 2021 and 2022 for the project have resulted in single occurrences of individual or low numbers of bats of these species, it is unlikely that there has been, or will be, an impact on a population level.

Important Advice: locations of other bat mitigation sites that may have significantly impacted or are likely to significantly impact on the same population/s of bats as this application must be shown on Figure B2.2.

C Survey and site assessment (also see section 5 of the Bat Mitigation Guidelines)

C1 Pre-existing information on the bat species at the survey site:
Please undertake a historical data search within a 2km search radius and provide a summary of the results of this search. For example, records from local environmental records centres, local bat groups and previous survey work undertaken at the site is all relevant. Please briefly comment on the results in relation to your project/site

- Should no historical records be found from your search please state this – and specify what searches you undertook.
- Note that you must not include records from National Biodiversity Network (NBN) without first obtaining written permission from the relevant Data Provider.

Data requests for records of bats within 1km of the Order Limits were made to the following record centres in February 2021 and updated in June 2022:

- Suffolk Biodiversity Information Service
- Essex Wildlife Trust Biological Records Centre
- Essex Field Club (including Essex Bat Group data)

Records were updated in June 2022 which included an expansion of the study area to 7km to inform a programme of Habitat Suitability Modelling (HSM). The results to 2km are presented as follows:

Thirty-two bat roost records and 170 general bat records within 2km of the Order Limits have been collated within the last 10 years. The records comprised nine defined species:

- Barbastelle (*Barbastella barbastellus*) - six non-roost records;
- Brown long-eared bat (*Plecotus auritus*) - four unclassified roosts (closest roost record approximately 32m from project);
- Common pipistrelle (*Pipistrellus pipistrellus*) - two maternity roosts, nine unclassified roosts (closest record approximately 10m from the project);
- Daubenton's bat (*Myotis daubentonii*) - non-roost records;
- Leisler's bat (*Nyctalus leisleri*) - non-roost records;
- Natterer's bat (*Myotis nattereri*) - five hibernation roosts, closest roost record approximately 1500m from the project;
- Noctule (*Nyctalus noctule*) - non-roost records;
- Serotine (*Eptesicus serotinus*) - non-roost records; and
- Soprano pipistrelle (*Pipistrellus pygmaeus*) - one unclassified roost approximately 860m from project and non-roost records.

Additional non-defined bat records were listed:

- *Myotis* species (non-roost record); and
- Long-eared species (non-roost records).

The data requests also returned 36 records of barbastelle bats outside of the 2km buffer but within 7km of the project (three unclassified roosts, two possible roosts and 31 non-roost records - closest roost record 4km from the project).

Bat roost and activity surveys undertaken in 2012/13 prior to the project pause identified the following:

- Twenty-one pipistrelle species and unknown bat species tree roosts across the project, including one potential maternity roost; and
- Bat activity from the following species: common pipistrelle, soprano pipistrelle, Leisler's bat, barbastelle bat, long-eared bat species and *Myotis* species.

A survey undertaken by Suffolk bat Group and Suffolk Wildlife Trust was undertaken at Hintlesham Woods (Ramsey Wood, Hintlesham Little Wood, and Hintlesham Great Wood) which focussed on identifying presence of barbastelle bats. In a single night in August results indicated the presence of good foraging, commuting and roosting habitat for bats. Five bat species were recorded including barbastelle, common and soprano pipistrelle, *Myotis* sp., and *Nyctalus* sp. These surveys also identified several trees suitable for roosting bats, although no roosts were explicitly stated in the results.

A desk study for the full 7km study area is provided in the Bat Survey Report (Appendix 7.7 of the Environmental

Statement).

C2 Status of the bat species: Detail conservation status at the local, county and regional levels. Please complete the following table, justifying your assessment, and add additional lines where necessary. If the status is unknown then please enter 'unknown'.

Species	Conservation status assessment		
	Local	**County**	**Regional**
Common pipistrelle	Common - Data search returned 46 records from within 2km of the project	Essex Widespread, occasionally common (Essex bat group, 2022. http://essexbatgroup.org/about/bats-of-essex/)). Suffolk Distribution map for the county suggests this species is widespread and common with over 350 roosts known within the county of Suffolk (Bats in Suffolk 1983-2016).	Abundant and widespread (Bat Mitigation Guidelines Beta version, 2021) Population considered to have increased since 1999 (National Bat Monitoring Programme (NBMP), BCT annual report, 2021)
Soprano pipistrelle	Common - Data search returned 23 records from within 2km of the project	Essex Widespread, occasionally common (Essex bat group, 2022). Suffolk Distribution map for the county suggests this species is widespread and likely common (Bats in Suffolk 1983-2016). Listed as a priority species in the Suffolk biodiversity action plan.	Abundant and widespread (Bat Mitigation Guidelines Beta version 2021) Stable population in England Since 1999 (NBMP, BCT annual report, 2021)
Daubenton's bat	Unknown – Data search returned 3 records from within 2km of the project	Essex Widespread, relatively frequent (Essex bat group, 2022). Suffolk Wide distribution but is not common in the county (Bats in Suffolk 1983-2016).	Less Abundant (Bat Mitigation Guidelines Beta version 2021) Stable population in England Since 1999 (NBMP, BCT annual report, 2021)
Natterer's bat	Unknown – Data search returned 5 records from within 2km of the project	Essex Widespread, relatively scarce (Essex bat group, 2022). Suffolk Widespread across the county (Bats in Suffolk 1983-2016).	Less Abundant (Bat Mitigation Guidelines Beta version 2021) Increased population in England Since 1999 (NBMP, BCT annual report, 2021)
Brown long-eared bat	Likely common, but under recorded - Data search returned 30 records from within 2km of the project	Essex Widespread, relatively frequent (Essex bat group, 2022). Suffolk Widespread across the	Less Abundant (Bat Mitigation Guidelines Beta version 2021) Stable population in England Since 2001 (NBMP, BCT annual

		county (Bats in Suffolk 1983-2016). Listed as a priority species in the Suffolk biodiversity action plan.	report, 2021)
Noctule	Unknown – Data search returned 10 records from within 2km of the project	Essex Widespread, relatively scarce (Essex bat group, 2022). Suffolk Records suggest that the Noctule is widespread throughout the county. (Bats in Suffolk 1983-2016). Listed as a priority species in the Suffolk biodiversity action plan.	Less abundant (Bat Mitigation Guidelines Beta version 2021) Stable population in England Since 1999 (NBMP, BCT annual report, 2021)
Leisler's bat	Unknown – Data search returned 3 records from within 2km of the project	Essex Widespread, but scarce and possibly declining. (Essex bat group, 2022). Suffolk Geographical bias towards West Suffolk, but it is regarded as rare. (Bats in Suffolk 1983-2016). Listed as a priority species in the Suffolk biodiversity action plan.	Rare (Bat Mitigation Guidelines Beta version 2021) Insufficient data to produce robust population trend (NBMP, BCT annual report, 2021)
Nathusius' pipistrelle (*Pipistrellus nathusii*)	Unknown – Data search returned 5 records from within 2km of the project	Essex Considered to be rare but possibly over-looked (Essex bat group, 2022). Suffolk May be more widespread than records suggest, distributed only around county borders. (Bats in Suffolk 1983-2016). Listed as a priority species in the Suffolk biodiversity action plan	Rare (Bat Mitigation Guidelines Beta version 2021) Insufficient data to produce robust population trend (NBMP, BCT annual report, 2021)
Serotine	Unknown – Data search returned 11 records from within 2km of the project	Essex Widespread, relatively scarce (Essex bat group, 2022). Suffolk Widespread but numbers unknown. Known in 23 locations across the county (Bats in Suffolk 1983-2016).	Rare (Bat Mitigation Guidelines Beta version 2021) Stable population in England Since 1999 (NBMP, BCT annual report, 2021)
Barbastelle	Unknown - Data search returned 6 records within 2km of the project and 42	Essex Possibly more widespread than appreciated but	Rare (Bat Mitigation Guidelines Beta version 2021)

	records from within 7km of the project	scarce (Essex bat group, 2022). <u>Suffolk</u> Widespread but small numbers (Bats in Suffolk 1983-2016) Listed as a priority species in the Suffolk biodiversity action plan.	Insufficient data to produce robust population trend (NBMP, BCT annual report, 2021).

* ***Please note** that you can add more rows to the table: right click in any cell choose Insert > Insert rows below.*

C3 Objectives of the survey to inform this proposal: Please complete the following table, entering 'Yes', 'No' or N/A' to indicate the objective of your survey and provide comments/explanation where necessary:

Survey objective	Yes / No / N-A	Comments
Determine presence / absence of bats	Yes	Building inspections (internal and external where possible), ground level assessment of trees, ground based and aerial tree inspections / endoscope surveys, and dusk emergence and dawn re-entry surveys of buildings carried out to determine the presence or likely absence of roosting bats.
Determine bat usage of site (e.g. maternity, hibernation, night roosts in various structures (specify)).	Yes	Close inspection surveys (where possible) on trees potentially impacted by the project have been undertaken in the appropriate seasons to determine the presence of hibernation, transitionary, maternity and mating roosts. Dusk emergence/ dawn re-entry surveys have been undertaken on buildings that will be impacted by the project to establish the presence and status of bat roosts present. A session of bat trapping was undertaken in Hintlesham Woods to identify the presence of post-lactating adult females or juveniles that would suggest the presence of a maternity roost.
Identify foraging, commuting or swarming sites (explain)	Yes	Hintlesham Woods only - crossing point and static monitoring surveys undertaken to gain an understanding of bat activity with particular focus on barbastelle bats.
Other (explain)	Yes	Habitat suitability modelling to establish likely suitable habitats that may be impacted for bat species across the project. When used in conjunction with roost records, important commuting routes can be identified without the need for transect surveys.

C4 Site/habitat description: Please provide:

- Brief descriptions of the site, including total size of the development site (ha) (most often within the red line planning boundary) and areas of the site with potential value to bats (ha).

The project runs through a predominately agricultural landscape that is mainly arable land with a mosaic of smaller blocks of woodland, hedgerows, and waterways. The woodlands, hedgerows, waterways, scrub, and scattered trees that occur within and adjacent to the project Order Limits are all considered to be of moderate or high suitability for bats (Collins, 2016). The location of the site and the habitats identified within the Order Limits are shown on Figure C5a and Figure C5bi respectively.

The area within the Order Limits is approximately 644ha. This is comprised of the habitats listed in Table C1.

Table C1. Habitats present within the Order Limits

Habitat	Approx. area (ha) / length (m)
Arable	412.1
Wetland	1.4
Grassland	142
Scrub	10.1
Rivers and standing water	2.1
Urban	40.2
Woodland	32.2
Hedgerow	35.4
Line of trees	5.1

- Brief descriptions of the structures on site indicating their roosting suitability (low, moderate or high), differentiating between **those surveyed** and **not surveyed**, with an explanation why. Ensure structures are referenced and consistently indicated on relevant figures and tables.

Buildings (BB)

Seventeen structures were identified within 50m of the initial project Scoping Boundary, two of which are within the final Order Limits (see Figure C5bii), and were assessed for bat roosting suitability. These buildings comprised residential houses, agricultural units, and an old storage container. The results are presented in the Bat Survey Report, which describes three buildings with high roosting potential, two with moderate roosting potential, five with low roosting potential and the remaining with negligible potential.

Subsequent emergence / re-entry surveys with reference to standard guidance (Collins, 2016) were carried out on those buildings with moderate or high roosting potential. As no buildings are due to be lost, low potential buildings were not surveyed as there would be no predicted impacts to low suitability building roosts through potential disturbance (i.e. only used opportunistically).

Trees (T)

Preliminary ground-level assessments of trees for bat roosting potential were undertaken on approximately 800 trees within 50m of the initial project Scoping Boundary. As the design developed (i.e. refinement of the Scoping Boundary into the Order Limits) and subsequent construction commitments relating to tree retention were developed, it was possible to focus subsequent surveys on 139 trees, as those that were likely to be impacted by the project.

Where land access and health and safety permitted, trees with moderate to high roost potential, or those that were confirmed roosts, were subject to ground-based or aerial inspection surveys. These surveys were to confirm the status of the Potential Roosting Feature (PRF) in the tree, the likely bat species or numbers of bats which may utilise the PRF, as well as the type of roost the PRF had potential to support.

Seven trees that were considered to either have moderate or high potential from the ground assessments could not be climbed due to health and safety concerns (e.g. ash dieback present). It was agreed with Natural England in a meeting on 13 June 2022, that no emergence or re-entry surveys would be undertaken on these trees and Licensing Policy 4 would be implemented for the following reasons:

- Emergence/ re-entry surveys on trees would incur a relatively high effort and cost that was disproportionate to the certainty the results would provide;
- Visual inspection using Mobile Elevated Working Platforms would be impractical and may require damaging the tree or woodland ground flora and soils to get close enough to inspect the features;
- Some of the trees that could not be inspected were located within Hintlesham Woods where alternative bat survey methods (static detector deployment, crossing point survey and trapping) have been carried out to inform likelihood of roosting; and
- Mitigation such as pre-fell checks will be implemented on these trees to prevent any harm to individual bats occurring.

The Bat Survey Report presents the desk study of trees with roosting potential that could not be inspected but could be impacted by the project and details the method of the assessment to establish the likelihood of which bat species could roost in these trees and at what time of year.

- A description of adjacent areas/offsite habitats, specifying any relevance to bats, including descriptions of habitat/s relevant to bat commuting/foraging behaviour.

The project is located within a largely rural landscape passing through farmland, with hedgerows and belts of trees bordering the fields providing commuting opportunities for bats. Scattered areas of woodland, including

ancient woodland, are present in adjacent habitats along the length of the project. These are shown in Figure C5bi which details the results of a UK Habitats Survey undertaken across 2021 and 2022.

The Order Limits are in close proximity to approximately 30 woodland copses that are likely to provide high quality foraging / commuting habitat for bat species. Hedgerows connecting these woodland copses are crossed by the Order Limits.

The Order Limits also cross four main watercourses that are likely to provide high quality foraging/ commuting habitat for bat species.

- Please also include annotated (cross reference the structures) and dated photographs (showing both internal and external survey areas) as these are very useful as an assessment aid. These can be inserted below or submitted as a separate (referenced) document.

See Appendix 7.7 Bat Survey Report

C5 Field survey(s):

Surveys must be up to date and have been conducted within the current or most recent optimal season. Where a site/structure/tree has demonstrable hibernation potential appropriate surveys must be carried out. Surveys must be undertaken in accordance with the most up to date edition of the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists – Good Practice Guidelines* and the *Bat Mitigation Guidelines*.

C5a Justification for surveys that deviate from the best practice guidelines: Please provide full justification below if your surveys deviate from the aforementioned best practice guidelines, confirming how you have obtained a full appreciation of the bat species roosting at the site, and of the type and status of roosts they use on site and in the context of the immediate surrounding area. **Please note that inadequate survey information is likely to cause delays to your licence application and may result in a Further Information Request.**

Where field surveys were conducted, these were completed with only minor deviations from the best practice guidelines, in isolated locations. All deviations occurred as a result of land access or health and safety issues.

A programme of pre-construction surveys will be undertaken should the project be given consent.

Buildings

No deviations occurred with the buildings surveys but limitations were at:

Building BB4 (Figure C5bii) was not surveyed due to land access restriction. However, aerial photography suggest that the residential property is bordered on all sides by high hedging and tree line such that if roosting bats were present, they would be sheltered from potential disturbance by those features.

A single survey was undertaken on BB5b (Figure C5bii). This is not considered a limitation as it was at the peak of the nursery bat roost season with the likely maximum number of bats recorded.

BB10 (Figure C5bii) was a confirmed roost with two surveys. A third survey is not considered a limitation as no maternity roost was likely present following the two initial surveys.

Building BB18 (Figure C5bii) was an abandoned/disused barn and unsafe to enter due to lack of structural integrity. Therefore, the surveyors were only able to assess the building externally. However, external inspection was deemed sufficing to identify the roosting potential.

Trees

Seven trees that had either moderate or high potential for roosting bats identified from the ground assessments (Figure C5bii) could not be climbed due to health and safety concerns (e.g. ash dieback present). It was agreed with Natural England in a meeting on 13 June 2022, that Licensing Policy 4 would be implemented for these seven trees. (Further justification and explanation provided in the Bat Survey Report).

Many of these trees unable to be inspected were located within Hintlesham Woods. Additional survey has been undertaken within Hintlesham Woods comprising static detector deployment and crossing point surveys. Although targeted to identify the presence of barbastelle bats, results of these surveys, in conjunction with the Bat Tree Habitat Key (Andrews, 2018) have been used to inform the bat species present and likelihood of bat roost types within these trees.

Outside of Hintlesham Woods, trees that met the criteria for survey and that could not be safely climbed or inspected from the ground used data extrapolated from nearby trees that were able to be surveyed to ascertain likely bat species potentially present. In addition, data from the Bat Tree Habitat Key (BTHK) (Andrews, 2018) and/or bat survey results undertaken in 2012 were compiled to identify the bat species and roost types that could use the PRF of these trees.

Where land access has not been provided to date, pre-construction surveys would be undertaken on these trees upon access permitted through the Development Consent Order (DCO) process.

C5b Please complete the following tables and add additional lines where necessary (*right click in any cell outside the grey box area. Choose Insert > Insert rows below)*. Please enter 'N/A' if the table is not applicable to your survey. Please ensure the information is consistent with Figure **C5b** (showing all buildings, structures and habitats that are within the survey area and distinguishing those that were surveyed and those that were not; indicate where surveyors were located):

Visual inspection

Date of each survey visit **(e.g. format 01/06/13)**	**Structure reference / location**	**Equipment used (e.g binoculars, endoscope)**	**Weather –** ***(Include temps, precipitation, Beaufort wind scale etc)***
May 2021 to June 2022	All trees and buildings identified and shown in Figure C5bii.	Ground assessment of trees and buildings for bat roosting potential	Various
17/02/2022	136a_T017	high powered torch, mirror, endoscope	Temp -7C Rain – 0 Wind – 18Mph
Comments: Two Surveyors – aerial inspection			
05/04/2022	136a_T059	high powered torch, mirror, endoscope	Temp – 12C Rain – 0 Wind – 19Mph
Comments: Two Surveyors - aerial inspection			
28/04/2022	T136a_T049	high powered torch, mirror, endoscope	Temp -10C Rain – 0 Wind – 9Mph
Comments: Two Surveyors - aerial inspection			
27/04/2022	T135a_T004	high powered torch, mirror, endoscope	Temp – 11C Rain – 0 Wind – 10Mph
Comments: Two Surveyors - aerial inspection			
20/08/2021	TC27	Endoscope	Temp – 21C Rain – 0 Wind – 10mph

Please provide surveyors names *(including Class Licence registration number if applicable)* and ensure the <u>above</u> table states the number of surveyors used for each survey visit undertaken.

Names of surveyors: Emily Cooke (2020-44639-CLS-CLS), Tim Rickard (Accredited agent - CL18 -2015 -18740-CLS-CLS), Rob Allen (2019-39156-CLS-CLS), Alex Keen, Will Hurry and Frankie McDowell.

Dusk survey

Date of each survey visit **(e.g. format 01/06/13)**	**Start and end times and time of sunset**	**Structure reference / location**	**Equipment used (include make of bat detectors and logging equipment)**	**Weather –** ***(Include start and end temps, precipitation, Beaufort wind scale etc)***
Comments: **(to include # of surveyors used for each visit)**:				
23/09/2021	Start - 18:39 End – 20:54 Sunset – 18:54	T16	Elekon Bat Logger M Anabat walkabout	Temp – 19C-21C Rain – 0 Wind- 1

			Anabat swift IR camera	Cloud 0
Comments: 2 surveyors				
28/06/2022	Start: 21:05 End: 23:20 Sunset: 21:20	BB5	Elekon Bat loggers M	Temp: 19C – 16C Rain: None Cloud: 2/8 – 0/8 Wind: 0
Comments: 4 surveyors				
11/07/2022	Start: 20:59 End: 23:13 Sunset: 21:13	BB10	Elekon Bat loggers M	Temp: 21C-18C Rain: None Cloud: 5/8 – 4/8 Wind: 3 - 2
Comments: 4 surveyors				
11/07/2022	Start: 20:59 End: 23:13 Sunset: 21:13	BB5	Elekon Bat loggers M	Temp: 21C-18C Rain: None Cloud: 4/8 – 4/8 Wind: 3 - 2
Comments: 4 surveyors				
12/07/2022	Start: 20:59 End: 23:13 Sunset: 21:12	BB5a	Elekon Bat loggers M	Temp: 23C-22C Rain: None Cloud: 7/8 – 7/8 Wind: 0
Comments: 4 surveyors				
12/07/2022	Start: 20:57 End: 23:12 Sunset: 21:12	BB5b	Anabat swift IR camera	Temp: 23C-22C Rain: None Cloud: 7/8 – 7/8 Wind: 0
Comments: Not within survey area. Observation made of mass emergence during survey of BB5. Unmanned survey undertaken – IR camera - to establish maternity roost size				
02/08/2022	Start: 20:20 End: 22:40 Sunset: 20:45	BB5	Elekon Bat loggers M	Temp: 22C Rain: None Cloud: 6/8 Wind: 2
Comments:				
03/08/2022	Start: 20:29 End: 22:44 Sunset: 20:43	BB5a	Elekon Bat loggers M	Temp: 21 Rain: 1 Cloud: 2/8 Wind: 1
Comments:				

Please provide surveyors names *(including Class Licence registration number if applicable)* and ensure the <u>above</u> table states the number of surveyors used for each survey visit undertaken.

Abbie Montgomery, Maithri Jayasuriya, Rosie McLaughlin, Sasha Dodsworth

Dawn survey

Date of each survey visit (e.g. format 01/06/13).	**Start and end time and time of sunrise**	**Structure reference / location**	**Equipment used (include make of bat detectors and logging equipment)**	**Weather – *(Include start and end temps, precipitation, Beaufort wind scale etc)***
Comments (to include # of surveyors used for each visit):				
09/06/2022	Start – 02:57 End – 04:52 Sunset – 04:37	BB5	Elekon Bat Logger M	Temp: 12C – 11C Rain: None Wind: 2-1 Cloud:0
Comments: 4 surveyors				
23/06/2022	Start – 02:36 End – 04:51 Sunrise – 04:36	BB5a	Elekon Bat Logger M	Temp: 11C – 9C Rain: None Wind: 0 Cloud:0
Comments: 4 surveyors				

02/08/2022	Start-03:20 End- 05:35 Sunrise: 05:19	BB10	Elekon Bat Logger M	Temp: 19C Rain: None Cloud: 2/8 Wind: 1
Comments:				

Please provide surveyors names *(including Class Licence registration number if applicable)* and ensure the <u>above</u> table states the number of surveyors used for each survey visit undertaken.

Rosie McLaughlin, Lilly Outram, Charlotte Toon, Abbie Montgomery, Sam Radonich
The bat surveys detailed below are those where confirmed bat roosts were found only. Details on bat surveys for all trees and buildings can be provided separately.

'Other' survey (please specify e.g. trapping, remote, etc)

Date of each survey visit **(e.g. format 01/06/13).**	**Start and end times**	**Structure reference / location**	**Equipment used (include make of bat detectors and logging equipment)**	**Weather – *(Include start and end temps, precipitation, Beaufort wind scale etc)***
Comments (to include # of surveyors used for each visit):				
09/08/2022	Start: 20:30 End: 01:00	Trap 1:TM 06598 43452 Trap 2: TM 06587 43347 Trap 3: TM 06744 43189 Net 1: TM 06497 43447 Net 2: TM 06549 43465	Ausbat triple bank harp x3 3m & 6m mist net 2x sussex autobat 1x AT100	Temp: 22c – 17c Cloud:0 Rain: 0 Wind: 0 Moon: Waxing gibbous
Comments: None				
10/08/2022	Start: 20:30 End: 00:45	Trap 1: TM 06969 43033 Trap 2: TM 0844 43040 Net 1: TM 07009 43064	Ausbat triple bank harp x2 9m mist net 2x sussex autobat 1x AT100	Temp: 22c – 16c Cloud:0 Rain: 0 Wind: 4m/s Moon: Waxing gibbous
Comments: None				

Please provide surveyors names *(including Class Licence registration number if applicable)* and ensure the <u>above</u> table states the number of surveyors used for each survey visit undertaken.

Hal Starkie (2018-38269-CLS-CLS; 2018-38270-CLS-CLS), Emily Cooke (2020-44639-CLS-CLS), Pippa Loam, Liam Maries

Please explain any constraints on the survey/s undertaken (time of year, cold weather, refused access, safety issues preventing access etc – justify as necessary and include evidence where required). If access was refused please provide evidence (letter/email) to demonstrate this.

Access Constraints:
Building B18 was an abandoned/disused barn and therefore unsafe to enter due to lack of structural integrity. Therefore, the surveyors were only able to assess externally. As such, this could have affected the accuracy of the initial survey.

Land access was dependent on a landowner's consent. Access was obtained for approximately 92% of the field survey area, with landowner permission refused or not obtained at some locations.

Due to access constraints two trees (127_T027 & 127_T030) with hibernation potential could not be surveyed within the hibernation period. Instead, they were surveyed in April 2022 once access had been secured. Both

trees had butt-rot PRF features which have been found to be used on two occasions within the UK by bats in winter, a soprano pipistrelle, and a brown long-eared bats (BTHK, 2022). A precautionary approach will be taken to works that may impact these trees. However, these trees are located either on or outside the Order Limits so would not be directly impacted by any works.

Safety Constraints:
Health and safety concerns made 18 trees unsafe to climb. The survey approach to these trees is described in section C4.

Also complete the following:

- If DNA analysis of droppings has been undertaken, please indicate below (Yes, No, N/A) and ensure that **Figure C5b** (if applicable – see below) details the locations where the samples were taken. Where long-eared bats are detected but cannot be identified to species level visually, DNA analysis of any droppings will be needed where grey long-eared bats may be present.

Yes – TC27 (GSP Substation). DNA analysis of droppings confirmed Natterer's bats roosting in oak tree

- Please confirm that a walk over survey/check has been carried out within 3 months *prior* to application submission by a suitably experienced ecologist to ensure that conditions have not changed since the most recent survey was undertaken. Provide details of any changes to conditions and habitats and/or structures on site since the surveys were undertaken.

Date of walkover survey/check	A walk over/survey check will be carried out within three months prior to the final licence submission.
Details of any changes to conditions and habitats and/or structures, if there are no changes please insert 'None'	

C6 Survey results: Summarise your findings in the tables below and cross reference to **Figure C6** (which must also include flight lines, access points, dimensions of existing roosts etc). If you did not undertake a specific survey type please add N/A to the relevant table/s. Raw data is to be appended to the Method Statement (including sonograms, DNA analysis results etc).

Roost t*ypes to be referenced as:* *Day, Night, Feeding Perch, Transitional, Satellite, Maternity, Hibernation confirmed, Foraging Area, Commuting Route, Swarming Site, Other*. See end of document for "Definitions" of these roosts.

When completing "**Notes/observations" include** reference *to direct observations, extent and age of droppings, presence of field signs, emergence or re-entry, echolocation analysis. Also include DNA results if applicable and include nil results)*

Visual inspection results

Date (e.g. format 01/06/13)	**Species and numbers**	**Roost type** *(to be consistent with the above listed types)*	**Structure reference** *(consistent with relevant figures and other text)*	**Roost location**	**Access points (include # of them)**	**Dimensions of existing roosts or explanation of where the roost is (as appropriate)**
17/02/2022	Unknown (Likely pipistrelle sp.) x1	Hibernation roost	136a_T017	TM 07013 43163	West facing split in limb.	At height 10-15m
Notes/observations:						
05/04/2022	*Plecotus auritus x1*	Day roost	136a_T059	TM 06731 43227	Large vertical wound extending upwards from	Height: 0

					base. Leads into cavity in trunk.	
Notes/observations:						
28/04/2022	*Myotis nattereri* x2	Day roost	136a_T049	TM 06883 42987	Wound on eastern stem facing west inwards towards second stem.	Vertical wound 30cmx5cm.
Notes/observations:						
27/04/2022	*Pipistrellus pygmaeus* x1	Day roost	35a_T004	TL 88087 36390	Cavity present at apex of south facing wound at 4-6m height.	Entrance 4x2cm. Extends upwards 20x5cm into narrow wedge
Notes/observations:						
20/08/2021	*Myotis nattereri* x3	Day roost	TC27	TL 84257 36963	Wound on tree	Crevice at back of wound is 7x2cm leading inwards 7cm. Dry and sheltered with lots of debris and dirt

Provide further (brief) comments/explanation if required:

The bat surveys detailed below are those where confirmed bat roosts were found only. Details on bat surveys for all trees and buildings can be provided separately.

Dusk survey results

Date (e.g. format 01/06/13)	**Start and end times**	**Species and numbers**	***Roost type*** *(to be consistent with the above listed types)*	**Structure reference** *(consistent with relevant figures and other text)*	**Roost location**	**Access points (include # of them)**	**Dimensions of existing roosts or explanation of where the roost is (as appropriate)**
23/09/2021	Start -18:39 End – 20:54	*Pipistrellus pygmaeus (1)*	Day roost	T16	TL 84631 37198	Woodpecker hole	Unknown dimensions – tree not safe to climb
Notes/observations: None							
28/06/2022	Start: 21:05 End: 23:21	*Pipistrellus pygmaeus (2)*	Day roost	BB5	TL97775 38751	Raised roof tile	Roosting under roof tiles
Notes/observations:							
11/07/2022	Start-20:59 End - 23:13	*Pipistrellus pipistrellus* (1)	Day roost	BB10	TL 88046 36171	Raised roof tile	Roosting under roof tiles
Notes/observations:							
12/07/2022	Start- 20:59 End- 23:12	*Pipistrellus pipistellus* (3) *Plectous auritus* (1)	Day roost	BB5a	TL 97780 38765	Raised roof tiles	Roosting under roof tiles
Notes/observations:							
12/07/2022	Start- 20:59 End- 23:13	*Pipistrellus pygmaeus* (216)	Maternity roost	BB5b	TL 97755 38761	Raised roof tiles	Roosting under roof tiles

Notes/observations: Outside of survey area. Emergence seen previously. IR camera used to estimate roost size.							
02/08/2022	Start- 20:20 End- 22:40	*None*	-	BB5	TL97775 38751	-	-
Notes/observations:							
03/08/2022	Start- 20:29 End- 22:44	*None*	-	BB5a	TL 97780 38765	-	-
Notes/observations:							

Provide further (brief) comments/explanation if required:

The bat surveys detailed below are those where confirmed bat roosts were found only. Details on bat surveys for all trees and buildings can be provided separately.

Dawn Survey results

Date (e.g. format 01/06/13)	**Start and end times**	**Species and numbers**	**Roost type** *(to be consistent with the above listed types)*	**Structure reference** *(consistent with relevant figures and other text)*	**Roost location**	**Access points (include # of them)**	**Dimensions of existing roosts or explanation of where the roost is (as appropriate)**
09/06/2022	Start – 02:57 End- 04:52	*Pipistrellus pygmaeus* (1)	Day roost	BB5	TL97775 38751	Raised tile	Under roof tile
Notes/observations:							
23/06/2022	Start – 02:36 End – 04:51	None	-	BB5a	TL 97780 38765	-	-
Notes/observations:							
02/08/2022	Start – 03:20 End – 05:35	*Pipistrellus pipistrellus* (2)	Day roost	BB10	TL 88046 36171	Raised roof tile	Roosting under roof tiles
Notes/observations:							

Provide further (brief) comments/explanation if required:

The bat surveys detailed below are those where confirmed bat roosts were found only. Details on bat surveys for all trees and buildings can be provided separately.

'Other' results – please specify.

Date (e.g. format 01/06/13)	**Species and numbers**	**Roost type** *(to be consistent with the above listed types)*	**Structure reference** *(consistent with relevant figures and other text)*	**Roost location**	**Access points (include # of them)**	**Dimensions of existing roosts or explanation of where the roost is (as appropriate)**
09/08/2022	Barbastelle x3	Maternity colony using Hintlesham Woods	Hintlesham Woods	unknown	NA	NA
Notes/observations: other species caught: Daubenton's, common pipistrelle, brown long-eared						
Notes/observations:						
Notes/observations:						
Notes/observations:						
Notes/observations:						

Provide further (brief) comments/explanation if required:

At 21:20 (approx. 45 mins after sunset) two post lactating female barbastelle bats and one juvenile male barbastelle bat were captured to the north of the woodland as the bridleway extends out of the woods (TM 06497 43447).

C7 Interpretation/evaluation of survey results (also see the Bat Mitigation Guidelines section 5.8 and Figure 4 for conservation significance of roost type): Please complete the following table:

Structure reference *(ensure consistency with other text and Figures)*	**Species**	**Count / estimate of number of individuals**	**Roost location**	**Site status assessment (e.g. maternity, feeding roost, swarming site, hibernation confirmed etc)**	**Conservation significance of roost**
136a_T017	Unknown (Likely pipistrelle sp.) x1	1	TM 07013 43163	Hibernation Roost	Low
136a_T059	*Plecotus auritus*	1	TM 06731 43227	Day roost	Low
136a_T049	*Myotis nattereri*	2	TM 06883 42987	Day roost	Low
35a_T004	*Pipistrellus pygmaeus*	1	TL 88087 36390	Day Roost	Low
Hintlesham Woods including unsurveyed trees in the Order Limits with features suitable for barbastelle bats 136a_T018; 136a_T023; 136a_T028; 136a_T036	*Barbastella barbastellus*	unknown	Unknown but within woods	Maternity	High
TC27	*Myotis nattereri*	3	TL 84257 36963	Day Roost	Low
TC16	*Pipistrellus pygmaeus*	1	TL 84347 36774	Day roost	Low
BB5	*Pipistrellus pygmaeus*	2	TL 97775 38751	Day Roost	Low
BB5a	*Pipistrellus pipistrellus*	3	TL 97780 38766	Day Roost	Low
BB5a	*Plecotus auritus*	1	TL 97780 38766	Day Roost	Low
BB5b	*Pipistrellus pygmaeus*	216	TL 97755 38761	Maternity Roost	Medium
BB10	*Pipistrellus pipistrellus*	1	TL 88046 36171	Day Roost	Low
Not surveyed – alternative approach (Policy 4). Precautionary approach on conservation significance.					
122_T002	See Table 3.6 of Appendix 7.7 Bat Survey Report		TM049 412	Assumption could support maternity/hibernation roosts where suitable.	Medium
132_T003			TM 08899 44667		Medium
132_T008			TM 08853 44728		Medium
136a_T018			TM 0699 4316		High
136a_T023			TM 06889 43115		High
136a_T028			TM 06962 43138		High

136a_T029			TM 06886 43098		Medium
136a_T034			TM 06946 43096		Medium
136a_T036			TM 06885 43080		High
136a_T045			TM 06823 42997		Medium
136a_T046			TM 06879 42975		Medium
136a_T056			TM 06850 42967		Medium
140_T001			TM 06289 41837		Medium
140_T002			TM 06301 41841		Medium
170_T003			TM 07134 41983		Medium
261_T002			TM 06860 41528		Medium
102_T007			TM 0085 3987		Medium
102_T010			TM 0086 3996		Medium
105_T001			TM 0104 4005		Medium
109_T016			TM 0172 4024		Medium
109_T029			TM 0124 4010		Medium
112_T001			TM 0172 4025		Medium
3_T001			TL 8850 3637		Medium

If hibernation roost(s) were not identified in the survey, please indicate the hibernation roost potential of the site and/or structure(s) which will be impacted by the proposal by ticking the relevant box.	☐ **High** ☐ **Medium** ☐ **Low**

Provide details on the assessment and rationale of the hibernation roost potential.

Where a site/structure/tree has hibernation potential and/or hibernation roosts have been confirmed, Natural England expects any works which may impact on hibernating bats, or their roosts, to be undertaken outside of the hibernation period.

Tree 136a_T017 was found to be used by a single unconfirmed species (likely pipistrelle sp. from the endoscope picture) in February 2022. It is concluded that this tree is a hibernation roost for individual pipistrelle bat species. Seventy-nine trees within the survey area were considered to have hibernation potential and were subject to hibernation surveys where ground based or aerial endoscope inspection was possible.

Provide further (brief) comments / explanation if required:

Important Advice:

Survey maps that must be included in this section of the Method Statement, or as separate documents if preferred, are listed in *section I "Map checklist" at the end of this document.*

Insert survey figures, photographs etc below here if not submitting them as separate documents

D Impact assessment <u>in absence of mitigation or compensation for each species / roost type</u>

(also see section 6 of the Bat Mitigation Guidelines). Where appropriate you must take into consideration cumulative impacts of your proposals on the bat species and populations identified in your survey in each section.

Guidance on quantifying roosts for the purpose of licensing: *To be considered the same roost, the locations need to have the same **functional** and **qualitative** (e.g. physical) characteristics, be used by the **same species** for the **same purpose** (e.g. day roosting) and be within the **same building / structure**. If the physical characteristics are different (e.g. one roost is in external crevices in the wall and the other is in the roof void against internal timbers) then they should be considered different roosts - because they offer bats different roosting opportunities. If the physical characteristics are similar and provide the same functional characteristics, used by the same species for the*

same purpose (e.g. transitional roost) but with different individual roosting locations within the overall building / structure, that could be considered one transitional roost. If two species are using an area which provides the same characteristics, for the same function, it is still two roosts - as there are two species.

D1 **Initial impacts:** The impact/s of activities undertaken on site pre-development and during works must be considered and explained. **Consider disturbance** (such as human presence, noise, vibration, dust, lighting, access obstruction due to scaffolding and plastic sheeting etc), **temporary damage and temporary loss of roosts and injuring/killing.**
E.g. Unsupervised contractor removing roof tiles has the potential to crush 3 common pipistrelle bats using the roof tiles as day roosts. Major negative impact at a site level; Demolition of an extension to a building will take place adjacent to a maternity roost of common pipistrelle bats situated under the soffit board of the retained building. Potential for significant disturbance if demolition works are undertaken during the maternity period through vibration, noise and dust. Medium negative impact on a local level.

