

Lower Thames Crossing

6.3 Environmental Statement Appendices Appendix 8.18 – Draft EPS mitigation licence application – dormouse (Tracked changes version)

APFP Regulation 5(2)(a)

Infrastructure Planning (Applications:
Prescribed Forms and Procedure)
Regulations 2009

Volume 6

DATE: December 2023
DEADLINE: 8

Planning Inspectorate Scheme Ref: TR010032
Application Document Ref: TR010032/APP/6.3

VERSION: 2.0

Revision history

Version	Date	Submitted at
1.0	31 October 2022	DCO Application
2.0	5 December 2023	Deadline 8

Licence Application Form

Mitigation Licensing - Dormice



Please Note - Applications can be completed online. For more information please visit [our website](#).

- 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 or using the online Casework Manager (CWM) system - please see [our website](#) for guidance or contact Wildlife Licensing.
- Additional guidance is provided in the [Using CWM - Applicant Guidance Document](#). This can be downloaded from our website or you can ask Wildlife Licensing to send you a copy.

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

For Office Use Only

CWM Ref No:

Charter Deadline:

1. Applicant Details

Please enter the details of the person who will become the licensee (*see attached annex for guidance*)

- If the applicant **is** already registered as a customer please complete Registered Applicant Details (a)
- If the applicant **is not** already registered as a customer please complete the New Applicant Registration (b)

(a) Registered Applicant Details

*Customer Number

*Surname

*Forename

*Postcode

(b) New Application Registration

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

*Email address

*Title

(please tick as appropriate)

Mr

Mrs

Ms

Other

Please specify

*Forename

Middle name

*Surname

Professional Membership
(eg, CIEEM, IEMA, etc) .

House name/number:

*Address Line 1

*Address Line 2

Address Line 3

Town

*County

*Postcode

Country

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

Telephone No.

Mobile No.

Fax No.

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

*Are you VAT registered? Yes No

If 'Yes' VAT Number

*Are you registered with the Rural Payments Agency? Yes No

If 'Yes' RPA SBI Number

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

*Position

What is the size of your organisation?

*Organisation Name

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)

Companies House Registration or Registered Charity Number:

(d) 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

Telephone No.

Email address

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 *(For guidance please see attached annex)*

- If the ecologist **is** already registered as a customer please complete Registered Named Ecologist Details (a)
- If the ecologist **is not** already registered as a customer please complete the New Named Ecologist Registration (b)
- If there will not be an ecologist used in conjunction with this application please go to the next section.

(a) Registered Named Ecologist Details

*Customer Number

*Surname

*Forename

*Postcode

(b) New Named 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

Ms

Other

Please specify

*Forename

Middle name

*Surname

Professional Membership
(eg, CIEEM, IEMA, etc) .

CIEEM; CEnv

House name/number:

*Address Line 1

*Address Line 2

Address Line 3

Town

*County

*Postcode

Country

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

Telephone No.

Mobile No.

Fax No.

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

*Are you VAT registered? Yes No If 'Yes' VAT Number

*Are you registered with the Rural Payments Agency? Yes No If 'Yes' RPA SBI Number

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

*Position

What is the size of your organisation?

*Organisation Name

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)

Companies House Registration or Registered
Charity Number:

(d) 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.

Name

Telephone No.

Email address

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 applications?

(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 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 species information.

Draft licence applications will be submitted to Natural England for the following protected species: badger; bats; great crested newt; water vole.

For applications which are part of the Pre-Submission Screening Services

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:

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

This is a draft application submission with the objective of securing a letter of no impediment. Discussions with Amy Radford, Matthew Ashton and Sonya Gray have been ongoing regarding this application since 2019. Sonya Gray and Matthew Ashton have commented on a working draft of this licence application.

5. Purpose

(a) Brief Description of Proposal

(Eg, Construction of a new road, construction of five flats with access road and car parking area, installation of an underground utilities cable).

The Project provides a connection between the A2 and M2 in Kent, east of Gravesend, crossing under the River Thames through two bored tunnels, before joining the M25 south of junction 29 in Essex. The road would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13 and junction 29 of the M25. The tunnel portals would be located to the east of the village of Chalk south of the Thames, and to the west of East Tilbury to the north of the Thames. The Project would be three lanes in both directions, except for link roads; stretches of carriageway through junctions; and the southbound carriageway from the M25 to the junction with the A13/A1089, which would be two lanes.

(b) * Please tell us why you need a licence.

(Eg, Woodland used for breeding and hedgerows used for dormice dispersal will be damaged during construction works).

Dormouse have been confirmed as present in woodland within the Project's Order Limits, but only south of the River Thames in Kent; they are considered absent from the Order Limits within Essex. Woodland and connecting hedgerow habitat will be lost as a result of the Project.

(c) * Please confirm the purpose of the application (Please select one of the following):

- 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):

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

(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 - http://webarchive.nationalarchives.gov.uk/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:	Lower Thames Crossing
House No:	
Address Line 1:	
Address Line 2:	
Address Line 3:	
Town:	A2/M2 in the south, to junction 29 of the M25 in the north
*County:	Kent in the south and Essex in the north
Postcode	
*OS Grid Reference (In format XX123456) :	<small>Southern Grid Ref: TQ 66809 70028 Northern Grid Ref: TQ 56934 92188</small>

7. Conservation Considerations

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

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 <i>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)</i>
On <input checked="" type="checkbox"/>	Adjacent to <input type="checkbox"/>	Shorne and Ashenbank Woods	SSSI
On <input checked="" type="checkbox"/>	Adjacent to <input type="checkbox"/>	South Thames Estuary and Marshes	SSSI
On <input type="checkbox"/>	Adjacent to <input checked="" type="checkbox"/>	Great Crabbles Wood	SSSI
On <input type="checkbox"/>	Adjacent to <input checked="" type="checkbox"/>	Mucking Flats and Marshes	SSSI
On <input type="checkbox"/>	Adjacent to <input checked="" type="checkbox"/>	Thames Estuary and Marshes	SPA
On <input checked="" type="checkbox"/>	Adjacent to <input type="checkbox"/>	Thames Estuary and Marshes	Ramsar

(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.

Discussions with Natural England (Sean Hanna; Jonathan Bustard; Jim Seymour) have been ongoing during the Project's development. Effects to all statutory designated sites are identified and assessed as part of the Environmental Statement submitted in support of the DCO application for the Project.

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: Two stage habitat removal

	Licensable Action
Application Subject	<i>Dormice</i>
Species	<i>Hazel Dormice</i>
	<input checked="" type="checkbox"/> Capture <input checked="" type="checkbox"/> Disturb <input checked="" type="checkbox"/> Transport <input checked="" type="checkbox"/> Damage breeding site <input checked="" type="checkbox"/> Destroy breeding site <input checked="" type="checkbox"/> Destroy resting place <input checked="" type="checkbox"/> Damage resting place
	<input checked="" type="checkbox"/> By hand <input checked="" type="checkbox"/> Next box/Nest tube <input checked="" type="checkbox"/> Hand search <input checked="" type="checkbox"/> Two stage habitat removal <input checked="" type="checkbox"/> Single stage habitat removal - active season <input checked="" type="checkbox"/> Single stage habitat removal - hibernation season <input type="checkbox"/> Other
If Other method, please specify	
Please enter the proposed start date of action below. <i>Please note this refers to the date of the first licensable action, not necessarily when the development commences.</i>	
*Proposed Date from:	May 2022

(b) Have you received the owner / occupier's permission to apply?

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 (eg, People's Trust for Endangered Species).

10. Experience

Please note: For guidance in completing this section please refer to the Experience in Great Crested Newt Mitigation document at http://webarchive.nationalarchives.gov.uk/20140605090108/http://www.naturalengland.org.uk/Images/wmlg05_tcm6-4115.pdf

(a) * Has the named ecologist associated with this application held or been named on a 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 and date of issue for licences held:

TBC

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

(c) * Does the named ecologist currently hold a valid personal survey licence or are they registered to use a class survey licence for the same species?

Yes

If 'Yes' complete all of the following.

No

If 'No' go to (f)

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

(e) * 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:

(f) * Please give brief details of the named ecologist's experience on mitigation 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

(g) * 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.

(h) * 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 (eg, Planning permission, listed building consent, etc).
2. Demolition consent (under Building Act 1984) including prior notice to demolish.
3. Other type of consent required (eg, 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 (eg, Public Health and safety issues)

if '3' is
selected

(b) * Please provide details of these consents

if '5' is
selected

(c) * Please explain why no consent is require

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'

Consent Not Obtained

Please explain why you are applying in advance of the granting of consent that would allow the development to commence and what the circumstances are (eg, Site investigation work which is required to inform the planning consent decision and where, after avoidance measures, the risk of affecting a European Protected Species is high). Please note that your application is unlikely to be processed until this issue has been resolved.

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

An application for development consent will be submitted to the Planning Inspectorate in 2020. The information contained within this draft licence application demonstrates that the project could be constructed in accordance with the Conservation of Habitats and Species Regulations 2017. This information would also inform the issuing of a Letter of No Impediment (LONI) by Natural England with respect to the project.

(f) *Other - Householder Planning Permission.

Please insert 'HHPP' in the text box

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 through this chargeable service. 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

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

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

Other Consent Type

(h) 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.

(i) 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' to (i), please skip (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.

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

(k) Is the site subject to any commitment that affects the protected species named in this application?

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.

Yes No

If 'Yes' to 'k' Has the commitment been met? Please also explain what has been done.

If 'Yes' to 'k' What work is outstanding and when will it be completed?

(l) 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 'l' Has this been met?

If 'Yes' to 'l' 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 tick this box to confirm that you have read and understood the Reasoned Statement template and advicenote/guidance

(m) * Does your application require a Reasoned Statement? Yes No

If 'No' to (m): * Please confirm the exception that applies (specify species and scenario eg, home improvements or small scale housing developments)

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 (eg, 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 (eg, Public health and safety issues) then please leave the remaining fields blank.

*Consenting Authority Name

Secretary of State for Transport

*Title

*Forename

*Surname

*Position

Email Address

Telephone Number

Address

13. Method Statement and Charge Form

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

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

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

Further Advice: Copies of the latest versions of templates for all species and further guidance to help you complete them are available on our website.

14. Supplementary Information

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

A large, empty rectangular box with a thin black border, intended for the applicant to provide supplementary information to support their application. The box is currently blank.

15. Data Protection

The data controller is the Natural England, Foss House, Kings Pool, 1-2 Peasholme Green, York, Y01 7PX. You can contact the Natural England Data Protection Manager at: Natural England, County Hall, Spetchley Road, Worcester, WR5 2NP; foi@naturalengland.org.uk

Any questions about how we are using your personal data and your associated rights should be sent to the above contact. The Data Protection Officer responsible for monitoring that Natural England is meeting the requirements of the legislation is: Defra group Data Protection Officer, Department for Environment, Food and Rural Affairs, SW Quarter, 2nd floor, Seacole Block, 2 Marsham Street, London SW1P 4DF. DefraGroupDataProtectionOfficer@defra.gsi.gov.uk

The information on the licence application form and any supporting material will be used by Natural England to undertake our licensing functions. This will include, but is not limited to assessing your application, issuing a licence if applicable, monitoring compliance with licence conditions and collating licence returns and reports. The personal information we will process will include, but is not limited to your name and contact details, customer type and reasons for wanting a licence. Processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the data controller. That task is to conduct the licensing functions as delegated by Defra to Natural England under Part 8 Agreement under section 78 of the Natural Environment and Rural Communities Act 2006.

The processing by us of personal data relating to wildlife-related or animal welfare offences or related security measures is carried out only under official authority. This information is used in assessing an application as it is a material fact.

Natural England will for particular licence applications and at specific stages of the licencing process discuss your application with third parties. The details of this sharing are set out here <https://www.gov.uk/government/publications/wildlife-licensing-privacy-notice>

Your personal data will be kept by us for 7 years after the expiry of your licence or longer if stated in the licence conditions. Failure to provide this information will mean that we will be unable to assess your application for a wildlife licence.

The information you provide is not connected with individual decision making (making a decision solely by automated means without any human involvement) or profiling (automated processing of personal data to evaluate certain things about an individual).

The data you provide will not be transferred outside the European Economic Area.

A list of your rights under the General Data Protection Regulation, the Data Protection Act 2018, is accessible at: <https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/individual-rights/>

You have the right to lodge a complaint with the ICO (supervisory authority) at any time. Should you wish to exercise that right full details are available at:

<https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/individual-rights/> Details of our Personal Information Charter can be found at: <https://www.gov.uk/government/organisations/natural-england/about/personal-information-charter>.

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.**

16. Declaration

16a. Convictions

* Have you or any person listed in the application been convicted of any wildlife-related or animal welfare offence?

Yes No

If 'Yes'
please
provide
details

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.

16b. Applicant Declarations

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 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 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 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)

TBC

Date

16c. Ecologist Declaration

I have read and understood the privacy notice above.

- 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)

TBC

Date

17. Annex - 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). This means that all authorised persons have a responsibility for ensuring that the licence terms and conditions, including any annex 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/wmlg05_tcm6-4115.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.



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

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 53(2)(e) and 53(9)(a) within The Conservation of Habitats and Species Regulations 2010 (as amended). These are known as the ‘**purpose**’ and ‘**no satisfactory alternatives**’ tests.

This form, for the purpose of Imperative Reasons of Overriding Public Interest, only needs to be completed if your application proposal is **not** covered by one the scenarios and categories listed [on GOV.UK](http://GOV.UK).

Important Note: Detailed information on the proposal is required to demonstrate that it will meet the tests set out under the Regulations. 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”
- **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 (see guidance for further information). Where the supporting evidence upon which your reasoning is based consists of lengthy documents, please do not submit these in their entirety as this will delay your application if we need to go through them to find the relevant extracts. You need to provide clear, concise information for us to be able to meet the licensing tests. Please note that your application is likely to be rejected in cases where the supporting evidence has not been clearly referenced.

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 A2 where applicable, for each benefit selected.

Does your proposal:			
Provide housing in an area where shortfalls have been clearly identified?	<input type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input checked="" type="checkbox"/> N/A
Create, repair or enhance essential infrastructure at a local, regional or national level?	<input checked="" type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input type="checkbox"/> N/A
Provide care facilities or another essential public service in an area where it is known to be required?	<input type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input checked="" type="checkbox"/> N/A
Address another clearly identified social, religious or cultural need?	<input type="checkbox"/> Primary benefit	<input checked="" type="checkbox"/> Secondary benefit	<input type="checkbox"/> N/A
Create long term employment opportunities in an area of high unemployment?	<input type="checkbox"/> Primary benefit	<input checked="" type="checkbox"/> Secondary benefit	<input type="checkbox"/> N/A
Deliver other economic benefits or otherwise contribute in some way to the wider economy?	<input checked="" type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input type="checkbox"/> N/A
Contribute to addressing problems associated with climate change or promote sustainable energy use	<input type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input checked="" type="checkbox"/> N/A
Conserve a place of environmental interest?	<input type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input checked="" type="checkbox"/> N/A
Provide alternative sources of energy?	<input type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input checked="" type="checkbox"/> N/A
Deliver other benefits from those specified above?	<input type="checkbox"/> Primary benefit	<input type="checkbox"/> Secondary benefit	<input checked="" type="checkbox"/> 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 (please do not send in documents with no indication where the evidence being referred to is). 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 policies 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 (a) (i) Please provide full details of the proposal in the box below.

The Lower Thames Crossing (the 'Project') would provide a connection between the A2 and M2 in Kent, east of Gravesend, crossing under the the River Thames through two bored tunnels, before joining the M25 south of junction 29. The Lower Thames Crossing is a Nationally Significant Infrastructure Project (NSIP) within Section 14(1)(h) and 22(1)(a) of the Planning Act 2008.

The A122 Road would be approximately 23km long, 4.25 km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13 and junction 29 of the M25. The tunnel portals would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.

The Project would be three lanes in both directions except for; link roads, stretches of carriageways through junctions, and the southbound carriageway from the M25 to the junction with the A13/A1089, which would have two lanes.

The Project would include adjustment to a number of side roads to accommodate the A122 road and to connect with the Project road at the A13 and A2 junctions. There would also be adjustments to a number of public rights of way, used by walkers, cyclists and horse riders. Construction of the Project would also require the diversion of a number of utilities, including gas pipelines, overhead and underground electricity cables, as well as water supplies and telecommunications assets.

A full description of the Project is set out in Environmental Statement (Chapter 2 - Project Description) (Application Document 6.1), specifically section 2.4 (Description of the Project) and section 2.8 (Operations, maintenance and management), submitted as part of the application for a development consent order.

A2 (a) (ii) 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 main drivers behind the need case are to reduce existing congestion at the Dartford Crossing and improve the resilience of the Thames Crossing and the major road network. The need case is set out in full within the Need for the Project, notably section 3 (Policy context) (Application Document 7.1) submitted as part of the application for development consent.

Government policy for Transport NSIPs is set out in the National Policy Statement for National Networks (NPSNN).

Paragraph 2.2 of the NPSNN recognises that there is a critical need to improve the national networks to address road congestion in order, '... to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth'.

This is supported by paragraph 2.22 of the NPSNN which states that without improving the road network, including its performance, it will be difficult to support further economic development, and this will impede economic growth and reduce people's quality of life. The Government has therefore concluded that, at a strategic level, there is a compelling need for the development of the national road network.

Paragraph 2.27 of the NPSNN goes on to state that, in some cases to meet the needs of traffic, it will not be sufficient to simply expand capacity on the existing network. In those circumstances new road alignment and corresponding links, including those alignments which cross a river or estuary, may be needed to support increased capacity and connectivity.

Please provide details of supporting evidence.

Provide clear referencing such as page numbers and paragraphs of specific documents so these can easily be cross-referenced. To help with our assessment, please only provide the relevant extracts that help to demonstrate the reasoning given above 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 (our preference is for you to extract the evidence and copy it below, referencing where it has come from).

A full description of the Project is set out in the Environmental Statement (Chapter 2 - Project Description. Application Document 6.1), specifically section 2.4 (Description of the Project) and section 2.8 (Operations, maintenance and management), submitted as part of the application for a development consent order. The need case is set out in full in the Need for the Project (Application Document 7.1).

Please confirm that relevant extract/s from supporting evidence to verify the above have been included

Yes No

A2 (b) Explain why the benefits of your proposal 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 (ie 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).

The benefits of the Project address the long-standing transport problems at Dartford Crossing which constrain the economy and impose negative issues on nearby communities. National policy recognises the contribution the Project would make to the national and regional economy, notably around the Government's levelling up proposals.

High level traffic demand for crossing the River Thames east of London significantly outstrips the available road space supply, with growth in this demand progressively making this situation worse. This results in traffic congestion and poor journey time reliability, ranking this part of the Strategic Road Network as being in the top 1% of worst performing sections for reliability. Such congestion, delay and poor journey time reliability are identified as being a major impediment to economic growth in the South East of England and the rest of the country.

The Project will increase the supply of available road space by over 80%, and provide an alternative route to the Dartford Crossing. This would reduce congestion and journey time, and improve reliability, increasing the growth potential for local economies both sides of the River Thames, and benefiting the flow of goods and services using the South East ports. Local communities would see reduced congestion in the local area, as well as reductions in noise and air pollution.

Further details on the need case for the Project are given in Need for the Project (Application Document 7.1).

The potential adverse effects on terrestrial biodiversity associated with the construction and operation of the Project are set out in Chapter 8: Terrestrial Biodiversity of the Environmental Statement (Application Document 6.1), notably section 8.4 (Baseline), section 8.5 (Project Design and Mitigation), and section 8.6 (Assessment of Likely Significant Effects), submitted as part of the application for a development consent order. There are no potential significant residual effects predicted to occur to any protected species, although significant adverse effects are predicted for some assemblages of terrestrial invertebrates, as well as a number of statutory and non-statutory designated sites.

The Planning Statement (Application Document 7.2), provides a Project-wide assessment of effects on protected species in a national policy context, and demonstrate that the benefits of the proposed development outweigh any harm or risk to protected species. Biodiversity impacts are detailed within section 6 (National Policy - Project-wide Assessment), notably paragraphs 6.5.45 to 6.5.93. Paragraphs 6.5.68 to 6.5.76 deal specifically with protected species.

Please provide details of supporting evidence as explained in A2 above.

Please refer to the following documents:

Environmental Statement. Chapter 2 - Project Description. (Application Document 6.1). Notably section 2.4 (Description of the Project) and section 2.8 (Operations, maintenance and management).

Environmental Statement. Chapter 8 - Terrestrial Biodiversity. (Application Document 6.1). Notably section 8.4 (Baseline), section 8.5 (Project Design and Mitigation), and section 8.6 (Assessment of Likely Significant Effects).