Construction Stage Disturbance

Construction activities such as removal of existing pylons, percussive piling for new pylon bases, excavation works for the underground cable trenches and trenchless crossings may also generate noise and vibration to a level that disturbs bat roosts in retained adjacent trees and buildings. Four trenchless crossings are proposed at the River Box, River Stour, Sudbury Branch Railway Line and to the south of Ansell's Grove. It is assumed that the technique is likely to be horizontal directional drilling (HDD) although this will be determined during the detailed design.

Overhead lines

Disturbance may occur to bat roosts located near to the works involved with the overhead line installations due to noise and vibration created via machinery and piling associated with the installation of new pylons. Tree 122_T002 is located within 50m of a new pylon and has high potential for roosting bats but was unsafe to aerially inspect. Table 3.8 in Appendix 7.7 Bat Survey Report details the possible bat species and types of roosts this combination of trees species and features has historically supported using the BTHK. The disturbing construction activities would be temporary and short term and unlikely to generate a response in any bats roosting within this tree which is located within a wooded belt which is likely to offer some protection against noise and vibration. A pre-construction survey would be undertaken to inform the final licence application.

Tree 170_T003 is located within 50m of an existing pylon that requires removal and has moderate potential for roosting bats but was unsafe to aerially inspect. Table 3.8 in Appendix 7.7 Bat Survey Report details the possible bat species and types of roosts this combination of trees species and features has historically supported using the BTHK. Removal of existing 132kV pylons would be a relatively swift process undertaken in the daytime and not generate a reaction from any roosting bats nearby. A pre-construction survey would be undertaken to inform the final licence application.

CSE compounds

Three of the four CSE compounds will be located within 50m of woodland/ tree lines comprising trees with bat roosting potential. Construction activities associated through these works could cause disturbance to any bats roosting within close proximity to the works. However, no confirmed bat roosts have been identified in these areas and no trees or buildings with bat roosting potential that have not been surveyed are located in these areas.

Installation of underground cables

The works associated with the installation of underground cables, including the trenchless crossings, could likely result in disturbance to bats roosting in the near vicinity (approx. 50m) due to increased levels of noise, vibration, visual and light disturbance while the work is undertaken.

Although it is assumed core working hours would be within daytime hours (07:00-19:00 Mondays to Fridays and 08:00-17:00 on Saturdays, Sundays and Bank Holidays), construction lighting may be needed in some locations, especially in the winter months and in association with the trenchless crossing beneath the Sudbury Branch Railway Line, which could be specifically timed for night-time working to avoid disruption to rail services.

The following operations may also take place outside the core working hours:

- the installation and removal of conductors, pilot wires and associated protective netting across highways, railway lines or watercourses;
- the completion of operations commenced during the core working hours which cannot safely be stopped;
- any highway works requested by the highway authority to be undertaken on a Saturday or a Sunday or outside the core working hours;
- security monitoring and surveys;
- the testing or commissioning of any electrical plant installed as part of the authorised

development;
- Trenchless crossing operations beneath highways, railway lines or watercourses; and
- the completion of works delayed or held up by severe weather conditions which disrupted or interrupted normal construction activities.

Construction lighting will be of the lowest luminosity necessary to safely perform each task. It will be designed, positioned and directed to reduce intrusion upon protected species and sensitive habitats.

T35a_T004 is a confirmed roost supporting an individual of a *Pipistrelle* species. The tree would be retained but is located within 50m of the underground cabling section at Ansell's Grove. The tree is surrounded by other trees which are likely to buffer any significant disturbance. No licensable impact is expected.

GSP substation
Two known bat roosts are present within trees in the woodland – T16 and TC27. These roosts supporting individual or few numbers of bats could be disturbed through construction activities (noise, vibration particularly from piling activities and artificial lighting). However, considering the short timescale of the potentially disruptive work, limited to installation of a small underground cable along the edge of Waldegrave Wood, it is anticipated that any disturbance caused would be temporary and have a slight adverse impact at local level to bat species within the area that would not exceed the threshold for disturbance in licensing terms.

Confirm number of roosts to be damaged: None

D2 Long-term impacts: Consider and explain the impacts of the proposed works on the different species populations at a site, local, regional, and national level**.**

D2.1. Roost modification: e.g. changes to roosts/access points, new entrances (including human access e.g. for servicing/maintenance etc), change in size of roost space, changes in air flow, temperature and humidity, light etc. Please detail the access points into each roost and the type/s of roosts which will be modified.
E.g. Non-mitigated changes to the roof structure, which requires replacing, will lead to the modification of 3 access points into a common pipistrelle maternity roost which will result in bats being unable to enter or exit the roost. Moderate negative impact on a local level.

No roost modification would take place as part of the works as roosts will either be lost through tree felling (if required) or avoided.

Confirm number of roosts to be modified: None

D2.2. Roost loss: Loss or deterioration of roosting sites, access points, habitat, etc must be considered. Please detail the access points into each roost and types of roost/s which will be lost.
E.g. Demolition of building reference X in June will lead to the loss of a night roost in the porch used by 1 lesser horseshoe bat and the loss of a maternity brown-long eared bat roost in the loft space. This will lead to the death and/or injury of bats including dependent young and permanent destruction (loss) of both roosts. Moderate negative impact at a site level for lesser horseshoe bats and moderate negative impact at a local level for brown-long eared bats.

Habitat Loss
Construction of the project will result in temporary and permanent habitat loss including loss of trees, woodland, and hedgerows. However, most habitats would be reinstated or left to regrow post works with the permanent habitat loss restricted to relatively minor areas associated with the CSE compounds, permanent access tracks and pylon bases which are generally located on grassland or arable land.

Overhead lines (including CSE compounds)
Where the temporary access route crosses perpendicular to a hedgerow, it is assumed that existing gaps would be used where available. Otherwise, a 5m gap (with roots removed) will be created in the hedgerow to allow a temporary access route.

Woodland areas crossed by the new overhead line conductors would have a 20m working width felled to ground level (no removal of roots) to facilitate construction activities. The trees would be graduated cut for an additional 12.5m on either side of the 20m working width to accommodate construction activities and conductor swing to mount the conductors onto the arms of the pylon.

At Hintlesham Woods, the route of the existing 400kV overhead line vegetation would be coppiced to ground

level for a width of 20m along the existing operational maintenance swathe. In addition, the trees would be graduated cut for up to an additional 12.5m on either side of the 20m swathe for construction activities and to safely install the conductors. During operation, the swathe would be maintained at a reduced canopy height to avoid vegetation interfering with the overhead lines (as per the existing maintenance regime for the existing line).

Vegetation would be reinstated where removed for the temporary works. Hedgerow gaps created for construction of the temporary access route would be replanted or allowed to naturally regenerate following construction along with reinforcement planting along the surrounding hedgerow where appropriate. Where vegetation is lost and hedgerows and trees cannot be replaced in situ due to the restrictions associated with operational requirements of planting near the line and/ or safety requirements, replacement vegetation will be planted as close by as practicable to the original location.

Installation of underground cables

There is only one location where the underground cables need to cross an area of woodland, this is in Section G: Stour Valley, north of Henny Back Road. At this location a 60m working width would be felled and the roots excavated to allow construction of the cable trenches and the temporary access route. Once the cables are installed, the working width would be replanted with scrub habitat consisting of low rooting species or left to naturally regenerate. Trees would be unable to be planted over the top of the cables as the roots can interfere and affect the cable rating.

Where the proposed cables need to cross hedgerows perpendicular to the alignment it is assumed that a 60m gap (including excavation of roots) would be required. The hedgerow would be reinstated following construction with low rooted varieties.

GSP substation

No tree clearance is required but gaps in hedgerows would be required for permanent access off the A131 and Old Road and temporary gaps for underground cable installation to the south of the GSP substation. No trees with bat roosting potential are located within these hedgerows.

Summary

The habitats to be affected are broken down into three categories: complete removal, coppiced, and pruned. This is summarised in table D1.

Habitat	Complete removal of habitat (ha/m)	Coppiced habitat (ha/m)	Pruned habitat (ha/m)	Total habitat affected (ha/m)
Hedgerow/line of trees	3199m	6590m	4091m	13880m
Woodland	0.98ha	3.93ha	4.61ha	9.52ha

Within these areas there are trees with bat roosting potential which have not been able to be surveyed (shown in Figure D). The potential roosts where survey was not possible which will be impacted would be the following seven trees with high or moderate bat roosting potential which were unable to be safely surveyed: 122_T002, 132_T008, 170_T003, 140_T001, 140_T002, 109_T029 and 3_T001 which have the potential to support a range of bat species and roost types as detailed in Table 3.6 of Appendix 7.7 Bat Survey Report.

Injury and Mortality

Without mitigation, construction of the project would result in temporary and permanent habitat loss, including loss of trees (in woodland and in hedgerows) which could result in the injury or mortality of bats, should bats be present.

Overhead lines (including CSE compounds)

Work impacting hedgerows may cause injury or death to any bats roosting within trees within the hedgerows that may require pruning / coppicing / removal. Any bats roosting within tree roosts lost by the works would likely be injured or killed in the absence of mitigation.

Installation of underground cables

Where the proposed cables would bisect a hedgerow, it is assumed that the working area would be 60m and would require the removal of hedgerow in that area to allow excavation of the cable trenches and temporary access route. Where the underground cables need to cross an area of woodland (a single location), a 60m working width would be felled and the roots excavated to allow construction of the temporary access route and cable trenches.

In both of these instances, if bat roosts are present within the trees required for felling, and individuals are within the roosts at the time of the work, this would likely cause harm to these individuals.

GSP substation
The trees on either side of the proposed GSP substation site may require trimming in order to maintain a safe working and long-term maintenance area. No confirmed bat roosts are present within this area.

Unmitigated, injury/mortality of bats is likely to be a medium negative impact at the local level.

Confirm number of roosts to be destroyed: Up to seven roosts – not confirmed as aerial survey not possible (Licensing Policy 4).

D2.3. Fragmentation and isolation: Will the proposed works results in these impacts? E.g. loss of linear features such as hedges, tree lines, increased lighting, severance of flight lines by roads/rail lines, separation of breeding/hibernation sites from feeding grounds, etc.
E.g. In addition to the removal of common pipistrelle day roosts in trees along the proposed road, removal of hedgerows, shown on Figure D, and the construction of the new road will fragment a significant commuting and foraging route for a lesser horseshoe maternity roost. This may cause a reduction in the long term success of the breeding colony of lesser horseshoes by restricting existing foraging range or killing bats on the road. Potentially major negative impact at a site and local level.

Fragmentation and Isolation of known roosts
(see Figure D)

136a_T017
The works in and around Hintlesham Woods are unlikely to cause any fragmentation/ isolation impacts to the likely pipistrelle sp. hibernation roost within tree 136a_T017. Unaffected suitable bat commuting routes extend from the woodland to the south and east as well and the crossing point surveys of the existing wayleave suggest that these do not generate any barrier effect. As the commuting requirements of pipistrelle species are less dependent on good bat commuting habitat than other species there is additional justification for concluding no impact would occur.

136a_T059
The brown long-eared bat day roost in tree 136a_T059 is unlikely to be affected by fragmentation or isolation impacts as the commuting routes out of the woods would remain available, a gap of 5m would be required in hedgerows which would be traversable by brown long-eared bats.

136a_T049
Works in the vicinity of Hintlesham Woods are unlikely to cause fragmentation/ isolation impacts to the Natterer's bat day roost within tree 136a_T049 as the woodland habitat surrounding the roost and suitable bat commuting habitats extending from the woodland would be retained.

35a_T004
The soprano pipistrelle day roost (1 individual) within tree 35a_T004 is considered unlikely to be impacted by fragmentation or isolation as the suitable bat commuting habitats in the surrounding area will be retained. While there would be temporary severance of the field boundaries to the south of the roost while underground cables were installed, alternative commuting routes would be available.

TC27 and T16
Tree T16 and TC27 are located on the western edge of Waldegrave Wood. The works in this area would not cause any fragmentation/ isolation impacts to these roosts as the work will be taking place on adjacent arable land which would not involve the loss of any woodland, hedgerow, or other suitable bat habitat within the area or installation of any barrier feature.

BB5, BB5a, BB5b
The complex of buildings at Nussteads Farm support individual day roosts and a maternity roost of over 200 soprano pipistrelle. During field survey, specific effort was made to identify the flight direction away from the roost. This identified the movement of bats westwards towards the River Box, rather than directly south over the Order Limits. The River Box would remain a feature for the bats to follow during and after construction.

BB10
While a field boundary to the north of this roost would be fragmented during construction, the remaining hedgerows in the area would be available and it is likely that most activity would be directed towards Ansell's Grove and the woodland there which would be retained and protected through construction.

Potential fragmentation and isolation impacts to barbastelle bats within Hintlesham Woods
Trapping, static and crossing point surveys in and around Hintlesham Woods have indicated the presence of a maternity colony of barbastelle bats using the woodland and likely roosting within the woodland.

The 400kV overhead line would use the route and existing pylons of the 400kV overhead line through the woods, and the existing 400kV overhead line would be re-routed around to the north and west of the woods on newly constructed pylons. The works would result in the severance of several hedgerows used by the barbastelle maternity colony within Hintlesham Woods for commuting. However, these hedgerows would have a gap of 5m created during construction which would then be reinstated post construction. An additional 20m of hedgerow would also be pruned during construction, to allow safe installation of the conductors overhead.

Surveys have indicated that the bridleway extending to the north and south from the woodland (grid ref: TM 06474 43471, TM 06803 42752) appear to be the most used by barbastelle and therefore important commuting routes out of the woodland for the barbastelle colony. With the other hedgerows (grid refs: TM 06717 43494, TM 06059 43280, TM 06007 42986, TM 06157 42733) being used by lower numbers of barbastelle bats.

Due to the minor nature of the hedgerow severance (5m wide gap) in each hedgerow, it is considered that this would not prevent dispersal of barbastelle bats from the woodland. However, it may delay the dispersal of the bats as individual bats may wait until it is darker before crossing the severed gaps as there would not be the same protection/ sheltered commuting habitat offered in these severed gaps as the rest of the commuting routes.

Surveys undertaken within Hintlesham Woods in 2022 suggest barbastelle bats are crossing the scrub habitat of the existing wayleave under the current 400kV overhead line that runs through the woodland. Therefore, it is unlikely that bats would be prevented from crossing under the new overhead line once operational.

General fragmentation and isolation impacts
Installation of overhead lines
Up to 45m width area would be cleared through woodlands for the overhead line works (20m to ground level and 12.5m graduated cut on both sides). This habitat severance is likely to cause fragmentation and possibly isolation to certain bat species within the area. Although scrub regeneration will be allowed under the overhead line with an operational safety clearance maintained (maintained to a three-year growth to avoid branches interfering with the conductors), which may reduce the fragmentation effect as it would provide suitable commuting habitat, it is unlikely to provide the same level of value in terms of commuting as the woodlands lost.

Hedgerows would be temporarily fragmented. However, they would be re-instated once work in the area is complete.

Without mitigation, temporary fragmentation may occur during construction. However, no long-term fragmentation caused by hedgerow or woodland loss is anticipated.

Installation of underground cables
Hedgerow gaps would be limited to 60m. However, reinstatement and replanting of trees over the cable would not be possible but replanting with shallow routing hedgerow species would be possible. Where the underground cables cross an area of woodland (one location), a 60m working width would be felled and the roots excavated to allow construction of the cable trenches and temporary access route. Once the cables are installed, the working width would be replanted with scrub habitat consisting of low rooting species or left to naturally regenerate. Trees would be unable to be planted over the top of the cables once works were complete.

GSP substation
The location of GSP substation positioned on arable fields between two woodlands is unlikely to cause fragmentation or isolation of bat populations within the area. The works would not impact any commuting routes.

Operation
During operation, the project would not create permanent dispersal barriers that could otherwise contribute towards habitat or species fragmentation.

D3 **Post-development interference impacts:** e.g. extra street lighting or other external lighting, use of loft space as storage, increased noise. Please also consider other direct or indirect post development impacts which may include disturbance/ injuring/killing.
E.g. Security lighting being installed will shine on the brown-long eared bat maternity roost access points which may affect emergence patterns and lead to a reduction in foraging times. This may cause a reduction in the long term success of the breeding colony or cause the roost to be abandoned. Moderate to high negative impact at a site and local level.

Overhead lines

During operation there would be negligible post-development interference impacts from the new overhead lines and pylons. Overhead lines and pylons are already present in the landscape, and it is unlikely that an increased collision risk would occur due to the overhead lines being higher from the ground than what is currently in use (different heights of pylon from 132kV removal and 400kV construction) and removal of overhead lines in the underground cable sections and where the alignment of the proposed 400kV deviates from the existing 132kV to be removed such as in Section A/B. No artificial lighting would be required in these sections.

Underground cables
Negligible post-development interference impacts from the underground cable sections is expected. Once underground cables are buried, habitats would be reinstated over the top and no permanent features would be present above ground (other than the CSE compounds, see below). No artificial lighting would be required in these sections.

CSE compounds
Permanent operational lighting is not required at the CSE compounds. There may be individual passive infrared sensor (PIR) motion activated security lighting at the CSE compounds but this would be directional to avoid spill into any adjacent habitats and activated during emergency maintenance (routine maintenance would usually be scheduled during daylight hours). As the lighting would only be on temporarily and for short periods of time when motion was detected, no impacts due to lighting is likely.

GSP substation
The GSP substation would require low lux level light-emitting diode (LED) type luminaires with directable light output to reduce light spill during emergency works only. There would also be individual PIR motion activated lighting at the access gates to facilitate safe entry at night. Although no bat roosts are known to be located close to the proposed GSP substation, the location of the substation between Waldegrave Wood and Butler's Wood means bats are likely to be using the habitats surrounding the GSP substation for foraging, commuting as well as potential roosting in the future. However, good practice measures with regards to operational lighting would only be used when operational staff were present and lighting is needed or by the motion activated lighting means impact on bat activity is unlikely.

D4 Predicted scale of impact of this development/activity on species status (also see section 6.5 of the Bat Mitigation Guidelines and the BCT's Bat Survey Good Practice Guidelines): Please complete the following table to explain what this is likely to be at the site, local/county and regional levels for each roost type and species. Add additional lines when necessary

Roost types to be referenced as: Day, Night, Feeding Perch, Transitional, Satellite, Maternity, Hibernation confirmed, Foraging Area, Commuting Route, Swarming Site, Other.

Species and Numbers (which will be affected at the time works will be undertaken)	**Roost type**	**Predicted scale of impact *(place X in relevant column)***			**Notes** (include impact on roost – damage / destruction /modification etc)
		Site	**County**	**Regional**	
Pipistrellus species (1)	Hibernation	-	-	-	Tree 136a_T017 (x 1 bat) **No direct impact**. Located beyond Order Limits. Disturbance unlikely. Unable to identify species confidently from endoscope picture but likely pipistrelle species.
Plecotus auritus (2)	Day roost	-	-	-	Tree 136a_T059 (x1 bats) **No direct impact**. Located outside of Order Limits. Disturbance unlikely. BB5a (x1 bats) No direct impact. Located outside of Order Limits. Disturbance unlikely.
Myotis nattereri (2)	Day roost	X	-	-	Tree 136a_T049 (x2 bats) **No direct impact**. Located outside of Order Limits. Disturbance unlikely

		-	-	-	TC27 (x3 bats) No direct impact. Located outside of Order Limits. Disturbance unlikely.
Pipistrellus pygmaeus (220)	Day roost	-	-	-	35a_T004 (x1 bat) **No direct impact**. Located outside of Order Limits. Disturbance unlikely.
	Day roost	-	-	-	BB5 (x2 bats) **No direct impact.** Located outside of Order Limits. Disturbance unlikely.
	Maternity roost	-	-	-	BB5b (x216 bats) **No direct impact**. Located outside of Order Limits. Disturbance unlikely.
	Day roost	-	-	-	TC16 (x1 bat) **No direct impact**. Located outside of Order Limits. Disturbance unlikely.
Pipistrellus pipistrellus (4)	Day roost	-	-	-	BB10 (x1 bat) **No direct impact**. Located outside of Order Limits. Disturbance unlikely.
	Day roost	-	-	-	BB5a (x3 bats) No direct impact. Located outside of Order Limits. Disturbance unlikely.
Barbastella barbastellus	Possible day roost Possible Transitional roost Possible satellite roost Probable maternity roost Possible hibernation roost	-	-	-	Hintlesham Woods Maternity colony confirmed to be using Hintlesham Woods and likely to be roosting within it due to post lactating and juvenile bats being captured 45mins after sunset (i.e. within anticipated emergence timeframe). **No tree roosts or trees with specific roosting features suitable for barbastelles have been found within the Order Limits**.
Pipistrellus pipistrellus, Pipistrellus pygmaeus, Plectus auritus, Myotis daubentonii Nyctalus leisleri, Myotis nattereri, Nyctalus noctula (unknown numbers)	Possible day or night roost, feeding perch or transitional roost. Potential maternity or hibernation roosts.	X	-	-	Trees where endoscope inspection has not been possible and the tree would likely be lost: 122_T002 132_T008 140_T001 140_T002 109_T029 3_T001 170_T003

* ***Please note** that you can add more rows to the table: right click in any cell outside the grey box area. Choose Insert > Insert rows below.*

Provide further comments/explanation as required (this helps understand how the impacts will be mitigated or compensated for when assessing section E):

Important Advice:
Please ensure that a separate 'Impact map' is provided (Figure D) which must show all structures or habitats (clearly referenced) that will be disturbed, damaged or destroyed, detailing where the roosts and access points are etc. Also *see section I "Map checklist" at the end of this document*.

E Mitigation and Compensation (please also see section 7 and 8 of the Bat Mitigation Guidelines)

E1 Please explain why this design was chosen over other potential solutions - set out what other designs were considered and why they were not feasible (*e.g. if the proposal is to construct a new stand-alone roost, explain why it is not possible to retain the roost in the existing structure etc).* The mitigation solution being proposed in the method statement should be the one that delivers the 'need' with the least impact on the bat population.

See Figure C5a for details of the Order Limits and alignment of the project.

The working area within Hintlesham Woods along the route of the existing 400kV overhead line would be 20m wide with a graduated arc pruned on either side to allow for conductor swing. This would lie within the existing maintained swathe of land crossed by the existing 400kV overhead line. During operation, the swathe would be maintained at a reduced canopy height to avoid vegetation interfering with the overhead lines (as per the existing maintenance regime for the existing line).

The Order Limits have been designed to avoid the demolition of any buildings and therefore no building roosts are anticipated.

The current alignment (in particular underground cable routing) has been designed to avoid woodland habitat wherever practicable.

The working area of underground cable sections has been reduced from a standard 80m wide working area to 60m at hedgerow crossings to reduce vegetation loss.

Where the overhead line crosses woodland the working area has been reduced to 20m (coppiced to ground) with a 12.5m area either side where vegetation will be managed at a reduced graduated height to allow for conductor swing and to reduce vegetation loss.

Trenchless installation techniques in Section G: Stour Valley in two areas would mean tree loss would be avoided at (approximately):
Woodland to the south of Ansell's Grove - TL877361 to TL871359:
River Stour and adjacent railway – TL898367 to TL887365.

There will also be a trenchless crossing of the River Box, this will retain the riparian corridor habitat.

Where the project needs to sever hedgerows and tree lines for the temporary access route, existing gaps in these hedgerows/ tree lines used where practicable to reduce potential or actual tree (and roost) roost loss and habitat severance.

Where tree loss with bat roosts is unavoidable, appropriate bat boxes (for species and type of roost) would be deployed within suitable habitat and as close as possible to the roost being lost. This is considered the most appropriate form of compensation for lost of tree roosts and so other alternatives were not considered.

Suitable bat foraging and commuting habitat that is unavoidably lost by the project would be reinstated after installation. The Order Limits have been identified with environmental inputs to avoid or limit environmental impacts as far as practicable and therefore the habitats proposed to be temporarily lost is unavoidable.

E2.2 Capture and release (if applicable):

Please confirm that you agree to undertake the following procedures for the capture and exclusion of bats, where these are applicable:

a. The use of endoscopes, artificial light from torches, destructive search by soft demolition (see Definitions), temporary obstruction of roost access, temporary or permanent exclusion methods (including installation)

and use of static hand held nets must only be undertaken or directly supervised by the Named Ecologist, or an Accredited Agent.

b. Where capture and/or handling of bats are necessary, only the Named Ecologist, Accredited Agent, or an Assistant directly supervised by the Named Ecologist may do so. Capture/handling/exclusion of bats must only be undertaken in conditions suitable for bats to be active.

c. Where bats are discovered and taken (excluding unexpected discoveries during adverse weather conditions) they must either be relocated to an alternative roost (see Definitions) suitable for the species, or where bats are held this must be done safely and bats released on site at dusk in, or adjacent to, suitable foraging/ commuting habitat in safe areas within or directly adjacent to the pre-works habitat.

d. Endoscopes and hand held nets are only to be used to assist with the locating and capture of bats.

e. Temporary and permanent exclusion must be carried out using techniques specified in the most up to date edition of the '*Bat Workers Manual*'. If one-way exclusion devices are to be used, each device must remain in position for a period of at least 5 consecutive days/ nights throughout a spell of suitable weather conditions, or remain longer until these conditions prevail.

f. Prior to destructive works, an inspection using torches and/or an endoscope must be performed internally to search for the presence of bats. If any licensed vesper bat species is found and is accessible, each will be captured by gloved hand or hand-held net, given a health check and then each placed carefully inside a draw-string, calico cloth holding bag or similar for transport. If any licensed horseshoe bat species is found, the capture methods outlined in (h) will only be used after it has been shown that overnight dispersal or exclusion are no longer practicable methods.

g. Following inspection and exclusion operations, the removal of any feature with bat roost potential, will be only performed by hand in suitable weather conditions and under direct ecological supervision. Where applicable, materials will be removed carefully away and not rolled or sprung to avoid potential harm to bats. The undersides of materials will be checked by the Named Ecologist or Accredited Agent for bats that may be clung to them before removal.

h. For sites where the presence of horseshoe species has been confirmed, the following exclusion method will be used: prior to work commencing, the Named Ecologist or Accredited Agent will conduct a thorough internal inspection for the presence of horseshoe bats. Only after the void is shown to be unoccupied will the destructive search commence, or all apertures into that void be closed and sealed (windows, doors, etc) by use of boarding, sealed tarpaulin or similar.

   If a horseshoe bat is encountered, it will be left undisturbed during daylight. After all bats have dispersed overnight, the void will be sealed as described above. If all bats have not emerged, the Named Ecologist will either use torchlight and non-tactile human presence to disturb the bat to encourage it to emerge and disperse, during night only, or through use of a hand held net. Only after all bats have emerged from the building or void will it be sealed.

Yes, I agree / No, I don't agree
Yes

If NO, please provide justification below. Please use this text box to describe any additional information on protocols to be employed if bats are found during works. Non-standard capture and exclusion apparatus must be shown on **Figure E2**.

The table below will not allow text to be entered so provided here instead:	
Seven trees that were flagged as having potential to support roosting bats but were unable to be safely inspected. Licensing Policy 4 is being implemented (as agreed with Natural England) to use alternative sources of evidence on bat roosts potentially using these trees and provide mitigation and compensation to cover the maximum impact of construction activity i.e. roost loss.	
Species	**Expected number of bats to be captured at the time works will be undertaken**
Myotis nattereri	Min: 1 – Max: 15
Pipistrellus pipistrellus	Min: 1 – Max: 31
Pipistrellus pygmaeus	Min: 1 – Max: 10
Plectus auritus	Min: 1 – Max: 20
Myotis daubentonii	Min: 1 – Max: 30
Nyctalus leisleri	Min: 1 – Max: 4
Nyctalus noctula	Min: 1 – Max: 49

Should your proposals include capture (taking) please specify numbers of each species that will be affected at the time the works are to be undertaken:

Species	**Expected number of bats to be captured at the time works will be undertaken**. *Note: this may be different to the number of bats using the roost at its optimum time as timings for works will be at a time when bats are least likely to be present*.

** * Please note that you can add more rows to the table: right click in any cell outside the grey box area. Choose Insert > Insert rows below.*

E3 Bat roost and access point retention, modification and creation: Please detail how all impacts to each species (as identified in sections C and D) will be mitigated. If not applicable to your proposals please state 'N/A' in the relevant text boxes.

Please note, if the use of non-bitumen coated roof membranes is necessary, you must include a certificate that proves the roofing membrane has passed a 'snagging propensity test'. For further details please see: https://www.gov.uk/government/publications/bats-apply-for-a-mitigation-licence

You do not need a certificate for bitumen 1F felt that has a non-woven, short fibre construction.

Please confirm: N/A

E3.1 Retention of existing roost(s) – *Works may include, for example, maintenance works that result in no material changes to the roost but may cause disturbance or temporary damage e.g. t*emporary *exclusion of a roost to allow investigative and repair works to a bridge*. Provide details of all works including:

- Number and description of roosts to be retained, with an explanation of how they will be retained. Confirm dimensions to be retained.

Roosts being retained:
Four confirmed building roosts and six confirmed tree roosts within 50m of the Order Limits would be retained.

No disturbance or temporary damage to any currently confirmed bat roosts would occur.

Construction working hours:
Working hours (as set out in the DCO) would be 07:00 to 19:00 Monday to Fridays and 08:00 – 17:00 Weekends and Bank Holidays. Exception to this would be drilling operations associated with the trenchless installation of underground cables which could be specifically programmed to run over night (see comment below). No bat roosts were identified in these areas. Additional exceptions would also include:

- the installation and removal of conductors, pilot wires and associated protective netting across highways, railway lines or watercourses;
- the completion of operations commenced during the core working hours which cannot safely be stopped;
- any highway works requested by the highway authority to be undertaken on a Saturday or a Sunday or outside the core working hours;
- security monitoring and surveys;
- the testing or commissioning of any electrical plant installed as part of the authorised development; and
- the completion of works delayed or held up by severe weather conditions which disrupted or interrupted normal construction activities.

Construction lighting:
Temporary construction stage lighting would be provided in essential areas only. Artificial lighting required within bat activity periods would be directional and designed to ensure no light spill over 0.5 Lux on to any identified commuting and foraging areas or roosting habitats. This is detailed in the Code of Construction Practice (CoCP) measure GG10 and GG20.

Construction noise:
Standard good practice measures for noise will be used during construction (CoCP measure NV01) i.e. where possible, placing plant / machinery away from noise sensitive receptors i.e. the bat maternity roost at Nussteads Farm (BB5b). No cutting of concrete or metal (as produces high frequency noise) within 50m of the maternity roost during the maternity season (May to August) would be required. All existing pylons identified for removal lie over 50m from confirmed roosts and the maternity roost is located over 50m from the Order Limits where underground cable installation is proposed.

170_T003 potentially supports a bat roost (unable to safely inspect) and is located within 50m of an existing pylon that requires removal. This tree would be retained and the short-term nature of the works using the best practical means to reduce noise (e.g. quieter steel cutter than standard) and use of acoustic enclosures would avoid any disturbance impact.

The bat roosts in buildings would be shielded from noise by the structures surrounding their roosts during the daytime periods when construction works would take place. Whilst it is difficult to be specific in relation to the level of protection that the structures will provide given variance in materials and condition, a safe assumption would be that the structure around the bat roosts would provide in the region of 20dB noise attenuation. If any roosts are within residential structures which are in good condition, then in theory protection levels up to around 40dB might be expected according to the guidance provided in BS8233:2014 Guidance on Sound Insulation and Noise Reduction in Buildings.

Potential disturbance to the day, transitional and night roosts is less significant, and it is expected that given the nature of the rural environment, that these bats would be able to find alternative roost opportunities should they need to during times of particularly disturbing construction activities. It is expected that these populations will be habituated to some level of agricultural activities and farm machinery.

Construction vibration:
Works may result in ground borne vibration, particularly where piling may be required i.e. CSE compounds and new pylon foundation installation. However, no bat roosts have been identified within 50m of these locations.

- Number of access/entrance points to be retained and how this will be achieved. If enhancements to the roosts will be provided, such as through crevice provision, please detail.

None

- Mitigation for any other impacts e.g. new lighting at the site.

CSE compounds
Permanent operational lighting is not required at the CSE compounds. There would be individual passive infrared sensor (PIR) motion activated security lighting at the CSE compounds but this would be directional to avoid spill into any adjacent habitats. As the lighting would only be on temporarily and for short periods of time when motion was detected, no impacts due to lighting is likely.

GSP substation
The GSP substation would require low lux level light-emitting diode (LED) type luminaires with directable light output to reduce light spill. There would also be individual PIR motion activated lighting at the access gates to facilitate safe entry at night. Although no bat roosts are known to be located close to proposed GSP substation, the location of the substation between Waldegrave Wood and Butler's Wood means bats are likely to be using the habitats surrounding the GSP substation for foraging, commuting as well as potential roosting in the future. However, operational lighting would only be used when staff were present and lighting is needed or by the motion activated lighting means impact on bat activity is unlikely.

E3.2 Modification of existing roost(s) - *Works may include, for example, reduction in roof void height, change of tiles and roof lining (stating the type of membrane that will be used), alteration of access point through replacement of soffits etc.* Please provide the following:

- Dimension details of modified roosts: clearly state what the original roost dimensions were and what the dimensions of the modified roost will be.

N/A

- Dimension details of modified access points: clearly state how the access points are being modified.

N/A

- Details of any other modifications to be made to roosts.

N/A

- Mitigation for any impacts of lighting on the modified roost/s if appropriate.

N/A

E3.3 New roost creation (including bat houses, cotes and bat boxes etc).

Note – creation of compensation for high impact cases (e.g. loss of a maternity roost) must be protected in the long term. Any bat boxes or roost structures that are part of a licence proposal which do not show signs of bats must be retained for a minimum of 5 years from date of completion of the development/works. Typically this will be around 5 years for low conservation status roost compensation (e.g. bat boxes) and longer for other significant roosts (e.g. bat houses, lofts etc). The exact time period will be specified in any licence issued. For high conservation status roost loss, the compensation roost/s must still be protected in the long term by another means (such as a s106 agreement), which is particularly important if the structure is likely to change ownership.

E3.3a Please complete the table below for the species and roost types listed. For all other species and roost types please provide information under **E3.3b**.

Species & Roost type for which new roost creation will be provided Select 'yes' for those species impacted or 'N/A' if not applicable to this application	**New roost creation** Compensation should be in line with the *Bat Mitigation Guidelines*. Where compensation is being provided, there should be at least **one compensation feature, suitable for the species concerned, per roost and per species to be impacted**, OR If a proposal impacts more than one bat species and / or roost type then cumulative impacts must be considered when designing the compensation; this should always be in line with the species and / or roost type which will be subject to the greatest impact and ensure that the requirements of all species impacted are met.		
	Compensation Feature	**Quantity**	**Location of Compensation Feature** (as shown on Figure E3)
Common pipistrelle ☒ Yes ☐ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☒ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None	No confirmed loss of common pipistrelle roost. Trees that would be lost with potential for this species include potential for maternity and hibernation roosts (where inspection not possible) 3 maternity suitable boxes per tree maternity roost lost 1 hibernation box per tree hibernation roost lost	☐ In same building ☐ In other existing building on site ☐ In new building ☒ Other (specify): Trees (indicative location shown in Figure E3)
Soprano pipistrelle ☒ Yes ☐ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None	No confirmed loss of soprano pipistrelle roost. Trees that would be lost with potential for this species include potential for maternity and hibernation roosts (where	☐ In same building ☐ In other existing building on site ☐ In new building ☒ Other (specify): Trees (indicative location shown in Figure E3)

		inspection not possible) 3 maternity suitable boxes per tree maternity roost 1 hibernation box per tree hibernation roost lost	
Whiskered ☐ Yes ☒ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Brandt's ☐ Yes ☒ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☐ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Daubenton's ☒ Yes ☐ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☒ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None	No confirmed loss of Daubenton's bat roost. Trees that would be lost with potential for this species include potential for maternity and hibernation roosts (where inspection not possible) 3 maternity suitable boxes per tree maternity roost 1 hibernation box per tree hibernation roost lost	☐ In same building ☐ In other existing building on site ☐ In new building ☒ Other (specify): Trees (indicative location shown in Figure E3)
Natterer's ☒ Yes ☐ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☒ Bat box ☐ Integrated bat box/ bat brick/ bat tube ☐ Bat tile (including ridge tile) ☐ Other (specify): ☐ None	No confirmed loss of Natterer's bat roost. Trees that would be lost with potential for this species include potential	☐ In same building ☐ In other existing building on site ☐ In new building ☒ Other (specify): Trees (indicative location shown in Figure E3)

		for maternity and hibernation roosts (where inspection not possible) 3 maternity suitable boxes per tree maternity roost 1 hibernation box per tree hibernation roost lost	
Brown long-eared ☒ Yes ☐ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	Note: boxes for this species will only be acceptable in certain circumstances, where this is justified on an ecological basis ☒ Bat box, justification ☐ Other (specify): ☐ None	No confirmed loss of brown long-eared bat roost. Trees that would be lost with potential for this species include potential for maternity and hibernation roosts (where inspection not possible) 3 maternity suitable boxes per tree maternity roost 1 hibernation box per tree hibernation roost lost	☐ In same building ☐ In other existing building on site ☐ In new building ☒ Other (specify): Trees (indicative location shown in Figure E3)
Serotine ☐ Yes ☒ N/A *Day roost* *Night roost* *Feeding* *Transitional/Occasional*	Note: bat boxes are not suitable for this species. Compensation should replicate, as closely as possible, the existing roost: ☐ Bat tile ☐ Bat brick ☐ Other (specify):		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):
Lesser Horseshoe ☐ Yes ☒ N/A *Day roost* *Transitional/Occasional*	A proportionate number of bat features suitable for the species. The provision of one feature, suitable for the species concerned (eg void) per roost to be impacted will be considered appropriate: Specify:		☐ In same building ☐ In other existing building on site ☐ In new building ☐ Other (specify):

E3.3b For all species and roost types not covered in the above table please provide the following:

- New roost dimension details or features (to include bat tiles/boxes as applicable).

Species & Roost Type for which new roost creation will be provided	New Roost Creation		
	Compensation Feature	**Quantity**	**Location of Compensation Feature (as shown on Figure E3)**
Noctule	☒ Bat box ☐ Integrated bat box/bat brick/bat tube ☐ Other (specify): ☐ None	No confirmed loss of noctule roost. Trees that would be lost with potential for this species include potential for maternity and hibernation roosts (where inspection not possible) 3 maternity suitable boxes per tree maternity roost 1 hibernation box per tree hibernation roost lost	☐ In same building ☐ In other building on site ☐ In new building ☒ Other (specify): Trees (indicaitive location shown in Figure E3)
Leisler's bat	☒ Bat box ☐ Integrated bat box/bat brick/bat tube ☐ Other (specify): ☐ None	No confirmed loss of noctule roost. Trees that would be lost with potential for this species include potential for maternity and hibernation roosts (where inspection not possible). 3 maternity suitable boxes per tree maternity roost 1 hibernation box per tree hibernation roost lost	☐ In same building ☐ In other building on site ☐ In new building ☒ Other (specify): Trees (indicative location shown in Figure E3)

Approach to provision of bat boxes:
A precautionary approach would be implemented where trees that have been identified as having bat roosting potential, were unable to be safely surveyed and would likely be felled. The assumption is that the roost type of highest conservation value possible for that tree (using the BTHK and bat activity data) would be mitigated for. This, in the main would mean that both a hibernation box and up to three maternity bat boxes would be deployed for each tree. With seven trees with bat roosting potential unable to be inspected, in the absence of pre-construction survey, 21 maternity bat boxes would be deployed and seven hibernation bat boxes would be deployed. Indicative locations for the bat boxes are shown on Figure E3.

General Approach to PRF loss where field survey did not identify evidence of roosting bats:
Bat boxes will be installed within the Order Limits within identified areas of retained woodland. In addition to the bat boxes proposed for the likely loss of the roosts there would also be bat boxes installed to enhance roosting opportunities within the local area and mitigate the loss of trees with suitable roosting features. The breakdown will be as proposed:

- Two artificial bat boxes would be deployed on retained trees to every one tree with high or moderate bat roosting potential felled.
- Where high potential roosting features are present, the project would seek to soft fell these and attach limbs to retained trees where practicable.

- Access points and size of access points.

N/A

- Location details (including an 8-figure grid reference for bat houses or bat lofts relating to the structure. 8-figure grid references are <u>not</u> required for positions of individual boxes, tiles etc).

N/A

- Aspect. Explain how the internal conditions of the roost will be created.

N/A

- Details of the materials to be used e.g. timber, sarking, felt etc.

N/A

- Justification for any variation from the original roost and/or deviations from recommendations in the Bat Mitigation Guidelines. (*Diagrams of widely available standard bat box designs are not required; just refer to bat box name and reference number, e.g. Schwegler 1FF*).

N/A

- Mitigation for any impacts of lighting if appropriate.

N/A

- Structures for access for monitoring / maintenance purposes (if applicable)

Bat boxes installed will be monitored and maintained with replacements if they are no longer fit for purpose, on an annual basis for the duration of the five year post-construction maintenance period.

E3.4 Other habitat re-instatement or creation (e.g. retention of existing flight lines, retention or creation of appropriate vegetation around roost entrances where applicable) – please include details of:

- Habitat replacement (following works resulting in temporary impacts) or creation not covered by sections E2 to E3 such as hedgerow/woodland planting or enhancement. State the length of hedgerow planting and areas (ha) of other planting to be provided such as woodland and anticipated establishment period etc.

The details below only cover mitigation planting. Additional habitats would be enhanced/created within the Order Limits but these are proposed as enhancements/Biodiversity Net Gain.

Dead hedging during (re-)establishment of hedgerows: approximately 1440m – where 60m wide lengths of each hedgerow would require removal.

Hedgerow re-instatement: approximately 9717m

Woodland reinstatement: 0.19ha

Hedgerow enhancement/gap-filling: approximately 1657m

Coppiced regrowth: approximately 4.6ha

New woodland planting: approximately 17.5ha

Natural regeneration of woodland:1.9ha

In addition, woodland gaps and hedgerows beneath the existing 132kV and 400kV overhead lines that would be removed would be left to naturally regenerate to full height hedgerow or scrub habitat.

- Creation of flight lines/routes of connectivity.

During construction, dead hedges/ “ready hedges” would be used to connect severed hedgerows on the underground cable sections of the project to maintain connectivity where 60m wide lengths of hedgerow require removal (See Figure E3 for locations). They will be used between dusk and dawn during the bat active season until reinstatement hedgerow planting is installed and would be left in place until established.

- Foraging area enhancements, etc

In addition to the habitat detailed above, the Order Limits would also include additional environmental gain areas comprising additional woodland planting and management of existing and retained features.

- Mitigation for any impacts of lighting if appropriate.

No additional mitigation over and above the good practice measures described above are necessary.

E3.5 Wider biodiversity gains:

Please indicate if enhancements, over and above what is necessary to mitigate the impact of the activity

of the licence proposal, are being provided. Please indicate if enhancements are included to satisfy the requirement of a planning permission, and if so state the relevant planning condition, or other consents in your response below. Please also state if an applicant wishes to provide more than is typically required to mitigate for the impacts. Enter N/A if this is not applicable to your application.

Note: *Any licence granted will only cover mitigation and compensation required to fulfill licensing requirements, but will acknowledge additional biodiversity enhancements*.

National Grid has committed to delivering at least a 10% environmental net gain. Wider biodiversity gains, not detailed here, will be detailed in the Environmental Gain Report.

The project includes planting to help screen and filter views of the project which will result in a net increase in good quality bat habitat and will strengthen connectivity between reinstated and existing woodland and hedgerows, although this will not be realised as a resource for foraging and commuting bats until the operational phase of the project and once the landscaping is sufficiently established.

Important Advice:
Scaled maps/plans of mitigation/compensation must be provided as separate maps/figures (also ***see section I "Map checklist" at the end of this document)***:

- **Figure E2** if non-standard capture and exclusion apparatus is proposed please include diagrams/photographs.
- **Figure E3** to show specifications for mitigation / compensation to be provided and annotate where it will be provided. Should the scheme be large or complicated it may be necessary to submit more than one figure.

NOTE: It must be possible to compare these with the survey results plan (**Figure C6**) and 'Impacts' Figure (**D)**.

E4 Post-development site safeguard: Further guidance and explanation on post-development monitoring requirements are included within our 'How to get a licence' document http://www.naturalengland.org.uk/Images/wml-g12_tcm6-4116.pdf. Also see Section 8.7 of the Bat Mitigation Guidelines.

E4.1 Habitat/site management and maintenance: Is any specific post-development habitat management and site maintenance planned? If 'No; state 'N/A'. If 'Yes' include the following:

- The period (years and months) for which habitat management and maintenance will take place. Ensure that this is consistent with the post development works detailed in section **E5b** of the **Work Schedule document, WML-A13-a-E5a&b**.

Hedgerow management
Inspections would be undertaken during the five year maintenance (post construction) contract to identify any significant deterioration in hedgerow health as per the Landscape Ecological Management Plan (LEMP). Where required, the following action would be taken in response:

- replanting of dead/dying hedgerows to provide connectivity (i.e. no gaps) and desired species-rich composition; and
- Weed control, re-firming of stakes and shelters, formative pruning, fertiliser application.

Woodland management
Inspections would be undertaken during the five year maintenance (post construction) contract to identify any significant deterioration in tree health as per the LEMP. Where required, the following action would be taken in response:

- Replanting of dead/dying trees to enable successful establishment.
- Weed control, re-firming of stakes and shelters, formative pruning, fertiliser application.

Thinning and coppicing of plants as required, to promote bushy, dense growth.

- Details of what will be undertaken in terms of site maintenance required to ensure long-term security of the affected population (e.g. maintain, repair or reinstate access points; maintain and repair heaters and /or data loggers; maintain, repair or restore bat feature / bat loft in good condition; repair or replace inspection hatches; management and maintenance of lighting regime, or bat boxes etc).

Maintenance of bat boxes would be carried out by the named ecologist or an accredited agent on an annual basis after deployment and continue until Year 2 post construction. Provided bats were absent at the time of the maintenance check, maintenance would involve cleaning out any bat droppings, feeding remains or other debris and making sure the fitting in the tree is secure. Fittings would be replaced where required to ensure the boxes

were securely mounted. Replacement boxes would be provided by the National Grid as necessary.

- Details of what will be undertaken in terms of habitat management (e.g. planting cover around roost structure, hedgerow management regime, checking establishment of habitat creation; reduction of shade around roosts, woodland management to maintain species and structural diversity etc). Ensure this relates to the relevant map.

New planting will be maintained in accordance with the LEMP for the initial five-year period following completion of construction. Monitoring of new habitats will occur during the first five years post construction – details above.

Note – for phased or multi-plot developments a separate habitat management and maintenance plan is required, which must be submitted with the master plan: see guidance on phased developments.

Important Advice:
Please include **Figure E4** as a separate figure to show which structures and habitats will be managed, maintained and monitored post development as part of your proposal – also *see section I "Map checklist" at the end of this document)*.

E4.2 **Population monitoring, roost usage etc**: This should be in line with the monitoring requirements detailed in the Bat Mitigation Guidelines section 8.7 and Figure 4.

E4.2a Please complete the table below for the species and roost types listed. For all other species and roost types please provide information under E4.2b.

Species	**Roost type**	**Post-development monitoring requirement**
Common pipistrelle **Soprano pipistrelle** **Whiskered** **Brandts** **Daubenton's** **Natterer's** **Brown long-eared**	*Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☐ None. There is no post-development requirement for proposals affecting bat roosts supporting up to any 3 species indicated, of the roost types listed, where they are used by low numbers of each species. ☐ A single presence / absence survey at an appropriate time of year is to be undertaken. This should not take place in the first year following completion of development. Timing (year): ☒ Other (specify): Bat box checks as specified above
Serotine	*Day roost* *Night roost* *Feeding* *Transitional/Occasional*	☐ A single presence / absence survey at an appropriate time of year is to be undertaken. This should not take place in the first year following completion of development. Timing (year): ☐ Other (specify):
Lesser Horseshoe	*Day roost* *Transitional/Occasional*	☐ A single presence or absence survey at an appropriate time of year to be undertaken in year 2 post development plus a check of the condition and suitability of the roost. ☐ Other (specify):

E4.2b For all species and roost types not covered in the above table please include details of:

- Timing – state the years and months post development monitoring or other will be undertaken. Ensure that is consistent with the post development works detailed in section **E5b** of the **Work Schedule document WML-A13-a-E5a&b**.

Bat boxes will be monitored annually during construction and then in year 2 of the five year maintenance contract (as indicated in the table above).

- The type of monitoring which will be undertaken – include survey methods and equipment to be used. If it is expected any bats are to be taken or disturbed during this period please state anticipated numbers per species against each licensable activity.

Bat Boxes
Daytime check of bat boxes – ladder, torch, cloth to stuff into hole before opening, brush for cleaning.

- Specify which compensation/mitigation measures will be subject to monitoring (as referenced on Figure E4).

All bat boxes.

Please note that it will be a requirement of the licence to undertake remedial action should monitoring identify that further management/maintenance is required of any compensation/mitigation provided, to ensure that mitigation/compensation measures are working effectively and are fit for purpose.

Important advice: Please always consider whether any *post development* monitoring effort should be staggered over alternate years in cases where use of the compensation measures may not occur in the same year of provision.

E4.3 Mechanism for ensuring safeguard of mitigation/compensation and post-development management, maintenance and monitoring works:
Please explain what mechanism is in place to ensure safeguard of mitigation/compensation provisions (e.g. Restrictive Covenant, clause to relinquish future development rights in S106 agreement, NERC Act agreement, explicit recognition of site in local planning documents, designation as County Wildlife Site or similar.) The need for this, and the type of mechanism, will vary with the scheme and impact. For substantial impact schemes (e.g. destruction of a significant maternity roost, or important hibernation site), some mechanism is always required. If you offer no specific mechanism, explain how you believe the population will be free of threats as far as can be reasonably determined (**the expectation of the granting of a licence should not be used for this purpose**).

All mitigation / compensation provisions will be secured through the DCO.

Explain how all post-development works (management, maintenance (including remedial action) and monitoring, as appropriate) will be ensured? Include a commitment that the monitoring, habitat management and maintenance work will be undertaken. Mechanism/s for ensuring delivery must be in place before applying for a licence (also see Section F).

National Grid or its appointed contractors will be responsible for all management, maintenance and monitoring of essential mitigation provided as part of the project for five years post construction at which point the maintenance of the planting would be handed back to the landowner, unless on land that National Grid has acquired for the permanent works. Bat boxes will be left in situ on completion of the five year post construction phase.

E5 Timetable of works: Please complete the **work schedule document WML-A13-a-E5a&b found on the 'bat' application form web page and append to your application pack.**

Important Advice: *Please note that from end of March 2014 a separate work schedule is a mandatory requirement to support a new bat licence application when using this template.*

F Declarations

If the mitigation/compensation area/s is/are not owned by the applicant, you must have consent from the relevant land owner(s). You must have also secured details of how any measures to maintain the population in the long term will be achieved (e.g. a legal agreement).

F1 Declaration Statement(s) – You must include the following declarations within your Method Statement and include the appropriate answer (Yes/No/Not applicable):

F1.1 **Re: section E1 -** I confirm that relevant landowner consent/s has/have been granted to accept bats into roosts or access into roosts on land outside the applicant's ownership:

Select

F2.2 **Re: section E2 -** I confirm that landownership consent/s has/have been granted to allow the creation of the proposed compensation on land outside the applicant's ownership

Select

F2.3 **Re: section E3** - I confirm that consent/s has/have been granted by the relevant landowner/s for monitoring, management and maintenance purposes on land outside the applicant's ownership

Select

Comments if applicable:

Important Advice:

Unsecured consents statement:

If you have been unable to secure consents for any of the three declarations please explain why and detail any plans you have in place to obtain the consent(s) or provide details of any right(s) or agreement(s) that will enable the lawful implementation of the proposed mitigation, compensation and monitoring. Failure to provide the appropriate landowner consents means that the Method Statement is unlikely to meet the requirements for the FCS test to be met. It is therefore in your interest to ensure that the appropriate consents have been secured *before* applying for a licence.

G References: List any references cited, and include credits for source information.

H Annexes (supporting documents please append to your application pack)

H1 Pre-existing survey reports;

H2 Raw survey data.

I Check list of figures to be submitted with each Bat Method Statement

With your Method Statement and supporting documents please submit the following maps/figures – see table below. Note that some can be included within the Method Statement itself (if preferred) and others must be submitted individually (i.e. separate documents)**.** Maps/Figures must include the title, site name as referenced on your application form, date and figure reference. If a grid reference is more applicable (e.g. a bat house is being provided please included this). Include a scale bar (appropriate to the situation e.g. 100m on site maps, 1km on location maps) and direction of North etc.

Additional maps, photographs or diagrams should be included where necessary to adequately explain the scheme.

Figure reference	Mandatory as will be included in the annexed licence, if applicable	Mandatory for assessment purpose only, but will not be included in the annexed licence	What it must show (also see details above on site reference, dating and naming).
Figure B2.1	-	Yes, if the application is part of a phased or multi-plot development	**Master plan overview-** note – this is not the same as a master plan document, for which you should follow the guidance as stated in section B2.1.
Figure B2.2	-	Yes, if applicable	**Locations of other nearby bat licensed sites, or sites which will be impacted on by future development.**
Figure C5a	-	Yes	**Location map** at an appropriate scale for the application (often 1:50,000 or 1:25,000)
Figure C5b	-	Yes	**Survey area** showing all buildings, structures and habitats that are within the survey area and distinguishing those that were surveyed and those that were not. Indicate where surveyors were located for each of the surveys and their respective field of view. Aerial photographs should be provided where possible (ensure you have permission to use copy

			righted maps). If automated detectors and/or transect routes were used, ensure that these are indicated (as appropriate).
Figure C6	-	Yes	**Survey results -** provide clear, annotated and cross-referenced maps/plans/photographs to show the survey results (access points, location of roosts, flight lines, results of activity surveys where DNA samples were taken etc). Ensure the Figure is at a suitable scale to show the results. If presenting multiple survey results on a single Figure, ensure the results are clearly differentiated.
Figure D	**Yes**	**-**	**Impacts plan –** map/figure which must show all structures or habitats (clearly referenced) that will be disturbed, damaged or destroyed, detailing where the roosts and access points are.
Figure E2	**Yes** – but only if applicable to the application	**-**	**Non-standard capture and exclusion apparatus.** If these are proposed please include diagrams/photographs.
Figure E3	**Yes**	**-**	**Specifications for mitigation / compensation** (including all dimensions for bat lofts/houses/stand-alone structures and materials to be used etc and 8-figure grid reference). Mitigation / compensation (must show all habitat creation, restoration, boxes). It may be necessary to submit more than 1 figure if the proposal is large or complicated.
Figure E4	**Yes** – when monitoring and maintenance will be included in the licence	**-**	**Monitoring, management and maintenance map.** Please indicate the specific structures and habitat that are to be managed, maintained and monitored as part of this licence proposal. Ensure that they are correctly referenced and are consistent with other parts of the Method Statement and figures.

Definitions of roost types to be included in the application (further detail can also be found in the Bat Mitigation Guidelines and the BCT's "Bat Surveys Good Practice Guidelines"):

a. **Day roost**: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

b. **Night roost**: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

c. **Feeding roost**: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

d. **Transitional / occasional roost**: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

e. **Swarming site**: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites

f. **Mating sites**: sites where mating takes place from later summer and can continue through winter.

g. **Maternity roost**: where female bats give birth and raise their young to independence.

h. **Hibernation roost**: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as '**hibernation confirmed**'.

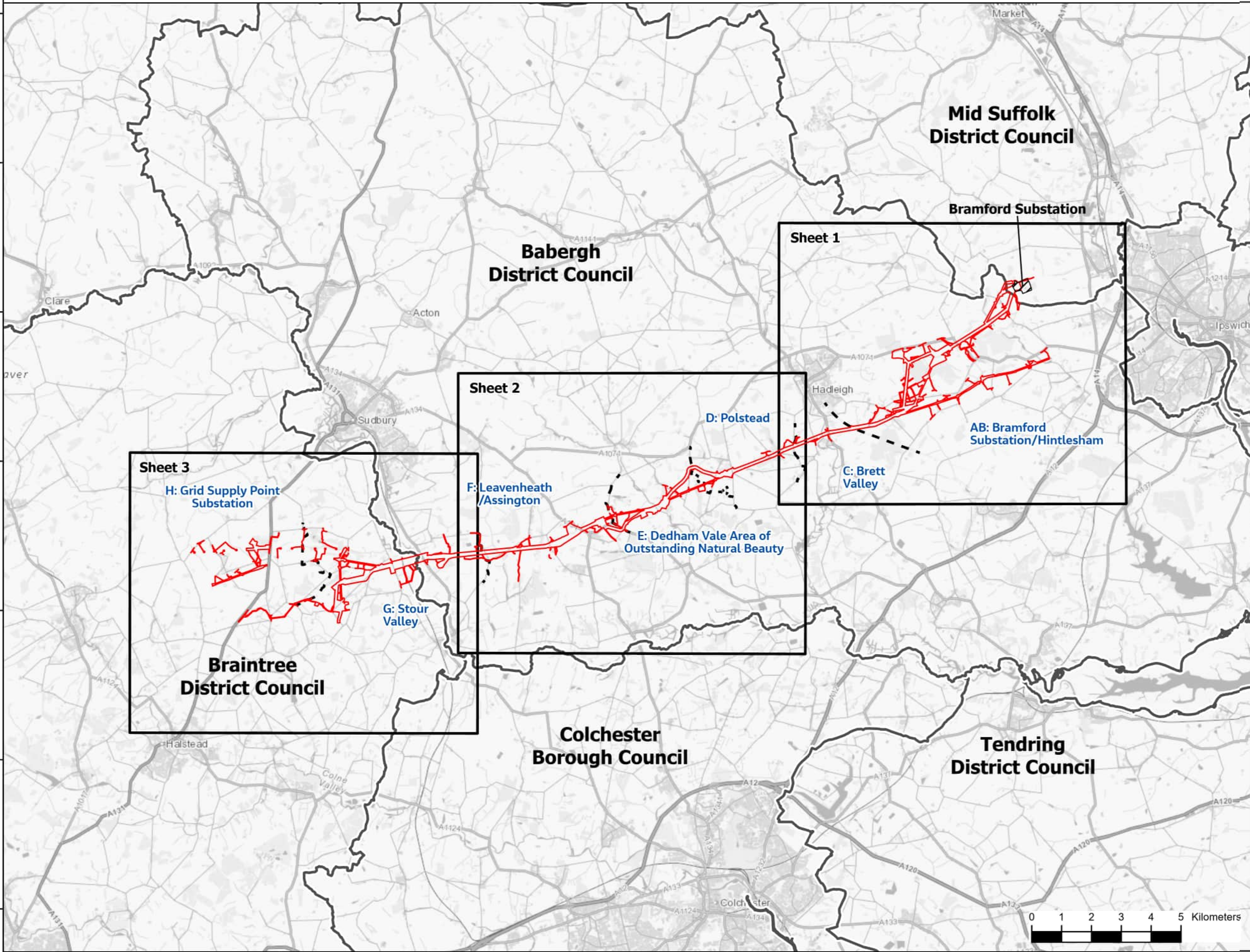
i. **Satellite roost**: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

j. **Other** – please explain what the roost type is if not one of the above (we recognise that roost types are interchangable and not always easy to classify according to the nuances of certain species).

k. An **'alternative roost'** shall include: a purposely installed bat box; an existing roost which will not be impacted by the works; or other new/enhanced roosting opportunities. Any alternative roost must be suitable for the species, within or close to the existing roost and free from additional disturbance or development pressure.

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION OF OTHER NEARBY BAT LICENSED SITES - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4



A	03/2023	Rev A for DCO Application	PM	LG	CW
ISSUE	DATE	REMARKS	DRWN	CHKD	APPD

NG Investment No. ETX/01142

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure B2.2 Location of Other Nearby Bat Licensed Sites - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigB2_2_KeyPlan_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0022

SCALE: 1:125000

SHEET NO. 1

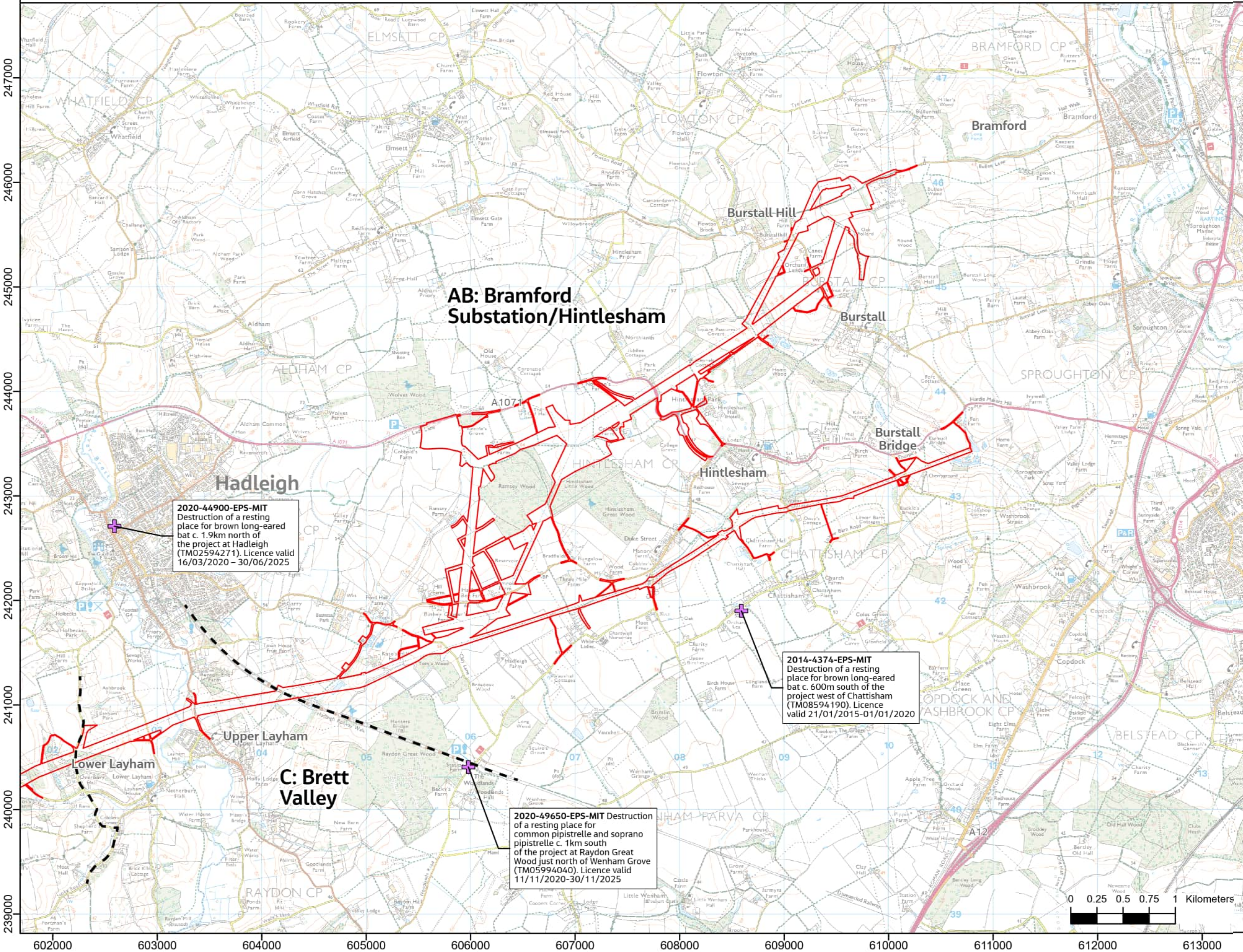
NO. OF SHEETS 1

ISSUE: A

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION OF OTHER NEARBY BAT LICENSED SITES
REGULATION 5(2)(a)
SHEET 1 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Section boundaries
Order Limits
Nearby bat licensed site


AB: Bramford Substation/Hintlesham
C: Brett Valley
Hadleigh
Bramford
Burstall Hill
Burstall
Burstall Bridge
Hintlesham
Upper Layham
Lower Layham
2020-44900-EPS-MIT
Destruction of a resting place for brown long-eared bat c. 1.9km north of the project at Hadleigh (TM02594271). Licence valid 16/03/2020 – 30/06/2025
2014-4374-EPS-MIT
Destruction of a resting place for brown long-eared bat c. 600m south of the project west of Chattisham (TM08594190). Licence valid 21/01/2015-01/01/2020
2020-49650-EPS-MIT Destruction of a resting place for common pipistrelle and soprano pipistrelle c. 1km south of the project at Raydon Great Wood just north of Wenham Grove (TM05994040). Licence valid 11/11/2020-30/11/2025
0 0.25 0.5 0.75 1 Kilometers
602000
603000
604000
605000
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607000
608000
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610000
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NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure B2.2 Location of Other Nearby Bat Licensed Sites

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge — GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigB2_2_Rev01 — A3

NG DRAWING No. BT-JAC-020631-500-0022 — SHEET NO. 1 — NO. OF SHEETS 3 — ISSUE: A

SCALE: 1:35000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION OF OTHER NEARBY BAT LICENSED SITES
REGULATION 5(2)(a)
SHEET 2 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Nearby bat licensed site

D: Polstead

F: Leavenheath/Assington

E: Dedham Vale Area of Outstanding Natural Beauty

Assington
Leavenheath
Polstead
Polstead Heath
Lower La
Newton
Boxford
Whitestreet Green
Stoke-by-Nayland
Nayland
A134
A1087
NEWTON CP
BOXFORD CP
POLSTEAD CP
ASSINGTON CP
LEAVENHEATH CP
STOKE-BY-NAYLAND CP
SHELLEY CP
BURES ST MARY CP

242000
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237000
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234000

591000 592000 593000 594000 595000 596000 597000 598000 599000 600000 601000 602000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure B2.2 Location of Other Nearby Bat Licensed Sites

CIRCUIT / SITE		GIS
Bramford – Pelham & Bramford – Braintree – Bulls Lodge		
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigB2_2_Rev01		A3
NG DRAWING No. BT-JAC-020631-500-0022	SHEET NO. 2 / NO. OF SHEETS 3	ISSUE: A
SCALE: 1:35000		

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION OF OTHER NEARBY BAT LICENSED SITES
REGULATION 5(2)(a)
SHEET 3 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Nearby bat licensed site

H: Grid Supply Point Substation

2018-37898-EPS-MIT Destruction of a resting place for brown long-eared bat, common pipistrelle, and soprano pipistrelle c. 800m north of the project at Little Henny (TL85963850). Licence valid 28/11/2018 - 31/03/2024

2017-31391-EPS-MIT Damage of a breeding site and destruction of a resting place for brown long-eared bat and common pipistrelles c. 200m south of the project at Twinstead (TL86203650). Licence valid 27/10/2017- 31/10/2027

2016-19650-EPS-MIT Destruction of, or damage to, a resting place for brown long-eared bat and common pipistrelle c. 500m south of the project at Lower Goulds Farm (TL87273419). Licence valid 05/02/2016 - 31/01/2021

G: Stour Valley

Sudbury
Workhouse Green
Twinstead
Lamarsh
Alphamstone
Wickham St Paul
A131
BULMER CP
MIDDLETON CP
LITTLE HENNY CP
GREAT HENNY CP
LITTLE CORNARD CP
WICKHAM ST PAUL CP
GESTINGTHORPE CP
GREAT MAPLESTEAD CP
LITTLE MAPLESTEAD CP
ALPHAMSTONE CP
PEBMARSH CP
HAMLET CP
BURES

0 0.25 0.5 0.75 1 Kilometers

240000 239000 238000 237000 236000 235000 234000 233000 232000

580000 581000 582000 583000 584000 585000 586000 587000 588000 589000 590000 591000

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure B2.2 Location of Other Nearby Bat Licensed Sites

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigB2_2_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0022

SHEET NO. 3

NO. OF SHEETS 3

ISSUE: A

SCALE: 1:35000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

Mid Suffolk District Council
Babergh District Council
Braintree District Council
Colchester Borough Council
Tendring District Council

Bramford Substation
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10
Sheet 11
Sheet 12
Sheet 13
Sheet 14

AB: Bramford Substation/Hintlesham
C: Brett Valley
D: Polstead
E: Dedham Vale Area of Outstanding Natural Beauty
F: Leavenheath /Assington
G: Stour Valley
H: Grid Supply Point Substation

Needham Market
Ipswich
Clare
Acton
Sudbury
Hadleigh
The Waver
Halstead
Colne Valley
Braintree
Coggeshall
Colchester

0 1 2 3 4 5 Kilometers

255000
250000
245000
240000
235000
230000
225000
575000
580000
585000
590000
595000
600000
605000
610000
615000

Norwich
Birmingham
Thetford
Cambridge
Ipswich
Stevenage
Colchester
London

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE:
Figure C5a
Location Plan - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5a_KeyPlan_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0023	1	1	A

SCALE: 1:125000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 1 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

AB: Bramford Substation/Hintlesham

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

246000
245000
608000
609000
610000
611000
0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0023

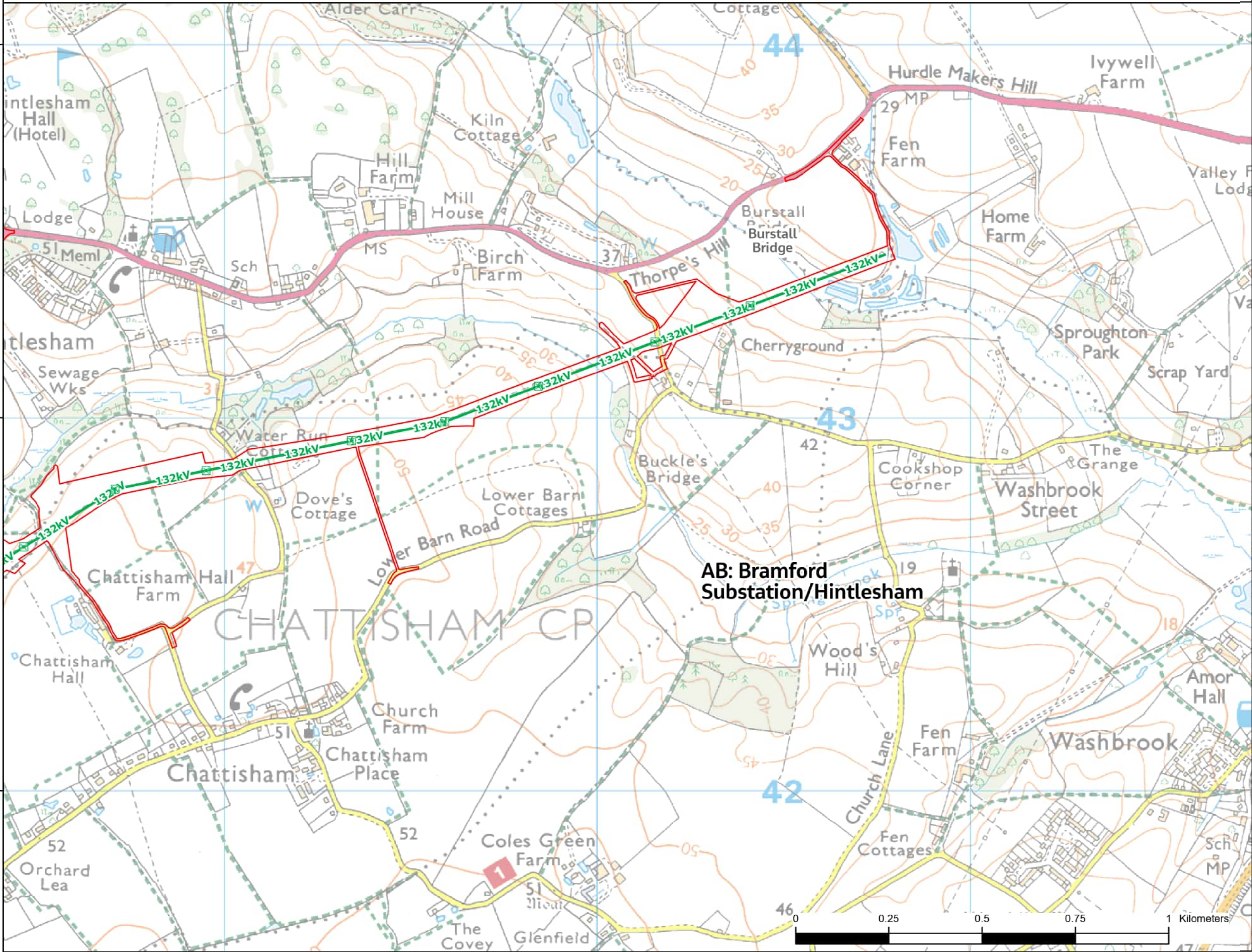
SCALE: 1:10000

SHEET NO. 1

NO. OF SHEETS 14

ISSUE: A

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 2 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
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- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge | GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01 | A3

NG DRAWING No. BT-JAC-020631-500-0023 | SHEET NO. 2 | NO. OF SHEETS 14 | ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 3 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

AB: Bramford Substation/Hintlesham

244000
243000
242000
606000
607000
608000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0023

SHEET NO. 3

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 4 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

N

242000
241000
604000
605000
606000

HADLEIGH CP
AB: Bramford Substation/Hintlesham
C: Brett Valley
French's Farm
Garry Farm
Business Park
Pond Hall Farm
Pond Hall
Hill Farm
Badleigh Bee Farm
Primrose Farm
Bushey Cooper's Farm
Reservoir
Bradfields
Town House Fruit Farm
Kate's Hill Farm
Tom's Wood
Clay Lane
Hadleigh Farm
Broadoak Wood
Long Wood
Squire's Grove
Hunters Bridge (FB)
Hadleigh Railway Walk
Upper Layham
Raydon Great Wood
Station Farm
Holly Lodge
400kV
132kV
04
05
06

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.: AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No.: BT-JAC-020631-500-0023

SHEET NO.: 4

NO. OF SHEETS: 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 5 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

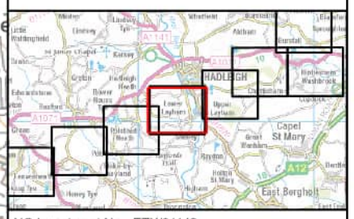
C: Brett Valley

D: Polstead

Holbecks
Holbecks Park
Football Gd
Priory Farm
Deaves Farm
Frogg Hall Farm
Hill Farm
Sewage Works
Benton End Farm
Ashbrook House
Layham Park
Resr
Rands Farm
Layham Grove
Valley Farm
LAYHAM CP
Overbury Hall
Lower Layham
Layham House
Layham Mill
Ford
Netherbury Hall
Windy Ridge
Lot's Farm
H Rams
Cobblers Corner
Water House Farm
Mason's Bridge
Pope's Green Farm
Sand & Gravel Pit
Shepherd's Farm
Wyncoll's Lane
Wyncoll's Farm
Moat Hall
Filter
01
02
03

0 0.25 0.5 0.75 1 Kilometers

241000
240000
601000
602000
603000



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5a_Rev01

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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 6 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

D: Polstead

E: Dedham Vale Area of Outstanding Natural Beauty

240000
239000
598000
599000
600000
601000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0023

SHEET NO. 6

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 7 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

F: Leavenheath/Assington

E: Dedham Vale Area of Outstanding Natural Beauty

239000
238000
595000
596000
597000
598000

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0023

SCALE: 1:10000

SHEET NO. 7

NO. OF SHEETS 14

ISSUE: A

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 8 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