Need for the Project. (Application Document 7.1). Notably section 3 (Policy Context).

Planning Statement (Application Document 7.2). Notably section 6 (National Policy - Project-wide Assessment)

Please confirm that relevant extract/s from supporting evidence to verify the above have been included

Yes No

A3 There must be a Public Interest. 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 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 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.

The Project will deliver benefits locally, regionally and nationally, across transport, community and environment, and economic sectors. Transport benefits would see increased road capacity and resilience through the creation of an alternative river crossing to the Dartford Crossing. There would also be reduced congestion, reduced journey times, improved journey reliability and safety benefits. From a community and environment perspective, local communities would experience improved connectivity to the wider road network and greater ease to cross the River Thames. Environmentally, the Project would see a net increase in receptors predicted to experience better air quality, and would create a positive legacy of green infrastructure through the creation of recreational sites such as Chalk Park and Tilbury Fields. The Project would also see direct and indirect provision of local jobs and opportunity for upskilling the local workforce. Economic benefits would aid growth potential north and south of the River Thames through the creation of a single market, no longer fragmented by the river, which would enhance the labour market, competition and efficiencies, driving up productivity.

The detail of these benefits is set out in the Need for the Project (Application Document 7.1), section 5 (Project Benefits) submitted as part of the application for a development consent order.

A3 (c) Please provide details of supporting evidence to verify the above as explained in A2 above

Need for the Project (Application Document 7.1). Notably section 5 (Project Benefits).

Please confirm that relevant extract/s from supporting evidence to verify the above have been included

Yes No

SECTION B: No Satisfactory Alternative Test

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 (ie 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 timings. The Method Statement focusses on the technical elements of this test – ie reducing the impact on the species (see ‘Important Advice’ below).

Important Advice: Please note that alternative mitigation (including timing of licensable works) and compensation solutions are considered as part of the Favourable Conservation Status test 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 (ie the status quo) isn’t acceptable or feasible.

The Need for the Project Document (Application Document 7.1), section 4 (Need Case: Issues and Opportunities) identifies the need for the Project and explains why the status quo is not acceptable or feasible. Currently demand outstrips road space supply, with no major increase in capacity achieved since the opening of the Dartford Crossing in 1991, despite increasing demand. This problem is exacerbated by the configuration of the road network at the Dartford Crossing and its approaches, particularly when compared to modern standards (e.g. high constraints within specific tunnel lanes leading the traffic weaving; the need to prevent traffic queuing within tunnels leading to increased congestion at tunnel entrances; drivers using local roads to avoid congestion on M25 and then rejoining the M25 closer to the crossing location). Congestion on M25 and local roads leads to increased and unreliable journey times.

There is a lack of alternative crossing routes east of London, those being limited to the Woolwich Ferry, 10 miles upstream of the Dartford Crossing, and the Blackwall Tunnel, 15 miles upstream. Limitations for some vehicles using these crossing points mean some vehicles are forced to follow the M25 west around London, significantly increasing their journey time.

B1 (b) Details of supporting evidence.

Provide clear referencing such as page numbers and paragraphs of specific documents so these can easily be cross-referenced. To help with our assessment, please only provide the relevant extracts that help to demonstrate the reasoning given above 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 (our preference is for you to extract the evidence and copy it below, referencing where it has come from).

See Need for the Project (Application Document 7.1). In particular, please refer to section 4 (Need Case: Issues and Opportunities) which details why the current situation at Dartford Crossing isn't acceptable or feasible.



B1 (c) Confirm relevant extract(s) from supporting evidence is included to verify the above.

Yes No

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).

B2 (a) Set out what alternative locations and/or routes were considered and indicate how and why they were not acceptable.	Not applicable to situation	Won't deliver need	Not feasible	Greater impact on species
Location or route 1:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you have ticked 'Not applicable to situation', please explain why here, otherwise please complete this table as appropriate:				
Describe the location or route considered	Additional capacity at the existing Dartford Crossing			
Clearly set out how and why the alternative location/route was discounted.	Option need not meet traffic-related objectives as it did not provide an alternative route, performed poor in relation to safety, noise and air quality impacts, and had drawbacks from a deliverability perspective.			
Location or route 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the location or route considered	Swanscombe peninsula link to the A1089			
Clearly set out how and why the alternative location/route was discounted.	Option would have a significant adverse impact on committed development within the area			
Location or route 3:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the location or route considered	M2 link to the A130 via Cliffe/Pitsea			
Clearly set out how and why the alternative location/route was discounted.	Failure to meet the objective of relieving congestion on the Dartford Crossing			
Location or route 4:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the location or route considered	M2 link to the A130 via Canvey Island			
Clearly set out how and why the alternative location/route was discounted.	Failure to meet the objective of relieving congestion on the Dartford Crossing			

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

B2 (b) Details of supporting evidence.

Provide clear referencing such as page numbers and paragraphs of specific documents so these can easily be cross-referenced. To help with our assessment, please only provide the relevant extracts that help to demonstrate the reasoning given above 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 (our preference is for you to extract the evidence and copy it below, referencing where it has come from).

One additional route options were identified which could not be incorporated into table B2:
 Route 5: Isle of Grain link to east of Southend
 Route discounted as wouldn't deliver the need case due to failure to meet the objective of relieving congestion on the Dartford Crossing.

The Planning Statement (Application Document 7.2), section 5 (Project Evolution and Alternatives) submitted in support of the application for a development consent order provides a consideration of all routes reviewed as part of the optioneering process and sets out why each option was assessed. In particular, please refer to section 5.4 (Route Selection) to understand the overview of the alternative options that were reviewed since 2009 (consisting of six potential crossing locations between the Dartford Crossing and the Isle of Grain) through to 2017 when the Secretary of State made the Preferred Route Announcement selecting the current location, as well as the subsequent reappraisal of the Preferred Route Announcement which sought to ensure that the previous work that had been undertaken to identify the preferred route, and to discount other routes, was still valid.

B2 (c) Confirm relevant extract(s) from supporting evidence is included to verify the above. Yes No

B3 (a) Set out <u>which</u> alternative development scales or designs were considered.	Not applicable to situation	Won't deliver need	Not feasible	Greater impact on species
<i>Important note: If new infrastructure is to be created explain why the need cannot be met by expanding existing infrastructure.</i>				
Development scale or Design 1:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you have ticked 'Not applicable to situation', please explain why here otherwise please complete this table as appropriate:				
Describe the development scale or design considered.	See Route 2 Plate 5.10 - Shortlisted routes. Planning Statement (Application Document 7.2).			
Clearly explain how and why the different development scale or design considered was discounted.	Route 2 would be closer to existing urban areas and would require challenging construction works, leading to the mixing of local and long distance traffic.			
Development scale or Design 2:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the development scale or design considered.	See Route 4 Plate 5.10 - Shortlisted routes. Planning Statement (Application Document 7.2).			

Clearly explain how and why the different development scale or design considered was discounted.	Route 4 had greater impacts on designated sites and was a longer, higher cost option than the Project design			
Development scale or Design 3:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the development scale or design considered.	See Comment below			
Clearly explain how and why the different development scale or design considered was discounted.	See Comment below			
Development scale or Design 4:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the development scale or design considered.	See Comment below			

Clearly explain how and why the different development scale or design considered was discounted.	See Comment below			
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**Please note: you can add more rows to the table: Right click in the bottom row > Choose Insert > Insert rows below.*

B3 (b) Details of supporting evidence.

Provide clear referencing such as page numbers and paragraphs of specific documents so these can easily be cross-referenced. To help with our assessment, please only provide the relevant extracts that help to demonstrate the reasoning given above 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 (our preference is for you to extract the evidence and copy it below, referencing where it has come from).

The Planning Statement (Application Document 7.2), section 5 (Project Evolution and Alternatives) submitted in support of the application for a development consent order provides a consideration of all routes reviewed as part of the optioneering process and sets out why each option was assessed. In particular, please refer to section 5.4 (Route Selection - development of the preferred route. Paragraph 5.4.97 - 5.4.130) to understand the refinement of the route options which led to the Secretary of State's Preferred Route Announcement selecting the current location, as well as the subsequent reappraisal of the Preferred Route Announcement which sought to ensure that the previous work that had been undertaken to identify the preferred route, and to discount other routes, was still valid.

B3 (c) Confirm relevant extract(s) from supporting evidence is included to verify the above. Yes No

B4 (a) Other alternative activities, processes or construction methods considered to reduce the impact upon the species	Not applicable to situation	Won't deliver need	Not feasible	Greater impact on species
<i>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.</i>				

Alternative activity, process or method 1:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you have ticked 'Not applicable to situation', please explain why here otherwise please complete this table as appropriate:				
Describe the alternative activity, process or method considered.	See comment below			
Clearly explain why this alternative was discounted.	See comment below			
Alternative activity, process or method 2:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the alternative activity, process or method considered.	See comment below			
Clearly explain why this alternative was discounted.	See comment below			
Alternative activity, process or method 3:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the alternative activity, process or method considered.	See comment below			
Clearly explain why this alternative discounted.	See comment below			
Alternative activity, process or methods 4:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe the alternative activity, process or method considered.	See comment below			
Clearly explain why this alternative was discounted.	See comment below			

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

B4 (b) Details of supporting evidence.

Provide clear referencing such as page numbers and paragraphs of specific documents so these can easily be cross-referenced. To help with our assessment, please only provide the relevant extracts that help to demonstrate the reasoning given above 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 (our preference is for you to extract the evidence and copy it below, referencing where it has come from).

During the design process undertaken following the Secretary of State's Preferred Route Announcement, a huge number of design decisions were considered across every aspect of the Project's design. These are too numerous to detail in this document but instead are summarised in the Planning Statement (Application Document 7.2), section 5.5 (Design Refinement and Evolution) submitted in support of the application for a development consent order. These include the development of designs for utilities diversions required to facilitate the Project, the location of construction compounds, and junction and road alignments.

B4 (c) Confirm relevant extract(s) from supporting evidence is included to verify the above.

Yes No

The Conservation of Habitats and Species Regulations 2017

Hazel Dormice – 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) of the species concerned (Regulation 55(9)(b)).

You are strongly advised to refer to the Dormouse Conservation Handbook. Please use recent photographs to support your application.

Wildlife Licensing
Natural England
Horizon House
Deanery Road
Bristol
BS1 5AH.
T. 020802 61089

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-A35a-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.

The A122 Lower Thames Crossing (hereafter the Project) would provide a connection between the A2 and M2 in Kent, east of Gravesend, crossing under the River Thames through two bored tunnels, before joining the M25 south of junction 29.

The A122 road would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13 and junction 29 of the M25. The tunnel portals would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.

The Project would require impacts to dormouse habitat. Dormouse surveys were conducted in 2017, 2018 and 2020 and dormouse presence was confirmed, or assumed (based on records and connectivity to known populations), at several locations South of the River Thames within the Order Limits (OL) and 50m buffer. This draft licence application covers the following Sites where dormouse presence has been confirmed or is assumed and where habitat will be impacted: Sites S24, S26, S27, S28, S30, S32, S33, S36, S40, S42, S43 and S44 (refer to figure C5b). Dormice are assumed / confirmed likely absent from the survey area north of the River Thames and therefore do not form part of this licence application.

The grant of Development Consent Order (DCO) is expected in mid-2024. The start of main construction works has been reprogrammed to begin two years after that with the construction period remaining at six years but disturbance to dormice at each local site will be less extensive than this. Vegetation clearance will be required which will include habitats suitable for dormice. Without mitigation, the Project has the potential to kill, injure or disturb individual dormice, as well as damage, destroy and fragment dormouse habitat.

The majority of areas requiring dormouse habitat removal will use the persuasion method. Strips of suitable habitat will be progressively cleared under ecological supervision during the summer / early autumn to displace dormice away from construction areas and into adjacent retained areas of suitable dormouse habitat. However, several areas will require capture and soft release into suitable retained habitat due to lack of connecting habitat, potential insufficient carrying capacity in adjacent habitats or barriers that would inhibit the dispersal of dormice. Areas of suitable habitat within Southern Valley Golf Club (S42), the eastern side of Claylane Wood (S24) and some areas of suitable habitat between the A2 carriageways and the A2 and High Speed 1 (HS1) rail line will be subject to capture and soft release measures (subject to the results of pre-construction surveys in isolated areas that have not previously been surveyed).

Captured dormice will be released within two receptor sites: Shorne Woods Country Park (S28) and the northern boundaries of Ashenbank Woods (S27) / Jeskyns Community Woodland. The receptor areas will be subject to enhancement works to maximise opportunities for dormice. Work to enhance the quality of the habitats for dormice within Shorne Woods Country Park (part of Shorne and Ashenbank Woods SSSI) has been consented by Natural England. Kent County Council, through their ranger team at the Country Park, started this consented work in May 2022 to maximise the period of establishment prior to any impacts occurring as a result of the Project. The enhancement works include native species-rich planting, changes to the coppice regime and removal of non-native invasive species. Dormouse nest boxes will also be erected in the receptor sites and other retained vegetation (where possible) at a minimum density of 25 per ha (Bright et al, 2006) to further increase the carrying capacity of these areas.

There will be a policy of native species-rich tree planting across the wider scheme to compensate for the loss of woodland habitat. The proposals include a variety of native tree and shrub planting and the provision of three green bridges to connect existing dormouse habitat to other areas of suitable habitat in the wider area including areas known to support existing dormice populations. The proposals will result in improved connectivity and an increase in the area of suitable habitat available for dormice, accepting that these newly created areas will take a number of years to establish fully. See Figure 2.4: Environmental Masterplan (Application Document 6.2) and Design Principles (Application Document 7.5), Clause no. PRO.04, PLA.05, STR.01, S1.14, S1.04, S2.04, S2.06, S2.07.

Additional mitigation measures such as appropriate timing of vegetation clearance, Ecological Clerk of Works (ECoW) supervision, and fencing of retained habitat will further safeguard dormice and prevent incidental injury and mortality. All contractors are to be fully briefed by the ECoW before works commence in order to explain the presence of dormice, their legal protection, roles and responsibilities, the proposed method of working and procedures. A hard copy of the licence including the method statement is to be kept on site at all times.

A post-construction monitoring programme will be undertaken to monitor the success of the licensable works and to inform future management and potential remedial measures.

The dormouse population associated with this Project has been assessed as being of County importance. By applying the measures outlined within this licence it is considered that the Project will not be detrimental to the maintenance of the favourable conservation status of the dormouse populations present within the area. In the long term there will be improved connectivity in the local area and a net increase (approximately 150ha) of suitable habitat for dormouse.

B Introduction

B1 Background to activity/development:

Include a brief summary of:

- Why the activity and a licence are necessary (*e.g. site preparation for a new housing development will remove hedgerows which dormice are known to nest in; the installation of an underground pipeline will require the removal of sections of hedgerow used by dormice; blocks of woodland inhabited by dormice will be removed for construction of the proposed road scheme*).

The Project would provide a connection between the A2 and M2 in Kent, east of Gravesend, crossing under the River Thames through two bored tunnels before joining the M25 south of junction 29. The Project route is presented in Figure C5a.

The A122 Lower Thames Crossing would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13, M25 junction 29 and the M25 south of junction 29. The tunnel portals would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.

Junctions are proposed at the following locations:

- New junction with the A2 to the south-east of Gravesend
- Modified junction with the A13/A1089 in Thurrock
- New junction with the M25 between junctions 29 and 30

To align with National Policy Statement for National Networks (Department for Transport, 2014) policy and to help the Project meet the Scheme Objectives, it is proposed that road user charges would be levied in line with the Dartford Crossing. Vehicles would be charged for using the new tunnel.

The Project road would be three lanes in both directions, except for:

- Link roads
- Stretches of the carriageway through junctions
- The southbound carriageway from the M25 to the junction with the A13/A1089, which would be two lanes

In common with most A-roads, the A122 Lower Thames Crossing would operate with no hard shoulder but would feature a 1m hard strip on either side of the carriageway. It would also feature technology including stopped vehicle and incident detection, lane control, variable speed limits and electronic signage and signalling. The A122 Lower Thames Crossing design outside the tunnel would include emergency areas. The tunnel would include a range of enhanced systems and response measures instead of emergency areas.

The A122 Lower Thames Crossing would be classified as an 'all-purpose trunk road' with green signs. For safety reasons, walkers, cyclists, horse riders and slow-moving vehicles would be prohibited from using it.

The Project would include adjustment to a number of local roads. There would also be changes to a number of Public Rights of Way, used by walkers, cyclists and horse riders. Construction of the Project would also require the installation and diversion of a number of utilities, including gas pipelines, overhead electricity powerlines and underground electricity cables, as well as water supplies and telecommunications assets and associated infrastructure.

The Project has been developed to avoid or minimise significant effects on the environment. The measures adopted include landscaping, noise mitigation, green bridges, floodplain compensation, new areas of ecological habitat and two new parks.

The new junction, road alignment and widening of the A2 as well as the construction of two compounds, will result in temporary and permanent dormouse habitat loss. This includes the removal of hedgerows, woodland, and scrub habitat where dormouse are known to be located, both for construction of the road, and for the temporary erection of compounds for the construction works. The Project will also require the diversion of utilities, some of which will impact dormice by the removal of woodland, scrub and hedgerow habitat.

- Include the site/project name and provide an OS grid reference to 8 figures (e.g. format AB 12345678).

Project Name: Lower Thames Crossing Project. The central Ordnance Survey grid reference for the dormouse licensable area is TQ 67250 71279

- 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.*

A DCO application for the Project was submitted in autumn 2022 with an anticipated date of grant in mid-2024. This Draft Dormouse Licence Application method statement has been produced to demonstrate how the Project will satisfy the provisions of Section 55(9)(b) of the Conservation of Habitats and Species Regulations 2017 (as amended). The information contained within this document will support the granting of any Letter of No Impediment (LONI) from Natural England. The LONI will be submitted to support the DCO application.

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 dormouse 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 dormouse licences will be required. The master plan must be included as a separate document to this application. 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 1 "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 dormice as this application. 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 dormice. 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) website (<https://magic.defra.gov.uk/>) for granted European Protected Species Mitigation Licences (EPSML) within 2km in the last five years was carried out on 11th May 2022.

Four EPSML have been granted (including amendments / revisions) for dormice within 2km of the Order Limits within the last five years (refer to figure B2.2). The survey sites along with details on how these licence applications may be applicable to the dormouse populations affected by the Project are provided in table 1 below. However, given the mitigation proposals of the Project, significant cumulative effects on dormice are not predicted with either of the identified third-party developments or licence applications.

Table 1

EPSML reference number	Grid reference	Period of cover	Potential dormouse population associations
2016-21265-EPS-MIT including one amendment / revision			
2016-21265-EPS-MIT	TQ60987340	21/03/2016 - 01/01/2020	This granted EPSML relates to a location approximately 1.5km west of the nearest survey area (Site S44) associated with this licence application. The EPSML is

Damage and destruction of a resting place			separated from the Project by a stretch of the A2, the A2 / Watling Street / A2260 roundabouts and road network as well as the Ebbsfleet urban environment, all considered potentially significant barriers to dispersal.
2016-21265-EPS-MIT-1 Damage and destruction of a resting place		24/02/2017 - 31/12/2019	
2015-17789-EPS-MIT including four amendments / revisions			
2015-17789-EPS-MIT Damage and destruction of a resting place	TQ60807300	15/12/2015 - 31/12/2025	This granted EPSML relates to a location approximately 1.5km west of the nearest survey area (Site S44) associated with this licence application. The EPSML is separated from the Project by a stretch of the A2, the A2 / Watling Street / A2260 roundabouts and road network as well as the Ebbsfleet urban environment, all considered potentially significant barriers to dispersal.
2015-17789-EPS-MIT-1 Damage and destruction of a resting place		29/02/2016 - 01/12/2025	
2015-17789-EPS-MIT-2 Damage and destruction of a breeding site and resting place		26/09/2016 - 31/12/2025	
2015-17789-EPS-MIT-3 Destruction of a breeding site and resting place		15/02/2017 - 01/12/2025	
2015-17789-EPS-MIT-5 Destruction of a breeding site and resting place		15/11/2019 - 01/12/2026	
2020-49586-EPS-MIT			
2020-49586-EPS-MIT Damage of a breeding site and resting place	TQ62297370	13/11/2020 – 31/10/2021	This granted EPSML relates to a location approximately 1.2km north of the nearest survey area (Site S44) associated with this licence application. The EPSML is separated from the Project by a stretch of the B262 Hall Road/Springfield Road and the A226 Thames Way which are considered potentially significant barriers to

			dispersal. Although there is a potential link between the sites along the hedgerows/trees and gardens along B262 Springfield Road this is unlikely given the distance and gaps in connectivity, roads and urban environment. Dormouse populations associated with these areas are distinct.
2020-50171-EPS-NSIP1			
2020-50171-EPS-NSIP1 Damage and destruction of a breeding site and resting place	TQ66307030	01/02/2021 – 31/12/2021	The grid reference for this granted EPSML relates to a location along the vegetated corridor of the A2 Watling Street within / adjacent to survey area S24 and S40. This population is likely to be part of the same population associated with the Project. Mitigation measures as part of this third-party development and particularly the Lower Thames Crossing project, which includes measures to avoid killing and injuring and significant habitat creation, enhancement and management, will ensure impacts are adequately mitigated with no adverse effect on the favourable conservation status of dormice.