F: Leavenheath/Assington

Assington
Severals Farm
Assington Thicks
Willow Tree Farm
Oatetch Grove
Wr Twr
Dillacks Farm
Assington House
Marshalls Green
Adam's Well
Bush Hill Grove
Shamrock Farm
The Gurdons
Pump Farm
Rose Green
Ash Ground
Hick's Farm
Till View
Leaven Hall
Leadenhall Wood
Woodthorpe's Farm
Woodbarn Farm
Mill Farm
Gedding Hall
Green's Farm
Leavenheath
High Road
Chestnut Grove
Moor's Farm
Brownsmiths Barn
Oaklands Farm
Leavenheath Green
Leavenheath Farm
Red Barn Farm
Little Roper's Farm
Wrights Plantation
Spouse's Grove
Kedge's Wood

132kV 400kV

0 0.25 0.5 0.75 1 Kilometers

592000 593000 594000 595000
238000 237000 236000

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
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- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01

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NG DRAWING No. BT-JAC-020631-500-0023

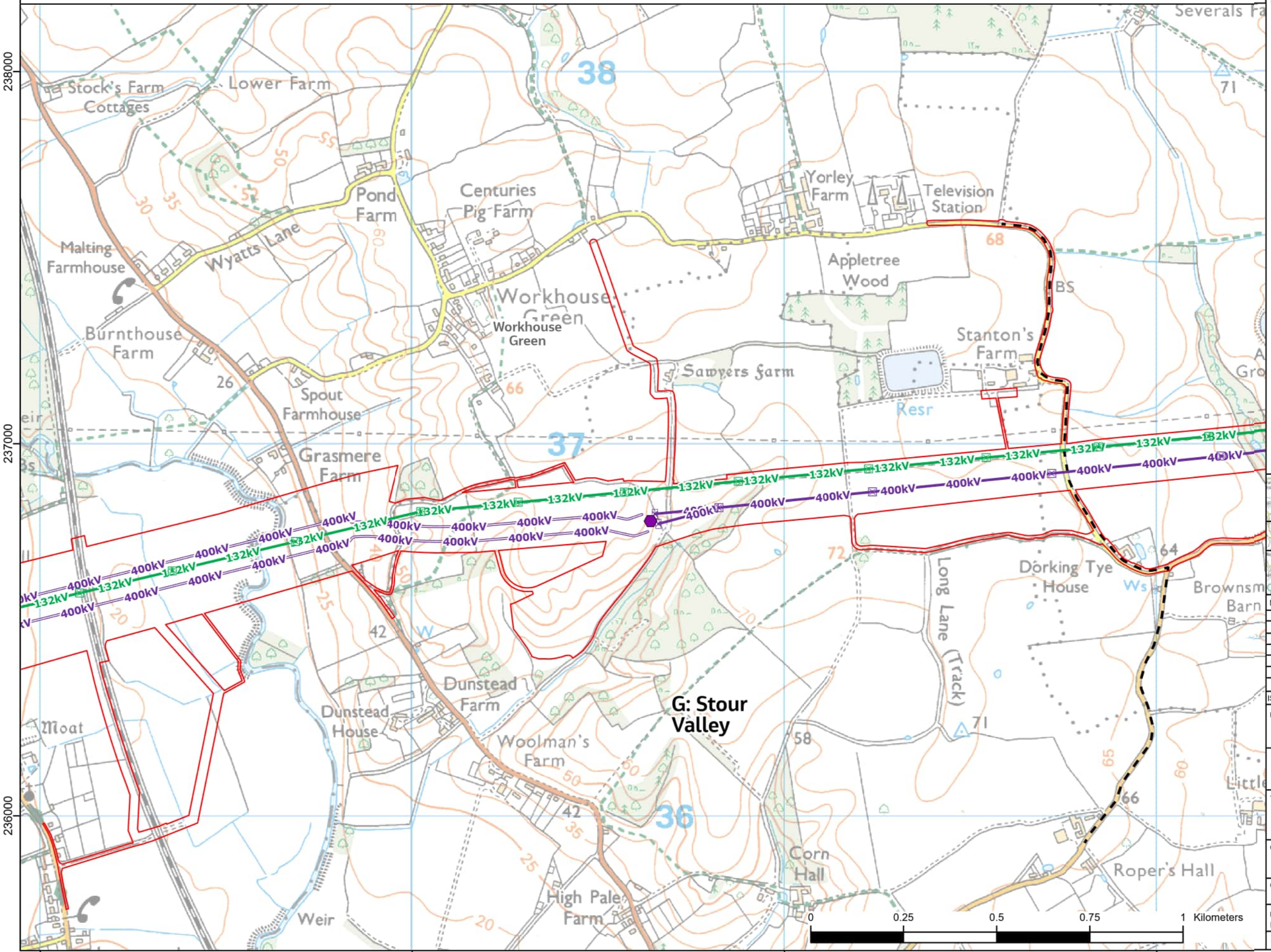
SHEET NO. 8

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 9 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
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- Proposed overhead line
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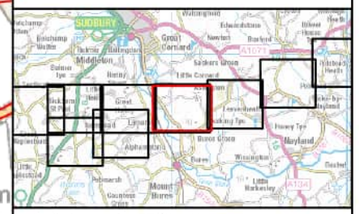
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5a_Rev01

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SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 10 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

G: Stour Valley

H: Grid Supply Point Substation

GREAT HENNY CP

238000
237000
236000
586000
587000
588000
589000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.: AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No.: BT-JAC-020631-500-0023

SCALE: 1:10000

SHEET NO.: 10

NO. OF SHEETS: 14

ISSUE: A

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 11 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

H: Grid Supply Point Substation

G: Stour Valley

236000
235000
586000
587000
588000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

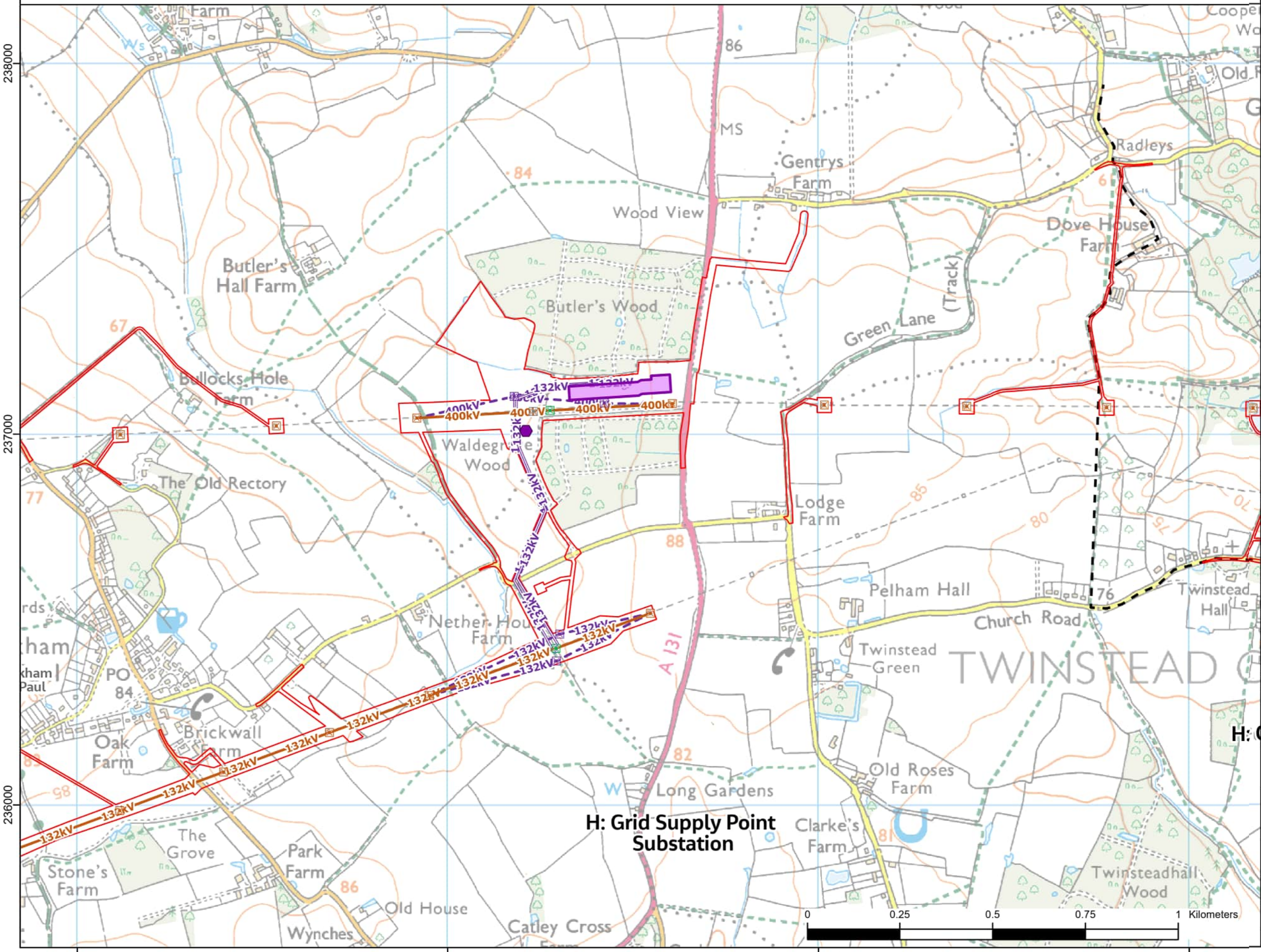
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0023	SHEET NO. 11	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 12 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
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NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge — GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01 — A3

NG DRAWING No. BT-JAC-020631-500-0023 — SHEET NO. 12 — NO. OF SHEETS 14 — ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 13 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
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- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction

H: Grid Supply Point Substation

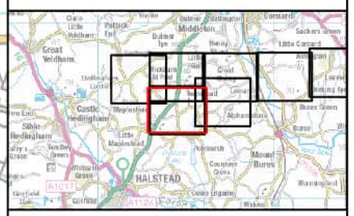
A131

132kV

Oak Farm
Brickwall Farm
The Grove
Stone's Farm
Park Farm
Old House
Wynches
Catley Cross Farm
Catley Cross
Stonehouse Farm
Long Gardens
Old Roses Farm
Clarke's Farm
Twinsteadhall Wood
Beech Cottage
Upper Links
Lower Links
Magnolia House
Cripple Corner
Scott's Farm
Airstrip
Collin's Farm
Dagworth Manor
Gibb's Farm
Hawkin's Farm
Dowman's Chase
Gallant's Farm
Mosses Farm
Dagworth Wood
The Manse
Seven Acre Wood
Works
Barn House
Le Mote Farm
Oak Farm
Birchleys
Clay Hill

236000
235000
234000
583000
584000
585000
586000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0023

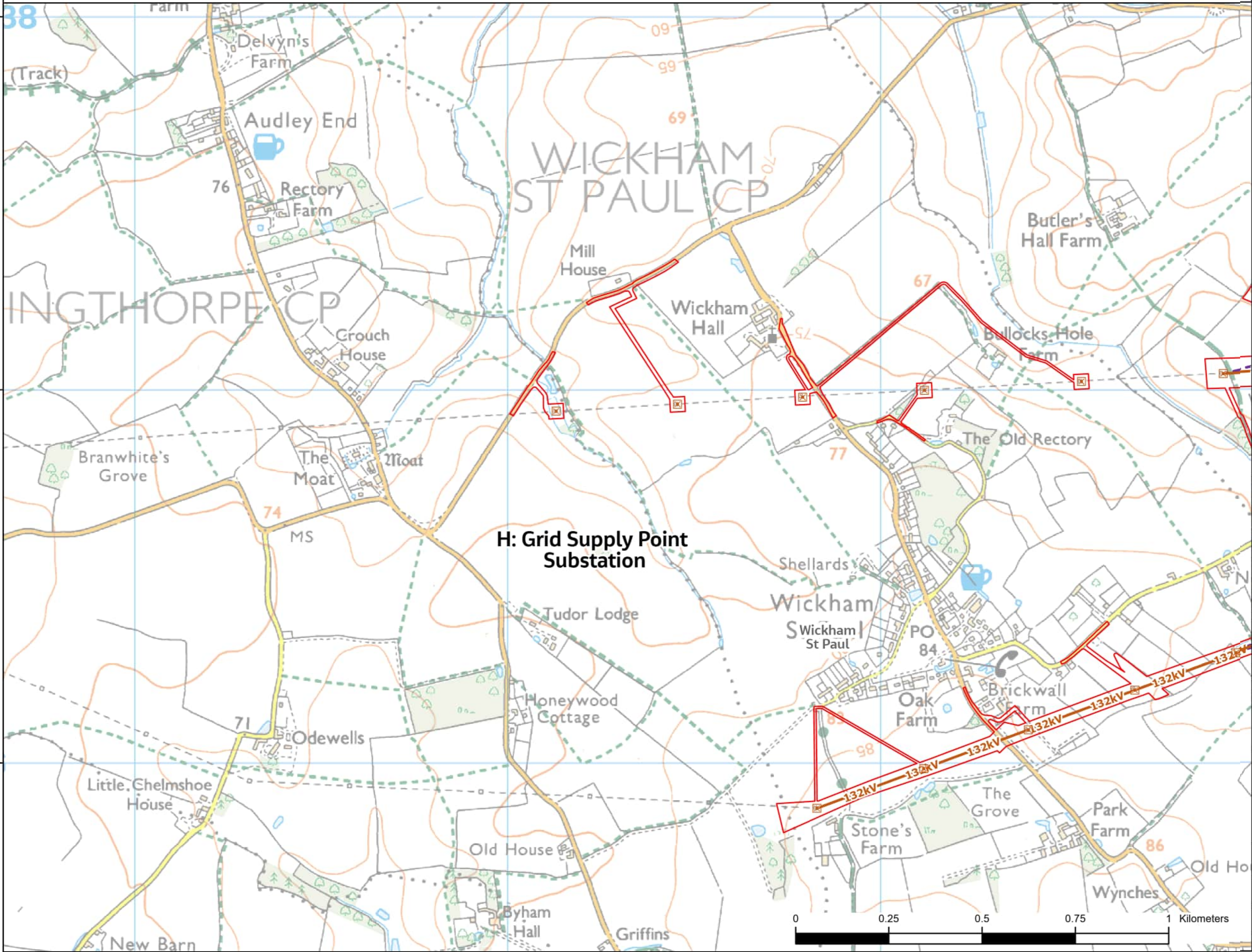
SHEET NO. 13

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
LOCATION PLAN
REGULATION 5(2)(a)
SHEET 14 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

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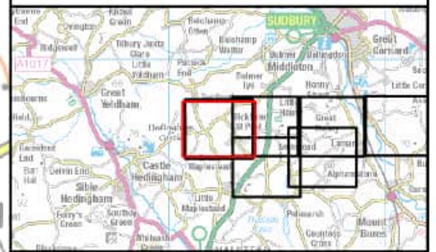
- Section boundaries
- Order Limits
- Proposed pylons
- Proposed gantries
- Modification to existing pylon
- Realignment of existing pylon
- Removal of existing pylon
- Realignment of existing gantry
- Proposed CSE compound
- Proposed GSP substation
- Proposed overhead line
- Modification works to existing overhead line
- Realignment of existing overhead line
- Removal of existing overhead line
- Proposed underground line
- Temporary overhead line during construction



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5a Location Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge | GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5a_Rev01 | A3

NG DRAWING No. BT-JAC-020631-500-0023
SCALE: 1:10000
SHEET NO. 14
NO. OF SHEETS 14
ISSUE: A

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA (HABITATS PRESENT) - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

Mid Suffolk District Council

Babergh District Council

Braintree District Council

Colchester Borough Council

Tendring District Council

Bramford Substation

Sheet 1

Sheet 2

Sheet 3

AB: Bramford Substation/Hintlesham

C: Brett Valley

D: Polstead

E: Dedham Vale Area of Outstanding Natural Beauty

F: Leavenheath /Assington

G: Stour Valley

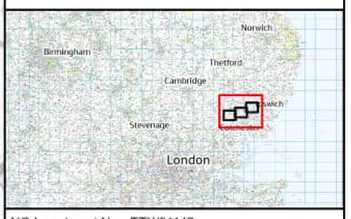
H: Grid Supply Point Substation

Market Weston, Clare, Acton, Sudbury, Hadleigh, Ipswich, Halstead, Colchester, Coine Valley

255000 250000 245000 240000 235000 230000 225000

580000 585000 590000 595000 600000 605000 610000 615000

0 1 2 3 4 5 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bi Survey Area (Habitats Present) - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bi_KeyPlan_Rev01

A3

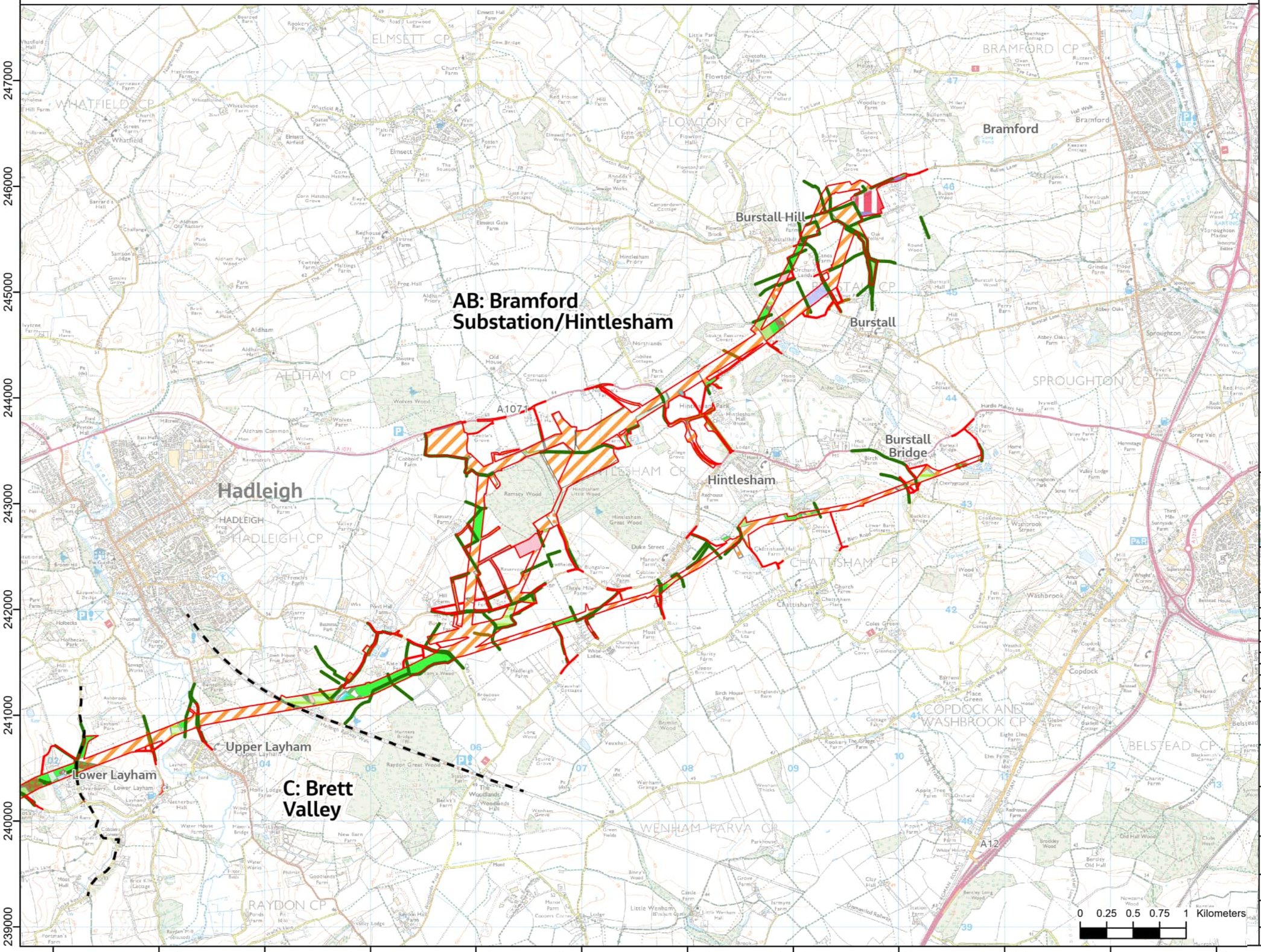
NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0024	1	1	A

SCALE: 1:125000

Legend - Habitat Type

- h2a - hedgerow (priority habitat)
- h2b - other hedgerows
- w1g6 - line of trees
- c - cropland
- c1 - arable and horticulture
- c1a - arable field margins
- c1a5 - Arable margins sown with tussocky grasses
- c1a7 - Arable margins cultivated annually with an annual flora
- c1a8 - Game bird mix strips and corners
- c1b - temporary grass and clover leys
- c1c - cereal crops
- c1c5 - Winter stubble
- c1c6 - Game bird mix fields
- c1c7 - Other cereal crops
- c1d - non-cereal crops
- c1d8 - Other non-cereal crops
- c1e - intensive orchards
- f - wetland
- f2 - fen,marsh and swamp
- f2b - Purple moor grass and rush pastures
- f2f - Other swamps
- g - grassland
- g1a - lowland dry acid grassland
- g1a6 - Other lowland dry acid grassland
- g1c - bracken
- g3c - other neutral grassland
- g3c5 - Arrhenatherum neutral grassland
- g3c6 - Lolium-Cynosurus neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- g4 - modified grassland
- h - heathland and shrub
- h3 - dense scrub
- h3a - Blackthorn scrub
- h3b - Hazel scrub
- h3d - Bramble scrub
- h3e - Gorse scrub
- h3h - Mixed scrub
- r - rivers and lakes
- r1 - standing open water and canals
- r1a eutrophic standing water
- r1a6 - Other eutrophic standing waters
- r1b - Mesotrophic lakes
- r2 - rivers and lakes
- r2a - Rivers (priority habitat)
- u - urban
- u1 - built-up areas and gardens
- u1a - open mosaic habitats on previously developed land
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1c - artificial unvegetated unsealed surface
- u1d - suburban mosaic of developed/natural surfaces
- u1e - built linear features
- w - woodland
- w1 - broadleaved, mixed and yew woodland
- w1d - wet woodland
- w1d5 - Alder woodland on floodplains (H91E0)
- w1f - lowland mixed deciduous woodland
- w1f7 - Other Lowland mixed deciduous woodland
- w1g - other woodland, broadleaved
- w1g6 - line of trees
- w1g7 - Other broadleaved woodland types
- w1h - other woodland, mixed
- w1h5 - Other woodland; mixed; mainly broadleaved
- w2c - other coniferous woodland

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA (HABITATS PRESENT)
REGULATION 5(2)(a)
SHEET 1 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- - - Section boundaries

Order Limits

A legend indicating the UK Habs type can be seen on the page preceding this figure

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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bi Survey Area (Habitats Present)

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bi_Rev01

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NG DRAWING No. BT-JAC-020631-500-0024

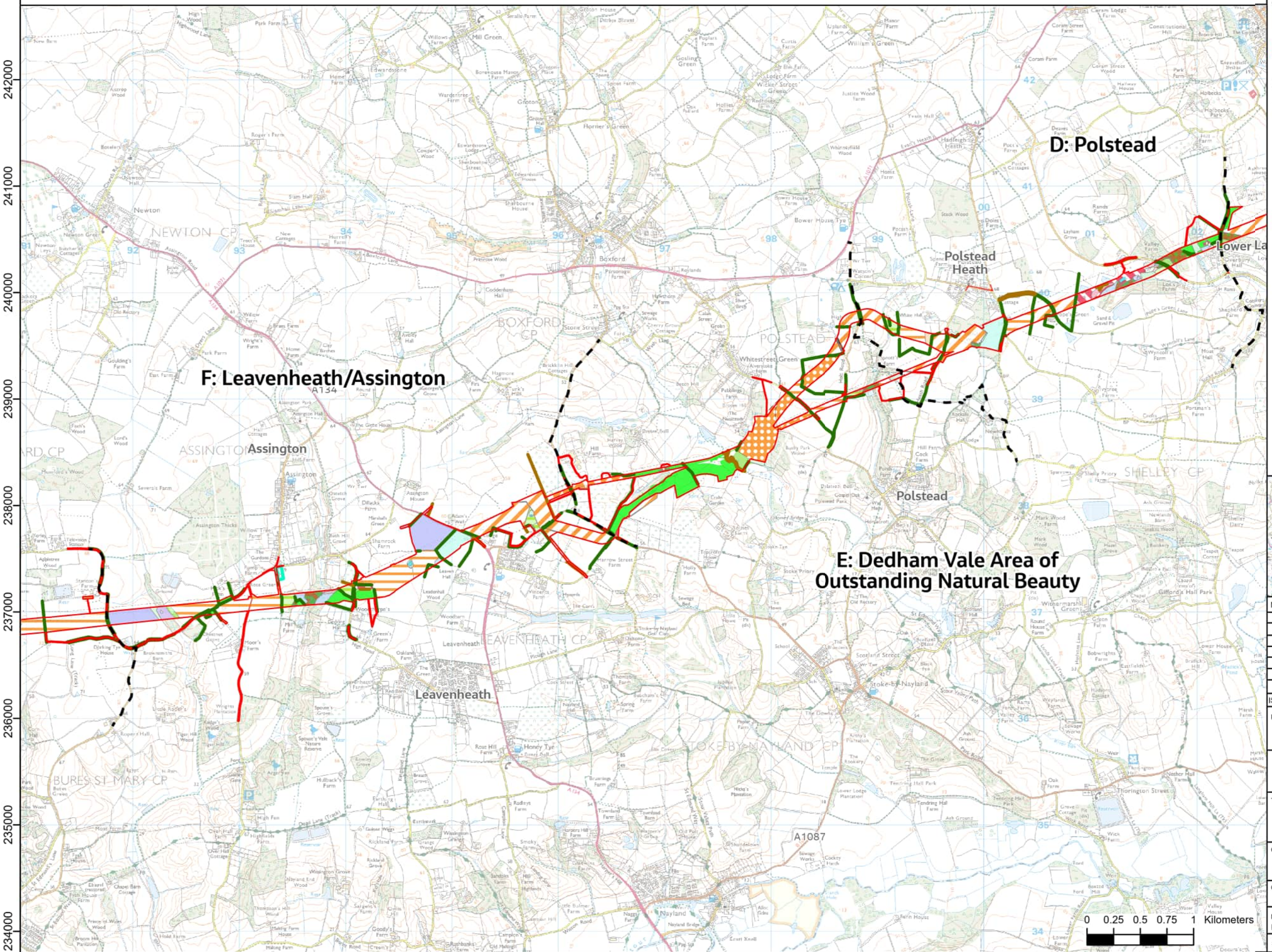
SHEET NO. 1

NO. OF SHEETS 3

ISSUE: A

SCALE: 1:35000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA (HABITATS PRESENT)
REGULATION 5(2)(a)
SHEET 2 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

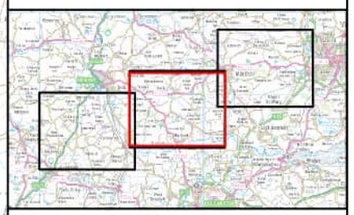


Application Document 6.4

- - - Section boundaries

Order Limits

A legend indicating the UK Habs type can be seen on the page preceding this figure



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bi Survey Area (Habitats Present)

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bi_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0024

SHEET NO. 2

NO. OF SHEETS 3

ISSUE: A

SCALE: 1:35000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA (HABITATS PRESENT)
REGULATION 5(2)(a)
SHEET 3 OF 3
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- - - Section boundaries

Order Limits

A legend indicating the UK Habs type can be seen on the page preceding this figure

H: Grid Supply Point Substation

G: Stour Valley

Twinstead

Wickham St Paul

Workhouse Green

Lamarsh

Alphamstone

A131

BULMER CP
MIDDLETON CP
LITTLE HENNY CP
GREAT HENNY CP
LITTLE CORNARD CP
WICKHAM ST PAUL CP
GESTINGTHORPE CP
TWINSTEAD CP
ALPHAMSTONE CP
GREAT MAPLESTEAD CP
LITTLE MAPLESTEAD CP
PEBMARSH CP
BURES HAMLET CP

240000
239000
238000
237000
236000
235000
234000
233000
232000

580000 581000 582000 583000 584000 585000 586000 587000 588000 589000 590000 591000

0 0.25 0.5 0.75 1 Kilometers

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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bi Survey Area (Habitats Present)

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bi_Rev01

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NG DRAWING No. BT-JAC-020631-500-0024

SHEET NO. 3

NO. OF SHEETS 3

ISSUE: A

SCALE: 1:35000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

Mid Suffolk District Council
Babergh District Council
Braintree District Council
Colchester Borough Council
Tendring District Council

Bramford Substation
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10
Sheet 11
Sheet 12
Sheet 13
Sheet 14

AB: Bramford Substation/Hintlesham
C: Brett Valley
D: Polstead
E: Dedham Vale Area of Outstanding Natural Beauty
F: Leavenheath /Assington
G: Stour Valley
H: Grid Supply Point Substation

Clare, Acton, Sudbury, Hadleigh, Ipswich, Halstead, Colchester, Market

255000
250000
245000
240000
235000
230000
225000

580000 585000 590000 595000 600000 605000 610000 615000

0 1 2 3 4 5 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bii_KeyPlan_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0121	1	1	A

SCALE: 1:125000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 1 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

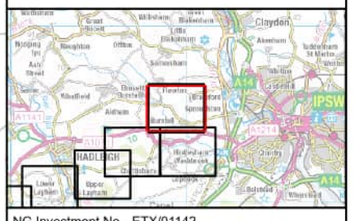
AB: Bramford Substation/Hintlesham

Bramford
Burstall Hill
Burstall

246500
246000
245500
245000
244500

608000 608500 609000 609500 610000 610500 611000

0 100 200 300 400 500 Meters



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE :	
Bramford – Pelham & Bramford – Braintree – Bulls Lodge	GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01	A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0121	1	14	A
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NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 2 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

Burstall Bridge

AB: Bramford Substation/Hintlesham

244000
243500
243000
242500
242000

608500 609000 609500 610000 610500 611000 611500

0 100 200 300 400 500 Meters

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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE : Figure C5bii Survey Area

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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SCALE : 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 3 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

A1071
CPH1
CPH2
CPH3
CPH4
CPH5
CPW1
CPW2
CPW3
Hintlesham
AB: Bramford Substation/Hintlesham

244000
243500
243000
242500
242000

605500 606000 606500 607000 607500 608000 608500

0 100 200 300 400 500 Meters

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

NG Investment No. ETX/01142

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE :	
Bramford – Pelham & Bramford – Braintree – Bulls Lodge	GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01	A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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SCALE : 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 4 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

AB: Bramford Substation/Hintlesham

CPH5

C: Brett Valley

Upper Layham

242500
242000
241500
241000
240500

604000 604500 605000 605500 606000 606500

0 100 200 300 400 500 Meters

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01

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NG DRAWING No. BT-JAC-020631-500-0121

SHEET NO. 4

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 5 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

C: Brett Valley

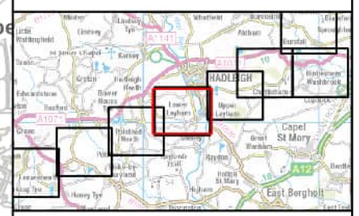
Lower Layham

D: Polstead

241500
241000
240500
240000
239500

601000 601500 602000 602500 603000 603500

0 100 200 300 400 500 Meters



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

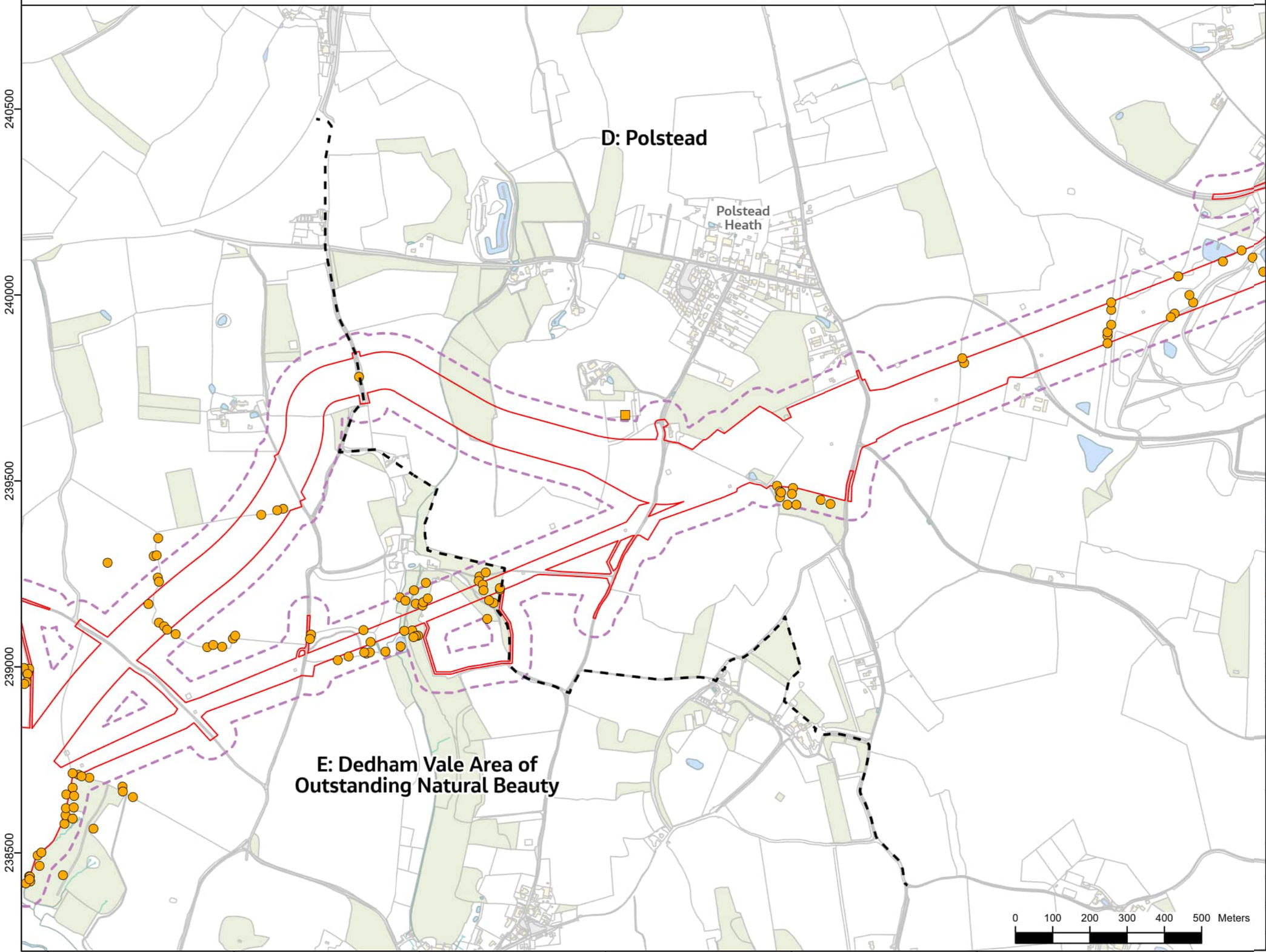
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE:			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0121	SHEET NO. 5	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 6 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

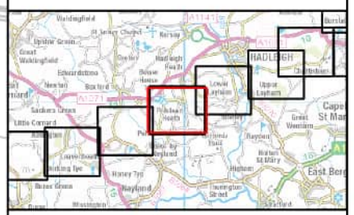


Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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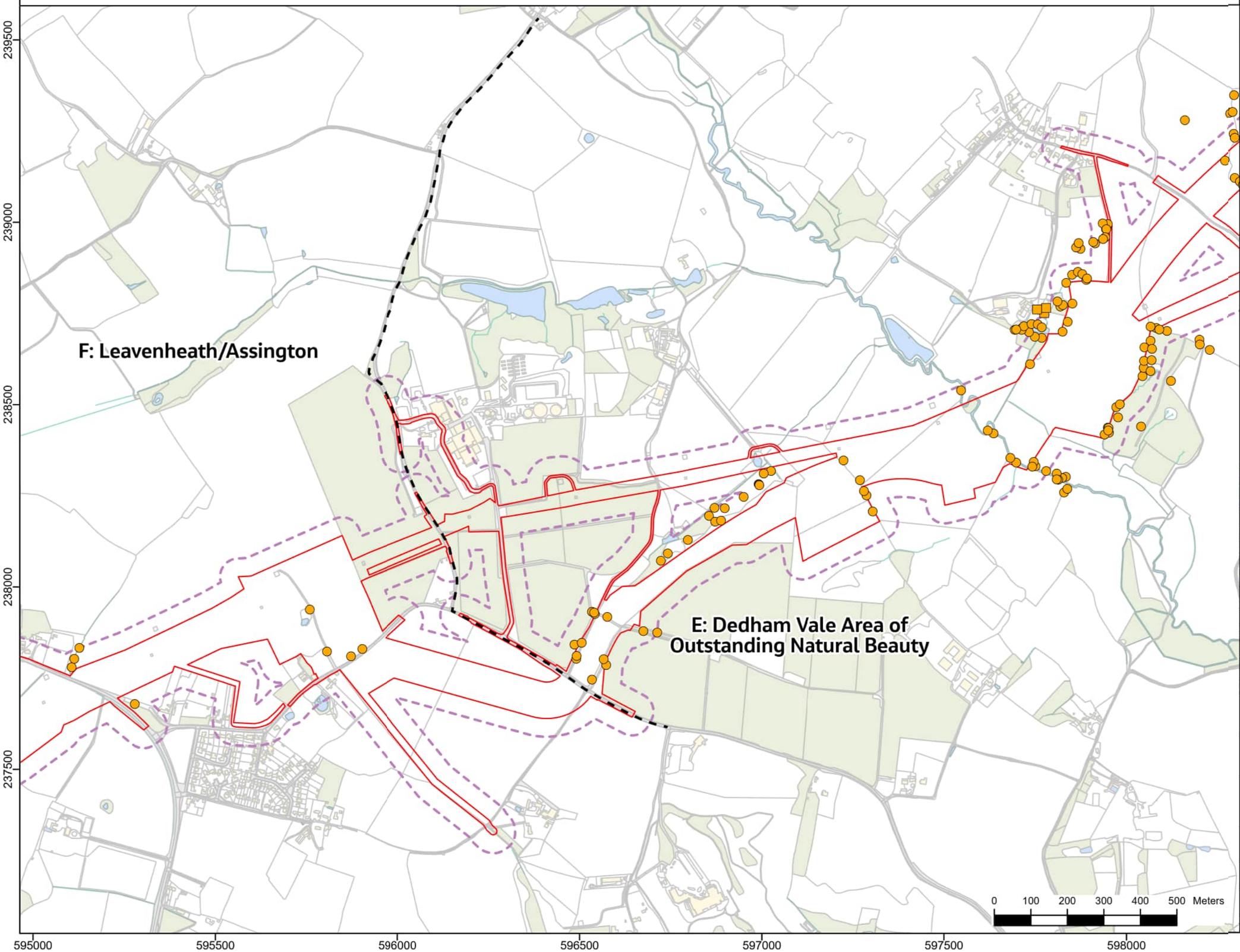
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 7 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0121

SCALE: 1:10000

SHEET NO. 7

NO. OF SHEETS 14

ISSUE: A

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 8 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

Assington

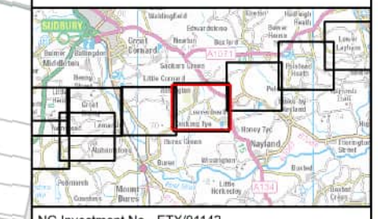
F: Leavenheath/Assington

Leavenheath

238000
237500
237000
236500
236000

592000 592500 593000 593500 594000 594500 595000

0 100 200 300 400 500 Meters



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0121	8	14	A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 9 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

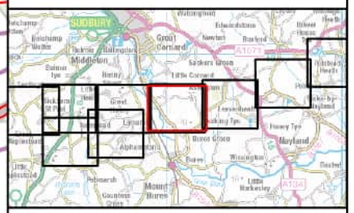
Workhouse Green

G: Stour Valley

238000
237500
237000
236500
236000

589000 589500 590000 590500 591000 591500 592000

0 100 200 300 400 500 Meters



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0121

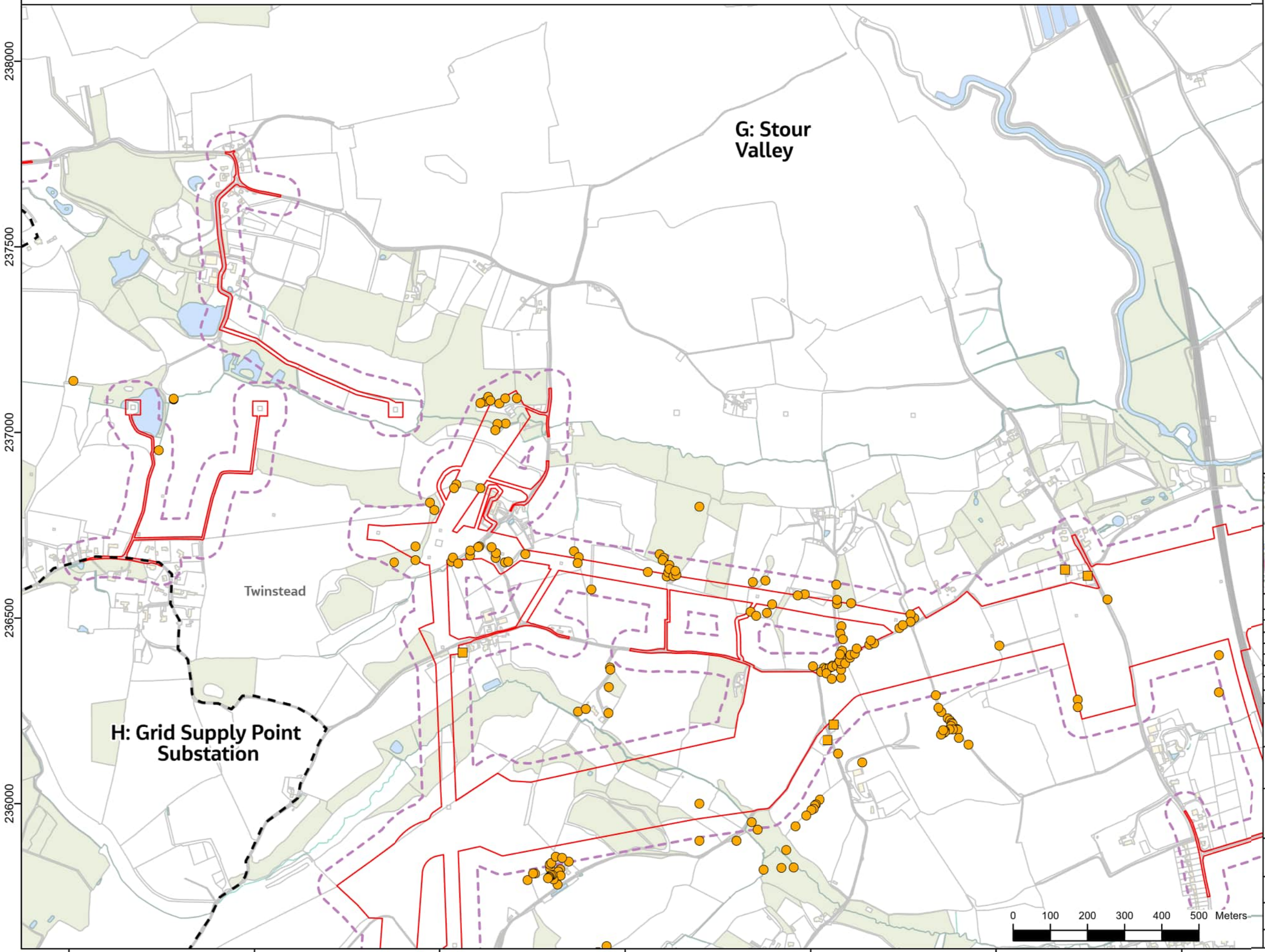
SHEET NO. 9

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 10 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0121

SHEET NO. 10

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 11 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237500
237000
236500
236000

583000 583500 584000 584500 585000 585500 586000

H: Grid Supply Point Substation

0 100 200 300 400 500 Meters

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE : Figure C5bii Survey Area

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0121

SHEET NO. 11

NO. OF SHEETS 14

ISSUE: A

SCALE : 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 12 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping
- Harp trap
- Mist

Twinstead

H: Grid Supply Point Substation

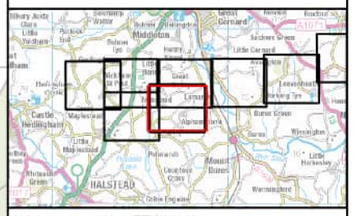
Alphamstone

G: Stour Valley

236500
236000
235500
235000
234500

585500 586000 586500 587000 587500 588000 588500

0 100 200 300 400 500 Meters



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

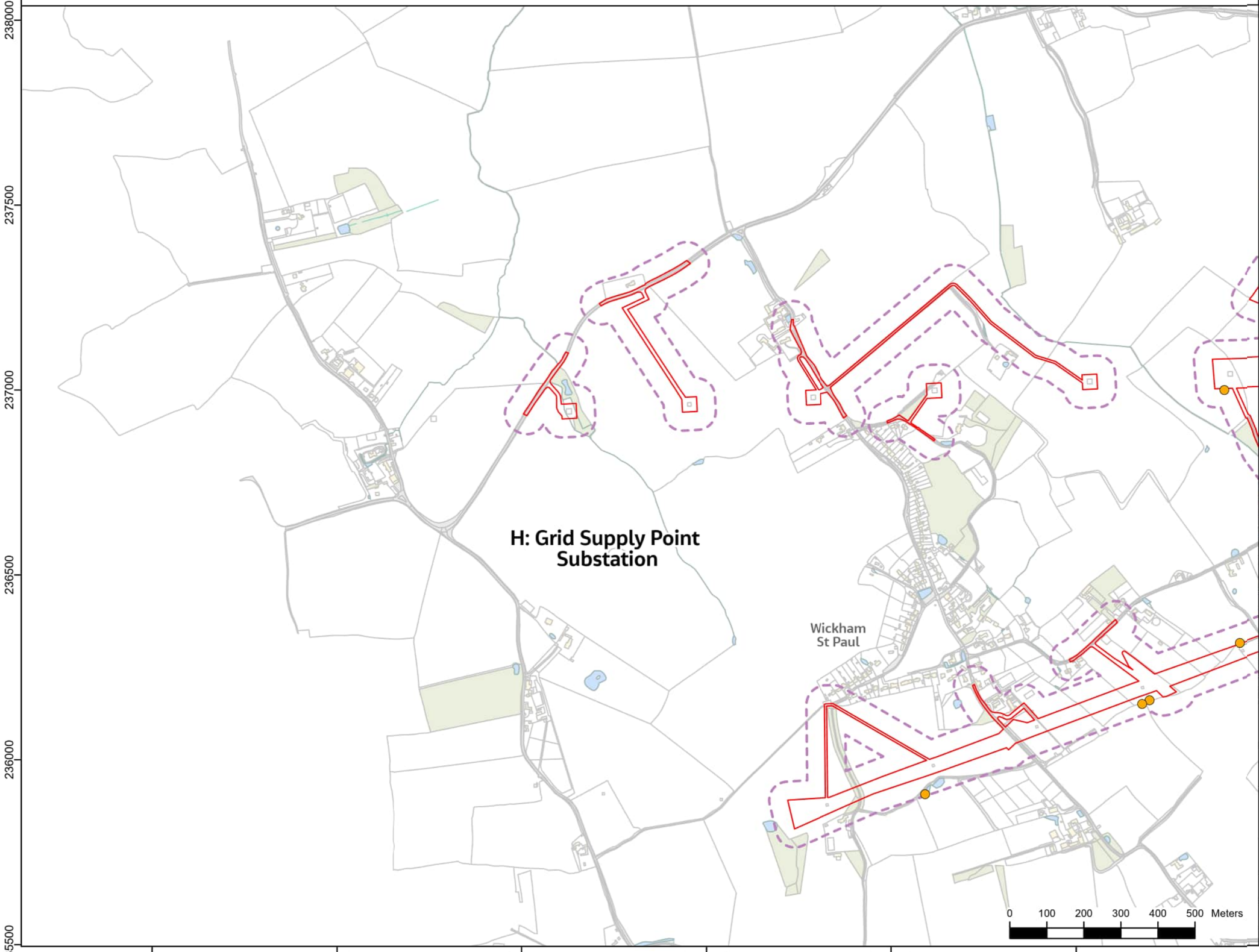
GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0121	12	14	A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 13 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC5bii_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0121

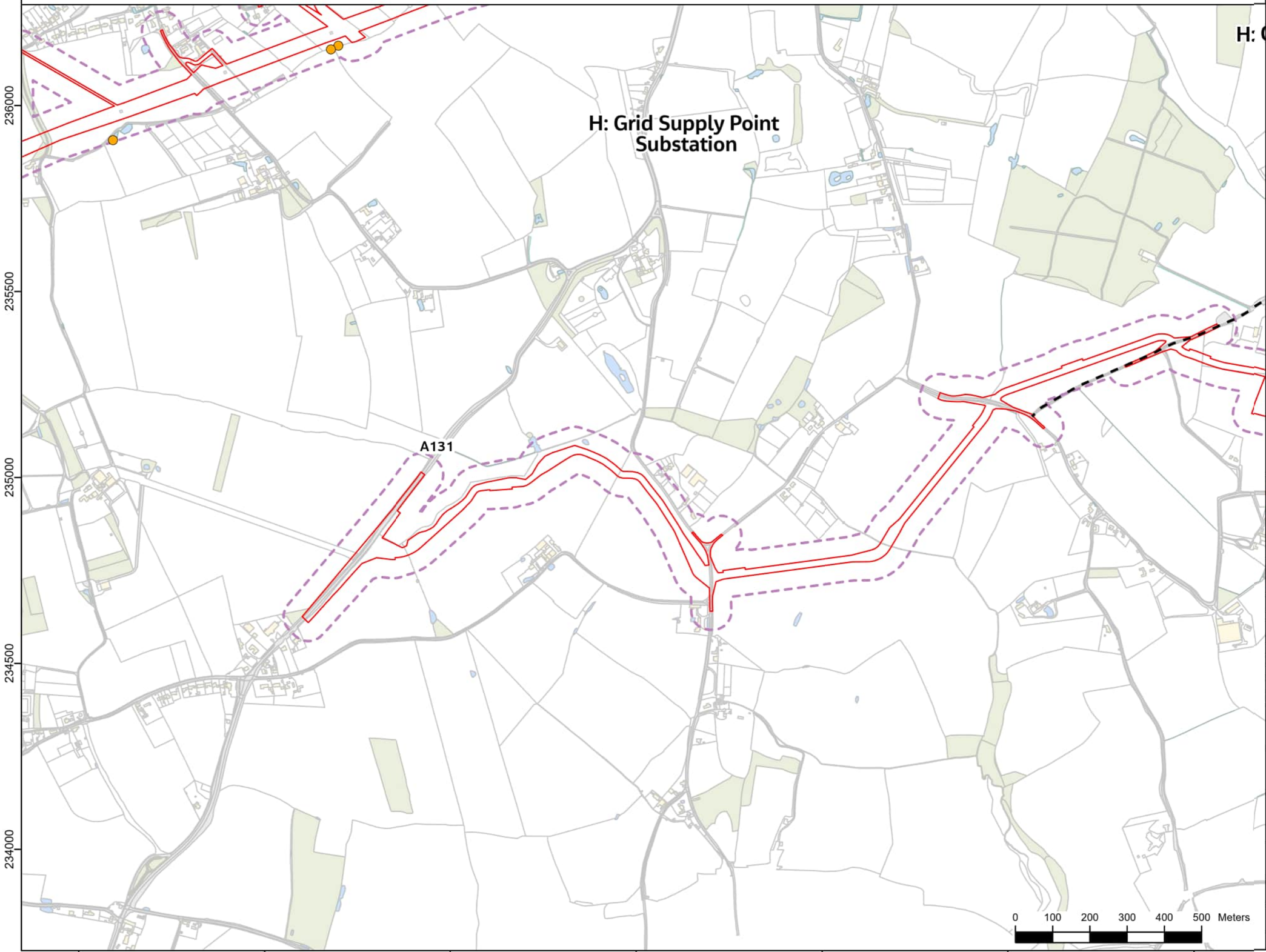
SHEET NO. 13

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY AREA
REGULATION 5(2)(a)
SHEET 14 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

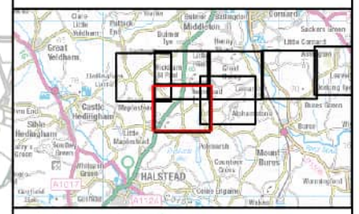


Application Document 6.4

- Section boundaries
- Order Limits
- Study area (50m)
- Trees surveyed
- Structures surveyed
- Static detectors
- Approximate crossing point survey

Bat Trapping

- Harp trap
- Mist



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

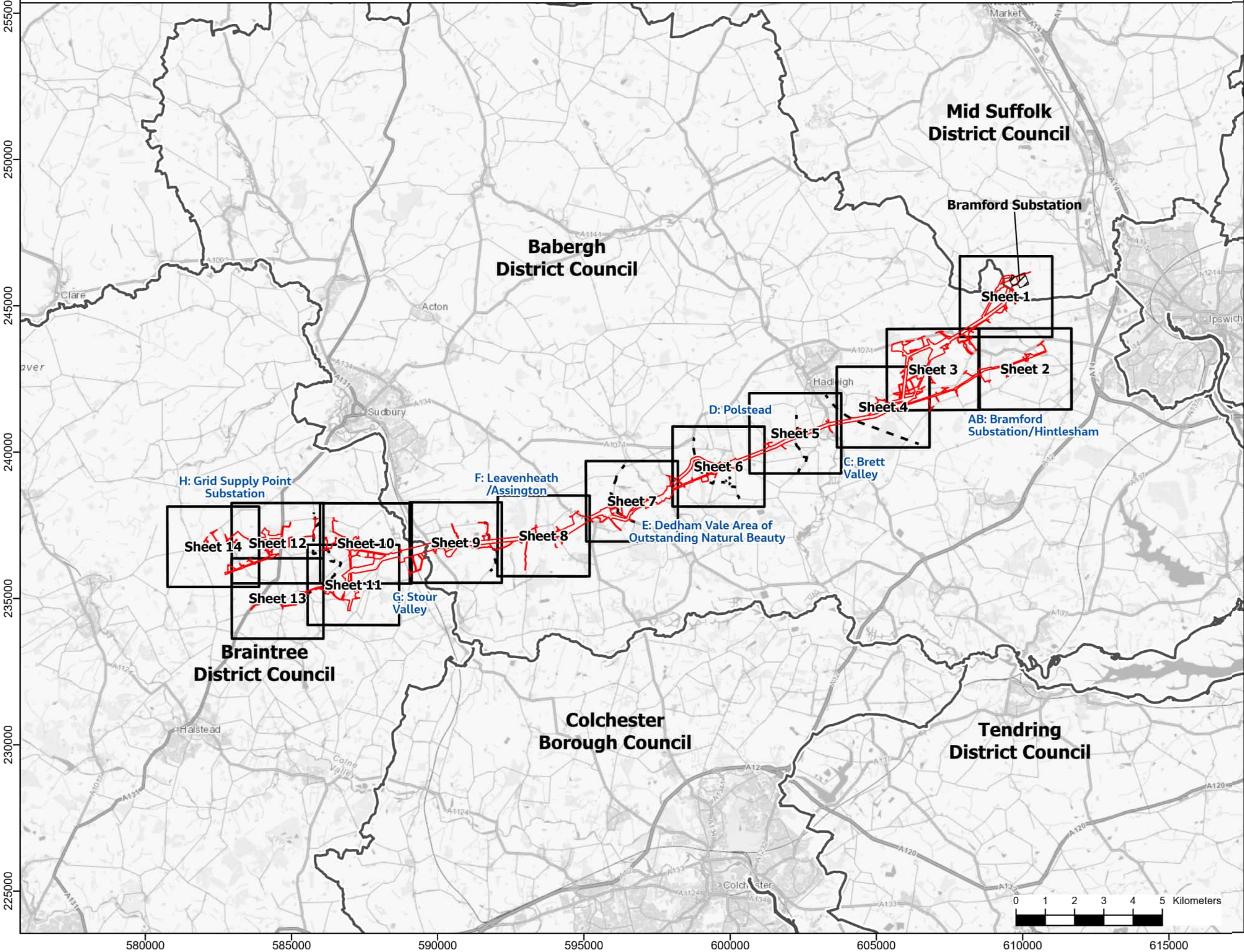
nationalgrid

TITLE: Figure C5bii Survey Area

CIRCUIT / SITE				
Bramford – Pelham & Bramford – Braintree – Bulls Lodge				GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC5bii_Rev01				A3
NG DRAWING No. BT-JAC-020631-500-0121	SHEET NO.	NO. OF SHEETS	ISSUE:	
SCALE: 1:10000	14	14	A	

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4



Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge | GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_KeyPlanRev01 | A3

NG DRAWING No. BT-JAC-020631-500-0121 | SHEET NO. 1 | NO. OF SHEETS 1 | ISSUE: A

SCALE: 1:125000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 1 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

AB: Bramford Substation/Hintlesham

Bramford

Burstall Hill

Burstall

134_T001
226_T011
226_T010
226_T009
226_T008
226_T007
226_T006
226_T005
132-T022
132_T006
132-T021
132-T020
132_T003
132_T004
132-T013
132_T008
132-T002

246000
245000
608000
609000
610000
611000

0 0.25 0.5 0.75 1 Kilometers

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge	GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01	A3
NG DRAWING No. BT-JAC-020631-500-0122	SHEET NO. 1 / NO. OF SHEETS 14 / ISSUE: A
SCALE: 1:10000	

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 2 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity

Burstall Bridge

AB: Bramford Substation/Hintlesham

244000
243000
242000
609000
610000
611000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE : Figure C6 Survey Results

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0122

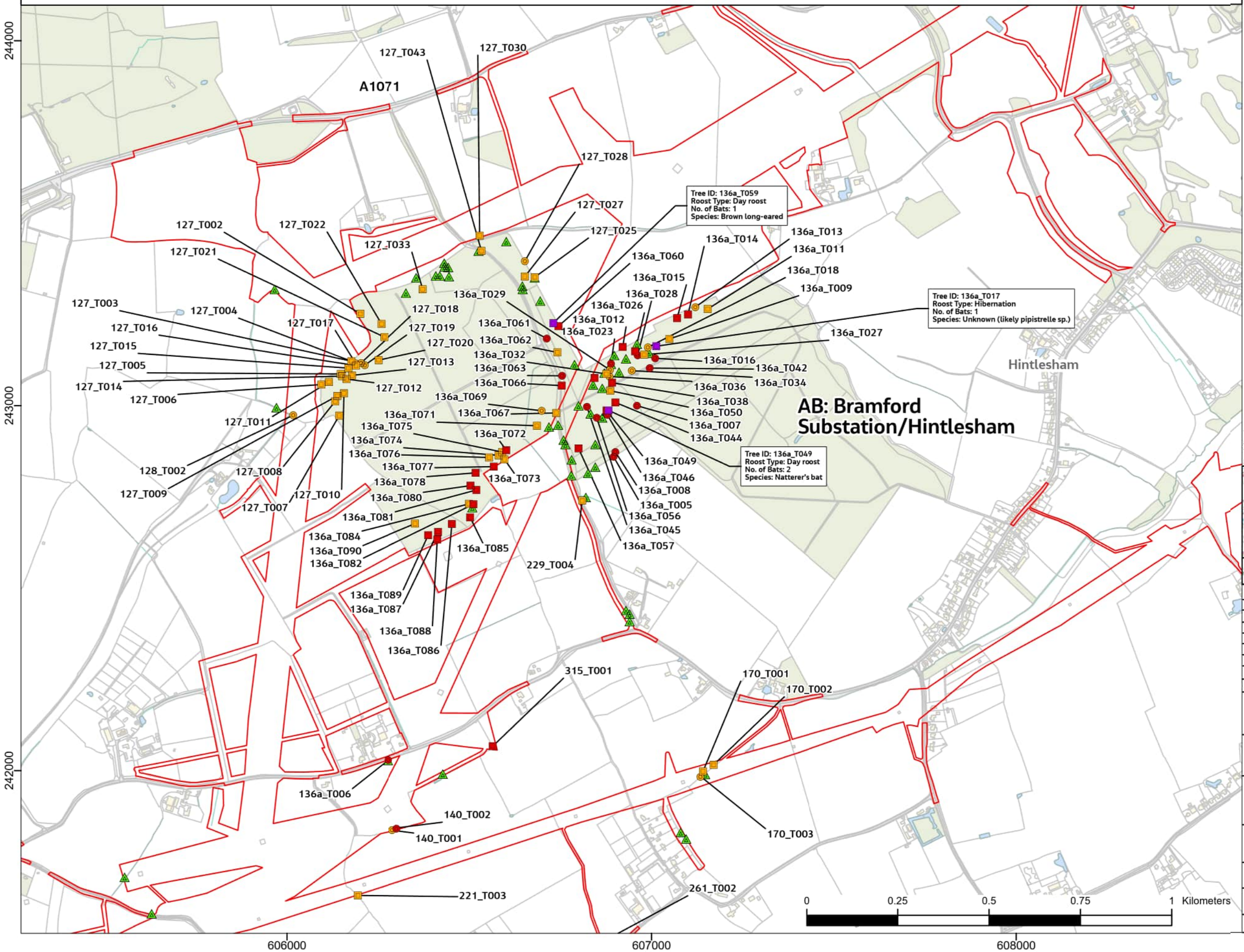
SHEET NO. 2

NO. OF SHEETS 14

ISSUE: A

SCALE : 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 3 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



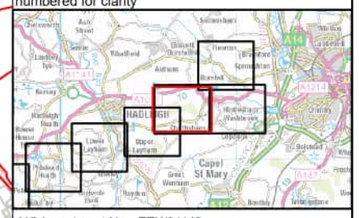
Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.: AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No.: BT-JAC-020631-500-0122

SHEET NO.: 3

NO. OF SHEETS: 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 4 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

N

AB: Bramford Substation/Hintlesham

C: Brett Valley

Upper Layham

127_T009
127_T007
127_T010
136a_T078
136a_T073
136a_T080
136a_T081
136a_T084
136a_T090
136a_T082
136a_T085
229_T004
136a_T089
136a_T087
136a_T088
136a_T086
315_T001
136a_T006
140_T002
140_T001
221_T003
221_T001
26_T009
119_T013
119_T007
122_T002
122_T001
121_T001
119_T005
119_T001
121_T005
119_T002
119_T003

242000
241000
604000
605000
606000

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

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NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0122

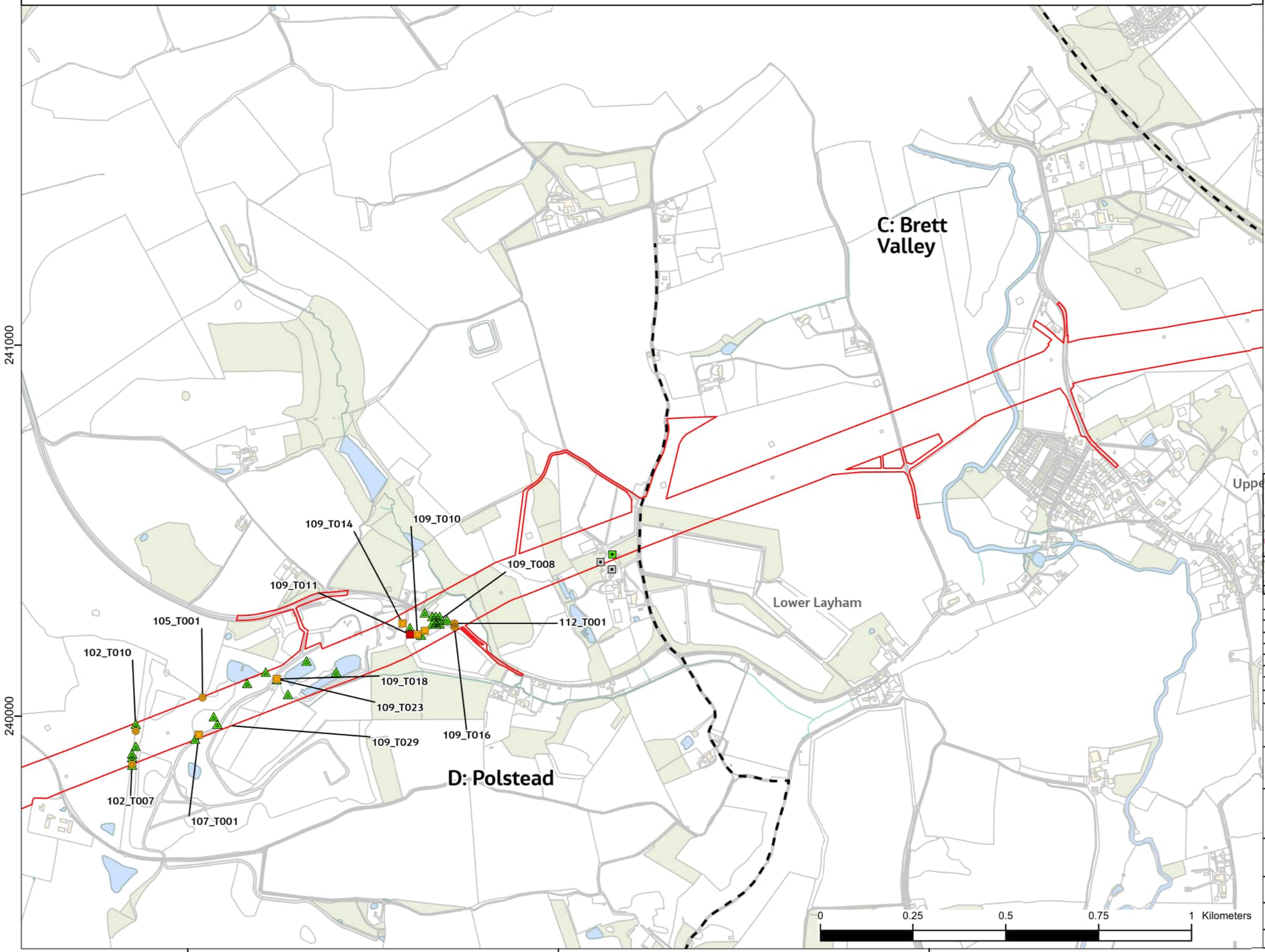
SHEET NO. 4

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 5 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

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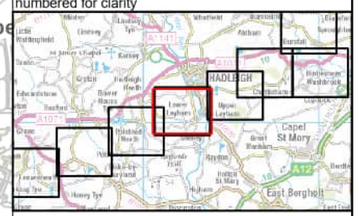
* Only confirmed, high and moderate roosts are numbered for clarity



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0122	SHEET NO. 5	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 6 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

D: Polstead

E: Dedham Vale Area of Outstanding Natural Beauty

Polstead Heath

240000

239000

598000

599000

600000

601000

0 0.25 0.5 0.75 1 Kilometers

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
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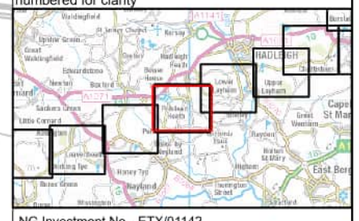
* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0122	SHEET NO. 6	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 7 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

F: Leavenheath/Assington

E: Dedham Vale Area of Outstanding Natural Beauty

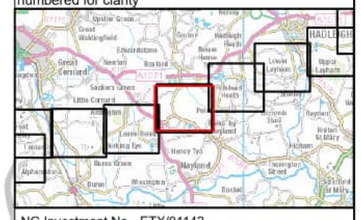
Building ID: BB5
Roost Type:
Day roost
No. of Bats: 3
Species:
Common pipistrelle
Brown long-eared

Building ID: BB5b
Roost Type:
Maternity roost
No. of Bats: 216
Species:
Soprano pipistrelle

Building ID: BB5a
Roost Type:
Day roost
No. of Bats: 2
Species:
Soprano pipistrelle

86_T011, 86_T006, 83_T002, 83_T003, 83_T001, 83_T004, 83_T005, 83_T009, 83_T007, 83_T011, 83_T008, 83_T016, 83_T010, 83_T015, 83_T014, 83_T019, 83_T013, 83_T018, 83_T038, 82_T009, 83_T028, 83_T035, 82_T010, 83_T037, 82_T008, 83_T032, 82_T006, 83_T031, 83_T027, 83_T030, 81_T011, 82_T016, 80_T003, 82_T003, 81_T003, 82_T003, 82_T001, 74_T004, 78_T002, 78_T001, 81_T002, 72_T002, 169_T002, 71_T001, 71_T002

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0122	7	14	A

SCALE: 1:10000

0 0.25 0.5 0.75 1 Kilometers

239000
238000
595000
596000
597000
598000

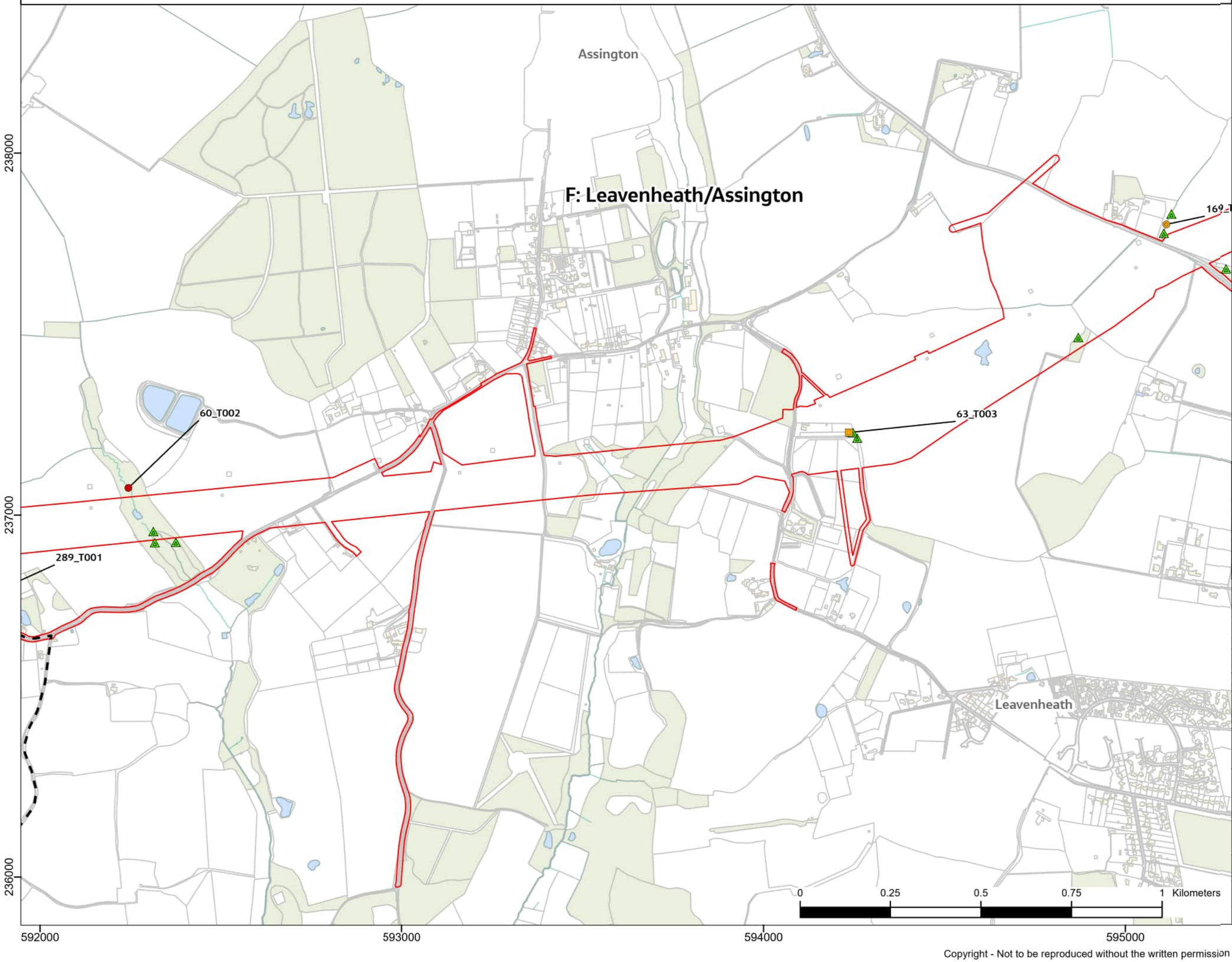
NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 8 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low



* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
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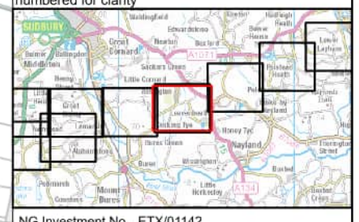


NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0122	SHEET NO. 8	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 9 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000
589000
590000
591000
592000

Workhouse Green

G: Stour Valley

59_T008
59_T006
59_T004
59_T001
56_T001
44_T006
44_T007
43_T002
289_T001
289_T002
289_T004
289_T005
289_T006

0 0.25 0.5 0.75 1 Kilometers

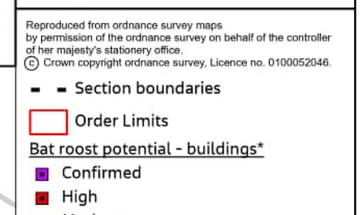
Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0122

SHEET NO. 9

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 10 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity

G: Stour Valley

H: Grid Supply Point Substation

Twinstead

Tree ID: 35a_T004
Roost Type: Day roost
No. of Bats: 1
Species: Soprano pipistrelle

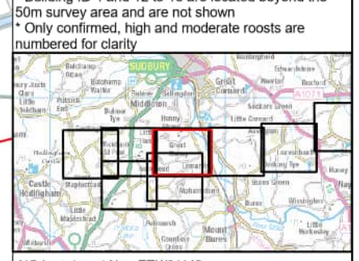
Building ID: BB10
Roost Type: Day roost
No. of Bats: 2
Species: Common pipistrelle

250_T005, 250_T003, 250_T001, 142_T002, 142_T007, 142_T006, 143_T001, 145_T002, 146_T002, 146_T003, 146_T005, 148_T005, 148_T002, 148_T001, 148_T004, 148_T007, 147_T005, 147_T006, 151_T002, 147_T004, 151_T003, 151_T004, 152_T002, 152_T004, 152_T003, 152_T005, 152_T007, 152_T011, 152_T010, 152_T001, 152_T009, 152_T006, 155_T194, 155_T191, 155_T197, 155_T196, 155_T198, 32_T004, 32_T005, 32_T003, 32_T001, 32_T002, 31_T001, 35_T14, 35_T6, 35_T26, 35_T10, 35_T12, 3_T001, 43_T002, 40_T001, 40_T005, 40_T002, 40_T007, 40_T012, 40_T022, 38_T001, 40_T006, 40_T004, 40_T009, 40_T021, 40_T017, 40_T008, 294_T001, 40_T015, 40_T011, 030_T002, 030_T008, 030_T013, 030_T006, 030_T009, 030_T012, 030_T, 30a_T003, 30a_T004, 21_T021, 21_T006, 21_T022, 21_T020, 25_T001, 21_T019, 4_T005, 4_T003, 306_T002, 306_T001, 179_T008, 179_T004, 17_T002, 179_T001

236000, 237000, 238000

586000, 587000, 588000, 589000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

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NG DRAWING No. BT-JAC-020631-500-0122

SHEET NO. 10

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 11 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000
583000
584000
585000
586000