A search on the Local Planning Authorities, Gravesham Borough Council and Medway Council, planning portals was undertaken to identify past (within the last five years) developments and current planning applications (included undecided applications) which may have significantly impacted or are likely to significantly impact on the same population/s of dormice as this application. The search of the Gravesham Borough Council planning portal on 14th September 2022 and the Medway Council planning portal on 19th October 2022 revealed no such developments.

In addition, a search for proposed National Significant Infrastructure Projects within 2km of the Order Limits was undertaken using the National Infrastructure Planning website ([National Infrastructure Planning \(planninginspectorate.gov.uk\)](https://planninginspectorate.gov.uk) (accessed 11th May 2022). No such Projects were identified within the search area.

Important Advice: locations of other dormice mitigation sites in relation to this proposal must be shown on Figure B2.2.

C Survey and site assessment (also see section 3 of the Dormouse Conservation Handbook)

C1 Pre-existing information on dormice at the survey site:

Please undertake a historical data search within a 1km search radius and provide a summary of the results of this search. For example, records from local environmental records centres, local dormice/wildlife groups and previous survey work undertaken at the site is all relevant.

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.

In addition to the Dormouse EPSML search using the MAGIC database as detailed above, a desk study including requests to Kent and Medway Biological Records Centre (KMBRC) was undertaken to obtain records of dormice within 2km of the Order Limits (from 2010 onwards). The desk study was

initially based on the preferred route announced in 2017 and was then requested again in 2022 when the final Order Limits were defined.

The KMBRC data search returned multiple records for dormice. For the purpose of this licence application, all dormouse records within 1km of the Order Limits (from 2010 onwards) are presented in table 2 below and on figure C6.

Table 2: KMBRC dormouse records (since 2010) within 1km of the Order Limits

Data Provider	Location	Date	Distance from The Project (m)	Comments
KMBRC	TQ686705	29/10/2010	170	Randall's Wood
KMBRC	TQ712685	28/08/2011 – 06/11/2020	891	Cuxton Ranscombe Wood (49 records)
KMBRC	TQ664696	27/10/2017 - 22/11/2019	79	Jeskyns Community Woodland (13 records)
KMBRC	TQ6718969591 TQ6720069644 TQ6726169659 TQ6731169649 TQ6892469920 TQ6901370219 TQ6911169471 TQ6911269471 TQ6913069464 TQ6913169464 TQ7025469981 TQ7042868818 TQ7043268804 TQ7065168854 TQ7066668848 TQ7067568849 TQ7068568840 TQ7072768817 TQ7073168698 TQ7073568822 TQ7081868703 TQ7083368835 TQ7084468830 TQ7085368823 TQ7086068808 TQ7086768690 TQ7088768820 TQ7098268895	08/05/2018 - 08/11/2018	2 – 595	Gravesham (29 records)
KMBRC	TQ7330024000 TQ7350062500 TQ7540061700 TQ7540062000 TQ7500061000 TQ7590061600 TQ7697861732	01/03/2010 - 29/10/2015	68 - 669	Medway (28 records)
KMBRC	TQ7530061700	15/05/2010 - 21/10/2018	198	Frith Wood (31 records)
KMBRC	TQ7530061600 TQ7550061600	18/06/2011 - 19/09/2021	0 – 163	Cossington Fields (68 records)

			(Grid references in bold are locations that fall within the Order Limits)	
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C2 Status of the dormouse population: Briefly detail conservation status at the local, county and regional levels. Please complete the following table, justifying your assessment. If the status is unknown then please enter 'unknown'.

Conservation status assessment		
Local	County	Regional
The presence of dormice within survey sites S24, S26, S27, S28, S29, S30, S32, S33, S34, S35, S36, S40, S42, S43 and S44 (please refer to figure C5b) has been confirmed/assumed. However, the status of the population within each site is unknown. Based on data search information, dormice appear to be common in the Local area.	Dormice are common in Kent (People's Trust for Endangered Species (PTES), 2016) with the county being within the regional southern stronghold for the species. Dormice are considered likely to be present within most areas supporting suitable and well-connected habitat (Kent Mammal Group, 2019).	The southeast of England is a known stronghold for dormice in the UK. Once widespread, the dormouse has a restricted distribution in the UK with very few sites north of the Midlands (Bright et al, 2006). They have a patchy but widespread distribution across much of southern England, particularly throughout most of the south (outside of London), with the highest population densities being in Devon, Somerset, Sussex and Kent (Morris, 2011).

C3 Survey summary: Please provide a brief summary of the survey undertaken. If standard survey effort was not undertaken please justify why.

<p>In areas where hazel trees were present, nut searches were attempted in October and November 2017 to identify any evidence of dormouse presence, although only one site (Claylane Wood - S24) was found to contain fruiting hazel. The nut search involved searching for characteristically chewed hazel nuts in a section of ground 10 m x 10 m for 20 minutes around each fruiting hazel tree.</p> <p>In March 2018 nest tubes and boxes were deployed within suitable dormouse habitat within 11 survey areas to the south of the River Thames (S24, S26, S27, S28, S29, S30, S32, S33, S34, S35 and S36) (refer to figure C5b). Further surveys were carried out in 2020 in survey areas S40 (Singlewell Feeder), S42 (Southern Valley Golf Course) and S43 (A2 Singlewell) which hadn't been surveyed previously due to access restrictions or refinements to the Order Limits. Area S44 (A2 Cyclopark) has not been surveyed due to access restrictions but is assumed to be used by dormice.</p> <p>Surveys were undertaken following guidance within the Dormouse Conservation Handbook (Bright <i>et al.</i>, 2006). Tubes and boxes were erected at 20 m intervals at a density of at least 50 tubes per survey area and replaced when broken or vandalised. These were then checked for evidence of dormice every other month until their removal in November of each survey year.</p> <p>In order to effectively check each tube or box, a quiet and careful approach was made before the entrance was sealed with a cloth. The inside of the tube or box was then carefully inspected for the presence of nests or animals. Where a dormouse nest was confirmed or assumed present the tube or box was carefully removed and placed into a large plastic bag in order to allow for the nest to be inspected further and any dormice present to be captured, weighed and sexed before the tube or box was put back into position.</p>
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C4 Site/habitat description: Please provide:

- A brief description of the site including:

Total size of the development site (ha) (most often within the red line planning boundary)

A breakdown of the different habitat types the site is comprised of (ha of each habitat type present) – i.e. regardless of their value to dormice

An indication of the habitat types on site with potential value to dormice (e.g. 4 ha habitat of ancient woodland, 400m of coppiced hedgerow; 1ha of scrub, etc), differentiating between those surveyed and not surveyed, with an explanation why.

Ensure habitat types are referenced and consistently indicated on relevant figures and tables.

The total area within the Order Limits (including north of the River Thames) is approximately 2147ha, 564ha of this habitat is within Kent, south of the River Thames. In addition to this area an additional 247ha of offsite compensation planting both north and south of the River Thames is proposed. This compensation planting area will result in no loss of habitat or disturbance of dormouse habitat so is not discussed further in this licence. A breakdown of habitat types and respective areas (regardless of their value for dormice) within the Order Limits south of the River Thames is detailed in table 3 below.

Table 3 Habitats within the Order Limits South of the River Thames (regardless of their value to dormice)

Habitat		Approximate area (ha) or length (m) within Order Limits
Woodland and Scrub	A1.1.1 Semi-natural broadleaved woodland	24.8 ha
	A1.1.2 Plantation broadleaved woodland	46.5 ha
	A1.3.2 Plantation mixed woodland	0.5 ha
	A2.1 Dense scrub	5.4 ha
	A4.1 Recently felled broadleaved woodland	0.3 ha
Grassland and Marsh	B2.2 Neutral grassland – semi-improved	22.5 ha
	B3.1 Calcareous grassland – unimproved	0.1 ha
	B3.2 Calcareous grassland – semi-improved	2.1 ha
	B4 Improved grassland	21.4 ha
	B6 Poor semi-improved grassland	70.7 ha
Tall Herb and Fen	C1.1 Continuous bracken	0.2 ha
	C3.1 Tall ruderal	5.7 ha
Swamp, marginal and Inundation	F1 Swamp	0.4 ha
Open Water	G1 Standing water	2.2 ha
	G2 Running water	1.4 km
Coastal	H1.1 Intertidal mud/sand	0.2 ha
	H1.2 Intertidal shingle	0.2 ha
	H2.6 Dense/continuous saltmarsh	0.1 ha
Rock Exposure and waste	I2.2 Artificial spoil	0.1 ha
Miscellaneous	J1.1 Arable land	249.7 ha
	J1.2 Amenity grassland	38.9 ha
	J1.3 Ephemeral/short perennial	1.5 ha
	J1.4 Introduced shrub	0.1 ha
	J3.6 Buildings	1 ha
	J4 Bare ground	5.1 ha
	J5 Hardstanding	62.6 ha
	J5 Gardens	1.7 ha
Boundary Features	J2.1.1 Intact species-rich hedgerow	1.8 km
	J2.1.2 Intact species-poor hedgerow	2.5 km

	J2.2.1 Defunct species-rich hedgerow	0.1 km
	J2.2.2 Defunct species-poor hedgerow	1.3 km
	J2.3.1 Species-rich hedgerow with trees	1 km
	J2.3.2 Species-poor hedgerow with trees	0.4 km
	J2.4 Fence	19.8 km
	J2.5 Wall	0.2 km
	J2.6 Dry ditch	0.5 km
	J2.8 Earth bank	0.3 km
	J3.5 Sea wall	0.2 km
	J5 Other habitat	1.7 km

Of the above habitats, the woodland, scrub and linear hedgerow habitats are considered to be suitable for dormice. Although the exact location of these habitats will influence the extent of their dormouse suitability, most are well connected within the landscape (hence easily accessible to dormice).

The most suitable areas for dormice south of the River Thames are the wooded areas immediately north and south of the A2. Dormice and/or dormouse nests have been found during survey work in survey areas S26 Shorne Woods, S27 Ashenbank Woods, S29 Great Crabbles Wood, S30 Rochester/Cobham Golf Course west, S34 Great Wood/Plantlife, S35 Great Wood, S40 Singlewell Feeder and S42 Southern Valley Golf Course. Presence is assumed in S24 Claylane Wood, S28 Brewers Wood, S32 Rochester Cobham Golf Course east, S33 Cole Wood, S36 A2/M2 Woodland), S43 A2 Singlewell and S44 A2 Cycopark.

Habitat types within the Order Limits with potential value to dormice are shown in table 4 below, this totals 78.5ha plus 7.1km of linear habitat. Woodland, scrub and hedgerow habitats were surveyed (Figure C5b). Due to the extent of the Order Limits and access restrictions in place in certain areas, it was not feasible to survey each hedgerow and area of dense scrub. However, the majority of un-surveyed hedgerows and/or areas of dense scrub were frequently connected to a larger surveyed area and on a precautionary approach, presence has been assumed in all suitable habitat. The habitat descriptions used followed standard phase 1 survey definitions, which do not account for location (e.g., if a habitat is found on a road verge, that additional level of detail is not captured).

Table 4 Habitats within the Order Limits with potential value to dormice

Habitat		Approximate area (ha) or length (m) within Order Limits South of the River Thames
Woodland and Scrub	A1.1.1 Semi-natural broadleaved woodland	25.9 ha
	A1.1.2 Plantation broadleaved woodland	46.5 ha
	A1.3.2 Plantation mixed woodland	0.5 ha
	A2.1 Dense scrub	5.6 ha
Boundary Features	J2.1.1 Intact species-rich hedgerow	1.8 km
	J2.1.2 Intact species-poor hedgerow	2.5 km
	J2.2.1 Defunct species-rich hedgerow	0.1 km
	J2.2.2 Defunct species-poor hedgerow	1.3 km
	J2.3.1 Species-rich hedgerow with trees	1 km
	J2.3.2 Species-poor hedgerow with trees	0.4 km

A summary of the quality of woodland and boundary features within each survey site is provided in table 5 below, using the methodology described by Bright et al (2006).

Table 5

Site	Overall habitat quality
S24 (Claylane Wood)	Optimal
S26 (Shorne Wood)	Optimal
S27 (Ashenbank Wood)	Optimal
S28 (Brewers Wood)	Optimal

S29 (Great Crabbles Wood)	Optimal
S30 (Rochester Cobham Golf Course west)	Optimal
S32 (Rochester Cobham Golf Course east)	Optimal
S33 (Cole Wood)	Optimal
S34 (Great Wood/Plantlife)	Optimal
S35 (Great Wood)	Optimal
S36 (A2/M2 Woodland)	Optimal
S40 (Singlewell Feeder)	Optimal
S42 (Southern Valley Golf Course)	Sub optimal
S43 (A2 Singlewell)	Optimal
S44 (A2 Cyclopark)	Optimal

National vegetation classification surveys have been carried out within adjacent woodland. The results from this comprise:

- Ashenbank wood (S27) – W10a *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* and W8 *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis*
- Brewers Wood (S28) - W10 *Quercus robur* – *Pteridium aquilinum* – *Rubus fruticosus*
- Shorne Woods (S26 and S28) - W10 *Quercus robur* – *Pteridium aquilinum* – *Rubus fruticosus*
- Claylane Wood (S24) - W8b *Fraxinus excelsior* – *Acer campestre* – *Mercurialis perennis*, *Anemone nemorosa* sub-community

- A description of adjacent areas/offsite habitats, specifying any relevance to dormice, including descriptions of habitat/s relevant to dormice connectivity to and from the site.

Habitats adjacent to the Order Limits are similar to the habitats within it, the majority of which being agricultural land. However, there are extensive areas of woodland connected to the site that provide suitable dormouse habitat.

North of the A2 is predominantly associated with Shorne Woods Country Park and Brewers Wood, with both forming part of the Shorne and Ashenbank Woods SSSI. Shorne Wood, approximately 118 ha in size, consists of semi-natural coppiced woodland widely used for recreational purposes. Brewers Wood, approximately 30 ha in size, consists of mature sweet chestnut coppice woodland.

South of the A2 there is extensive woodland associated with Ashenbank Wood, Cobham Hall and Rochester and Cobham Park Golf Club which are connected to both the site and the wider landscape. Cobham Hall Woodland, approximately 60 ha in size, consists of an extensive area of parkland trees and a large area of mature deciduous woodland. Small areas of semi-natural broadleaved woodland were present within Rochester and Cobham Golf Course which are connected to approximately 75 ha of historic wood pasture at Cobham Wood south of the golf course.

In addition, to the south of the A2 there is a newly created country park which has areas of landscape planting incorporated. This area is likely to be sub-optimal for dormice at present, but with the continual development of the landscape planting it is anticipated that this will be suitable for dormice in the near future.

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

Photographs from the survey areas (S24 Claylane Wood; S26 Shorne Wood; S27 Ashenbank Wood; S28 Brewers Wood; S29 Great Crabbles Wood; S30 Rochester Cobham Golf Course west; S32 Rochester Cobham Golf Club east; S33 Cole Wood; S34 Great Wood/Plantlife; S35 Great Wood; S40 Singlewell Feeder; S42 Southern Valley Golf Course and S43 A2 Singlewell) are presented below. Photographs of S36 (A2/M2 Woodland) are not available. The locations of the survey areas are shown in Figure C5b

Photos from survey area S24 (Claylane Wood)



1 Claylane Wood (July 2022)



2 Claylane Wood (July 2022)



3 Claylane Wood (November 2018)



4 Claylane Wood (November 2018)

Photos from survey area S26 (Shorne Wood)



5 Shorne Wood (July 2022)



6 Shorne Wood (July 2022)



7 Shorne Wood (July 2022)



8 Woodland at North-west corner of Shorne Woods Country Park (June 2018)



9 Woodland surrounding Thong Lodge (June 2018)



10 Woodland adjacent to Thong Lodge (June 2018)



11 Woodland adjacent to Thong Lodge (June 2018)

Photos from S27 (Ashenbank Wood)



12 Ashenbank Wood (November 2018)



13 Ashenbank Wood (November 2018)

Photos from S28 (Brewers Wood)



14 Brewers Wood (June 2020)



15 Brewers Wood (June 2020)



16 Brewers Wood (June 2020)

Photos from S29 (Great Crabbles Wood)



17 Great Crabbles Wood (June 2020)



18 Great Crabbles Wood (June 2020)



19 Great Crabbles Wood (June 2020)

Photos from S30 (Rochester Cobham Golf Course west)



20 Rochester Cobham Golf Club west (June 2020)



21 Rochester Cobham Golf Club west (June 2020)

Photos from S32 (Rochester Cobham Golf Club east)



22 Rochester Cobham Golf Club east (June 2020)



23 Rochester Cobham Golf Club east (June 2020)

Photos from S33 (Cole Wood)



24 Cole Wood (June 2020)



25 Cole Wood (June 2020)

Photos from S34 (Great Wood/Plantlife)



26 Great Wood/Plantlife (June 2020)



27 Great Wood/Plantlife (June 2020)

Photos from S35 (Great Wood)



28 Great Wood (June 2020)



29 Great Wood (June 2020)



30 Great Wood (June 2020)

Photo from S40 (Singlewell Feeder)



31 Western boundary of S40 (September 2020)

Photos from S42 (Southern Valley Golf Course)



32 Southern boundary hedgerow of Southern Valley Golf Club (March 2020)



33 Scrub present in Southern Valley Golf Club (March 2020)

Photos from S43 (A2 Singlewell)



34 A2 Singlewell (March 2020)



35 A2 Singlewell (March 2020)

C5 Field survey(s): See requirement for location map (C5a) and survey area (C5b) in Checklist I.

Please complete the following tables and add additional lines where necessary. Please enter 'N/A' if the table is not applicable to your survey:

Dates survey undertaken (e.g. format 01/06/13 to 15/10/13)	Survey method (e.g. tubes/nest boxes; nut searches; other – please specify)
<p>Dormouse tubes and boxes were deployed in March 2018 and March 2020. Surveys were undertaken between 08/05/2018 and 22/11/2018 and 12/5/2020 and 19/11/2020</p> <p>Dormouse nut searches were carried out at a single site (S24 - Claylane Wood) during October and November 2017</p>	<p>Based on a review of high-resolution aerial imagery and habitat maps, areas of unsuitable or poor dormouse habitat such as heathland, grassland, scattered and isolated trees and scattered scrub were scoped out of the survey area.</p> <p>Fifteen survey sites were identified within the Order Limits. Due to access restrictions and other constraints only 11 of these sites were surveyed in 2018. These included, S24, S26, S27, S28, S29, S30, S32, S33, S34, S35 and S36. A further three survey sites (S40, S42 and S43), which hadn't been surveyed previously due to access restrictions or refinements to the Order Limits, were surveyed in 2020. One area, S44, could not be surveyed due to access restrictions.</p> <p>A total of 560 tubes and 30 boxes were set up across the 11 sites in March 2018 with approximately 50 tubes per survey site. Surveys were undertaken every other month between May and November 2018. Between five and ten boxes were also installed across five of these sites in March (refer to figure C5b for survey tube / box locations).</p>

	<p>In 2020, a total of 190 tubes were set up across the three surveys sites in March 2020, with a minimum of 50 tubes per survey site. Surveys were undertaken every other month between May and November 2020.</p> <p>Only one area, Claylane Wood (S24), was subject to a nut search as it was the only area with fruiting hazel. The majority of other areas had dormouse desk study records associated with them and were subject to nest tube surveys to determine dormouse presence or likely absence. The lack of nut searches in other areas is not considered to be a significant constraint to the objectives of the survey.</p>
Comments (include # of tubes/boxes and date of first installation/quadrats/other field signs etc):	
	All sites surveyed with dormouse tubes accumulated the required minimum of 20 points based on the index of probability (Bright et al, 2006). Based on tube installation dates in March 2018 and March 2020 all sites scored a total of 25 points as 50 tubes per site were left out and checked over the whole season (April – November).
Comments:	
	Gravelhill Wood (western part of S26), has not been surveyed separately as it is assumed that it forms part of the same dormouse population as the adjoining Shorne Wood. Although partially separated by Thong Lane this would not prevent dormouse dispersal.
Comments:	
Comments:	
Comments:	

Please provide surveyors names (including Class Licence registration number if applicable).

Surveyor	Class Licence registration number
Kora Kunzmann	2019-39308-CLS-CLS
Hannah Tracey	2017-32764-CLS-CLS
Polly Tayler	2016-28430-CLS-CLS
Nick Downs	2016-21643-CLS-CLS

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.

There are several small areas between the A2 carriageways and between the A2 and High Speed 1 (HS1) that have not been surveyed due to health and safety concerns of accessing central reserves of the dual carriageway and the safety of accessing locations within the HS1 boundary. Due to the fact that dormice have been recorded north and south of the A2 however, presence is assumed between the A2 carriageways and between the A2 and HS1.

Access to survey area S44 was refused and access restrictions were in place for survey area S36 due to the A2/M2 road network presenting safety concerns which is why only the western side of S36 has been surveyed (March to November 2018).

Health and safety discussions are being progressed to allow dormouse surveys within the isolated areas where translocation is proposed between the A2 carriageways and the A2 and HS1. This is with a view to install dormouse nest boxes (where appropriate/practical) and nest tubes in these areas in late 2023 / early 2024 and these will be surveyed throughout the 2024 survey season. These areas are identified in Figure C5b.

Surveys at S42: Southern Valley Golf Course were restricted to a central tree line and habitat along the southern boundary. Additional surveys will be undertaken within the Golf Course and adjacent

habitat, including the hedgerows bordering the adjacent Sports Ground in 2024 as above. These areas are identified in Figure C5b.

These surveys have been recommended to inform and refine mitigation proposals. If dormouse are found to be present, the dormouse boxes and tubes will be left in-situ and will be used for the translocation exercise. If dormouse are not found they will be assumed to be absent and a dormouse translocation exercise from these areas will not be required.

Occasionally, dormouse tubes were unable to be located or were found in poor condition (such as the inner tray or wire missing). Where possible, damaged/missing tubes were replaced as soon as these were identified as missing/damaged. The highest number of damaged/missing tubes occurred in survey site S35 (Great Wood) with ten damaged/missing tubes, most likely due to vandalism. However, this is not considered to be a constraint given the immediate replacement of the tubes and the high number of tubes deployed at each site. In all other sites there were no more than four damaged/missing per site.

Due to access constraints, dormouse surveys within the receptor sites were restricted. However, access has been arranged and dormouse boxes will be installed in both receptor sites in late 2025 / early 2026 and a suite of surveys will be undertaken throughout the 2026 survey season in advance of translocation (proposed 2026 and 2027). This will be undertaken to gain an indication of the distribution of dormice within the receptor sites (although it is acknowledged that not all dormice will use next boxes) to help identify release locations.

Please confirm (Yes, No, N/A) that a walk over survey/check has been carried out within 3 months prior to application submission to ensure that conditions have not changed since the most recent survey was undertaken. If 'yes' – provide the date/s undertaken and details of any changes to conditions and habitats on site since the surveys were undertaken. If no walk-over survey/check has been undertaken please explain why.

Yes

C6 Survey results: Summarise your findings in the tables below and cross reference to **Figure C6** (which must also include locations of positive field signs – see Checklist I). If you did not undertake a specific survey type please add N/A to the relevant table/s.

When completing "Findings" include reference to *direct observations, presence of field signs, etc.*

Nest tubes & nest box check results

Date (e.g. format 01/06/14 to 15/10/14)	Evidence (Yes / No)
---	---------------------

08/05/2018 to 13/11/2020	Yes
--------------------------	-----

Findings:			
Site	Summary of Survey Findings	Dormouse Presence / Likely Absence	
S24 (Claylane Wood)	None	Presence assumed due to location	
S26 (Shorne Woods)	2 dormouse nests, 2 adult dormice (first nest and dormouse found 08/05/2018)	Dormouse presence confirmed	
S27 (Ashenbank Wood) – No access to habitat between A2 and HS1 line	4 dormouse nests, 2 adult dormice plus a single litter of newborns (pinks/grey eyes closed) (first nest and dormouse found 31/07/2018)	Dormouse presence confirmed	

S28 (Brewers Wood)	None	Presence assumed as adjacent to survey site S26 and KMBRC data search records.
S29 (Great Crabbles Wood)	1 dormouse nest (nest found 26/09/2018)	Dormouse presence confirmed
S30 (Rochester Cobham Golf Course west)	3 dormouse nests, 1 adult dormouse (first nest found 24/09/2018, first dormouse found 05/11/2018)	Dormouse presence confirmed
S32 (Rochester Cobham Golf Course east)	None	Presence assumed as adjacent to survey site 30
S33 (Cole Wood)	None	Presence assumed due to location and connectivity to known populations.
S34 (Great Wood/Plantlife)	14 dormouse nests, 7 adult dormice, 5 juvenile dormice plus 2 litters of newborns (pinks/grey eyes closed) (first nest and dormouse found 27/09/2018)	Dormouse presence confirmed
S35 (Great Wood)	6 dormouse nests, 1 juvenile dormouse (first nest and dormouse found 27/09/2018)	Dormouse presence confirmed
S36 (A2/M2 Woodland) Only partially surveyed due to access restrictions	None	Presence assumed due to location and connectivity to known populations.
S40 (Singlewell Feeder Station)	18 dormice nests, 4 adults, 10 juvenile dormice plus a litter of newborns (grey eyes closed) (first nest and dormice found 27/07/2020)	Dormouse presence
S42 (Southern Valley Golf Course)	4 dormouse nests found (first nest found 27/07/2020)	Dormouse presence
S43 (A2 Singlewell)	None	Presence assumed due to location
S44 (A2 Cyclopark)	Initially outside Order Limits and not surveyed. Due to design changes, now present within Order Limits – no surveys due to access restrictions.	Presence assumed due to location

Please note, sites listed above are a complete list of sites within the Order Limits south of the River Thames (refer to figure C5b and C6). Dormouse survey sites were numbered on a Project-wide basis. Missing survey site numbers in the above table are north of the River Thames and are not relevant to this licence application.

Findings:

Findings:

Findings:

Provide further (brief) comments/explanation if required:

N/A

Nut search results

Date (e.g. format 01/06/14)	Quadrat site
October and November 2017	S24 Claylane Wood (TQ 66501 70500)
Findings (include % of nuts opened by dormice):	
	No evidence of dormice was found during nut searches at survey area S24 (Claylane Wood).
Findings:	
Findings:	
Findings:	
Findings:	
Findings:	

Provide further (brief) comments/explanation if required:

C7 Interpretation/evaluation of survey results:

Guidance: *Natural England advises that caution is taken when interpreting the results of dormice nest tube surveys; a common misconception is that nest tube surveys provide accurate dormice distribution data. However, usage of nest tubes by dormice is patchy and depends on a whole range of site specific factors, such as the presence of suitable locations for natural nests. Natural England considers that once dormice are detected they should be assumed to be present in all suitable habitats on site, unless there are effective barriers to movement.*

Please provide the following:

- A best estimate of dormouse numbers based on data collected, available habitat and published data

The results from the desk study data search and field surveys have confirmed the presence of dormice within the Order Limits at eight survey sites (S26 Shorne Wood, S27 Ashenbank Wood, S29 Great Crabbles Wood, S30 Rochester Cobham Golf Course west, S34 Great Wood/Plantlife, S35 Great Wood, S40 Singlewell Feeder and S42 Southern Valley Golf Course). At sites S24 Claylane Wood, S28 Brewers Wood, S32 Rochester Cobham Golf Course, S33 Cole Wood, S36 A2/M2 Woodland, S43 A2 Singlewell and S44 A2 Cyclopark dormice are assumed present due to the presence of suitable habitat and their location adjacent to habitat with confirmed dormouse presence and/or historic records. In addition, dormice are considered likely to be located in all suitable habitat within the A2 corridor, particularly the scrub alongside the road verges (which was not surveyed for health and safety reasons).

The area of suitable dormouse habitat within the Order Limits in Kent covers an approximate 78.5 ha and 7.1km of linear habitat (a width of 3m was used to provide an area for linear habitats), giving a total area of 80.63 ha. An estimate of the number of individuals within this habitat has been calculated using the total peak count (34) of dormice across the survey area, divided by the total area surveyed using dormouse tubes (14.4ha) then rounded up to the nearest 1 decimal place. It was not possible to use the May survey peak count as May surveys returned negative results for most survey areas, so the peak count (adults and juveniles, excluding newborns) was used regardless of the month. An average population density was then calculated, the result of which was a figure of 2.5 dormice per hectare. This approach to estimate population density across the project was discussed and agreed

with Natural England during meetings held to cover issues and progress on draft protected species licences. The total estimated number of dormice within the Order Limits (including reinstated habitat) is therefore calculated as 202 dormice. This is considered to be a precautionary approach as the peak counts include both adult and juvenile records, rather than just the adult counts which the May figures would have provided.

- Status and significance of the population

Despite their national decline, dormice are still widespread in Kent, with the county being a stronghold for the species (Kent Biodiversity Partnership, 2004). However, dormice are nationally rare and vulnerable to extinction. Dormouse populations continue to decline in number and range, with the threat to their survival primarily owing to the loss and degradation of suitable habitat.

The wider landscape surrounding the Order Limits south of the River Thames supports a large amount of optimal dormouse habitat, including boundary features and broadleaved woodland (much of which is ancient in origin). The suitable dormouse habitat within the Order Limits is typically well connected to these wider landscape habitats by boundary features.

Although dormice are quite widespread within Kent, given their conservation status and the habitats present within the site, the population is considered to be of County importance.

- An assessment of the importance of the site for dormice in the context of the wider landscape, *consider the site's location within the geographic range for dormice; dispersal corridors; connectivity to offsite woodland habitat, quality of habitats on site etc*

Of the 15 surveys sites, 14 were described as optimal, and one as sub-optimal (see section C.4 for full details).

There are extensive areas of woodland connected to the site that provide suitable dormouse habitat. North of the A2 is predominantly associated with Shorne Woods Country Park and Brewers Wood. There is connectivity to areas of woodland north of Shorne Woods Country Park to Cats Wood, Fenn Wood and Shorne Hill. There are also significant dispersal corridors north of Great Crabbles Wood to Starmore Wood, Cole Wood and Court Wood. Furthermore, dispersal is possible between Brewers Wood and Great Crabbles Wood.

South of the A2 there is extensive woodland associated with Ashenbank Wood, Cobham Hall Woodland and Rochester and Cobham Park Golf Club which are connected to the site and the wider landscape. Cobham Hall Woodland and Rochester and Cobham Golf Course are well connected to Cobham Woods SSSI, an extensive area of ancient and semi-natural woodland in the south. This area further connects to the woodland of the Kent Downs AONB.

The A2 corridor is known to have dormice present and is likely to provide a link to the wider landscape. In addition, to the south of the A2 there is a newly created country park which has areas of landscape planting incorporated. This area is likely to be sub-optimal for dormice at present, but with the continual development of the landscape planting it is anticipated that this will be suitable for dormice in the near future, further increasing the links to the wider landscape.

In the context of the wider landscape there is good connectivity to extensive areas of ancient and semi-natural woodland outside of the Order Limits.

Provide further (brief) comments / explanation if required:

N/A

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.

D Impact assessment in absence of mitigation or compensation (also see section 5 of the Dormouse Conservation Handbook). Where appropriate you must take into consideration cumulative impacts of your proposals on the dormouse population/s identified in your survey in each section.

D1 Short-term 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, use of machinery for site preparation works etc), **temporary damage and temporary loss of habitats and injuring/killing.**

Unmitigated, the Project has the potential to kill or injure dormice during vegetation removal, topsoil stripping or machinery movements. Individual dormice within retained adjacent habitats could be temporarily disturbed during the construction phase by human presence, machinery movements, vibration and lighting. This may mean that habitats become temporarily unusable for foraging or nesting dormice, at least until dormice have become habituated to such disturbance.

Details of suitable dormouse habitat confirmed or assumed to support dormice within the Order Limits are provided in table 6 below. Standard phase 1 habitat categories are used regardless of location (e.g. vegetation on road verges is included in the below categorisation).

Table 6 Suitable dormouse habitat confirmed / assumed to support dormice within the Order Limits

Habitat		Approximate area (ha) or length (m) within Order Limits South of the River Thames
Woodland and Scrub	A1.1.1 Semi-natural broadleaved woodland	25.9 ha
	A1.1.2 Plantation broadleaved woodland	46.5 ha
	A1.3.2 Plantation mixed woodland	0.5 ha
	A2.1 Dense scrub	5.6 ha
Boundary Features	J2.1.1 Intact species-rich hedgerow	1.8 km
	J2.1.2 Intact species-poor hedgerow	2.5 km
	J2.2.1 Defunct species-rich hedgerow	0.1 km
	J2.2.2 Defunct species-poor hedgerow	1.3 km
	J2.3.1 Species-rich hedgerow with trees	1 km
	J2.3.2 Species-poor hedgerow with trees	0.4 km

As habitat loss is likely to be a longer-term effect due to the length of the construction period, these short-term effects have focussed on areas where disturbance from construction is likely. Out of approximately 564ha of land within the Order Limits south of the River Thames, approximately 78.5 ha of suitable (optimal and sub-optimal) dormouse habitat comprising woodland and dense scrub is present. Of this, 26.37ha will be retained and may be subject to disturbance through changes in environmental conditions (e.g., noise, vibration, lighting). In addition, there is 7.1km of suitable linear habitats (hedgerows) within the Order Limits, approximately 2.43km of which will be retained and therefore may also be subject to disturbance.

The extent and significance of potential disturbance impacts on the resident dormouse population is difficult to predict. However, the current background level of noise and lighting adjacent to the existing A2/M1 and HS1 is high. Although there is an absence of published guidance or research on noise and lighting disturbance in relation to dormice, dormice do not appear to be a species particularly sensitive to noise and lighting in locations where they are familiar with those conditions and dormice regularly occur along busy railway lines, motorway / roadside verges (and even central reservations). Throughout the majority of the Project, which lies adjacent to existing busy infrastructure, whilst some dormice may be displaced a few metres further back into retained habitat, disturbance related impacts are unlikely to be significant particularly given that construction works will be undertaken during daylight hours and will not require artificial lighting (except for security lighting at compounds). Although increased noise may deter nesting in these locations, it is anticipated that dormice will not be significantly deterred from foraging and dispersing within these areas. The only place where disturbance may be significant is within the retained area of Claylane Wood as there is likely to be a noticeable change in noise and environmental conditions due to the loss of woodland in this area. It is

anticipated that dormice may be deterred from nesting in locations immediately adjacent to construction works in this area and dormouse will be displaced further into the retained areas of Claylane Wood. For the purpose of this assessment, it is assumed that a 10m buffer into the woodland (from the edge of the construction area) may be subject to significant disturbance. This potential disturbance zone is shown in Figure D.

D2 Long-term impacts: habitat loss or modification Consider and explain the impacts of the proposed works on the dormouse population at a site, local, regional, and national level.

E.g. Removal of Xha scrub habitat for railway embankment stabilisation scheme – Medium negative impact on a site level; medium negative impact at a regional level; low level impact at a national level.

Potential loss of woodland, scrub and linear habitats (i.e., hedgerows and lines of trees or scrub) may cause resident dormice to alter normal behaviours, potentially increasing their exposure to predation, increasing energy expenditure that cannot easily be replaced and so reducing their chances of surviving over winter.

Of approximately 564ha of land within the Order Limits, approximately 52.13ha of suitable (optimal and sub-optimal) dormouse habitat comprising woodland and dense scrub will be lost as a result of the Project (refer to figure D). In addition, approximately 4.67km of linear habitat will be removed within the Order Limits where dormouse presence has been confirmed or assumed.

D3 Fragmentation and isolation: Will the proposed works result in these types of impacts? *E.g. loss of linear features such as hedges, tree lines, severance of dispersal routes by roads/rail lines, loss of connectivity between existing wooded or hedgerow habitats as a result of the proposal, etc.* Please explain.

The construction and operation of the Project may cause habitat fragmentation in an east-west orientation around the new A2/M2 junction and as the road progresses north from there. The Project will sever the existing vegetation within and immediately adjacent to the roadside verges. Dormice would still be able to disperse in an easterly-westerly direction, to some extent, by using adjacent woodland areas. However, the new A2/M2 junction would provide a significant barrier to dispersal and would fragment suitable dormouse habitat. For example, dormouse present within Claylane Wood and adjacent areas would be confined to the west of the new road and dormice within Southern Valley Golf Course and adjacent areas would be confined to either the east or west of the new road. Dormouse present to the east would still be able to disperse within and along hedgerows and woodland where large areas of suitable habitat would remain. Although suitable habitat is also present to the west of the new road, it is not as abundant and is less well connected.

D4 Post-development interference impacts: e.g. human activity as a result of new housing development, by new motorway, increased risk of predation from domestic cats, etc. Please also consider other direct or indirect post development impacts which may include disturbance/ injuring/killing.

E.g. Occupancy of proposed 200 unit housing development will result in an increased recreational use of retained woodland 'dormouse' areas leading to a likely increase in disturbance and possible increase in predation risk (by cats, dogs etc). Moderate to high negative impact at a site and local level.

The Project will include the construction of new roads, utilities diversions, landscaping (earth movement) and habitat creation, some of which will be adjacent to dormouse habitat. This could result in disturbance through extra noise and changes in the site layout and local environment which can have detrimental effects on dormice, their needs for particular environmental conditions and a stable landscape that allows them to follow established routes to feed.

The Project will result in new and upgraded footpaths as part of the Walkers, Cyclists and Horse riders (WCH) strategy through both new and existing dormouse habitat. However, it is not considered that this would have an adverse effect on sensitive ecological features, including dormice, as it will not significantly alter the current use of retained dormouse habitat in terms of numbers of users or their distribution within the area.

D5 Impact Summary

D5.1 Summary of dormouse habitat types to be damaged or destroyed as a result of the proposal:
Please complete the following table.

Dormouse habitat type <i>e.g. hedgerow, woodland, scrub</i>	Total quantity of habitat to be Damaged	Total quantity of habitat to be Destroyed
Total (all survey sites combined)		
Semi-natural broadleaved woodland (25.9 ha)	N/A	13.02 ha
Plantation broadleaved woodland (46.5 ha)	N/A	34.5 ha
Plantation mixed woodland (0.5 ha)	N/A	0.38 ha
Dense scrub (5.6 ha)	N/A	4.23 ha
Intact species-rich hedgerow (1.8 km)	N/A	1.16 km
Intact species-poor hedgerow (2.5 km)	N/A	1.99 km
Defunct species-rich hedgerow (0.1 km)	N/A	0.01 km
Defunct species-poor hedgerow (1.3 km)	N/A	0.87 km
Species-rich hedgerow with trees (1 km)	N/A	0.48 km
Species-poor hedgerow with trees (0.4 km)	N/A	0.16 km
Total quantity	N/A	52.13 ha and 4.67 km of linear habitat

Please ensure consistency with figures provided with section C4.

D5.2 Predicted scale of impact of this development/activity on species status: Please complete the following table to explain what impacts are likely to be at the site, local/county and regional levels.

Estimated #s of dormice likely to be affected by proposal	Predicted scale of impact (<i>insert Low, Medium, High in columns below</i>)			Notes (include impact on population)
	Site	County	Regional	
Based on a density of 2.5 dormice per ha, approximately 134 dormice may be directly impacted (e.g., killed / injured) during habitat clearance. A further 68 dormice may be affected by indirect impacts (e.g. disturbance) if present in retained habitat adjacent to construction.	High	Low	Negligible	The impact at a local level has the potential to kill, injure or disturb individual dormice, as well as damage, destroy and fragment dormouse habitat.

Provide further comments/explanation as required, particularly should cumulative impacts be incurred (this information helps develop an understanding of how the impacts will be mitigated or compensated when assessing information provided in Section E):

Table 7 below shows the breakdown of suitable habitat loss within each numbered survey site/area. The estimated number of dormice to be impacted due to direct habitat loss have been estimated from the average density (2.5/ha) from all survey sites with dormice found to be present multiplied by the area.