T1 T3 T2 TC4 TC8 TC10 TC9 TC2 TC1 TC11 TC13 TC15 T3 TC16 TC34 250_T003 TC6 TC7 TC14 TC33 TC23 TC22 T4 TC25 T5 T9 TC19 TC32 T6 T7 T8 TC24 T11 T12 T10 TC28 T13 TC30 TC29 T15 T14 TC31

Tree ID: TC27
Roost Type:
Day roost
No. of Bats: 3
Species:
Natterer's bat
(DNA confirmed)

Tree ID: T16
Roost Type:
Transitional roost
No. of Bats: 1
Species:
Soprano pipistrelle

T18 T17 T19 T20

H: Grid Supply Point Substation

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
* Only confirmed, high and moderate roosts are numbered for clarity

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

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NG DRAWING No. BT-JAC-020631-500-0122

SHEET NO. 11

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 12 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

Tree ID: 35a_T004
Roost Type: Day roost
No. of Bats: 1
Species: Soprano pipistrelle

Building ID: BB10
Roost Type:
Day roost
No. of Bats: 2
Species:
Common pipistrelle

H: Grid Supply Point Substation

G: Stour Valley

Twinstead

Alphamstone

146_T005, 148_T002, 148_T001, 148_T004, 148_T007, 147_T004, 151_T003, 151_T004, 152_T002, 152_T004, 152_T001, 152_T006, 152_T009, 152_T010, 155_T194, 155_T197, 155_T196, 155_T198, 35_T14, 35_T6, 35_T26, 35_T10, 35_T12, 3_T001, 40_T001, 40_T005, 40_T002, 40_T007, 40_T012, 40_T022, 38_T001, 40_T006, 40_T004, 40_T021, 40_T009, 40_T017, 40_T008, 294_T001, 40_T015, 40_T011, 32_T004, 32_T005, 32_T003, 32_T001, 32_T002, 31_T001, 030_T002, 030_T008, 030_T013, 030_T006, 030_T009, 030_T012, 030_T011, 30a_T004, 21_T021, 21_T006, 21_T022, 21_T020, 21_T019, 25_T001, 4_T005, 4_T003, 4_T004, 25_T006, 25_T008, 17_T002, 17_T001, 306_T002, 306_T001, 179_T008, 179_T004, 179_T001, 179_T003, 179_T010, 179_T009, 179_T011, 180_T001, 298_T001

236000
235000
586000
587000
588000

0 0.25 0.5 0.75 1 Kilometers

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
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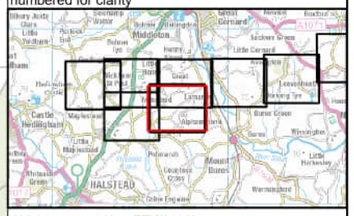

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.: AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No.: BT-JAC-020631-500-0122

SHEET NO.: 12

NO. OF SHEETS: 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 13 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000
581000
582000
583000

H: Grid Supply Point Substation

Wickham St Paul

TC7
TC33
TC25
T9
TC32
T11
TC29
T18
T19
T20

Tree ID: TC27
Roost Type:
Day roost
No. of Bats: 3
Species:
Natterer's bat
(DNA confirmed)

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*
- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method
- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

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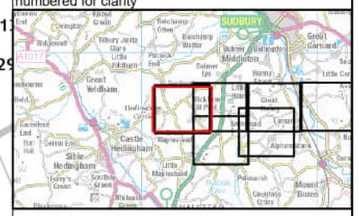
* Only confirmed, high and moderate roosts are numbered for clarity



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0122

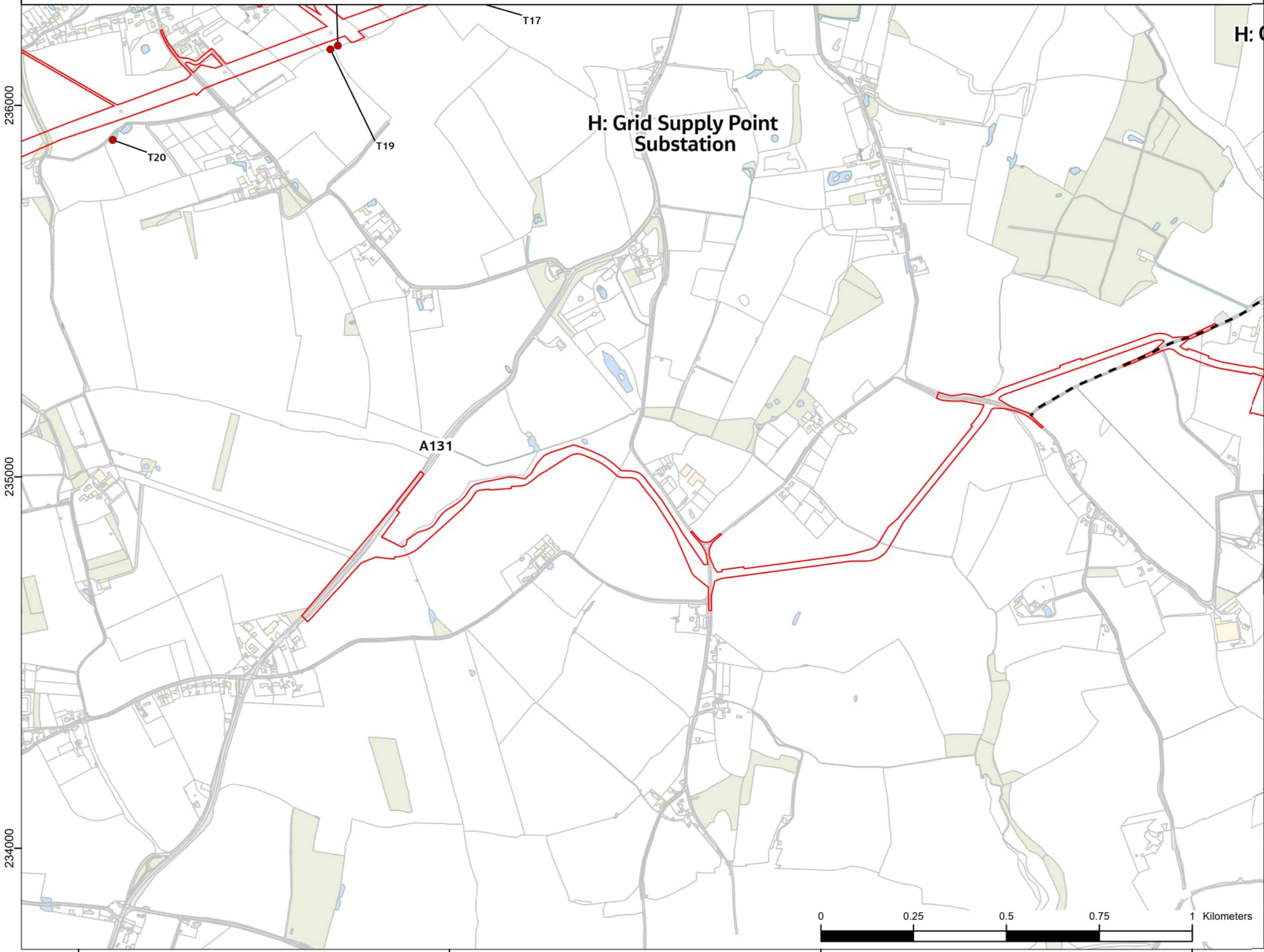
SHEET NO. 13

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SURVEY RESULTS
REGULATION 5(2)(a)
SHEET 14 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits

Bat roost potential - buildings*

- Confirmed
- High
- Moderate
- Low
- Negligible

Bat roost potential – trees and survey method

- Roost; endoscope inspection
- High; endoscope inspection
- Moderate; endoscope inspection
- Roost; dusk/dawn
- High; dusk/dawn
- Moderate; dusk/dawn
- Low

* Building ID 4 and 12 to 16 are located beyond the 50m survey area and are not shown
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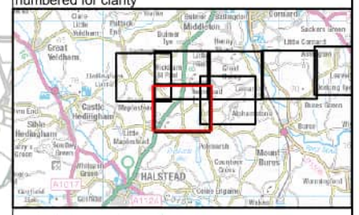


NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure C6 Survey Results

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigC6_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0122

SHEET NO. 14

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

Mid Suffolk District Council
Babergh District Council
Braintree District Council
Colchester Borough Council
Tendring District Council

Bramford Substation
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10
Sheet 11
Sheet 12
Sheet 13
Sheet 14

AB: Bramford Substation/Hintlesham
C: Brett Valley
D: Polstead
E: Dedham Vale Area of Outstanding Natural Beauty
F: Leavenheath /Assington
G: Stour Valley
H: Grid Supply Point Substation

Clare, Acton, Sudbury, Hadleigh, Ipswich, Halstead, Colchester, Market

255000
250000
245000
240000
235000
230000
225000

580000 585000 590000 595000 600000 605000 610000 615000

0 1 2 3 4 5 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE :
Figure D
Impacts Plan - Key Plan

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigD_KeyPlan_Rev01

A3

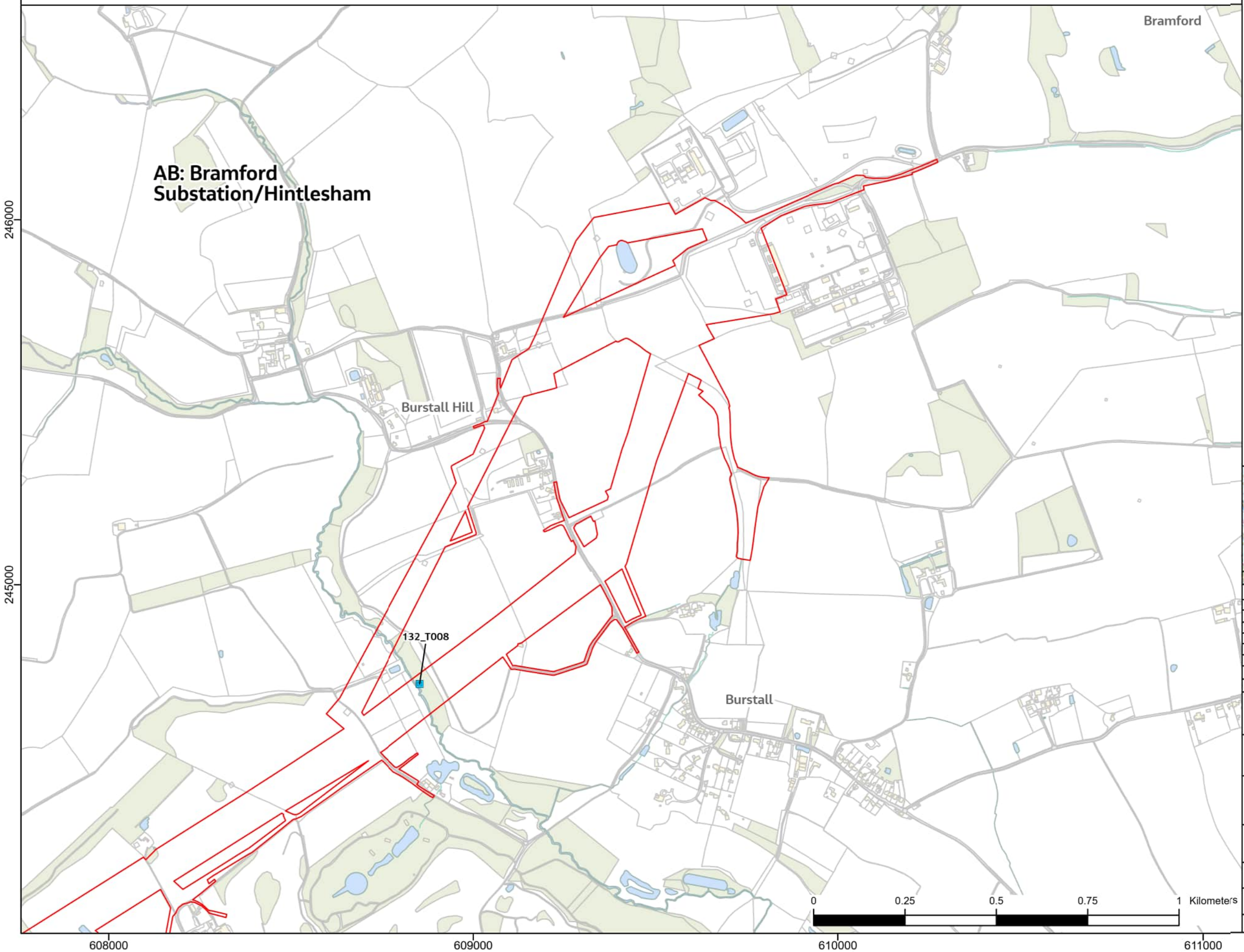
NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0123	1	1	A

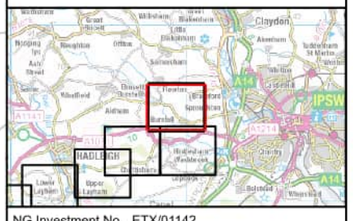
SCALE : 1:125000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 1 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost





NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

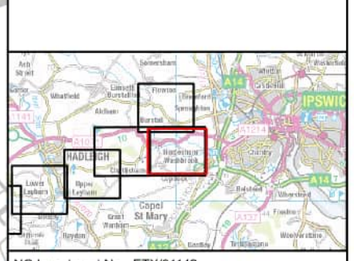
CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge	GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01	A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0123	1	14	A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 2 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost



Burstall Bridge

AB: Bramford Substation/Hintlesham

244000
243000
242000
609000
610000
611000

0 0.25 0.5 0.75 1 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE :
Figure D
Impacts Plan

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge	GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01	A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0123	2	14	A
SCALE : 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 3 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

A1071

Hintlesham

AB: Bramford Substation/Hintlesham

170_T003

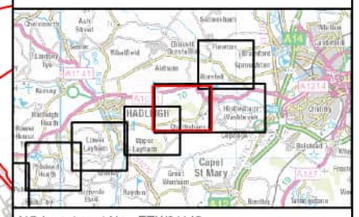
140_T002

140_T001

244000
243000
242000

606000
607000
608000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0123

SHEET NO. 3

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 4 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

AB: Bramford Substation/Hintlesham

140_T002

140_T001

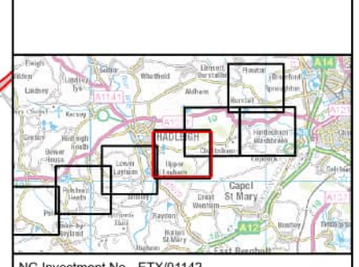
122_T002

Upper Layham

C: Brett Valley

242000
241000
604000
605000
606000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

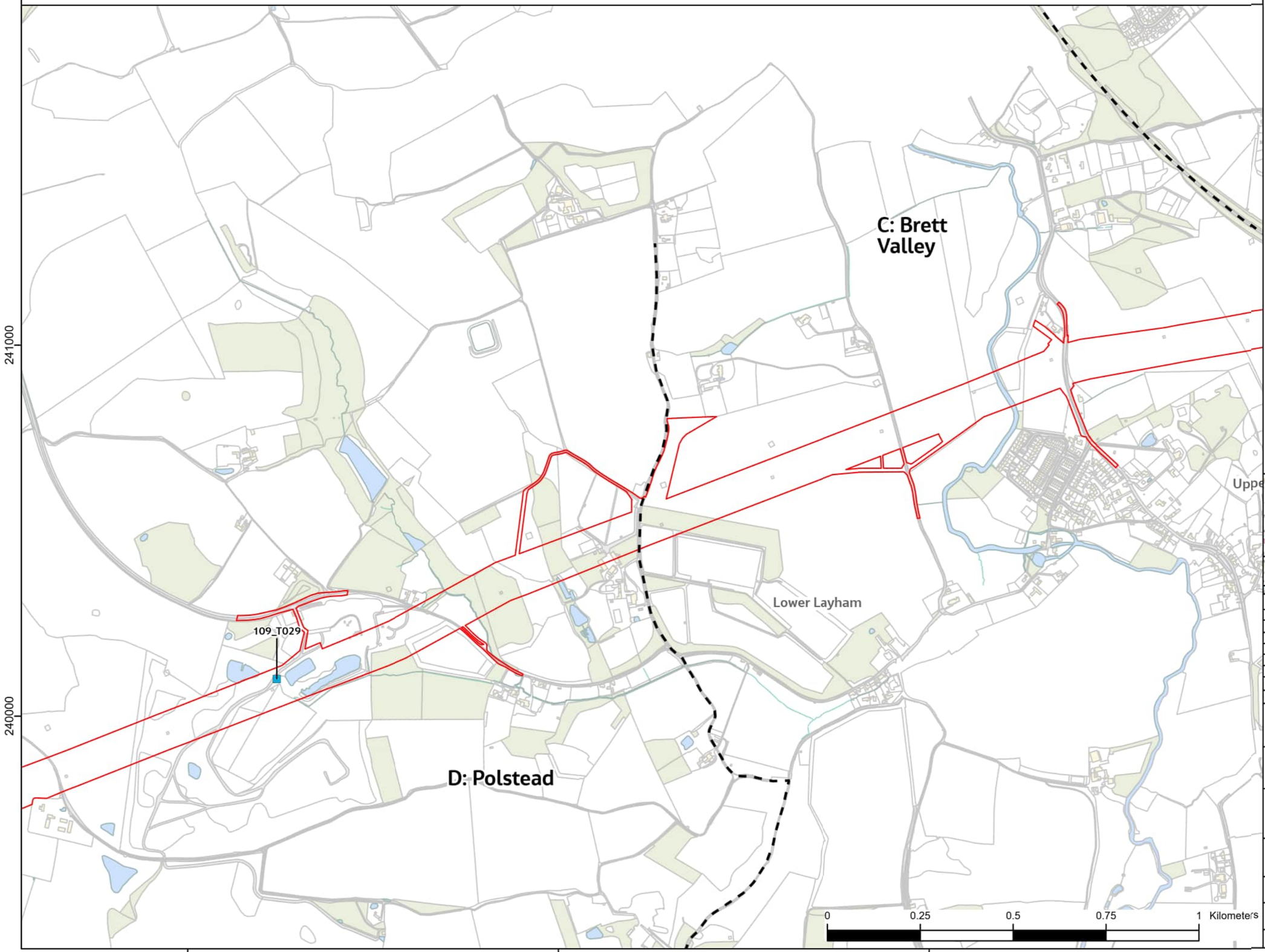
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D Impacts Plan

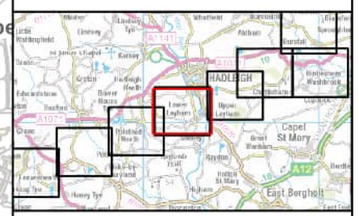
CIRCUIT / SITE:			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0123	SHEET NO. 4	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 5 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE:		
Bramford – Pelham & Bramford – Braintree – Bulls Lodge		GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01		A3
NG DRAWING No. BT-JAC-020631-500-0123	SHEET NO. 5 / NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000		

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 6 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

D: Polstead

Polstead Heath

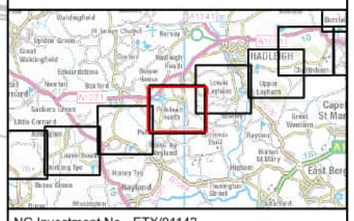
109_T029

E: Dedham Vale Area of Outstanding Natural Beauty

240000
239000

598000
599000
600000
601000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0123

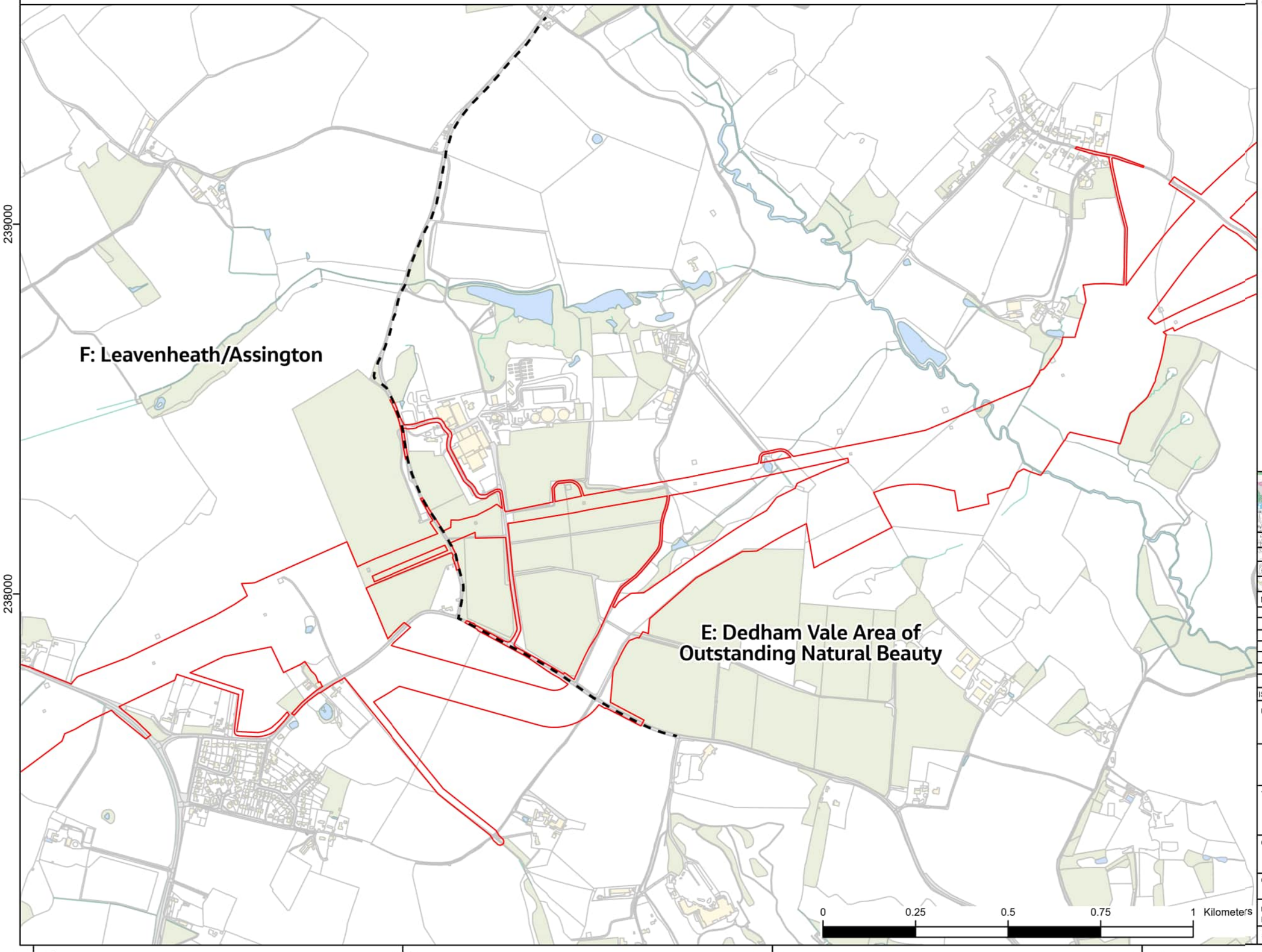
SHEET NO. 6

NO. OF SHEETS 14

ISSUE: A

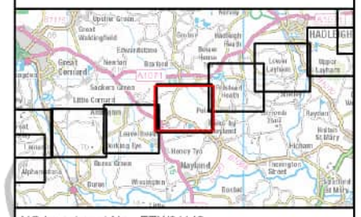
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 7 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigD_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0123

SHEET NO. 7

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 8 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

Assington

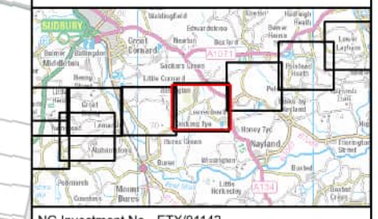
F: Leavenheath/Assington

Leavenheath

238000
237000
236000

592000
593000
594000
595000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

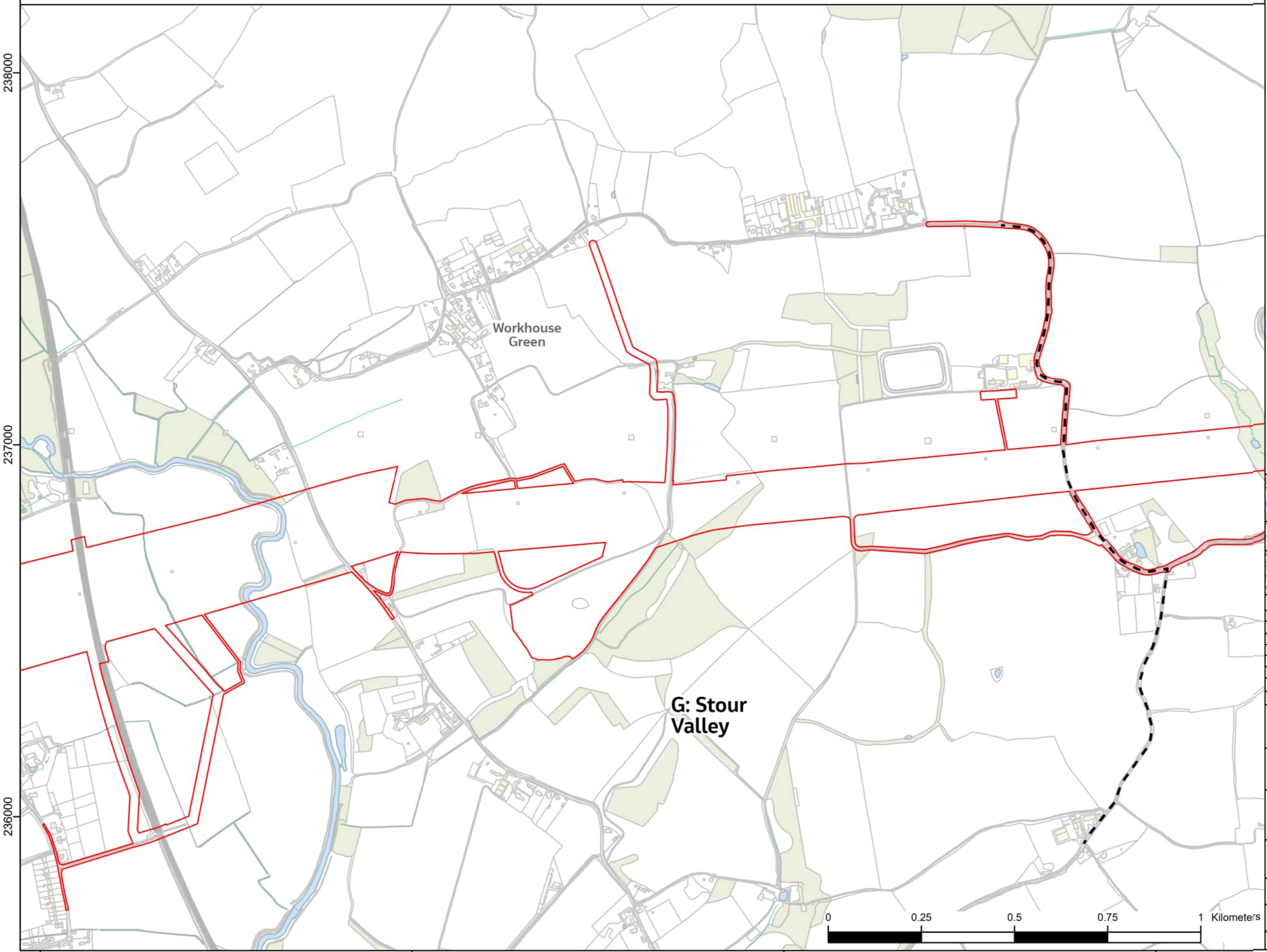
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE :
Figure D
Impacts Plan

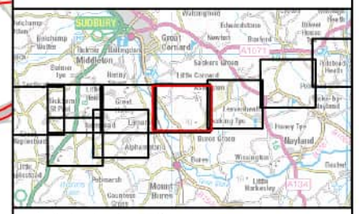
CIRCUIT / SITE :			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0123	SHEET NO. 8	NO. OF SHEETS 14	ISSUE: A
SCALE : 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 9 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

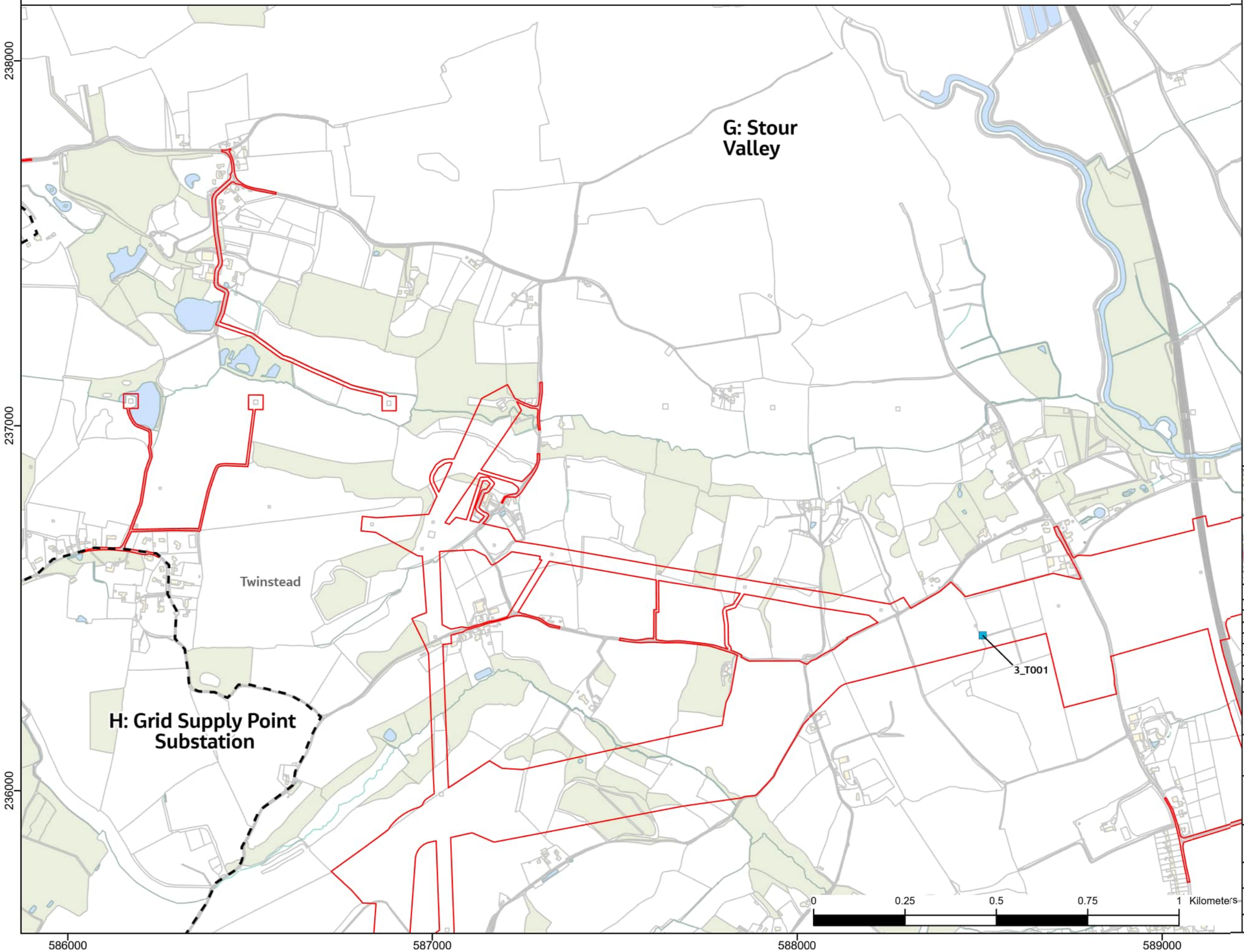
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE :
Figure D
Impacts Plan

CIRCUIT / SITE :			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO.			A3
AAA_BTT_BatsLicense_FigD_Rev01			
NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0123	9	14	A
SCALE : 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 10 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0123	SHEET NO. 10	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 11 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

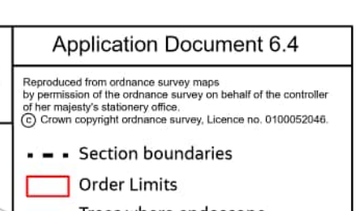
- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

238000
237000
236000

583000
584000
585000
586000

H: Grid Supply Point Substation

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigD_Rev01

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NG DRAWING No. BT-JAC-020631-500-0123

SHEET NO. 11

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 12 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

Twinstead

H: Grid Supply Point Substation

3_T001

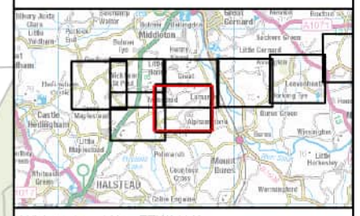
Alphamstone

G: Stour Valley

236000
235000

586000
587000
588000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigD_Rev01

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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0123	12	14	A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 13 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000
581000
582000
583000

H: Grid Supply Point Substation

Wickham St Paul

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigD_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0123

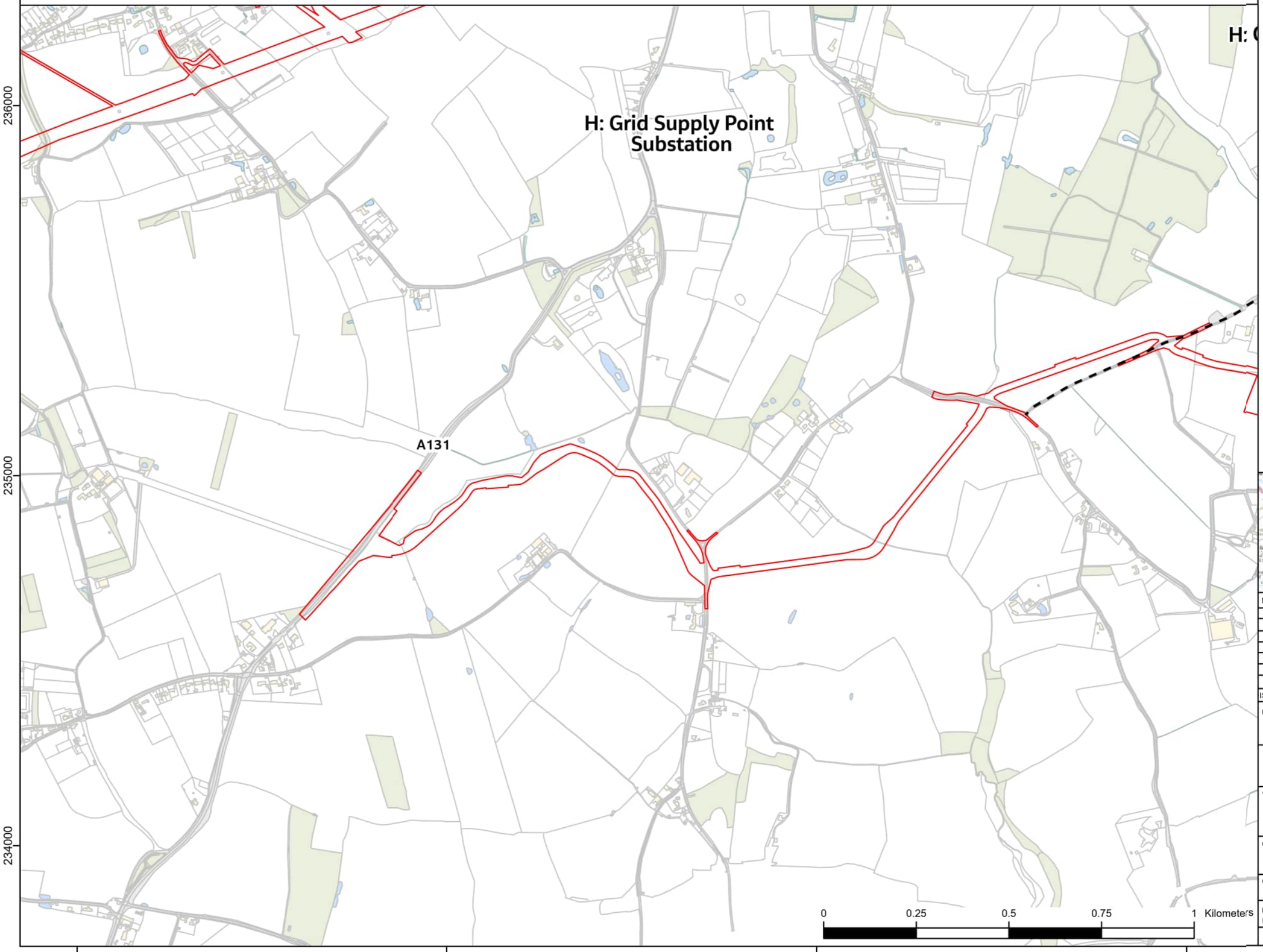
SHEET NO. 13

NO. OF SHEETS 14

ISSUE: A

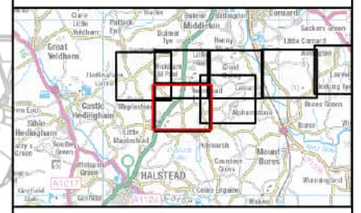
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
IMPACTS PLAN
REGULATION 5(2)(a)
SHEET 14 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Trees where endoscope inspection has not been possible and possible roost could be lost



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure D
Impacts Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigD_Rev01

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NG DRAWING No. BT-JAC-020631-500-0123

SHEET NO. 14

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

Mid Suffolk District Council
Babergh District Council
Braintree District Council
Colchester Borough Council
Tendring District Council

Bramford Substation
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10
Sheet 11
Sheet 12
Sheet 13
Sheet 14
AB: Bramford Substation/Hintlesham
C: Brett Valley
D: Polstead
E: Dedham Vale Area of Outstanding Natural Beauty
F: Leavenheath /Assington
G: Stour Valley
H: Grid Supply Point Substation

Clare, Acton, Sudbury, Hadleigh, Ipswich, Halstead, Colchester, Market, Colne Valley