Table 7 Estimated number of dormice to be impacted

Site	Habitat loss	Estimated number of dormice impacted
S24 (Claylane Wood)	4.24ha	10.6 (No dormouse found. Presence assumed. Estimate based on an average of 2.5 adults per ha)
S26 and S28 (Shorne Woods and Brewers Wood)	4.92ha	12.3 (Dormouse surveys confirmed presence in S26. No dormouse found during surveys of S28. Data search indicates presence. Estimate based on 2.5 adults per ha)
S27 (Ashenbank Wood)	2.99ha	7.48 (Dormouse surveys and data search confirmed presence. Estimate based on 2.5 adults per ha)
S29 (Great Crabbles Wood)	0	0
S30 and S32 (Rochester Cobham Golf Course east and west)	0.13ha	0.33
S33 (Cole Wood)	0	0
S34 (Great Wood/Plantlife)	0	0
S35 (Great Wood)	0	0
S36 (A2/M2 Woodland)	0.4ha	1 (Dormouse surveys and data search confirmed presence. Estimate based on 2.5 adults per ha)
S40 (Singlewell Feeder Station)	7.26ha	18.15 (Dormouse surveys confirmed presence. Estimate based on 2.5 adults per ha)
S42 (Southern Valley Golf Course)	3.02 ha + 0.46km	7.9 (Dormouse surveys confirmed presence. Estimate based on 2.5 adults per ha)
S43 (A2 Singlewell)	0.43ha	1.08 (No dormouse found. Presence assumed. Estimate based on an average of 2.5 adults per ha)
S44 (A2 Cyclopark)	0.15ha	0.38 (No dormouse found. Presence assumed. Estimate based on an average of 2.5 adults per ha)
Habitat outside of survey areas	28.59ha + 4.21km	74.63 (No dormouse found. Presence assumed. Estimate based on an average of 2.5 adults per ha)
Total	52.13 ha and 4.67 km of linear habitat	134 dormice

Important Advice:

Please ensure that a separate 'Impact map' is provided (**Figure D**) which must indicate all areas and habitat types (clearly referenced) that will be disturbed, damaged and / or destroyed (please specify the level of impact on the figure). Also see section I "Map checklist" at the end of this document.

E Mitigation and Compensation (please also see section 4 & 5 of the Dormouse Conservation Handbook)

E1 The mitigation solution being proposed in the method statement should be the one that delivers the 'need' with the least impact on the dormouse population.

Please explain why this design was chosen over other potential solutions – clearly set out what other designs were considered and why they were not feasible (e.g. if the proposal for a road scheme will directly impact on a small section of woodland inhabited by dormice, explain why it is not possible to retain that section of woodland and to avoid the impact; if timings to undertake the works are at a time of year when dormice are breeding explain why the works cannot be timed to avoid this most sensitive period, etc)

The most suitable areas for dormice south of the River Thames are the wooded areas north and south of the A2. The Project would result in the loss of habitat considered suitable to support dormice including woodlands, dense scrub and hedgerows. The amount of dormouse habitat to be lost is anticipated to be 52.13ha and 4.67km of linear habitat (approximately 53.53ha in total) within the Order Limits. The design of the project has been an iterative process and the Project has been designed to avoid and reduce impacts to dormice (and other features) wherever possible. This has included reducing the footprint of the Project and measures to reduce potential fragmentation impacts. The current proposals impacting potential dormice habitat are essential and cannot be practically avoided.

In total, ten of the 15 Site Areas (S24, S26, S27, S28, S30, S32, S36, S40, S42 and S43) would require dormouse habitat removal as well as additional areas of woodland, hedgerows and scrub in adjacent areas including along the roadside verges and central reservation of the A2.

The majority of areas requiring dormouse habitat removal will include the persuasion method to displace dormice to adjacent retained areas, although some areas will require translocation to identified receptor sites due to lack of connecting habitat, potential insufficient carrying capacity in adjacent habitats or barriers that would inhibit the dispersal of dormice. Some areas, such as S40 Singlewell Feeder Station and S42 Southern Valley Golf Course, will be subject to both persuasion measures and translocation.

As detailed below, areas within and adjacent to S26 Shorne Wood, S27 Ashenbank Wood, S28 Brewers Wood, S30 and S32 Rochester Cobham Golf Course east and west, S36 A2 / M2 Woodland, S40 Singlewell Feeder Station, S42 Southern Valley Golf Course, S43 A2 Singlewell and some additional areas within / alongside the roadside verge of the A2 will be subject to persuasion measures. Other areas of suitable dormouse habitat beyond survey areas to be cleared, such as the area of dense scrub and trees in the west of Jeskyns Community Woodland and the area of dense scrub and hedgerows to the immediate south of S42 Southern Valley Golf Course will also be subject to persuasion measures.

Dormice within areas of S24 Claylane Wood, S42 Southern Valley Golf Club and suitable habitat between the A2 carriageways and the A2 and High Speed 1 (HS1) rail line including the western section of S40 (and other suitable areas that have not been surveyed separately) will be translocated. Dormice from these areas will be translocated to one of two receptor sites; Shorne Woods Country Park (S26 and S28 and adjoining woodland) and the northern boundaries of S27 Ashenbank Woods and Jeskyns Community Woodland.

Please refer to figure E2 for persuasion locations and directions of displacements, translocation areas and receptor sites.

In the majority of capture sites, dormouse nest boxes (and tubes if required) will be installed in late 2025 / early 2026 in advance of translocation (2027) to increase the chance of uptake of the boxes. As detailed in section C5 and shown in Figure C5b, pre-construction surveys will be undertaken in areas between the A2 carriageways and between the A2 carriageways and HS1 which are isolated and were not previously surveyed and within the northern part of S42 Southern Valley Golf Course to help refine the mitigation approach. The dormouse boxes (and tubes where appropriate) installed for the pre-construction surveys in these areas will be left in-situ and used for the translocation exercise if dormouse presence is confirmed (additional boxes/tubes will be added as required).

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Prior to displacement and translocation, the adjacent areas and receptor sites will be enhanced for the benefit of dormice. Dormouse nest boxes will be installed within the woodland receptor sites at a density of approximately 25 per hectare. Dormouse nest boxes would also be installed within areas of retained vegetation adjacent to the footprint of the works where these occur within the Order Limits. Dormouse boxes are an effective measure that can increase the carrying capacity of such these areas for dormouse.

The new junction and widening at the A2 would result in 4.24ha habitat loss at Shorne Wood (S26) and Brewers Wood (S28) and 2.99ha habitat loss at Ashenbank Wood (S27), although not all of the habitat loss within S27 is SSSI designated. This habitat loss equates to approximately 2.9% loss of Shorne and Ashenbank Woods SSSI which is designated for its ancient woodland. Dormice are not included as a reason for notification as a SSSI. **The direct and indirect** impacts to the SSSI network form part of the overarching application for development consent for the Project and therefore do not form part of this draft licence application.

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Work to enhance the quality of the habitats for dormice within Shorne Woods Country Park (part of Shorne and Ashenbank Woods SSSI) has been consented by Natural England (dated 27/01/2022). Kent County Council, through their ranger team at the Country Park, started this consented work in May 2022 to maximise the period of establishment prior to any impacts occurring as a result of the Project (anticipated 2027). The enhancement works include native species rich planting, change in the coppice regime, removal of non-native invasive species and installation of a high density of dormouse boxes (based on an area of 97ha and a density of 25/ha approximately 2425 dormouse boxes will be installed in this receptor site).

The receptor site along the northern boundaries of Ashenbank Woods (S27) and Jeskyns Community Woodland would also be subject to enhancement work prior to works including the installation of a high density of dormouse next boxes (based on area of 6.8ha and a density of 25/ha approximately 170 dormouse boxes will be installed in this receptor site).

Persuasion Areas

In areas that are to be subject to persuasion measures, narrow strips of habitat would be progressively and carefully cleared under ecological supervision to encourage dormice to leave the area as it becomes unsuitable. As stated in the Dormouse Conservation Handbook (Bright *et al*, 2006) this is the preferred and recommended option when the area to be cleared forms part of a larger continuous area of dormouse habitat.

Southern Valley Golf Course (S42) and adjacent habitat

A compound area is to be created within the Southern Valley Golf Club (S42) requiring the removal of 3.02 ha of woodland / trees and dense scrub and 0.46km of hedgerow / tree lines. An adjacent area of plantation woodland and scrub with hedgerows (2.7ha) to the immediate south of the golf course would also be lost. The southern boundary of the golf course (0.65km of hedgerow / tree line) and adjacent habitat to the south would be subject to persuasion measures to displace dormice into Shorne Wood (S28). The habitat to be cleared in this location is fairly well connected to Shorne Wood but temporary dead hedging will be used to strengthen connections to facilitate displacement where appropriate. Although, this area is partially separated from Shorne Wood by a small (3m wide) country road (Shorne Ifield Road), the hedgerow and woodland canopy overhang the road in this location (and further along the road to the east) and provide good connectivity for dormice. This road does not currently present a barrier to dispersal / displacement.

The hedgerows around the adjacent Sports Ground will be retained and it is anticipated that any dormouse present in these areas will be able to continue using this area and disperse into the wider environment. In order to improve connectivity, native species hedgerow planting (using transplant planting) will be planted along Thong Lane to provide connectivity from the southern boundary of the Sports Ground to Thong Lane North green bridge and new species rich woodland edge planting will be planted from Claylane Wood along the boundary of the Order Limits to Thong Lane. This hedgerow planting and woodland edge planting will be undertaken in the winter 2026/2027 in advance of vegetation clearance in late 2027 / early 2028. There is a commitment to start planting and habitat creation as early as practical in the construction programme (REAC ref. TB001 within the Code of Construction Practice).

The remaining areas of the Golf Course to be cleared are fairly isolated and do not have strong habitat linkages to nearby optimal dormouse habitat. Therefore, persuasion measures would not be appropriate and translocation will be required if pre-construction surveys identify the presence of dormice. This is discussed within the translocation section below.

Shorne Wood (S26) and Brewers Wood (S28)

Dormice will be persuaded / displaced from the areas to be impacted along the southern margins of Shorne Wood and Brewers Wood to retained areas of these woodlands.

The area of Gravelhill Wood (western part of S26), which is adjacent to Shorne Wood but not part of any site designations, is to be lost completely (3.21ha). In addition, an area (1.8ha) of woodland to the west of Gravelhill Wood, along the A2 between S24 Claylane Wood and Gravelhill Wood, would also be lost. Persuasion methods would be used to displace dormice from east to west from these areas into Shorne Wood. Dead hedging (using the first few shrubs felled) would be used to improve connectivity where there are gaps, for example improving connectivity from the woodland area to be cleared along the A2 to Gravelhill Wood (up to 35m) and also at Thong Lane which separates Gravelhill Wood from Shorne Wood (indicative locations are shown in Figure E2). Thong Lane is a small country road approximately 5m wide in this location. The works would be undertaken over a few days and would require road closures at Thong Lane and closure of the access track to agricultural fields to the west of Gravelhill Wood. Persuasion methods would be used to displace dormouse from Gravelhill Wood in an easterly direction across Thong Lane and into Shorne Wood. The dead hedging would be checked for dormice, removed and chipped prior to reopening Thong Lane.

Ashenbank Wood (S27)

A footpath within Ashenbank Woods (S27) is to be upgraded to a hard surface footpath. This work will not require vegetation clearance or displacement / removal of dormice. However, the construction of the project will require the removal of woodland (2.99ha) along the northern and north-eastern edge. The majority of this habitat is found to the north of the HS1 line outside of the SSSI boundary and will be subject to persuasion measures. This will include displacing dormice from the area of habitat between the A2 and Darnley Lodge Lane across Darnley Lodge Lane. Dead hedging will be used to facilitate dispersal of dormouse over Darnley Lodge Lane into the area between Darnley Lodge Lane and the HS1 line to the south. Darnley Lodge Lane is approximately 6m wide in this location and is a continuation of Thong Lane. The vegetation between Darnley Lodge Lane and the HS1 line will then be cleared to displace dormouse to the east and to the west across the existing small green bridges; one to the east where the HS1 rail line goes into tunnel and one to the west leading from Darnley Lodge Lane to the access road to Scalers Hill House and The Mount. Dormice would therefore be displaced into Ashenbank Wood which comprises optimal dormouse habitat and lies adjacent to other areas of optimal dormouse habitat. An approximate 6.8ha strip (also to be used as a receptor site) of Ashenbank Wood and Jeskyns Community Woodland in which dormice will be displaced will be enhanced prior to displacement including the provision of approximately 170 dormouse boxes.

S40 (Singlewell Feeder)

An area (approximately 3.2ha) in the eastern section of S40, adjacent to the persuasion areas of S27 described above, would also be subject to persuasion measures (after the western section has been cleared) to displace dormice over the existing small green bridge at Darnley Lodge Lane (leading to the access road to Scalers Hill House and The Mount) into the strip of enhance woodland of Ashenbank Wood and Jeskyns Community Woodland discussed above.

S30 and S32 Rochester Cobham Golf Course east and west

A very small area (0.13ha) within plantation and mixed deciduous woodland along the northern boundary of this area (adjacent to the railway) will need to be cleared and will be displaced into the retained habitat.

S36 (A2/M2 Roundabout)

Small areas (0.4ha) associated with the A2/M2 Roundabout will need to be cleared. Persuasion methods will be used to displace dormice to the south and east into retained areas of suitable habitat. An area (0.12ha) to the immediate west of S36 will also be subject to persuasion measures to displace dormice eastwards into the retained woodland in this location. Dead hedging (approximately 15m) would be used over the access track to improve connectivity. The access track will need to be closed

for the duration of the works. Approximately 10 dormouse boxes will be installed on retained trees in the margins of this area within the Order Limits.

Small areas of habitat to the north and northeast of the A2/M2 Woodland between the M2 and A2 Watling Street will also be subject to displacement measures with dormice being displaced into retained habitat.

S43 (A2 Singlewell) and S44 (A2 Cyclopark) and adjacent habitat

Small areas of habitats within and adjacent to S43 and S44 will also need to be cleared. Persuasion methods will be used to displace dormice into retained areas of adjacent habitat. Where possible, dormice within habitat to be cleared to the south of S43, to the south of the A2 will be displaced into retained habitat along the adjacent railway corridor. However, some areas will require translocation, such as an area to the east of S43 (if preconstruction surveys confirm dormouse presence).

Translocation - Capture and soft release

In areas to be subject to translocation, dormice will be captured and released within two receptor sites: Shorne Woods Country Park (S28) (approximately 97ha) and the northern boundaries of Ashenbank Woods (S27) and Jeskyns Community Woodland (approximately 6.8ha). Further information on the receptor sites and the translocation process is provided in Section E2.2 below.

S24 Claylane Wood

As detailed above in relation to areas to be subject to persuasion measures, the new road alignment would require approximately 4.5ha of habitat clearance at Claylane Wood. This area would be subject to a translocation exercise. Captured dormouse from this location would be translocated to Shorne Woods (S26) which is approximately 0.8km east at its closest point.

Southern Valley Golf Club (S42)

As detailed above, the Project would involve habitat clearance within Southern Valley Golf Club (S42) requiring the removal of 3.02 ha of trees / dense scrub and 0.46km of hedgerow / tree lines. Whilst the southern boundary of the golf course (0.65km) will be subject to persuasion measures, the majority of the habitat to be cleared within the golf course is fairly isolated, with poor connectivity. Therefore, dormice from the remaining areas of the golf course to be cleared will be translocated into the receptor site within Shorne Wood (S26) which is approximately 0.67km (at its closest point) to the south. Pre-construction surveys will be undertaken in the northern part of the Golf Course throughout **the 2021** survey season in order to inform the mitigation approach. If dormouse are found they will be left until the translocation period **in 2027**. If dormouse are not found to be present in such areas, dormouse will be assumed to be absent and clearance will be able to proceed without dormouse related constraints.

S43 (A2 Singlewell) and adjacent habitat

Small isolated areas adjacent to the east of S43 will require translocation if preconstruction surveys in **2021** confirm dormouse presence as described above for the Golf Course. These areas are isolated by the A2 and/or adjoining slip roads.

Habitat along the A2 carriageway

The areas of habitat between the A2 carriageways to the south of Shorne Wood and Brewers Wood (that haven't been surveyed largely due to H&S restrictions) have the two carriageways as northern and southern barriers (both approx. 20m wide), preventing persuasion as an appropriate mitigation method. Similarly, the areas between the A2 and HS1 (including the western section of S40 and other suitable dormouse habitat that haven't been surveyed largely due to H&S restrictions) have the A2 (approx. 40 m wide) as a barrier to the north and HS1 (approx. 17 m wide) as a barrier to the south and would therefore also not be suitable for persuasive dispersal.

Dormice from the A2 carriageway to the south of the Shorne Wood and Brewers Wood will be translocated into Shorne Woods / Brewers located on the opposite side of the A2.

Dormice to be translocated from the western section of S40 and other areas to the west will be translocated into the northern strip of Ashenbank Wood / Jeskyns Community Woodland which is located to the south on the opposite side of the HS1 line.

Pre-construction surveys will be undertaken within these isolated areas throughout the **2021** survey season in order to refine the mitigation approach. **if dormouse are found translocation would be**

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~~undertaken in both 2026 and 2027 (see section E2.2).~~ If dormouse are not found to be present in such areas, they will be assumed to be absent and clearance will be able to proceed without dormouse related constraints.

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Green bridges and additional habitat creation / enhancement

There will be a policy of native species-rich tree, shrub and hedgerow planting across the wider scheme to compensate for the loss of habitat and to maintain / improve connectivity. The majority of habitat creation for dormice would comprise woodland planting, located around the A2 corridor, with links between Great Crabbles Wood (S29) and Shorne Woods Country Park (S26/S28). The ancient woodland at Claylane Wood (S24) will also be linked to Shorne Woods Country Park (S26/S28) with woodland planting either side of the Project and connecting to the wider environment. Woodland planting is also proposed to the west of Jeskyns Community Woodland.

The new species rich ecological mitigation planting to the north of Claylane Wood and the new planting around the Golf Course, adjacent Sports Ground and along Thong Lane from the Sports Ground to Thong Lane North green bridge will also improve connectivity and opportunities to the west of the Project. This will reduce potential fragmentation impacts in this area.

Although, the Project will largely impact upon suboptimal dormouse habitat it is acknowledged that the creation of the new A2/M2 junction and the new road extending to the north will present a significant barrier to dispersal. The new proposed habitat creation either side of the new road is designed to provide opportunities for nesting, sheltering and foraging habitat for dormice and to improve connectivity across the wider landscape on both sides. The barrier to dispersal caused by the Project will be mitigated by the provision of Thong Lane North green bridge (and connective planting). Two additional new green bridges included within the project will improve habitat connectivity by linking currently fragmented habitats to the north and south of the existing A2/M2 and HS1. The green bridges are described below.

The Project (south of the River Thames) includes three mixed-use green bridges to maintain biodiversity connectivity across this area of the Project. This includes the Thong Lane North green bridge, which would consist of a two-lane road with large southern and northern green verges that include hedgerow planting connecting to woodland either side of the route alignment (see Figure E3a)The Thong Lane South mixed-use green bridge would include a green verge to the west with a double hedgerow character, and a smaller green verge to the east with a single hedge line (see Figure E3a)This green bridge, in addition to the existing green bridge over the HS1 railway line, would allow species to cross over the A2/M2 from Shorne / Brewers Woods (S26/S28) to the north to Ashenbank Woods (S27) to the south. Although this green bridge is designed for multiple species, it will mitigate existing fragmentation of the dormouse populations present either side of the A2/M2 which are currently fragmented. The Brewers Road mixed-use green bridge has also been designed with a double hedgerow and single hedgerow either side of a two-lane carriageway, which would allow species, including dormouse, to cross from the woodland north of the A2/M2 to the parkland south of the A2/M2, over the HS1 tunnel (see Figure E3a).

Hedgerow habitat losses would be compensated by creating new hedgerows using locally occurring native species. This would include particular focus on maintaining and improving hedgerows in the vicinity of the proposed green bridges.

The proposals will result in improved connectivity and an increase in the area of suitable habitat available for dormice, accepting that these newly created areas will take a number of years to establish fully. See Figure 2.4: Environmental Masterplan (Application Document 6.2), and the Register of Environmental Actions and Commitments [REAC] (Appendix 2.2 (Application Document 6.3), Figure 2.4: Environmental Masterplan (Application Document 6.2) and Design Principles (Application Document 7.5), Clause no. PRO.04, PLA.05, STR.01, S1.14, S1.04, S2.04, S2.06, S2.07.

Disturbance mitigation

As described in Section D, construction activities will result in increased noise and lighting levels which may disturb dormice within retained areas of dormouse habitat adjacent to the project, specifically in Claylane wood.

The implementation of the committed mitigation measures described in the Code of Construction Practice REAC (Appendix 2.2 (Application Document 6.3) would safeguard dormouse from significant levels of disturbance. This includes measures to reduce noise and lighting adjacent to retained areas of suitable habitat and across the Project in accordance with good practice guidance such as locating access tracks, compounds, material storage areas and generators away from retained areas of

woodland, trees and hedgerows; sensitive lighting design in accordance with the Institute of Lighting Professionals' Guidance Notes for the Reduction of Obtrusive Lighting HN01/20 (2020) and the provisions of BS EN 12464-2:2014 Light and Lighting – Lighting of workplaces Part 2: Outdoor work places (British Standards Institution, 2014); the provision of an Ecological Clerk of Works to ensure compliance with mitigation measures; and the implementation of Best Practicable Means as defined under Section 72 of the Control of Pollution Act 1974 to reduce noise and vibration.

E2 Methodology

E2.1 Search and clearance of dormouse habitat: Please provide details on the areas involved in search and clearance of habitat (this detail must be in line with impacts **Figure D**). If not applicable to your proposals please state 'N/A' in the relevant text boxes. Also note requirement for **Figure E2**.

Single-stage habitat clearance

Details of dormice habitat to be cleared following the single-stage clearance technique (as defined in the Dormouse Conservation Handbook)

Single staged clearance will be used in all Persuasion areas. This is considered the best approach in these areas. The first stage of vegetation clearance will be thorough and will be effective in displacing dormice into adjacent optimal habitat so there will be no need for the stump removal to be delayed. Indeed, Goodwin *et al* 2018 suggests dormice may try to re-occupy cleared habitat if it is left undisturbed for long, particularly if it is left to start re-growing.

In addition, if update surveys within isolated areas (i.e., within the isolated areas between the A2 and HS1 and within S42 Southern Valley Golf Course identify the presence of dormice, these areas will be subject to single staged clearance after translocation. There would be no benefit in undertaking a second stage clearance as animals would have nowhere to disperse to.

With regards to the area at S40 Singlewell, the western half of this area will be subject to translocation (due to distance from the crossing point) and the eastern half of this area will be subject to persuasion measures. Instead of undertaking a two staged-approach to the translocation area (western half of S40), the whole S40 area will be subject to a single staged approach in September and October 2027 immediately following the translocation exercise in the western half (this approach in this location was recommended by the NE advisor). Clearance will start from the west and continue eastwards.

Quantity of habitat to be cleared	An estimated total area of 35.04ha of suitable dormouse habitat will be subject to single-stage habitat clearance. This includes 20.14ha comprising all areas identified as requiring persuasion measures (see figure E2) including areas within and adjacent to S26 Shorne Wood, S27 Ashenbank Wood, S28 Brewers Wood, S30 and S32 Rochester Cobham Golf Course east and west, S36 A2 / M2 Woodland, S40 Singlewell Feeder Station, S42 Southern Valley Golf Course, S43 A2 Singlewell and some additional areas within / alongside the roadside verge of the A2. The western half of S40 (approximately 5.2ha), although to be subject to a translocation exercise, will be subject to a single staged approach after translocation as discussed above. In addition, approximately 9.69ha within isolated areas associated with S42 Southern Valley Golf Course and between / adjacent to the A2 and HS1 will be subject to single staged clearance after translocation (if pre-construction surveys identify presence)
Description of the habitat types to be cleared	All Persuasion areas including areas within and/or adjacent to; S26 Shorne Wood and S28 Brewers Wood. Mixed deciduous woodland including 0.9ha of Ancient Woodland. S27 Ashenbank Wood. Ancient Woodland. S30 and S32 Rochester Cobham Golf Course east and west. Minor tree loss within plantation woodland and mixed deciduous woodland. S36 A2/M2 Woodland. Plantation broadleaved woodland

	<p>S42 Southern Valley Golf Course. Trees / dense scrub and hedgerow / tree lines</p> <p>S43 A2 Singlewell. Plantation broadleaved woodland</p> <p>S44 A2 Cyclopark. Plantation broadleaved woodland</p> <p>There are also additional areas of trees, scrub and hedgerows within / alongside the roadside verge of the A2 and other small areas.</p> <p>The isolated areas between / adjacent to the A2 and HS1 comprise plantation broadleaved woodland and scrub. The isolated areas within the S42 golf course comprises scattered trees/tree lines.</p>
<p>Clearance to be undertaken within best practice timing of April – May (inclusive) and/or September – October (inclusive)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If No, please provide details of proposed timing and justification</p> <p>Estimated number of days/ weeks unknown at present. Timing of works to be provided once construction programme finalised.</p> <p>In areas proposed for displacement through habitat manipulation and isolated areas (not connected to suitable dormouse habitat) where translocation is proposed.</p> <p>The western and eastern area of S40 will be subject to vegetation clearance in September – October 2027 as soon as western area of S40 has been subject to translocation in June – September 2027.</p> <p>All other areas to be subject to displacement will be undertaken in April and May 2027; September and October 2027 and/or April and May 2028.</p> <p><u>Where dormice are confirmed in the isolated areas associated with the northern part of the S42 golf course and the A2 corridor, single-staged vegetation clearance will generally be undertaken in April to May 2027 and/or September to October 2027. However, as previously stated, it is anticipated that translocation from the larger isolated locations between the A2 carriageways (if required) will commence in 2026 to give two capture seasons (2026/2027) to maximise the chance of locating dormice. Following year 1 of capture, consideration will be given to the partial removal of habitat in September and October 2026 to reduce the size of the capture area and potentially increase the uptake of nest boxes. Sufficient habitats would be retained to sustain any remaining dormice until the translocation exercise is complete and further habitat clearance completed in September – October 2027.</u></p>

<p>Confirm that a maximum of 50m² (0.25ha) is to be cleared per day, on successive days</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Estimated number of days. Unknown at present</p> <p>If No, please provide details and justification.</p> <p>The 50m/day basis specified in the Dormouse Conservation Handbook Bright <i>et al</i> (2006) is based on an assumption (with very limited evidence) that it may be more stressful for dormice to be completely displaced from their habitat in one day. However, research by Goodwin <i>et al.</i>, (2018) found that radio-tracked dormice responded to woodland management with a 'hiding' response and effectively tried to stay within their home range even when little of it was left. The implication for persuasion is that limiting to short sections each day may displace the same animals repeatedly on successive days, with no benefits compared to more extensive daily clearance work. It is anticipated that up to approximately 150m² could be cleared in one day depending on the nature of the habitat.</p>
<p>Tools to be used</p>	<p>Hand tools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Other as specified: Chipper.</p>
<p>Measures to maintain connectivity to retained habitat (if applicable), i.e., dead hedging</p>	<p>Dead hedging will be used to improve connectivity to habitats during displacement where appropriate. This includes the following locations;</p> <p><u>Gravelhill Wood (western part of S26)</u> Dormouse from Gravelhill Wood will be displaced in an easterly direction, across Thong Lane (a narrow country lane measuring approximately 5m wide in this location) into the adjacent Shorne Wood. Connectivity across the lane will be maintained by the use of temporary dead hedging (using the first few shrubs felled) across the road. The dead hedging would be checked for dormice, removed and chipped prior to reopening Thong Lane. Dead hedging would also be used to improve connectivity from the woodland area to be cleared along the A2 to Gravelhill Wood (up to 35m).</p> <p><u>Ashenbank Wood (S27)</u> Persuasion measures within this area will include displacing dormice from the area of habitat between the A2 and Darnley Lodge Lane across Darnley Lodge Lane. Dead hedging will be used to facilitate dispersal of dormouse over Darnley Lodge Lane into the area between Darnley Lodge Lane and the HS1 line to the south. Darnley Lodge Lane is approximately 6m wide in this location and is a continuation of Thong Lane.</p> <p><u>A2/M2 Roundabout (S36)</u> An area (0.12ha) to the immediate west of S36 will be subject to persuasion measures to displace dormice eastwards into the retained woodland in this location. Dead hedging (approximately 15m) would be used over the access track to improve connectivity.</p> <p><u>Area adjacent (south) to Southern Valley Golf Course (S42)</u> The southern boundary of the golf course and adjacent habitat to the south would be subject to persuasion measures to displace dormice into Shorne Wood (S28). The habitat to be cleared in this location is fairly well connected to Shorne Wood but temporary dead hedging will be used to strengthen connections to facilitate displacement where appropriate. Although, this area is</p>

	<p>partially separated from Shorne Wood by a small (3m wide) country road (Shorne Ifield Road), the hedgerow and woodland canopy overhang the road in this location (and further along the road to the east) and provide good connectivity for dormice. This road does not currently present a barrier to dispersal / displacement and dead hedging (and road closures) in this location would not be required.</p> <p><u>Additional areas</u> Dead hedging would also be used to facilitate displacement by improving connectivity in and between areas to be cleared and adjacent habitats. For example, improving small islands of vegetation in the persuasion areas to be cleared in Jeskyns Community Woodland and to improve connectivity where there are gaps within and between the area of scattered trees / scrub to the east of Claylane Wood.</p> <p>The Project will include the provision of green bridges and new planting to improve connectivity in the long term. This is described below in relation to the two-staged clearance.</p>
Other:	
<p>Two-stage habitat clearance Details of dormice habitat to be cleared following the two-stage clearance technique (as defined in the Dormouse Conservation Handbook)</p>	
Quantity of habitat to be cleared	An approximate area of 4.56ha of suitable dormouse habitat is to be cleared using the two-stage habitat clearance approach. This comprises the area to be cleared at S24 Claylane Wood. As detailed above, isolated areas between the A2 carriageways and HS1 and isolated areas within the S42 Southern Valley Golf Club will be subject to single stage clearance only (if dormouse are found to be present during pre-construction surveys).
Description of the habitat types to be cleared	This has been selected as the most appropriate approach for vegetation clearance at S24 Claylane Wood This would allow dormice to be translocated between June and September/October in the first year (2027), with a winter clearance to above ground level between November (2027) and March (2028) followed by ground level clearance including stump extraction after the hibernation period in April / May (2028). S24 Claylane Wood comprises Ancient Woodland,
Clearance to be undertaken within best practice timing of stage one in November – March (inclusive) and stage two in April – May (inclusive)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Estimated number of days/ weeks unknown at present. Timing of works to be provided once construction programme finalised. If No, please provide details and justification
Tools to be used	Hand tools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other as specified: Chipper
Measures to maintain connectivity to retained habitat (if applicable), i.e., dead hedging	Biodiversity connectivity south of the River Thames will be maintained by crossings of the Project by three mixed use green bridges. Green bridges have been individually designed to provide the greatest benefit at each particular crossing location. One of these green bridges will be built over the route alignment (Thong Lane North), with a further two built over the existing A2/M2 road

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	<p>(Thong Lane South and Brewers Lane South). These latter two bridges will replace existing road bridges and will enhance wider environmental connectivity by addressing existing habitat severance.</p> <p>In some locations it will not be possible to retain existing hedgerows and gaps within hedge lines will be created as a result of the Project. Where this occurs, following construction, hedgerow habitat losses will be compensated by creating new hedgerows using locally occurring native species. This will include a particular focus on maintaining and improving hedgerows in the vicinity of the proposed green bridges, since these features will act as key wildlife corridors across the Project.</p> <p>The landscape planting habitat has been designed to provide connectivity with the wider landscape through a range of habitat creation measures. South of the River Thames the landscape planting provides a north-south link between the River Thames and the woodland around the A2/M2.</p> <p>The majority of the habitat creation will comprise woodland planting. This will also follow the "bigger, better, more joined up" approach (Lawton et al, 2010). The planting will be focused around the A2 corridor, with links between Great Crabbles Wood and Shorne Woods Country Park. The ancient woodland at Claylane Wood will be linked to Shorne Woods Country Park with woodland planting either side of the Project and across the Thong Lane North green bridge. Woodland planting is also proposed to the west of Jeskyns Community Woodland. These areas will be linked via the proposed green bridges, particularly the Thong Lane South green bridge linking Shorne Woods to the north of the A2 to Ashenbank Woods to the south of the A2.</p>
Other:	

E2.2 Capture and release (if applicable):

Please confirm that you agree to undertake the following procedures if a dormice is encountered during works:

Where active dormice are discovered during works and it is possible to allow them to move independently to safe habitats, outside high risk work areas, this will be the first course of action. Where this is not possible, either:

In the active season, dormice that are active or torpid will be relocated in their existing nest to suitable habitat, or a specially erected dormice nest box (if applicable), within 100m of the 'capture' location.

During hibernation, dormice found outside high risk areas, such as haul routes, must remain in situ. Where hibernating dormice need to be moved, the existing nest must be relocated, with surrounding material, to a location within 100m of this site similar in condition and aspect to the existing hibernation nest location. It must then be covered by suitable material, i.e. a log or clay tile for protection. In the unlikely event of the animal rousing from hibernation it should be taken into captivity until it can be released within 100m of its capture site at a suitable time.

Where a breeding nest is discovered, works must stop and provision be made for the nest to remain in situ, undisturbed and connected to contiguous habitat, until the young have been weaned and allowed to disperse naturally. Only following dispersal of all young from the nest shall licensable works in this location recommence.

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

No, I don't agree

If NO, please provide justification below. Please use this text box to describe any additional information on protocols to be employed if dormice are found during works.

Given the scale of the Project it is not possible to ensure all dormice requiring the capture and release approach can be released within 100m of their capture location, although this approach will be adopted wherever it is possible. It is proposed to capture and translocate dormice from S24 Claylane Wood, S42 Southern Valley Golf Course and suitable habitat between the A2 carriageways and the A2 and High Speed 1 (HS1) rail line including the western section of S40.

Dormice from areas of S24 Claylane Wood and S42 Southern Valley Golf Club will be translocated to S26 Shorne Wood which is approximately 0.8km east and 0.67km south respectively (at their closest points).

Dormice from the A2 carriageway to the south of the Shorne Wood and Brewers Wood will be translocated into Shorne Woods / Brewers Wood located on the opposite side of the A2, 25m north at its closest point.

Dormice to be translocated from the western section of S40 and other areas to the west will be translocated into the northern strip of Ashenbank Wood / Jeskyns Community Woodland which is located to the south on the opposite side of the HS1 line, 15m south at its closest point.

Details of the proposed approach, including release locations are given in the box below.

Should your proposals include capture (taking) and release please see requirements for Figure E2 (in Checklist I) and specify below:

Numbers of dormice that are likely to be affected at the time the works are to be undertaken. Note: this may be different to the maximum number of dormice estimated during survey as timings for works should be at a time when dormice are least likely to be directly impacted.

Dormice and habitats to be subject to translocation

The number of dormice that may be directly affected by vegetation clearance is estimated at 134 individuals, using the method of calculation described in section C7 above. An estimated 53 of these animals will be located in areas in which persuasion is not possible and will therefore have to be translocated.

Translocation will be required in areas of S24 Claylane Wood, S42 Southern Valley Golf Club and suitable habitat between the A2 carriageways and the A2 and High Speed 1 (HS1) rail line including the western section of S40 and other suitable areas that have not been surveyed separately (subject to the results of pre-construction surveys). Refer to figure E2.

Receptor sites

Translocation from these areas will involve capture and soft release in suitable retained habitat within two receptor sites; one within Shorne Woods Country Park to the north of the A2 (approximately 97ha) and one along the northern boundary of S27 Ashenbank Woods / Jeskyns Community Woodland to the south of the A2 and HS1 line (approximately 6.8ha). Please refer to section E1 for reasons why persuasion would not be suitable in these areas and details on which receptor sites have been chosen for each individual translocation site.

The receptor site north of the A2 in (Shorne Woods Country Park comprises a large area (approximately 97ha) of semi-natural coppiced woodland, the majority of which is ancient woodland. This area lies adjacent to other areas of ancient woodland including Brummelhill Wood, Randall Wood and Brewers Wood which all form part of the Shorne and Ashenbank Woods SSSI. The receptor site south of the A2 consists of a 6.8ha linear strip of semi-natural broadleaved / deciduous woodland (Priority Habitat) within Ashenbank Wood (survey area S27) and extending into the adjacent Jeskyns Community Woodland. Ashenbank Wood comprises semi-natural broadleaved woodland, including

ancient woodland and also wood pasture and parkland. This area (including the majority of the receptor area) forms part of Shorne and Ashenbank Woods SSSI.

The receptor sites are part of survey areas which were surveyed in 2018. The surveyed areas of S26 had two dormouse nests and two adult animals, one in May and one in November. The surveyed areas of S27 had four dormouse nests, two adult dormice (both in July) and several newborns (grey eyes open). The surveyed areas of S28 did not identify dormouse but presence is assumed as dormice were confirmed to be present in adjacent habitat and the KMBRC data search included records from within Brewers Wood. Jeskyns Community Woodland was not surveyed separately but is connected to Ashenbank Woods and has dormouse desk study records from 2017/2018. These areas will be enhanced for the benefit of dormice which will significantly increase foraging, sheltering, nesting and hibernating opportunities for dormice and will therefore increase the carrying capacity of these areas.

Although these receptor sites already support dormice, they are considered to be suitable as receptor sites for this project due to presence of plentiful suitable habitat and significant opportunities for enhancement, the majority of which started in May 2022 well in advance of translocation works in 2026 and 2027 (as detailed in section E1). Dormouse nest boxes will also be erected in the receptor sites and other retained vegetation (where possible) at a minimum density of 25 per ha (Bright *et al*, 2006) to further increase the carrying capacity of these areas. The dormouse boxes within the receptor sites will be erected in late 2025 / early 2026 and will be subject to surveys throughout the 2026 survey season (the year prior to translocation) to gain an indication of the distribution of dormice within the receptor sites (although it is acknowledged that not all dormice will use nest boxes). All occupied nest boxes will be marked and a minimum 100m buffer will be identified to help identify release locations to help reduce the likelihood of territorial conflicts (this is further discussed below in relation to the translocation process).

Pre-construction surveys will be undertaken in areas between the A2 carriageways and between the A2 carriageways and HS1 which are isolated and were not previously surveyed. Pre-construction surveys will also be undertaken in the northern part of S42 Southern Valley Golf Course. Dormouse boxes and tubes will be installed in these areas in late 2023 / early 2024, and checked as part of pre-construction surveys throughout the 2024 survey season. If dormice are found they will be left until the translocation period in 2026 / 2027. If dormice are not found to be present in such areas, dormice will be assumed to be absent from these areas and the vegetation clearance within these areas will proceed without dormouse related constraints.

The translocation process

Dormouse nest boxes will be erected within each capture area at a density of 30 to 100 per ha depending on the suitability of the habitat present. These will be erected in late 2025 / early 2026 in advance of translocation 2027 and vegetation clearance (late 2027 / early 2028) to increase the chance of uptake of the boxes. Nest tubes will also be installed prior to May of the capture year at a similar density to improve capture efficiency.

In areas which are isolated and/or were not previously surveyed or surveys were restricted, dormouse boxes / tubes will be installed in late 2023 / early 2024 and checked as part of pre-construction surveys throughout the 2024 survey season. If dormice are found they will be left until the translocation period in 2026 / 2027. It is anticipated that translocation from the larger isolated locations between the A2 carriageways (if required) will commence in 2026 to give two capture seasons (2026/2027) to maximise the chance of locating dormice. Translocation from other areas will be undertaken in 2027. If dormice are not found to be present in isolated areas, dormice will be assumed to be absent from these areas and the vegetation clearance within these areas will be undertaken without dormouse related constraints.

Translocations will be undertaken from mid-summer (late June) to early – mid autumn (October) 2026 and 2027 due to the practicality of collecting suitable natural foods and the availability to dormice once released. This has been identified as a key factor in the success of translocating wild dormice (Downs *et al*, 2020). Nest boxes and tubes will be inspected frequently (weekly) until no more dormice appear in them or the area is cleared of vegetation. The vegetation will also be searched for 'natural'

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dormouse nests (i.e., nests not within boxes or tubes). In line with CIEEM's Covid-19 guidance, handling of animals will be minimised and ecologists will wear face masks and gloves.

Non-breeding adult dormice will be translocated immediately to pre-release cages within receptor sites at the time of discovery. Animals found within nest boxes / tubes will be transported in the boxes / tubes they have been found in with the entrance holes blocked up with a suitable cloth, the box / tube within the donor site will be replaced. Animals found in natural nests will be put into a nest box and transported to the receptor site. Breeding females or young animals found prior to 1st September will be left until the young become independent. After 1st September, breeding females will be captured and translocated with their nestlings. Pre-release cages containing adult males will be placed at least 100m apart, cages with only female animals will be placed in between cages with only male animals. Wherever possible dormice will be released in pairs (1 male and 1 female) or family groups.

Prior to translocation, several dormouse pre-release cages will be installed in suitable locations within receptor sites. The locations will be informed by pre-commencement dormouse surveys of the receptor sites discussed above. All occupied nest boxes will be marked and a minimum 100m buffer will be identified to help identify release locations. Adult male dormice will not be released within 100m of locations where adult male dormice have been found to help reduce the likelihood of territorial conflicts.