255000
250000
245000
240000
235000
230000
225000

580000
585000
590000
595000
600000
605000
610000
615000

0 1 2 3 4 5 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

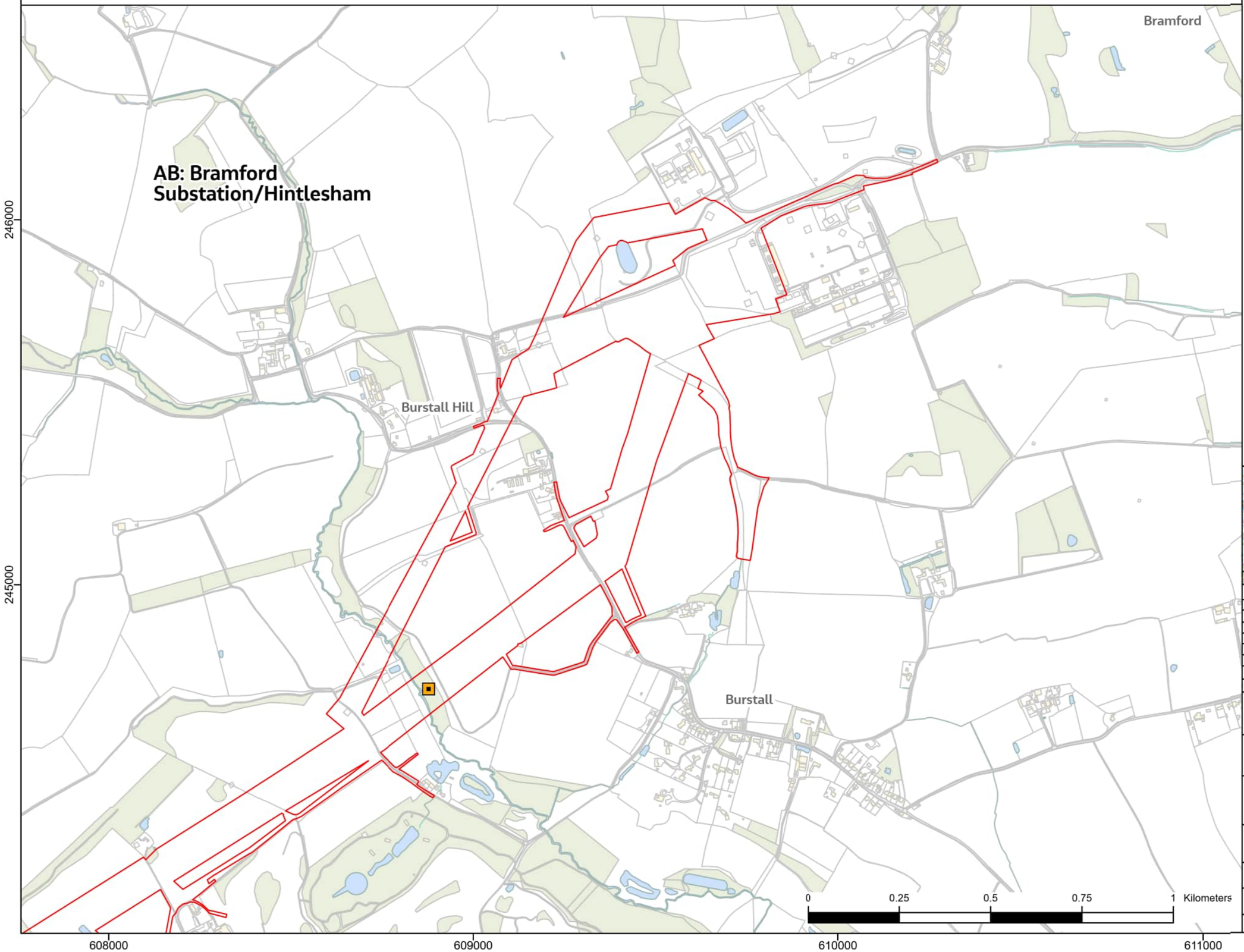
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE3_KeyPlan_Rev01

A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0124	1	1	A

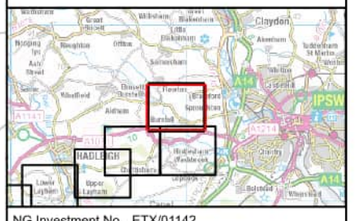
SCALE: 1:125000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 1 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

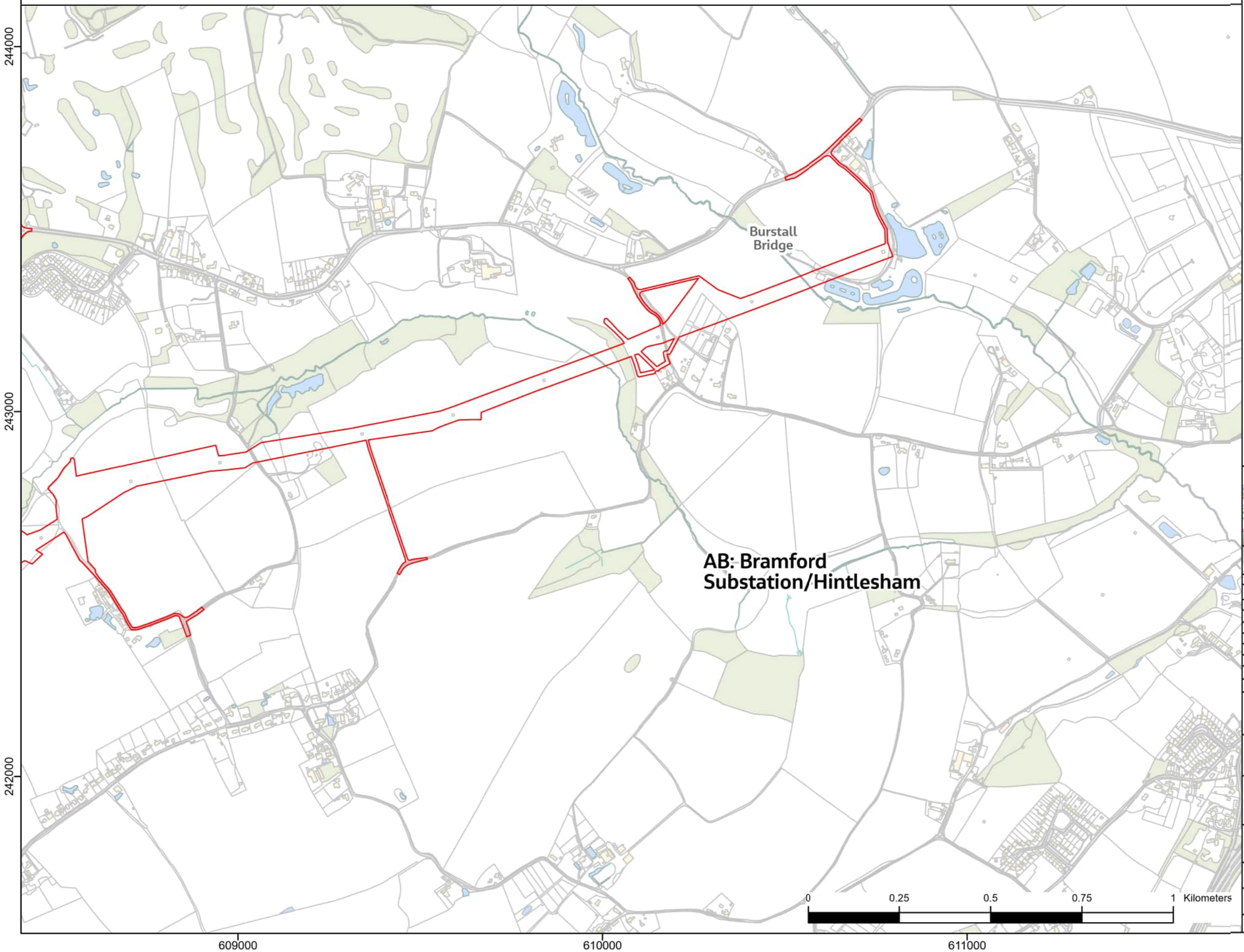
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE3_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0124	SHEET NO. 1	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 2 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE:			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE3_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0124	SHEET NO. 2	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 3 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

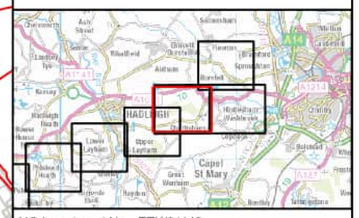
A1071

Hintlesham

AB: Bramford Substation/Hintlesham

244000
243000
242000
606000
607000
608000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
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NG DRAWING No. BT-JAC-020631-500-0124

SHEET NO. 3

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ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 4 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

AB: Bramford Substation/Hintlesham

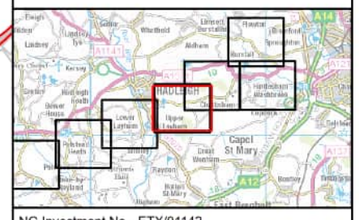
C: Brett Valley

Upper Layham

242000
241000

604000
605000
606000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE3_Rev01

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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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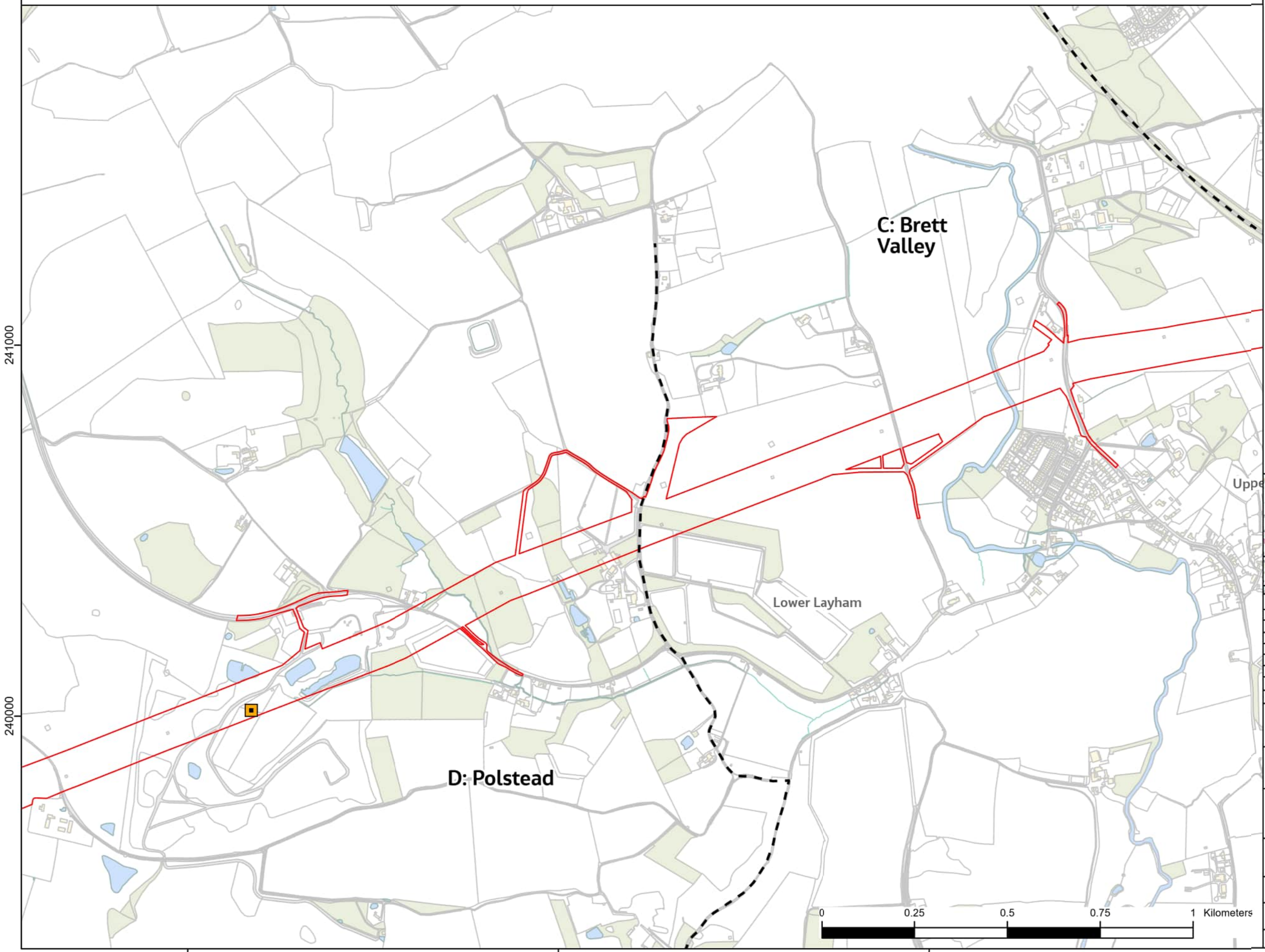
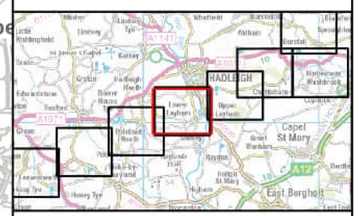
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 5 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE3_Rev01

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NG DRAWING No. BT-JAC-020631-500-0124

SHEET NO. 5

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 6 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

D: Polstead

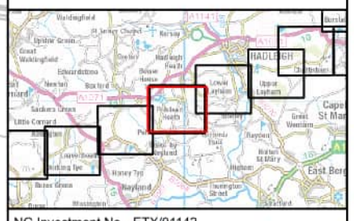
Polstead Heath

E: Dedham Vale Area of Outstanding Natural Beauty

240000
239000

598000 599000 600000 601000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE				GIS
Bramford – Pelham & Bramford – Braintree – Bulls Lodge				
ORIGINATOR DRAWING NO.				A3
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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:	
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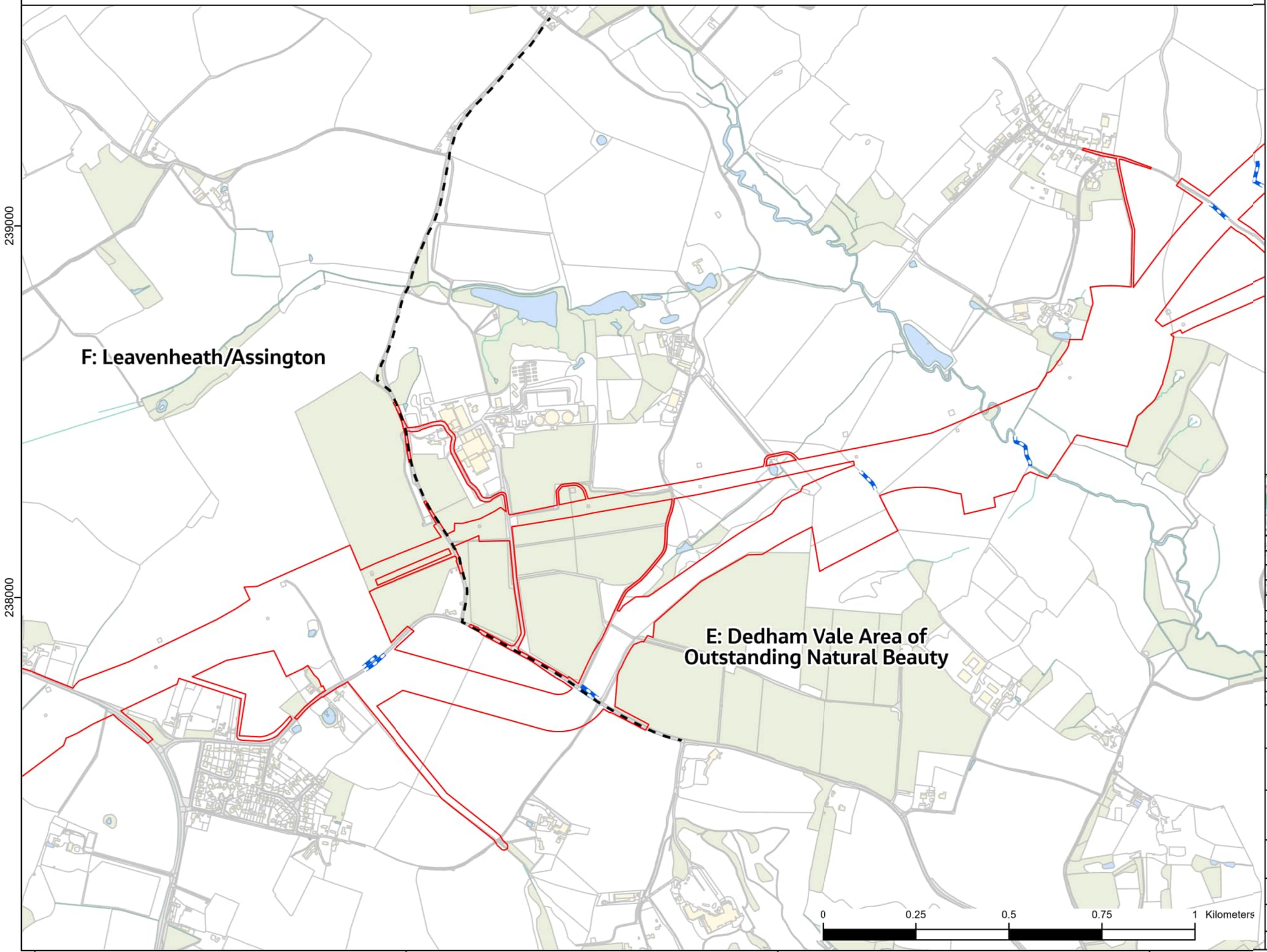
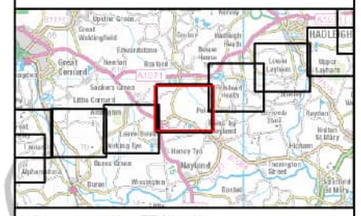
NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 7 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
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NG DRAWING No.
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ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 8 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

Assington

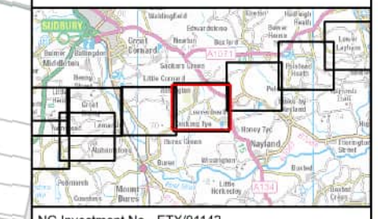
F: Leavenheath/Assington

Leavenheath

238000
237000
236000

592000
593000
594000
595000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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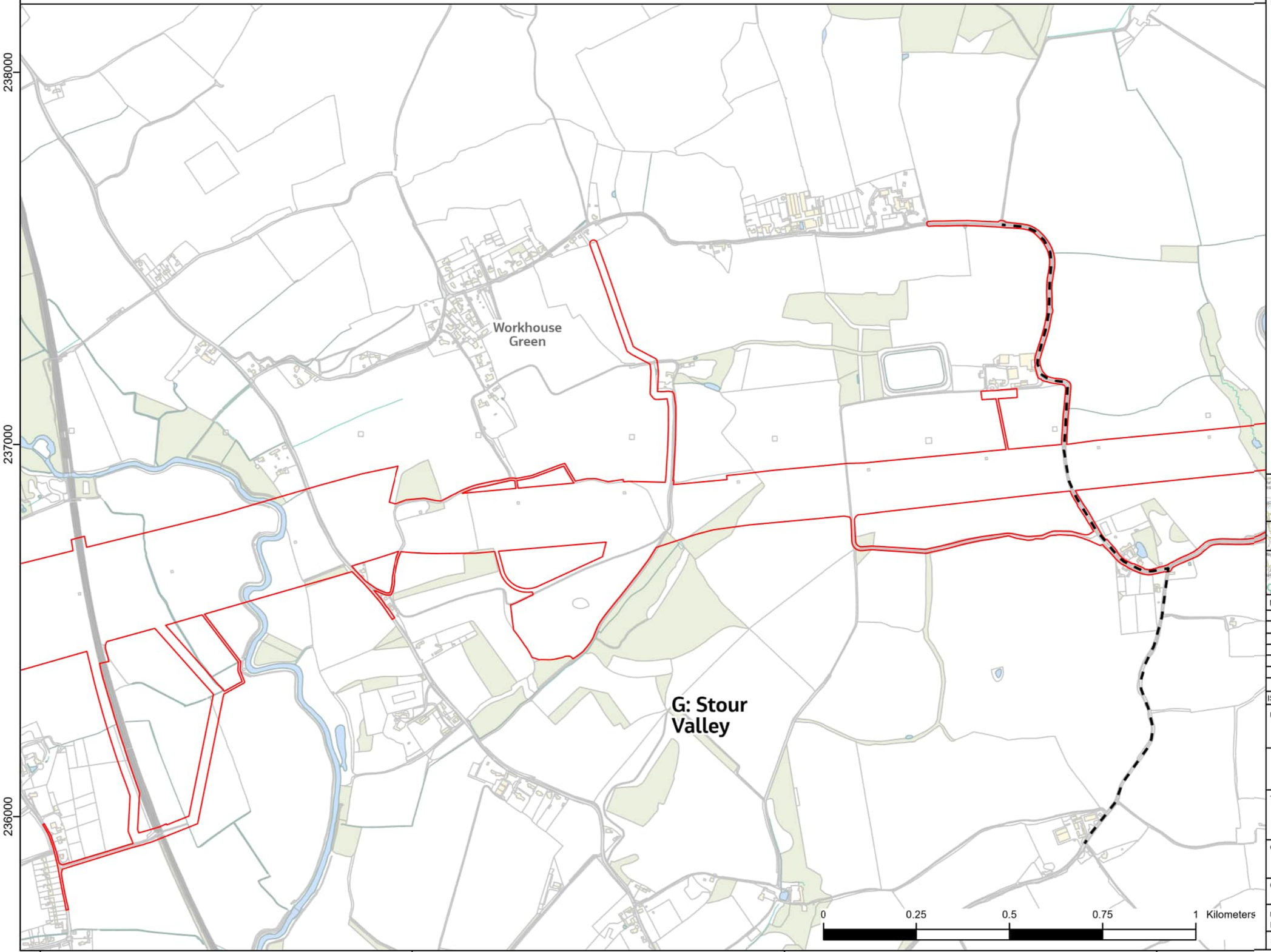
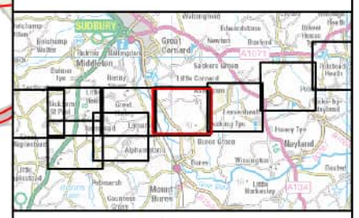
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 9 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)



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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
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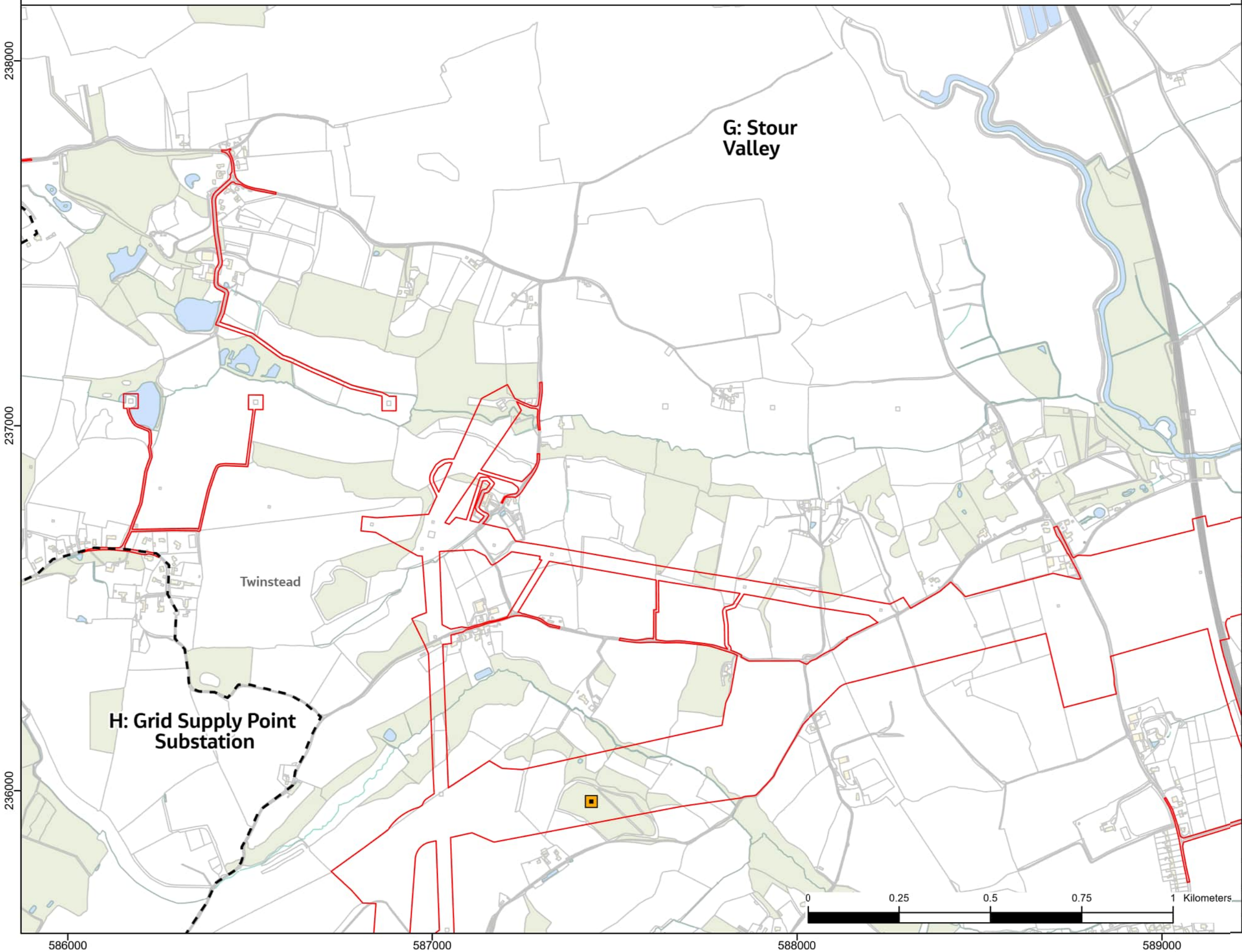
NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0124	9	14	A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 10 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigE3_Rev01

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NG DRAWING No.
BT-JAC-020631-500-0124

SHEET NO. 10

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 11 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

N

238000

237000

236000

583000

584000

585000

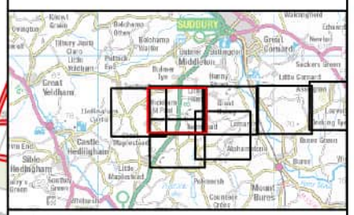
586000

H: Grid Supply Point Substation

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3
Specifications for
Mitigation / Compensation

CIRCUIT / SITE:			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE3_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0124	SHEET NO. 11	NO. OF SHEETS 14	ISSUE: A
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NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 12 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

Twinstead

H: Grid Supply Point Substation

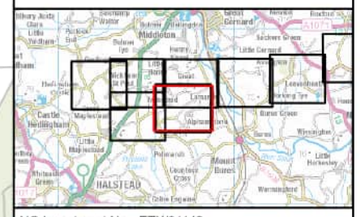
Alphamstone

G: Stour Valley

236000
235000

586000
587000
588000

0 0.25 0.5 0.75 1 Kilometers



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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 13 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000

581000
582000
583000

H: Grid Supply Point Substation

Wickham St Paul

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

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NG DRAWING No. BT-JAC-020631-500-0124

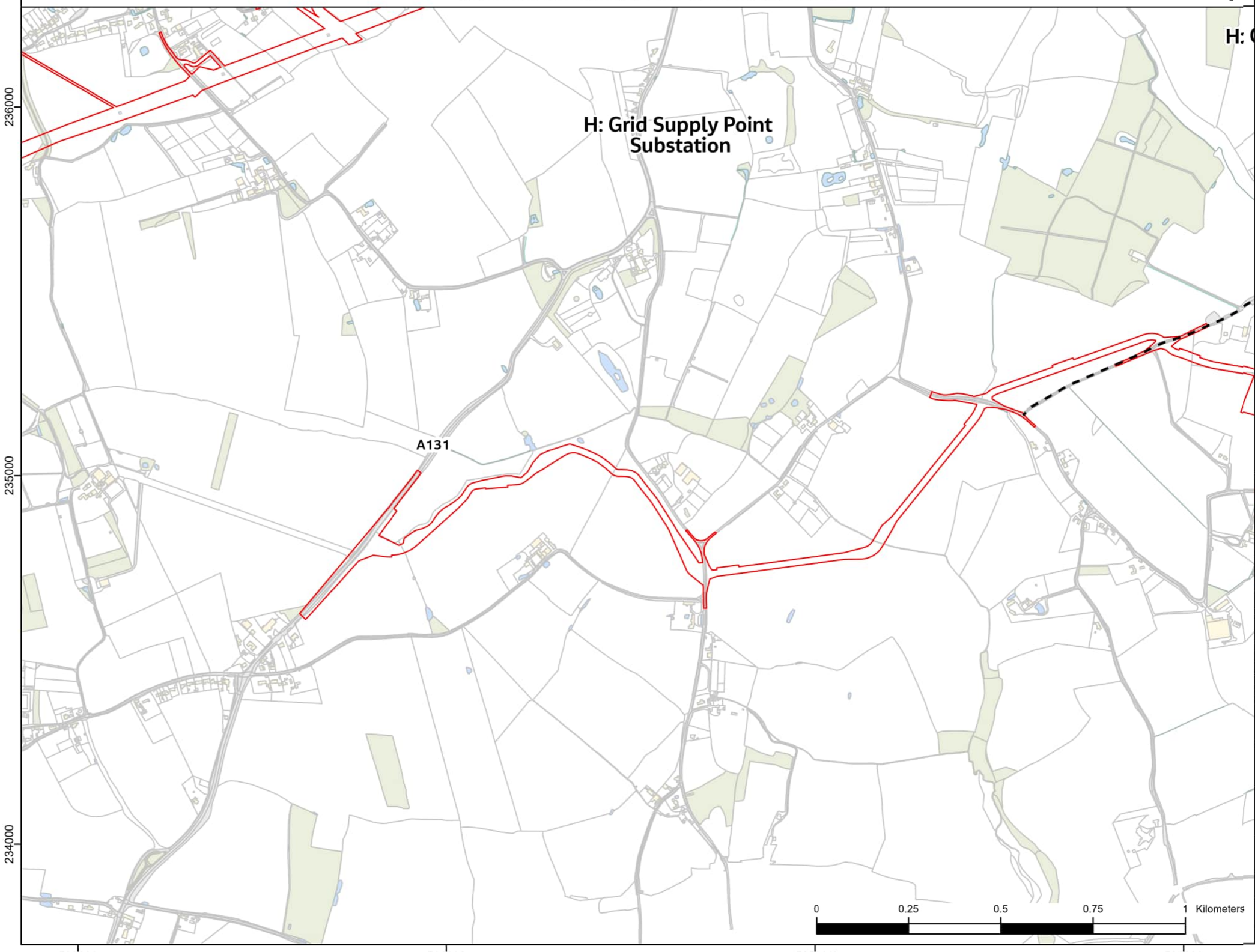
SHEET NO. 13

NO. OF SHEETS 14

ISSUE: A

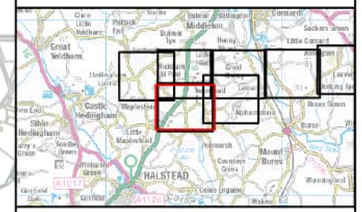
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
SPECIFICATIONS FOR MITIGATION / COMPENSATION
REGULATION 5(2)(a)
SHEET 14 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Dead hedging
- Bat boxes on trees (indicative)



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E3 Specifications for Mitigation / Compensation

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
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NG DRAWING No. BT-JAC-020631-500-0124

SCALE: 1:10000

SHEET NO.	NO. OF SHEETS	ISSUE:
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NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE - KEY PLAN
REGULATION 5(2)(a)
SHEET 1 OF 1
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

Legend
- Section Boundaries
- Order Limits
- Local authority districts
- Existing Bramford Substation

Mid Suffolk District Council
Babergh District Council
Braintree District Council
Colchester Borough Council
Tendring District Council

Bramford Substation
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10
Sheet 11
Sheet 12
Sheet 13
Sheet 14

AB: Bramford Substation/Hintlesham
C: Brett Valley
D: Polstead
E: Dedham Vale Area of Outstanding Natural Beauty
F: Leavenheath /Assington
G: Stour Valley
H: Grid Supply Point Substation

Clare, Acton, Sudbury, Hadleigh, Ipswich, Halstead, Colchester, Market

255000
250000
245000
240000
235000
230000
225000

580000 585000 590000 595000 600000 605000 610000 615000

0 1 2 3 4 5 Kilometers

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4 Monitoring, Management and Maintenance - Key Plan

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_KeyPlan_Rev01

A3

NG DRAWING No. BT-JAC-020631-500-0125

SHEET NO. 1

NO. OF SHEETS 1

ISSUE: A

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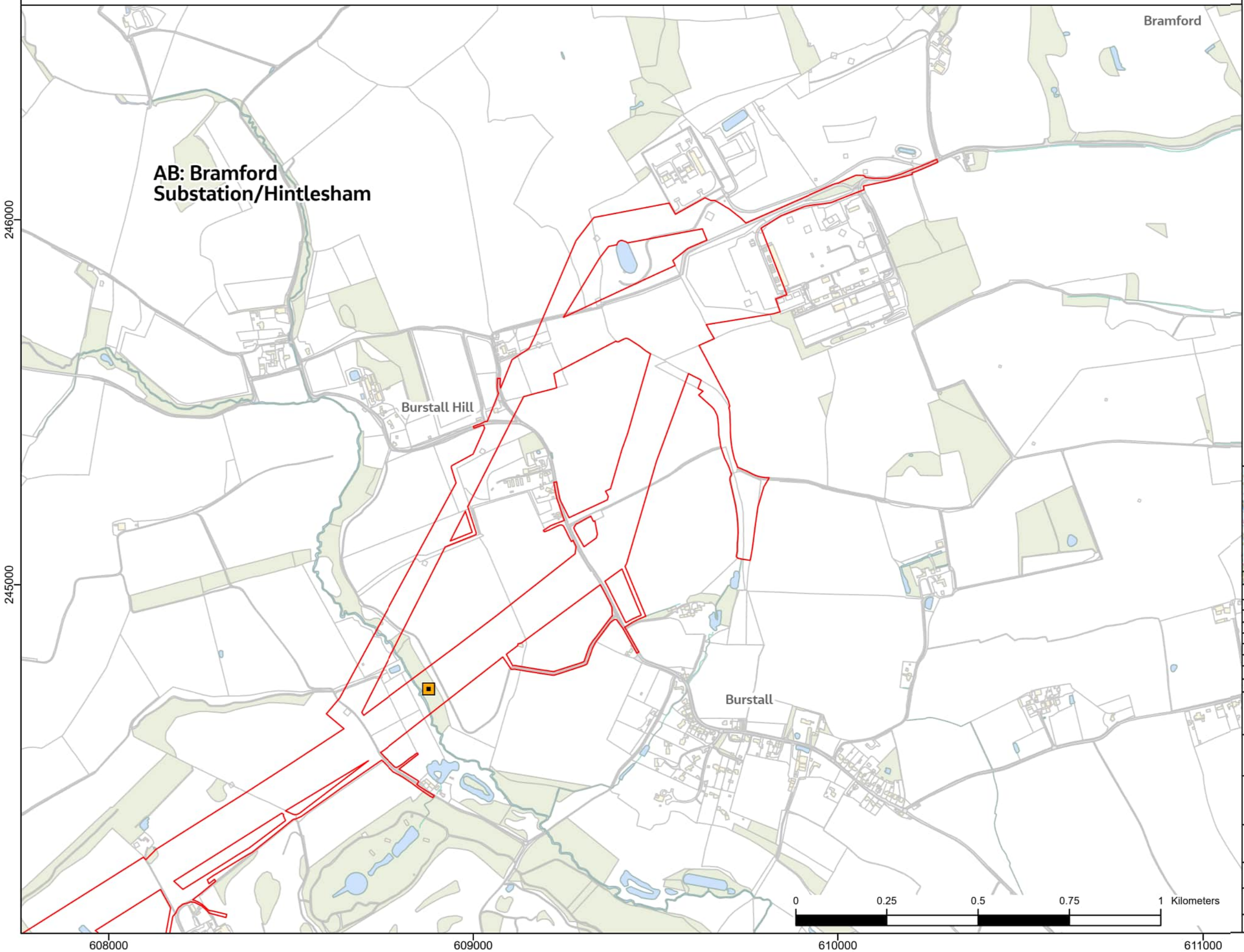
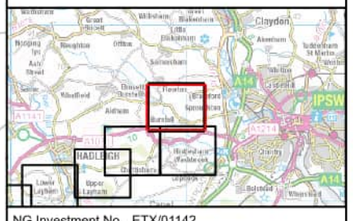
NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 1 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE		GIS
Bramford – Pelham & Bramford – Braintree – Bulls Lodge		
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01		A3
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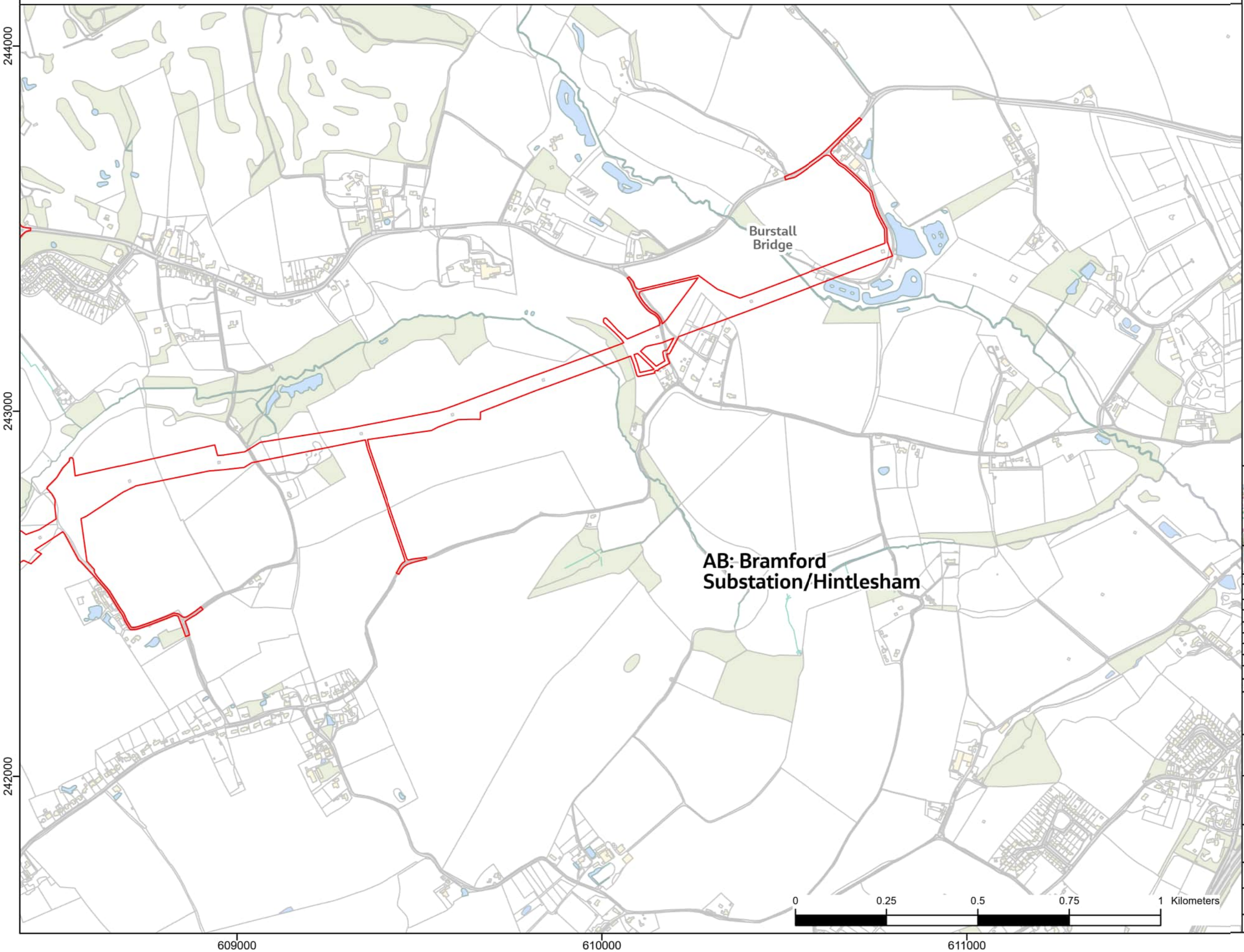
NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 2 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE : Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE : Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01