Pre-release cage design will be based on the design found in the Dormouse Conservation Handbook (Bright *et al.*, 2006). This will be a mesh cage with plenty of vertical space to allow for climbing. The cages will comprise a mix of 0.75 cubic metre cages (for single dormice) and 1.5 cubic metre cages (for pairs or family groups – male, female and young). The base of the cage will include a deep tray filled with soil and moss to allow for animals to hibernate. There will be a minimum of two nest boxes in each cage, and fresh hazel or other branches will be provided to allow for climbing. An example of these cages is shown in the photo below.



Additional dormouse boxes will be erected in the area immediately surrounding each pre-release cage in preparation to support released translocated dormice. The cages will be provisioned with a minimum of two dormouse nest boxes. Dormice found at translocation sites within boxes will be placed inside a cage in an additional box to those already present. Straw will be provided within the alternative nest boxes so that dormice can easily move nest sites if they chose to, and also replenish their nesting material. Fresh water will be provided in drip bottles and in shallow dishes, and a variety of fresh and dried food will be provided. For example, grapes, apple, shelled hazel nuts, dried fruit, digestive biscuits, peanuts, sunflower seeds and wax worms along with blackberries and unshelled fresh green hazel nuts as soon as they become available. Frozen blackberries will be purchased to ensure their availability throughout the translocation period. The cages will be checked daily for at

least two weeks to make sure the animals are eating, and food and water will be replenished. If the food is not eaten, cages will be opened and the health of the animals will be checked. Animals will be kept in the pre-release cages for a minimum of ten days to become accustomed to their new surroundings. The pre-release cages will then be opened during fine weather by making a small opening (about 3cm) in the cage roof. Food and water will be continuously available for at least two weeks after release and ideally into the hibernation season.

E3 Dormouse compensation: Please detail how all impacts to dormice (as identified in section D) will be compensated. If not applicable to your proposals please state 'N/A' in the relevant boxes (also note requirement for **Figure E3 and E4** below).

E3.1 Enhancement and / or restoration of dormouse habitat – Provide details of all works including:

Enhancement measure <i>Select 'yes' or 'N/A' if not applicable to this application</i>	Quantity	Details of location (must also be clearly shown on Figure E3)	Additional details <i>i.e. species composition, size of whips (where applicable)</i>
Hedgerow gap planting <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Length (m)		Species-diverse hedgerow planting shall be designed to form part of a matrix of biodiverse habitats aiding wildlife movement through areas of intensive arable land. Hedgerow planting (whips) shall comprise a diverse mix of native species and, where appropriate, include hedgerow trees.
Hedgerow translocation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	Length (m)		
Coppice stool translocation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Area (ha) / length (m)	From within Claylane Wood to ancient woodland compensatory planting immediately north of, and contiguous with, Claylane Wood. The area of Claylane Wood affected by the Project is 4.24ha so this would be the maximum area from which soil and coppice stools could be salvaged.	As part of the proposed soil salvage, where practicable, in areas of ancient woodland loss, coppice stools would also be translocated into areas of ancient woodland compensation planting.
Habitat re-instatement / restoration <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Area (ha) / length (m) 8.1ha / 2400m	Areas of Shorne Woods, Claylane Wood, Brewer's Wood and the landscape planting between the A2 and HS1 line will be restored. These enhancements will not impact the notified features or the	Species-diverse hedgerow planting shall be designed to form part of a matrix of biodiverse habitats aiding wildlife movement through areas of intensive arable land. Hedgerow planting (whips) shall comprise a diverse mix of native species

		favourable condition of the SSSI. Natural England will continue to be consulted on any management measures proposed within the SSSI relevant to this application.	and, where appropriate, include hedgerow trees.
Woodland thinning / coppicing <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Area (ha) 97ha	Shorne Woods Country Park is currently undergoing some woodland thinning and a change in coppicing regime to enhance the area as a receptor site for dormice.	Homogenous areas of silver birch scrub are being thinned and replanted with a range of species to provide greater diversity and structure. Changes to the coppicing regime of sweet chestnut are designed to provide more optimum dormouse habitat.
Woodland infill planting to increase species diversity <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Area (ha) 32ha	Areas within Shorne Wood Country Park that have undergone some understorey thinning are currently being infilled.	Infill planting with a range of species to provide greater diversity and structure to enhance the area for dormice
Other:			

E3.2 Creation of new habitat – Provide details of all works including:

Compensation measure <i>Select 'yes' or 'N/A' if not applicable to this application</i>	Quantity	Details of location (must also be clearly shown on Figure E3)	Additional details <i>i.e. species composition, size of whips (where applicable)</i>
New hedgerow planting <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Length (m) 9440m	Native species rich hedgerows will be planted at all three green bridges and various other locations across the Project including to the east of Claylane Wood, to the south of the A2, along the north of the M2 and to the west of Henhurst and within Southern Valley Golf Course. Native hedgerows with trees will also be planted in various sections including areas to the north of the A2, within and adjacent to Southern Valley Golf Course, adjacent to Thong Lane from the south of the Sports Ground to Thong	Species-diverse hedgerow planting will be designed to form part of a matrix of biodiverse habitats aiding wildlife movement through areas of intensive arable land. Hedgerow planting shall comprise a diverse mix of native species, some of which will include hedgerow trees.

		Lane North green bridge, and to the north of Shone Wood Country Park.	
<p>New scrub planting</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A</p>	<p>Area (ha)</p> <p>Approximately 1.5 ha</p>	<p>Land immediately west of Shorne Wood (approximately TQ 67183 70439). This will be an open mosaic habitat, consisting of a mix of grassland, scrub, banks, bare ground and ponds, although unlikely more than 10% of this area will be scrub.</p>	<p>Species composition will be native and of local provenance.</p>
<p>New woodland planting</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A</p>	<p>Area (ha) 178 ha</p>	<p>Several areas of new woodland planting will be created to mitigate/ compensate for impacts to dormice in addition to other project mitigation / compensation requirements. New woodland planting including several types as shown in Figure E3 (e.g., Wet/Carr Woodland, Native Woodland, Native Woodland Edge habitat).</p> <p>Substantial areas of woodland planting include;</p> <p>Ancient woodland mitigation planting to the north of Claylane Wood (TQ 66487 70872), areas to the east of Thong Lane to the immediate north of Shorne Woods Country Park (TQ 67801 71088 and TQ 68312 70798), within several land parcels between Brewers Wood and Great Crabbles Wood (TQ 69673 69818) and an area to the west of Henhurst (TQ 65815 70141)</p> <p>Native Woodland and Woodland Edge planting to the West of Thong Lane (TQ 66984 70290)</p> <p>Several parcels of Woodland with Non-Native Species within / adjacent to Southern Valley Golf Course (TQ 67500 72035).</p>	<p>The planting form or shall be clearly capable of forming groups of similar species, form and height to those in the vicinity, reflecting local vegetation patterns, structure and nature conservation value (adjacent woodland NVC W10 <i>Quercus robur</i> - <i>Pteridium aquilinum</i> - <i>Rubus fruticosus</i> woodland);</p> <p>Vegetation to comprise at least 50% of indicator species from ancient woodland at Shorne Woods</p> <p>Native ground flora shall have been allowed to develop through provision of a variable light environment including shaded areas beneath a closed canopy at year 25</p>

		In addition to these areas the landscape plan includes small parcels of woodland planting in and around the A2 corridor.	
Nest box installation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	25 dormouse boxes per hectare within receptor sites and other retained habitats resulting in an approximate total of 3475.	Nest boxes will be installed throughout the receptor sites and in suitable areas of retained habitat within the Order Limits particularly in proximity to where dormice will be translocated / displaced.	Estimated number of nest boxes for each area: Shorne Woods Country Park receptor site (97/ha): Approximately 2425 Ashenbank Woods and Jeskyns Community Woodland receptor site (6.8ha): Approximately 170 Retained habitats within the Order Limits: Approximately 680 boxes
Connectivity / linking structures (e.g. dead hedging) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Three green bridges	A new green bridge at Thong Lane north over the Project, and conversion of both Brewer's Road bridge and Thong Lane south bridge over A2/M2 to green bridges.	See section E3.4 below for details
Other:			

E3.3 Summary of compensation – please summarise the total quantity of dormice habitat to be enhanced and / or provided as compensation.

Total quantity of dormice habitat enhanced / restored (total of Table E3.1) in ha / metres	172 m Hedgerow gap planting 8.1 ha / 2400m reinstatement	Total quantity of dormice habitat created (total of Table E3.2) in ha / metres	Hedgerow 9440 m Woodland 178 ha Scrub 1.5 ha
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Provide further (brief) comments/explanation if required: Note that compensation measures are expected to result in no net loss of dormice habitat. If your proposals will result in an overall net loss of available dormice habitat please provide full justification on how the favourable conservation status of the population will be maintained.

There will be no net loss of dormouse habitat. The Project design and mitigation measures described above would result in habitats of greater connectivity and quality for dormice in the medium to long term (after approximately five to 10 years of the habitat being created), which would avoid any detriment to the maintenance of favourable conservation status of the dormouse population.

If you are proposing **enhancement** of existing habitat, please provide details to justify that the existing habitat is in need of enhancement and / or has the potential to be enhanced.

Hedgerow gap planting is proposed to link Shorne Woods Country Park to Thong Lane north green bridge (TQ 67340 70956) to mitigate fragmentation. Thong Lane North green bridge will then be linked to new planting west of Thong Lane and north of Claylane Wood. This enhancement of hedgerows by gap planting will link Shorne Woods Country Park to Claylane Wood west of Thong Lane. New

hedgerow will be planted along the east of Thong Lane to provide connections from Thong Lane North green bridge to Southern Valley Golf Course (to the north).

E3.4 Bridges and other permanent linking structures *Note – creation of dormouse bridges to mitigate for fragmentation impacts for high impact cases must be protected in the long term. Please provide details of:*

Planting

Siting, including why and how area/location for creation was selected

8-figure grid reference on location

Design (including length, width, height, installation details and materials to be used)

Evidence (if necessary) to provide reassurance that such a design is used or will be used by dormice (also see requirement for **Figure E3** and the need for long term site safe guard, security and monitoring and maintenance of such a mitigation measure in section E4).

Habitat connectivity will be maintained by the provision of three mixed-use green bridges (refer to figure E3, E3a and E4). Green bridges have been individually designed to provide the greatest benefit at each particular crossing location (see Environmental Masterplan (Application Document 6.2) and Figures E3, E3a and E4.

Thong Lane North green bridge (TQ 67199 71102) is described as a heavy-duty mixed-use green bridge. The bridge will consist of a two-lane road with a southern 12.2-29.6 m green verge, and a 39.2-56.8 m northern green verge. Both these green verges will include an WCH route and will include both grassland areas and hedgerow planting. The hedgerow planting will connect to woodland planting located to either side of the route alignment. The proposed hedgerow planting adjacent to Thong Lane will connect the bridge to the sports ground and habitats to the north. See table below for full specifications.

Thong Lane South mixed-use green bridge (TQ 67364 69840) has been designed with a 12.75 m verge to the west of a two-lane road, with a smaller 1.5 m green verge to the east. This western green verge will be planted with a double hedgerow character with grassland planting in between the hedgerows. The eastern green verge will be a single hedge line. This green bridge will allow species to cross over the A2/M2 from Shorne Woods SSSI to the north to Ashenbank Woods SSSI to the south. The green bridge is designed for multiple species use and will improve the connectivity between habitats either side of the A2/M2 that are currently fragmented. See table below for full specifications.

Brewers Road mixed use green bridge (TQ 68262 69648) shown in Figure E3 has been designed with a 9.25 m green verge to the east, and a 5 m green verge to the west of a two-lane road. The western green verge has been designed to have a double hedgerow character with grassland planting in between the hedgerows. The eastern verge will consist of an WCH route and an area of grassland planting with a single hedge line. This green bridge will allow species to cross from the woodland to the north of the A2/M2 to the parkland to the south of the A2/M2. See table 8 below for full specifications.

Table 8 Green Bridge descriptions

Bridge	Structure Type	Hedgerow width (m)	Green Width (m) (this will include areas of landscape planting and grassland, but specifications are still being designed)	Low planting, grass or grasscrete width (m)	Overall width (m)	Length (m)	Bridge Height (m)
Brewers Wood	Multi-span medium weight	3	8.5	3.25	29.55	Still being finalised	Still being finalised

	green bridge						
Thong Lane South	Multi-span medium weight green bridge	3	8.5	3.25	29.55	Still being finalised	Still being finalised
Thong Lane North	Heavy weight green bridge	The design will consist of a two-lane road with a southern 12.2-29.6 m green verge, and a 39.2-56.8 m northern green verge. Both these green verges will include an WCH route. This consists of a two-lane road with 34 m green verges on either side of the road. This green bridge will and will include both grassland areas and hedgerow planting.		5	83.35	Still being finalised	Still being finalised

Evidence that green bridge structures are utilised by dormice is detailed in 'Green Bridges; Literature review' by Natural England, Report NECR181.

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 to be provided.

N/A

Important Advice:

Scaled maps/plans of mitigation/compensation must be provided as separate maps/figures (also **see section 1 "Map checklist" at the end of this document for more detail**). Please remember to date your maps/figures and include a relevant site name and / or grid reference.

Figure E2 to show search and clearance of dormouse habitat and indicate which areas will be subject to the different methodologies showing direction of displacement where applicable (ensure this is clearly labelled and consistent with other mandatory maps/figures).

Figure E3 to show specifications for mitigation / compensation to be provided, and or retained/enhanced habitats, and annotate where it will be provided. Indicative locations of dormouse boxes must also be shown. Should the scheme be large or complicated it may be necessary to submit more than one figure (note: this will be necessary should linking structures be required see Checklist I – as the design detail must also be provided). For development schemes, include the final development layout.

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.

E4.1 Habitat/site management and maintenance:

Is any specific post-development habitat management and site maintenance planned? 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-A35a-E5a&b**.

Detail what will be undertaken in terms of habitat management and site maintenance required to ensure long-term security of the dormouse population. Ensure this relates to **Figure E3**.

Habitat Management	Required?	What measures will be undertaken?	Timing <i>i.e. first 5 years following completion of development</i>
<input type="checkbox"/> No habitat management required			
Hedge management	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	The landscape design secured by the Environmental Masterplan (Application Document 6.2), is integral to the Project's design and will be maintained and managed as part of the Project in line with its design life. This includes hedgerow management. All areas of bespoke landscape and ecology mitigation, including those where hedgerow planting is included, are detailed within the outline Landscape and Ecology Management Plan (Application Document 6.7). This details the long term management and monitoring of these areas of mitigation and includes the provision for a steering group on which Natural England, as well as local authorities and other relevant organisations, will sit and be able to advise on site management.	Five-year establishment period following planting as part of the main works contract followed by management and maintenance in perpetuity as detailed within the outline Landscape and Ecology Management Plan (Application Document 6.7).
Woodland management	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	The landscape design secured by the Environmental Masterplan (Application Document 6.2), is integral to the Project's design and will be maintained and managed as part of the Project in line with its design life. This includes hedgerow management. All areas of bespoke landscape and ecology mitigation, including those where woodland planting is proposed, are detailed within the outline Landscape and Ecology Management Plan (Application Document 6.7). The details the long-term management and monitoring of these areas of mitigation and includes the provision for a steering group	Five-year establishment period following planting as part of the main works contract followed by management and maintenance in perpetuity as detailed within the outline Landscape and Ecology Management Plan (Application Document 6.7).

		on which Natural England, as well as local authorities and other relevant organisations, will sit and be able to advise on site management.	
Scrub management	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	The landscape design secured by the Environmental Masterplan (Application Document 6.2), is integral to the Project's design and will be maintained and managed as part of the Project in line with its design life. This includes hedgerow management. All areas of bespoke landscape and ecology mitigation, including those where scrub planting is proposed, are detailed within the outline Landscape and Ecology Management Plan (Application Document 6.7). The details the long-term management and monitoring of these areas of mitigation and includes the provision for a steering group on which Natural England, as well as local authorities and other relevant organisations, will sit and be able to advise on site management.	Five-year establishment period following planting as part of the main works contract followed by management and maintenance in perpetuity as detailed within the outline Landscape and Ecology Management Plan (Application Document 6.7).
Other as specified: - - - -	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>		

Site Maintenance	Required?	What measures will be undertaken?	Timing <i>i.e.</i> , first 5 years following completion of development
<input type="checkbox"/> No site maintenance required			
Check success of establishment of new planting and take remedial action if required	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Replanting will be monitored, during which appropriate remedial action will be implemented to rectify any issues e.g., dead, diseased or dying plants will be replaced.	New planting will be monitored on a regular basis for a five year establishment period of five years. Beyond this, the provision of the outline Landscape and Ecology Management Plan would be in place.
Maintain dormouse bridges / connecting structures in good condition	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Monitoring of connecting vegetation, <i>i.e.</i> , the establishment of new planting on the bridge will be monitored and appropriate remedial action will be implemented to rectify any issues e.g., dead, diseased or dying plants will be replaced.	New planting will be monitored on a regular basis for a five year establishment period of five years. Beyond this, the provision of the outline Landscape and Ecology Management Plan would be in place.
Clear material in nest boxes to maintain condition	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Dormouse boxes will be cleared, and condition maintained.	Pre-construction, construction and up to 10 years post construction impact during dormouse population monitoring.
Other as specified:	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>		

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Provide further (brief) comments/explanation if required:

N/A

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 1 "Map checklist" at the end of this document).

E4.2 Population monitoring, habitat usage etc: Where required, 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-A35a-E5a&b**.

All nest boxes that were within pre-release cages will be checked in September and October to count and weigh the translocated dormice and to note numbers of young. After this they will be left alone until May the following year. There will be monitoring every two months of the nest boxes to observe progress in the first five years after translocation. Further monitoring will take place twice a year in years six to 10 (in May and September between the 15th and 25th of the month). The receptor sites will be set up to enable data to contribute to the National Dormouse Monitoring Programme. In addition to the nest box monitoring, the green bridges will be monitored for use of the hedgerows by dormice. These green bridges will be monitored using nest boxes / tubes concurrently with the nest boxes in the receptor sites as described in the work schedule. Monitoring using camera traps at each of the green bridge location will also be employed.

The type of monitoring which will be undertaken (e.g. nut searches, nest tube/nest box survey, hair tubes, camera traps, etc) – include survey methods and equipment to be used as necessary.

Nest box survey, nest tube survey and camera traps

Deleted:

Specify which compensation/mitigation measures will be subject to monitoring (and ensure these are clearly referenced on **Figure E4**).

Note: any bridges or linking structures deployed must be monitored.

Monitoring of nest boxes will be undertaken within receptor sites to observe progress of the animals in the 10 years following translocation. Locations planted to link existing habitat including the green bridges will also be monitored for five years after planting. Dormouse nest tubes will be placed within the hedgerows leading to the green bridges, and the hedgerows present on the green bridges themselves. Where appropriate features are located, nest boxes will be erected (e.g., on poles within hedgerows). Camera traps will be used where appropriate pinch points are located, for example gates in hedges or fence lines between hedges.

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 measure provided (e.g. dormouse nest boxes or bridges/linking structures) to ensure that they 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, 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).

The Development Consent Order (DCO) provides for the compulsory purchase of all land required to construct and operate the Project, including essential mitigation. All land required as part of this licence will be within the ownership or under legal agreement through the Highways Act 1980 and will be the long-term responsibility of National Highways.

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).

A five-year aftercare period will be established for all mitigation planting and reinstatement. A 10-year monitoring period of dormice populations will also be implemented (see the CoCP (Application Document 6.3). REAC Ref. TB015).

E5 Timetable of works: Please complete the **Work Schedule document WML-A35a-E5a&b found on the 'dormouse' application form web page and append to your application pack.**

Important Advice: Please note that from July 2014 a separate Work Schedule is a mandatory requirement to support a new dormouse 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 dormice onto land outside the applicant's ownership:

Not applicable

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

Not applicable

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

Not applicable

Comments if applicable:

All relevant land to be within the ownership of or under legal agreement with National Highways

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.