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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
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SCALE : 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 3 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

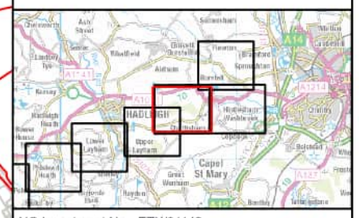
A1071

Hintlesham

AB: Bramford Substation/Hintlesham

244000
243000
242000
606000
607000
608000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

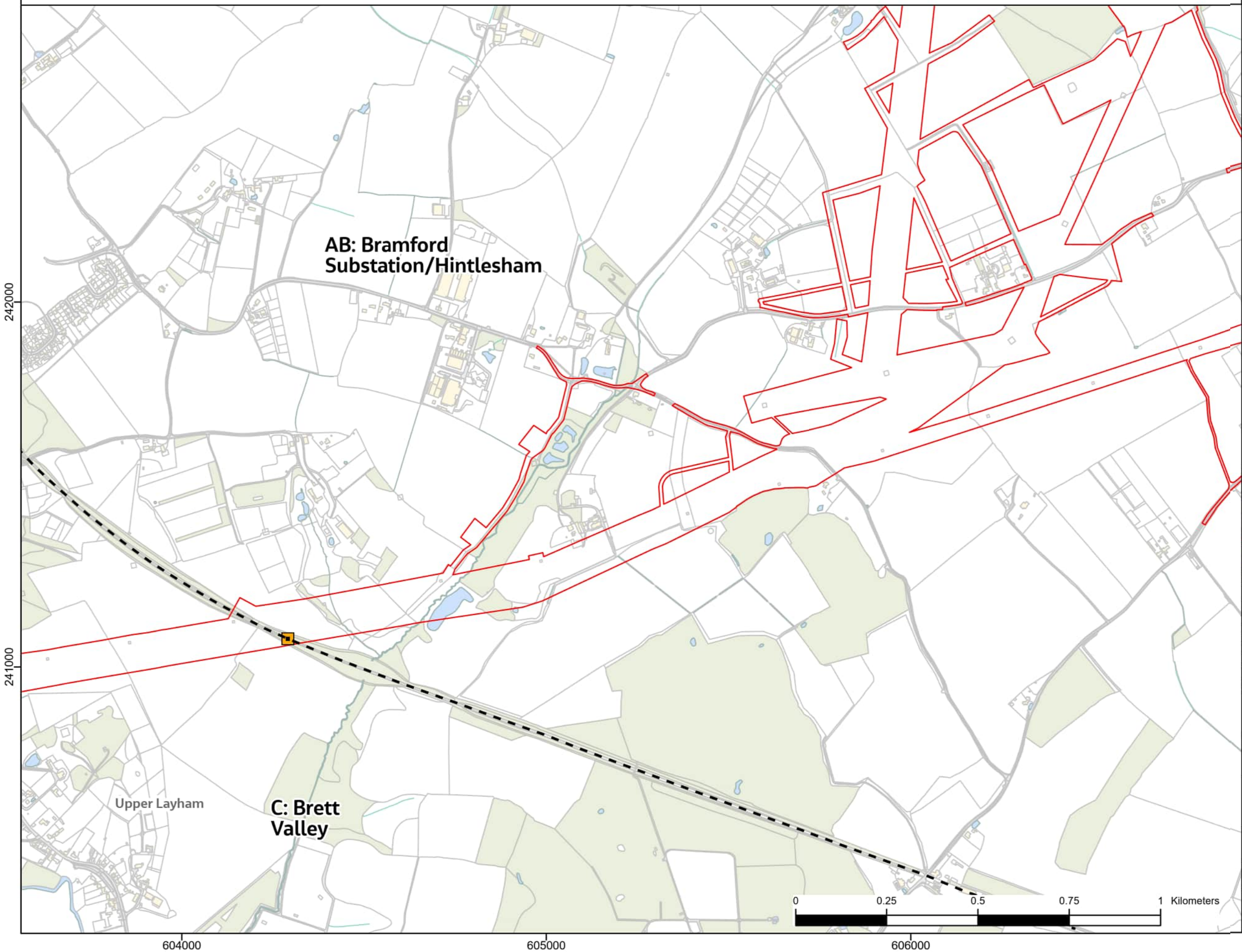
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0125	SHEET NO. 3	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 4 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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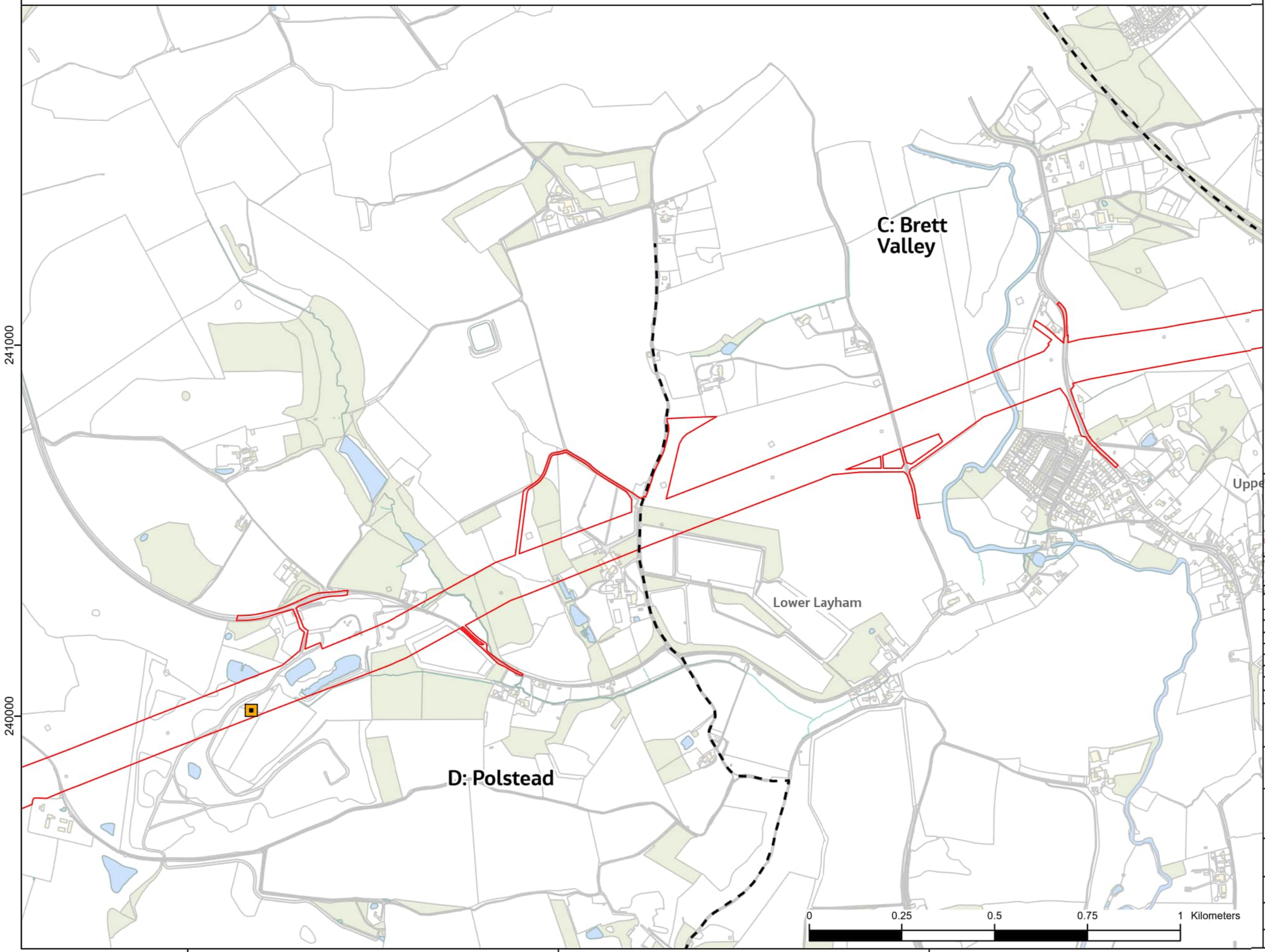
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4
Monitoring, Management and Maintenance

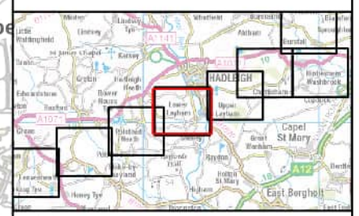
CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0125	SHEET NO. 4	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 5 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

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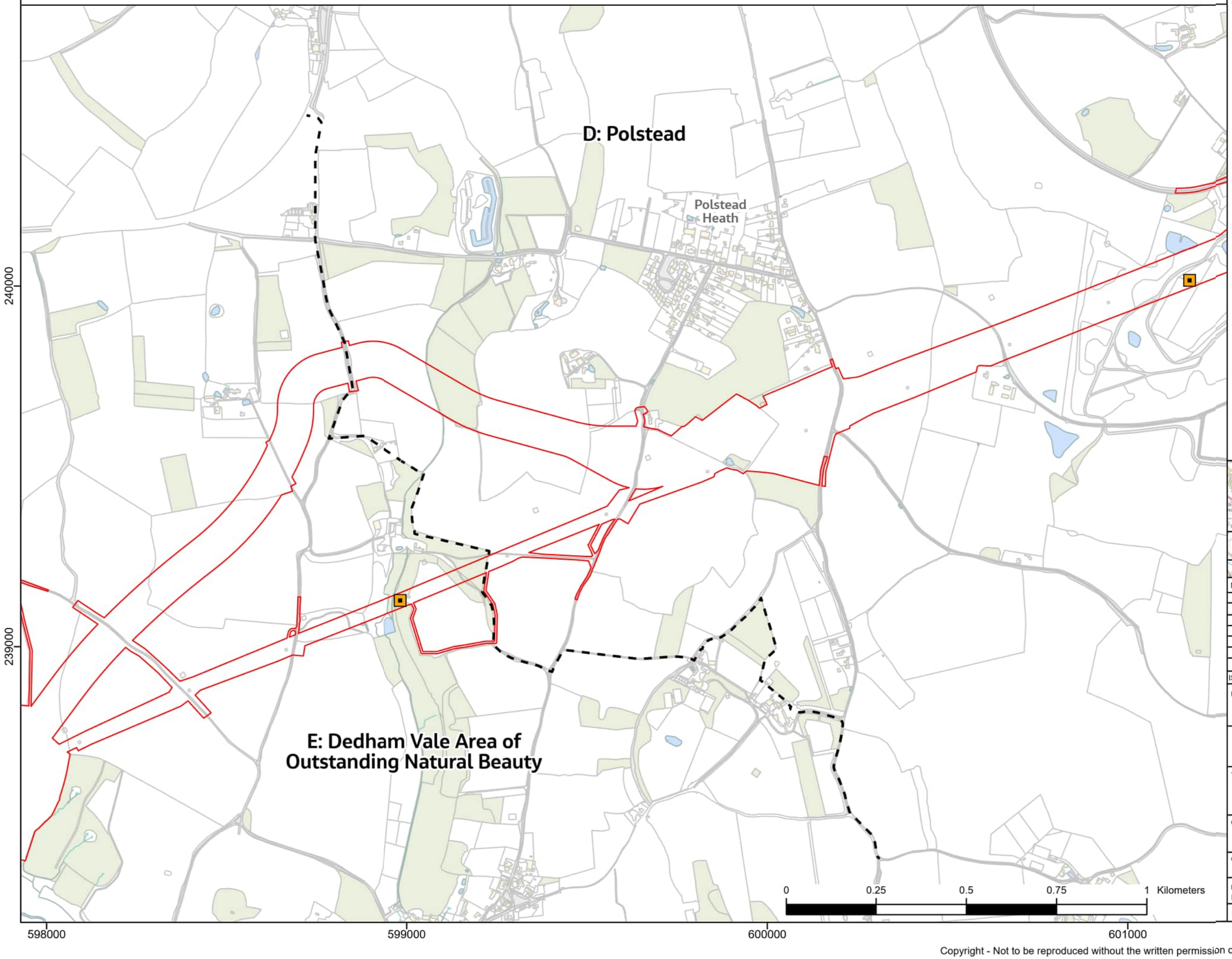
TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0125	SHEET NO. 5	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 6 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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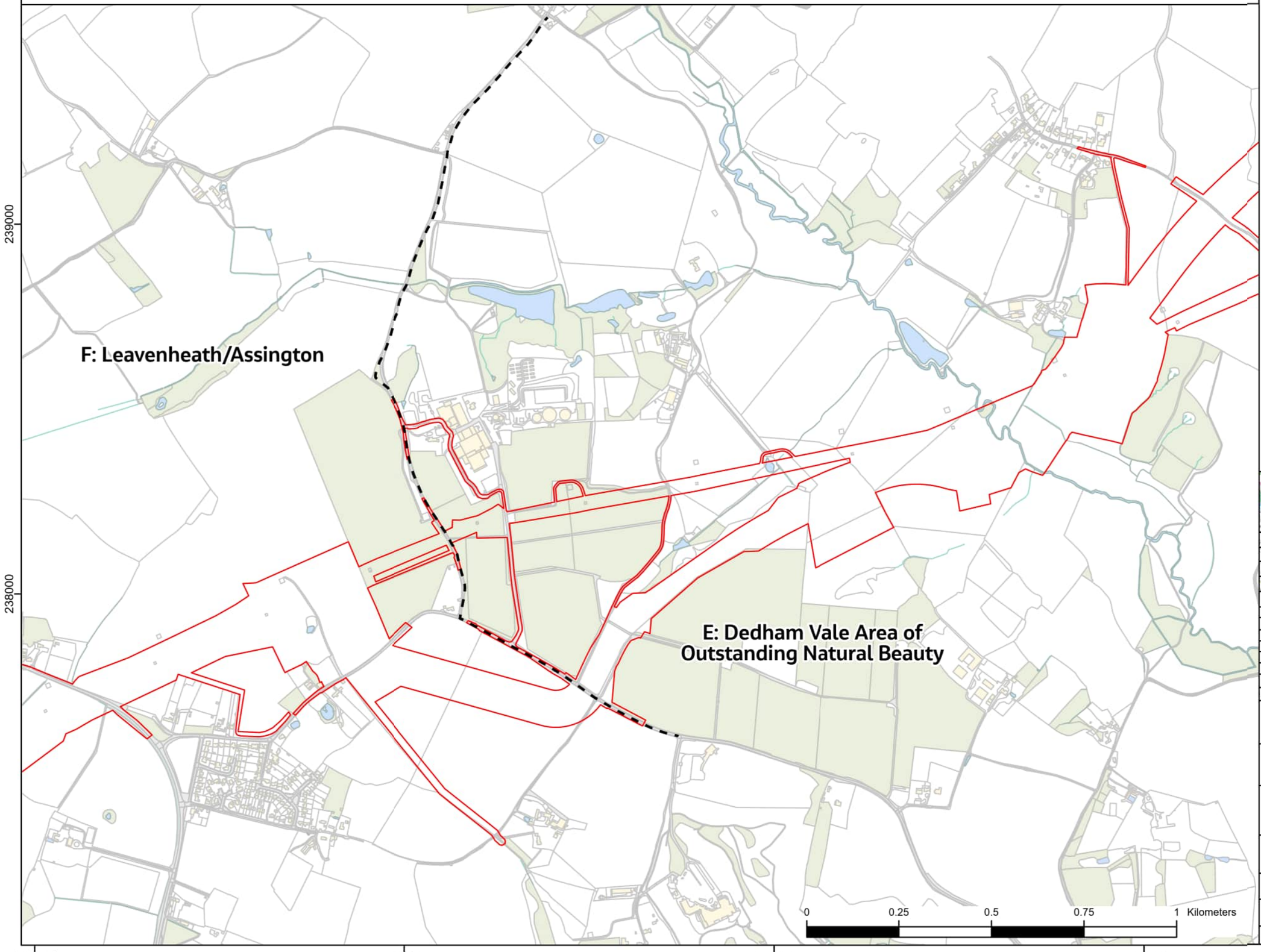
PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4
Monitoring, Management and Maintenance

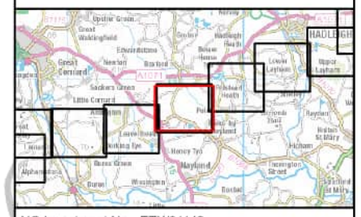
CIRCUIT / SITE			GIS
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01			A3
NG DRAWING No. BT-JAC-020631-500-0125	SHEET NO. 6	NO. OF SHEETS 14	ISSUE: A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 7 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

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NG DRAWING No.
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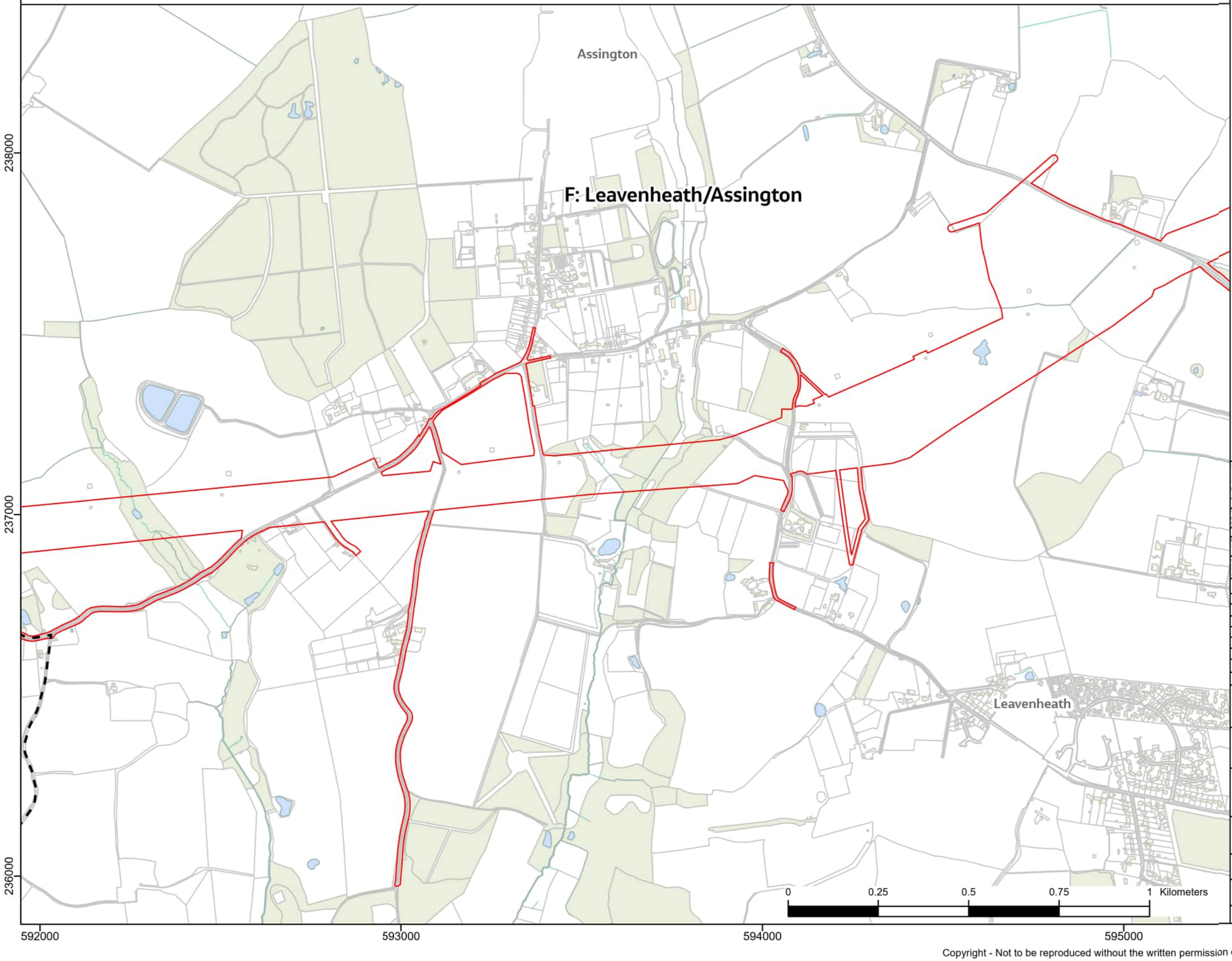
SHEET NO. 7

NO. OF SHEETS 14

ISSUE: A

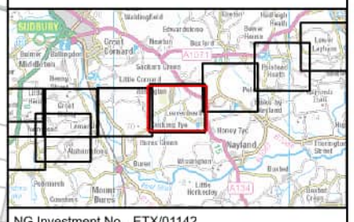
SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 8 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract



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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

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TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE			
Bramford – Pelham & Bramford – Braintree – Bulls Lodge			GIS
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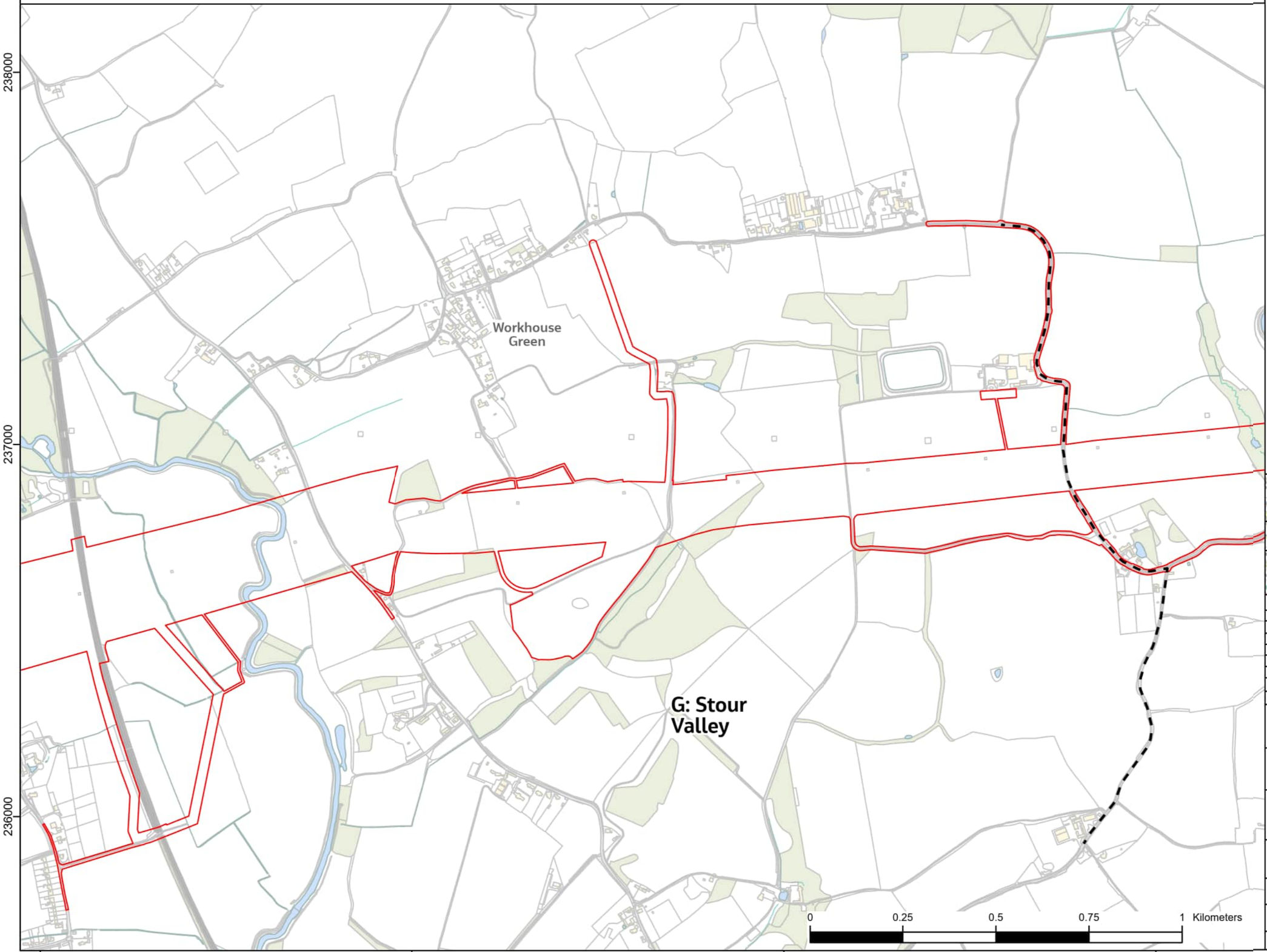
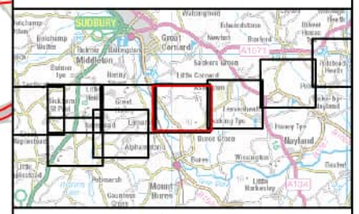
NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 9 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

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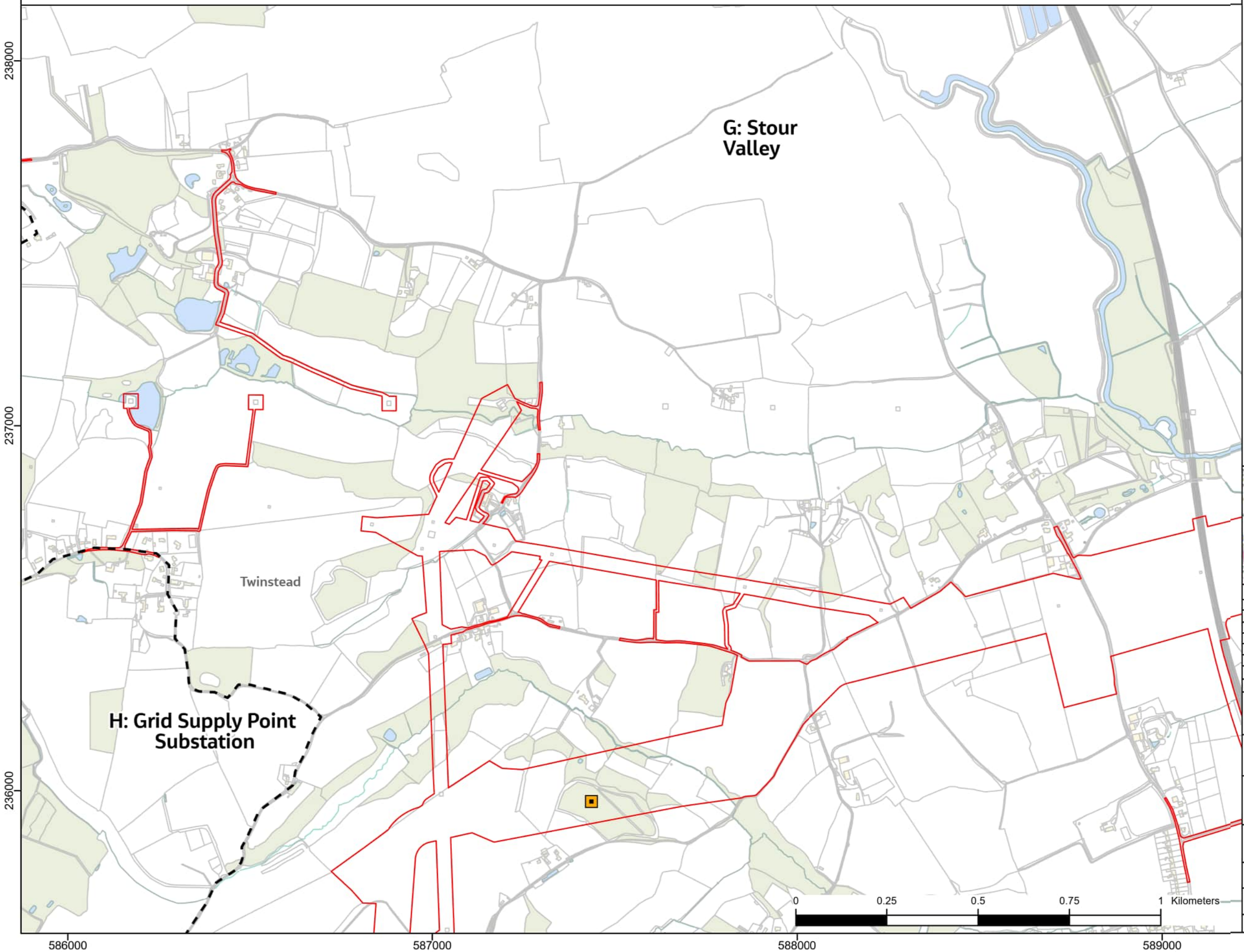
TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge	GIS
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01	A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0125	9	14	A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 10 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE	GIS
Bramford – Pelham & Bramford – Braintree – Bulls Lodge	
ORIGINATOR DRAWING NO. AAA_BTT_BatsLicense_FigE4_Rev01	A3

NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0125	10	14	A
SCALE: 1:10000			

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 11 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000
583000
584000
585000
586000

H: Grid Supply Point Substation

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.
AAA_BTT_BatsLicense_FigE4_Rev01

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NG DRAWING No. BT-JAC-020631-500-0125

SHEET NO. 11

NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 12 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

Application Document 6.4

- Section boundaries
- Order Limits
- Bat boxes (indicative) monitored annually during construction and in Year 2 of five year maintenance contract

Twinstead

H: Grid Supply Point Substation

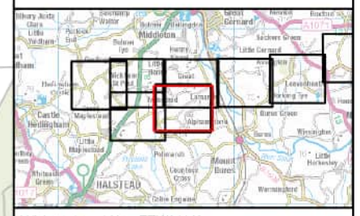
Alphamstone

G: Stour Valley

236000
235000

586000
587000
588000

0 0.25 0.5 0.75 1 Kilometers



NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

nationalgrid

TITLE: Figure E4 Monitoring, Management and Maintenance

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

ORIGINATOR DRAWING NO.: AAA_BTT_BatsLicense_FigE4_Rev01

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NG DRAWING No.	SHEET NO.	NO. OF SHEETS	ISSUE:
BT-JAC-020631-500-0125	12	14	A

SCALE: 1:10000

NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 13 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL

238000
237000
236000
581000
582000
583000

H: Grid Supply Point Substation

Wickham St Paul

0 0.25 0.5 0.75 1 Kilometers

Application Document 6.4

- Section boundaries
- Order Limits
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NG Investment No. ETX/01142

ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
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TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

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NG DRAWING No. BT-JAC-020631-500-0125

SCALE: 1:10000

SHEET NO.	NO. OF SHEETS	ISSUE:
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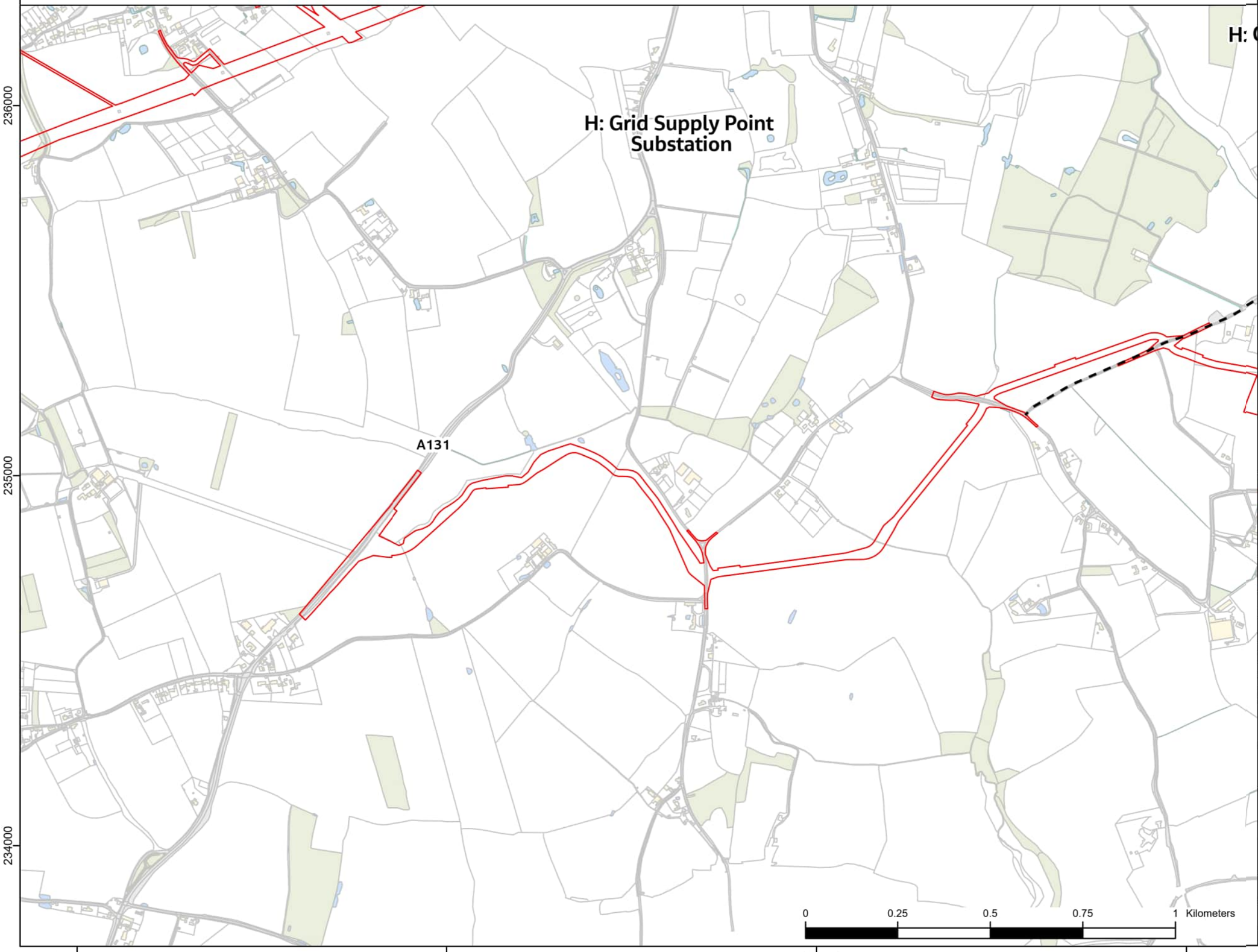
NATIONAL GRID (BRAMFORD TO TWINSTEAD REINFORCEMENT) ORDER
PINS APPLICATION NUMBER: EN020002
MONITORING, MANAGEMENT AND MAINTENANCE
REGULATION 5(2)(a)
SHEET 14 OF 14
IN THE DISTRICTS OF MID SUFFOLK DISTRICT COUNCIL, BABERGH DISTRICT COUNCIL AND BRAINTREE DISTRICT COUNCIL



Application Document 6.4

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- Order Limits
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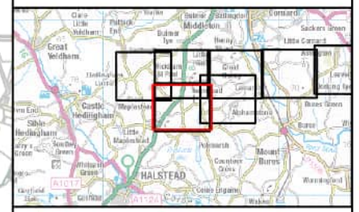

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ISSUE	DATE	REMARKS	DRWN	CHKD	APPD
A	03/2023	Rev A for DCO Application	PM	LG	CW

PROJECT: Bramford to Twinstead Reinforcement

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TITLE: Figure E4
Monitoring, Management and Maintenance

CIRCUIT / SITE: Bramford – Pelham & Bramford – Braintree – Bulls Lodge

GIS

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NO. OF SHEETS 14

ISSUE: A

SCALE: 1:10000

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No. 4031152
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