Title	Document number or Date
Baker, J., Hoskin, R. and Butterworth, T. (2019) Biodiversity net gain. Good Practice Principles for Development. A practical guide.	2019
Bright, P. & MacPherson, D. (2002) English Nature Research Reports No. 454: Hedgerow management, dormice and biodiversity. Peterborough: English Nature	2002
Bright et al (2006). The Dormouse Conservation Handbook. 2nd Ed. Peterborough: English Nature	2006
Downs, N.C., Dean, M., Wells, D., & Wouters, A. (2020) Displacing and translocating hazel dormice (<i>Muscardinus avellanarius</i>) as road development mitigation measures. Mammal Communications 6: 1-9, London	2020
Essex Wildlife Trust Biological Records Centre (EWTBRC)	2019
Goodwin C.E.D., Hodgson DJ, Nailey, S., Bennie, J and McDonald R.A (2018) Habitat Preferences of hazel dormice <i>Muscardinus acellanarius</i> and the effects of tree-felling on their movement	2018
Juskaitis, R. (2008) The Common Dormouse <i>Muscardinus avellanarius</i> : Ecology, Population Structure and Dynamics. Institute of Ecology of Vilnius University Publishers, Vilnius.	2008
Kent Biodiversity Partnership, 2004. Available at: http://www.kentbap.org.uk/ [Accessed on 1st March 2020]	
Kent Mammal Group (2019). A Future for Dormice in Kent. Available at: [redacted] [Accessed on 1st March 2020]	2019
Lawton, J.H., Brotherton, P.N.M., Brown, V.K., Elphick, C., Fitter, A.H., Forshaw, J., Haddow, R.W., Hilborne, S., Leafe, R.N., Mace, G.M., Southgate, M.P., Sutherland, W.J., Tew, T.E., Varley, J., & Wynne, G.R. (2010) Making Space for Nature: a review of England's wildlife sites and ecological network. Report to Defra	2010
Morris, 2011. Dormice: A Tale of Two Species. 2nd Ed. Whittet Books Limited.	2011
Natural England (2015). Green Bridges: A Literature [redacted] [Accessed 20th February 2019]	2015
Wembridge, D., White, I., Al-Fulaij, N., Marnham, E. & Langton, S. (2016). The State of Britain's Dormice 2016. Available at: [redacted] [Accessed 1st March 2020]	2016
Wembridge, D., White, I., Al-Fulaij, N., Marnham, E. & Langton, S. (2019), The State of Britain's Dormice 2019. People's Trust for Endangered Species, London.	2019

Wolton, 2009. Hazel dormouse <i>Muscardinus avellanarius</i> (L.) nest site selection in hedgerows. <i>Mammalia</i> 73(1):7-12.	2009
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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 Dormouse 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 dormouse bridge is being provided please include 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 where more than 1 licence is required	-	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 dormouse 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 habitats that are within the survey area and distinguishing those that were surveyed and those that were not. Aerial photographs should be provided where possible (ensure you have permission to use copy righted maps). If boxes or tubes were used or transect/quadrat routes, ensure that these routes are indicated as appropriate.
Figure C6		Yes	Survey results - provide clear, annotated and cross-referenced maps/plans/photographs to show the survey results (location of nests/dormice, etc). Ensure Figure is at a suitable scale to show the results.
Figure D	Yes	-	Impacts plan – map/figure to show impacts and where licensable works will take place: clearly indicate areas of habitats and habitat types to be impacted by the works (specify whether damage,

			and temporary impacts, destruction or disturbance will occur).
Figure E2	Yes	-	Locations and habitats where all capture and exclusion activities will be undertaken (ensure this is clearly labelled and consistent with other mandatory maps/figures). Indicate direction of displacement with arrows.
Figure E3	Yes – depending on proposals more than one figure may be required – particularly if the proposal is large or complicated or linking structures are provided	-	Specifications for mitigation / compensation Mitigation / compensation figures must show all habitat creation, restoration/enhancement, indicate where boxes will be erected etc. For development projects, show the final development layout within the site. Non-standard structures: Include design and dimensions for dormice bridges / other linking structures and materials to be used etc and provide an 8-figure grid reference for each structure.
Figure E4	Yes – when monitoring and maintenance will be included in the licence	-	Monitoring, management and maintenance map. Please indicate the specific structures and habitats 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.

WML-A35a-E5a&b – WORK SCHEDULE FOR HAZEL DORMOUSE LICENCE



Site name and address (as stated on the application form and/or licence): Lower Thames Crossing

Please ensure that this work schedule is 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 major 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 line for example). 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 annexed licence.

E5a

PLEASE INCLUDE DATE OF SUBMISSION (e.g. 1 January 2016). This will be referenced in the licence →		October 2023
Activity	Timing	Comments
Activity (state completed and fit for purpose before licensed works due to commence if appropriate)		
<i>Example: Capture by nest box / nest tube followed by release</i>	<i>May 2015</i>	<i>Release into suitable habitat within hours of capture</i>
New habitat creation / planting - scrub, woodland	2026-2032	Compensation woodland habitat would be created after DCO granted. The Project includes a commitment to plant areas as soon as practicable within the construction programme so only those areas affected by construction activity would see a delay to the start of habitat creatio
New habitat planting of hedgerow	2026-2032	As with habitat creation, hedgerow planting would occur as soon as practicable within construction

		programme so only those areas affected by construction activity would see a delay to the start of habitat creation
Habitat enhancement (e.g. thinning and infill planting, etc)	2022-2029	Woodland enhancement works within Shorne Woods Country Park for the dormouse receptor area began in spring 2022, in advance of DCO application. Hedgerow gap filling would occur as soon as practicable within construction programme so only those areas affected by construction activity would see a delay to the start of habitat creation
Hedgerow translocation	N/A	N/A
Coppice stool translocation	2027-2029	As part of the proposed soil salvage, where practicable, in areas of ancient woodland loss, coppice stools would also be translocated into areas of ancient woodland compensation planting.2025
Installation of dormouse nest boxes (pre-works)	2025-2026	Within capture areas and receptor sites in 2025-26, in advance of any preconstruction surveys and/or translocation..
Installation of dormouse nest boxes (post construction)	N/A	N/A
Construction of connectivity or linking structure (state what this is)	2027-2032	Three green bridges: Thong Lane north (new bridge across the Project); Thong Lane south and Brewers Road (existing bridges over A2 to be constructed as green bridges). Construction of bridges between 2027 and 2032. Planting of new woodland habitat to link areas of existing retained woodland (Claylane Wood; Shorne Wood Country Park; Great

			Crabbles Wood; Fenn Wood; Starmore Wood; Cole Wood; Court Wood; Ashenbank Wood; Jeskins Community Woodland). All planting to occur as early as practicable within the construction programme
Single stage habitat removal – active season (with finger tip search)		September and October 2026. April and May 2027, September and October 2027 and April and May 2028	In areas proposed for displacement through habitat manipulation and isolated areas (not connected to suitable dormouse habitat) where translocation is proposed
Single stage habitat removal – hibernation season (with finger tip search)		N/A	N/A
Hand searches including capture by hand		September and October 2026. April and May 2027, September and October 2027 and April and May 2028	Hand search proposed as part of vegetation clearance. In September and October 2026, April and May 2027, September and October 2027 and April and May 2028 during single staged clearance at persuasion areas and in isolated areas subject to translocation. Between November 2027 and March 2028 during winter clearance of other translocation areas and during stump extraction and ground clearance in April and May 2028
Two stage habitat removal:	Stage 1 – habitat removal (above ground vegetation 15-30cm)	November 2027 - March 2028	Likely to occur across two seasons in areas where capture and translocation proposed.
	Stage 2 – habitat removal (removal of root balls)	April-May 2028	
Capture by nest box / nest tube, followed by immediate release		June-October 2026 and 2027	Immediate translocation to pre-release cages within hours of capture
Construction period (start and end dates)		2026-2032	Preliminary works proposed once DCO granted (assumed 2024) with

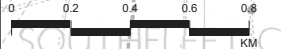
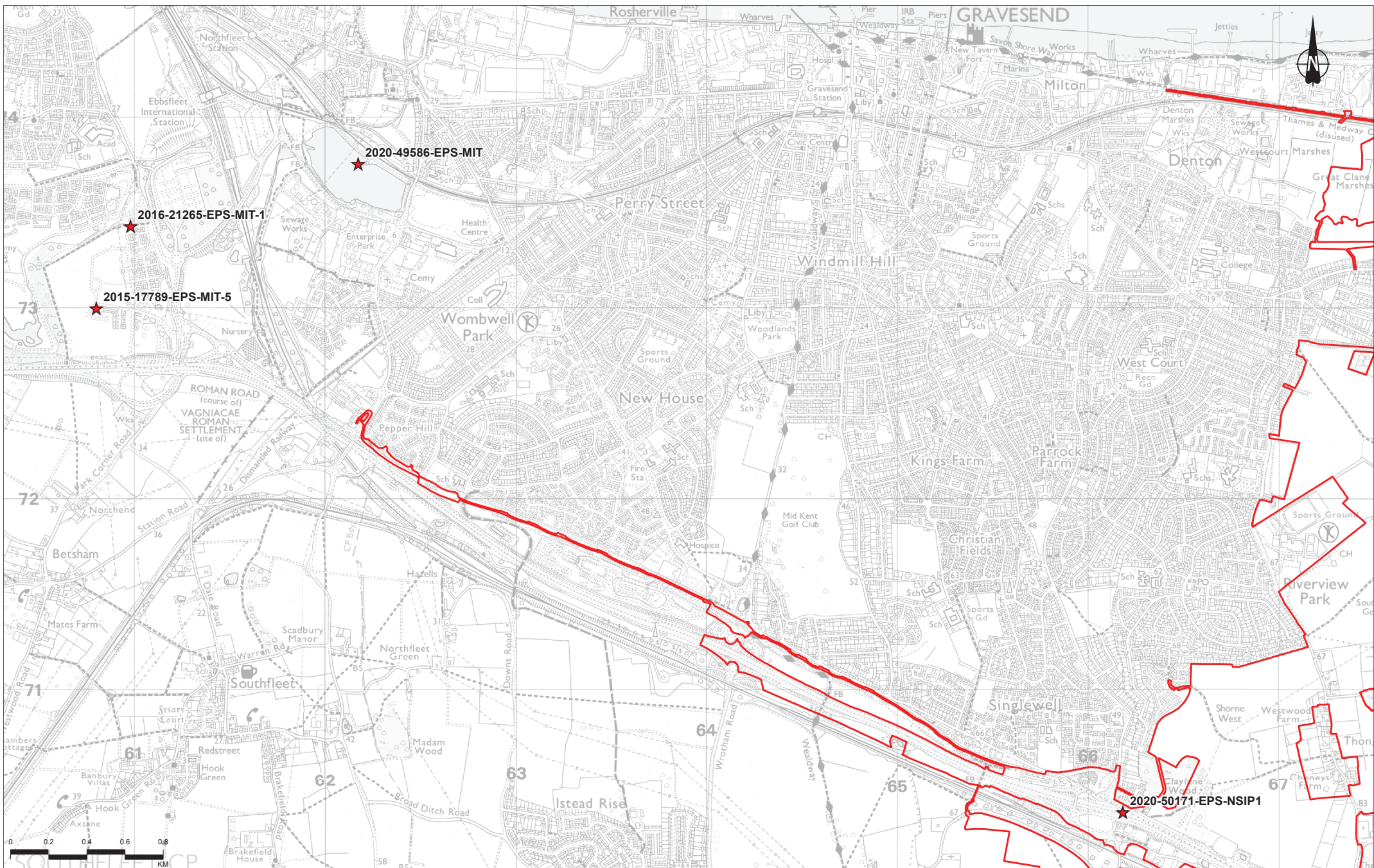
		Main Construction starting in 2026/27. Road opening programmed for 2032
Site checks & maintenance during construction	2026/27-2032	Site checks and maintenance will occur through construction period and would be undertaken by specialist Ecological Clerks of Works
Habitat reinstatement (for temporary impact schemes only) – e.g. restoration	2030-2032	Once construction compounds and areas have been decommissioned. Landscaping works to be undertaken as soon as practicable within the construction programme
Post construction mitigation/compensation on dev't site or other (provide details)	2026 ongoing	National Highways will secure all dormouse mitigation provision for long-term management and maintenance. Woodland, scrub and hedgerow habitats will be managed to meet success criteria under the supervision of a steering group which includes Natural England and relevant local authorities. This provision is secured through the grant of DCO via the outline Landscape and Ecology Management Plan document (Application Document 6.7). Habitat management will be an ongoing process from the point at which they are created



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

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Population monitoring												Y
Connectivity or linking structure monitoring (e.g. bridge)												
Habitat management (e.g. thinning, coppicing, hedges etc)							Y	Y	Y	Y	Y	Y
Site maintenance (clear out boxes, check establishment of new planting, maintenance of bridges etc)							Y	Y	Y	Y	Y	Y

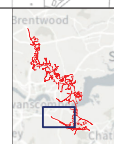
Year	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Population monitoring	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Connectivity or linking structure monitoring (e.g. bridge)					Y	Y	Y	Y	Y	Y		
Habitat management (e.g. thinning, coppicing, hedges etc)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Site maintenance (clear out boxes, check establishment of new planting, maintenance of bridges etc)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y



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- Legend**
- Order Limits
 - ★ Dormouse licenced site

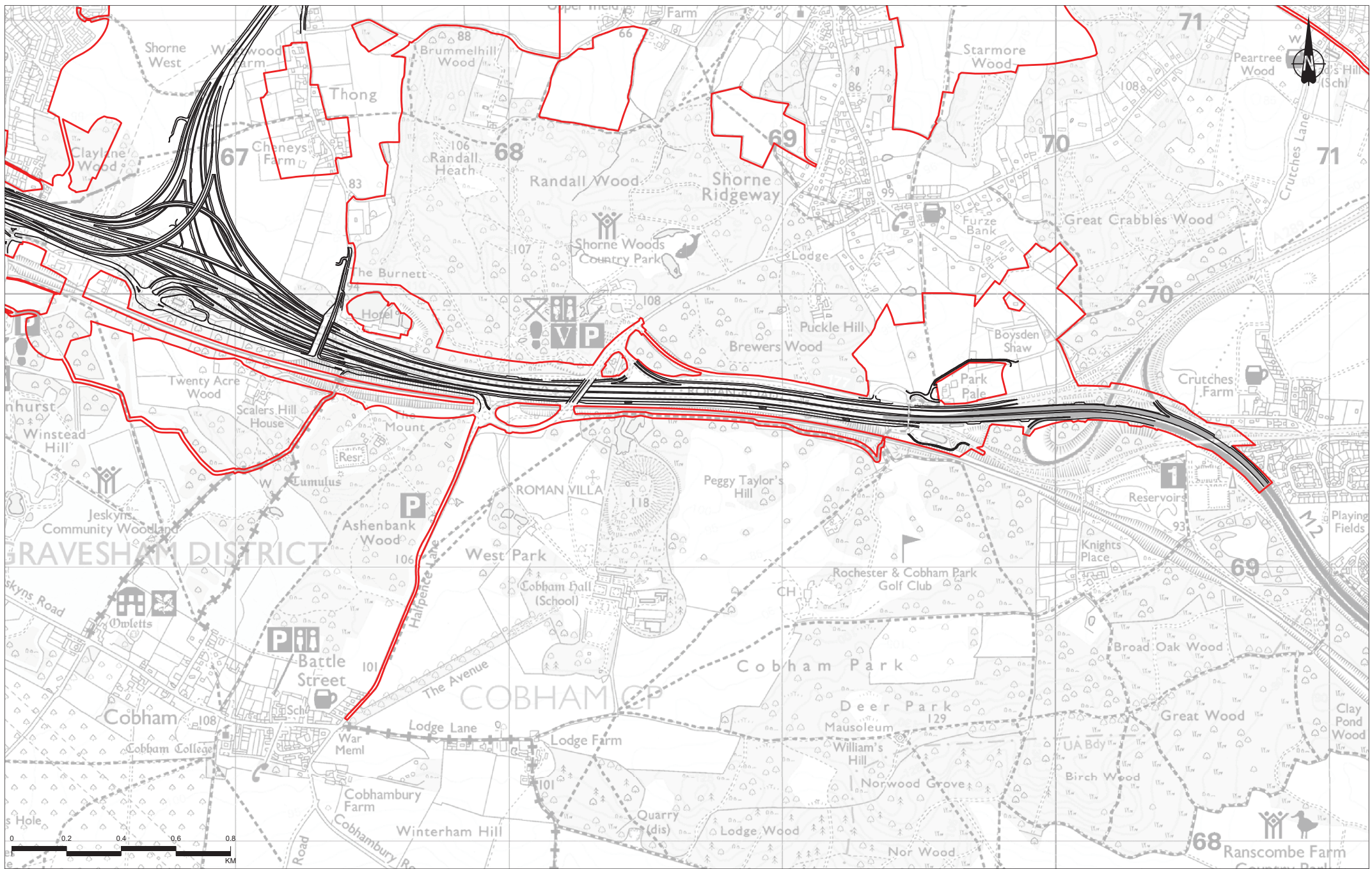
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	19/08/2022	DCO Application	CD	KL	NC



national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.2	Scale	1:18,000		
Drawing Title	Dormouse Licence Figure B2.2 Locations of Dormouse Licenced Sites				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60002				



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	10/19/2022	DCO Application	CD	KL	NC

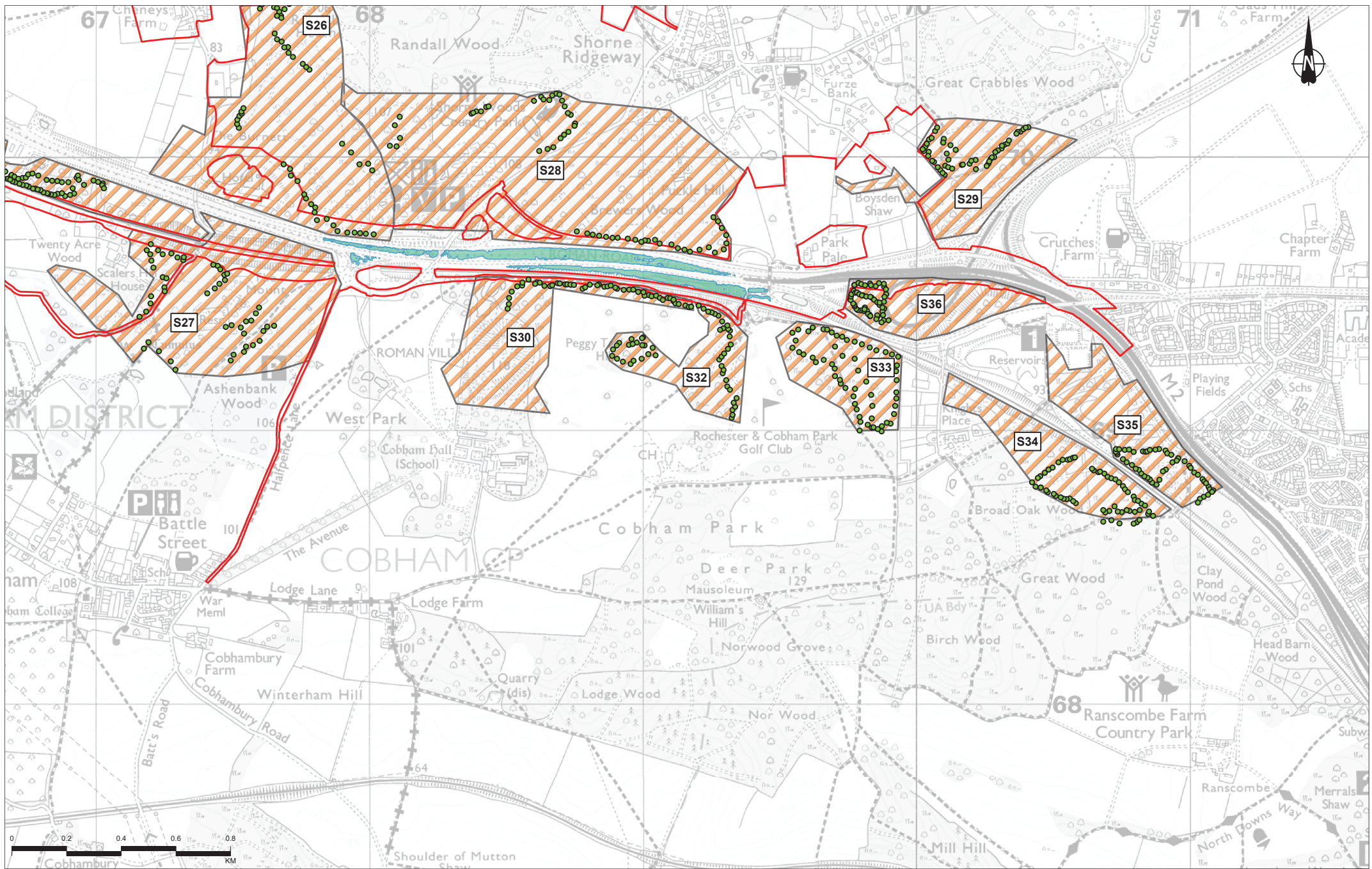
Legend
 Order Limits
 Route alignment



national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.2	Scale	1:12,500		
Drawing Title	Dormouse Licence Figure C5a - Location Map Page 1 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60003				



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	18/08/2022	DCO Application	CD	KL	NC
P03	S9	15/06/2023	Natural England comments	CD	KL	NC

- Legend**
- Order Limits
 - Dormouse survey area
 - Dormouse area not surveyed

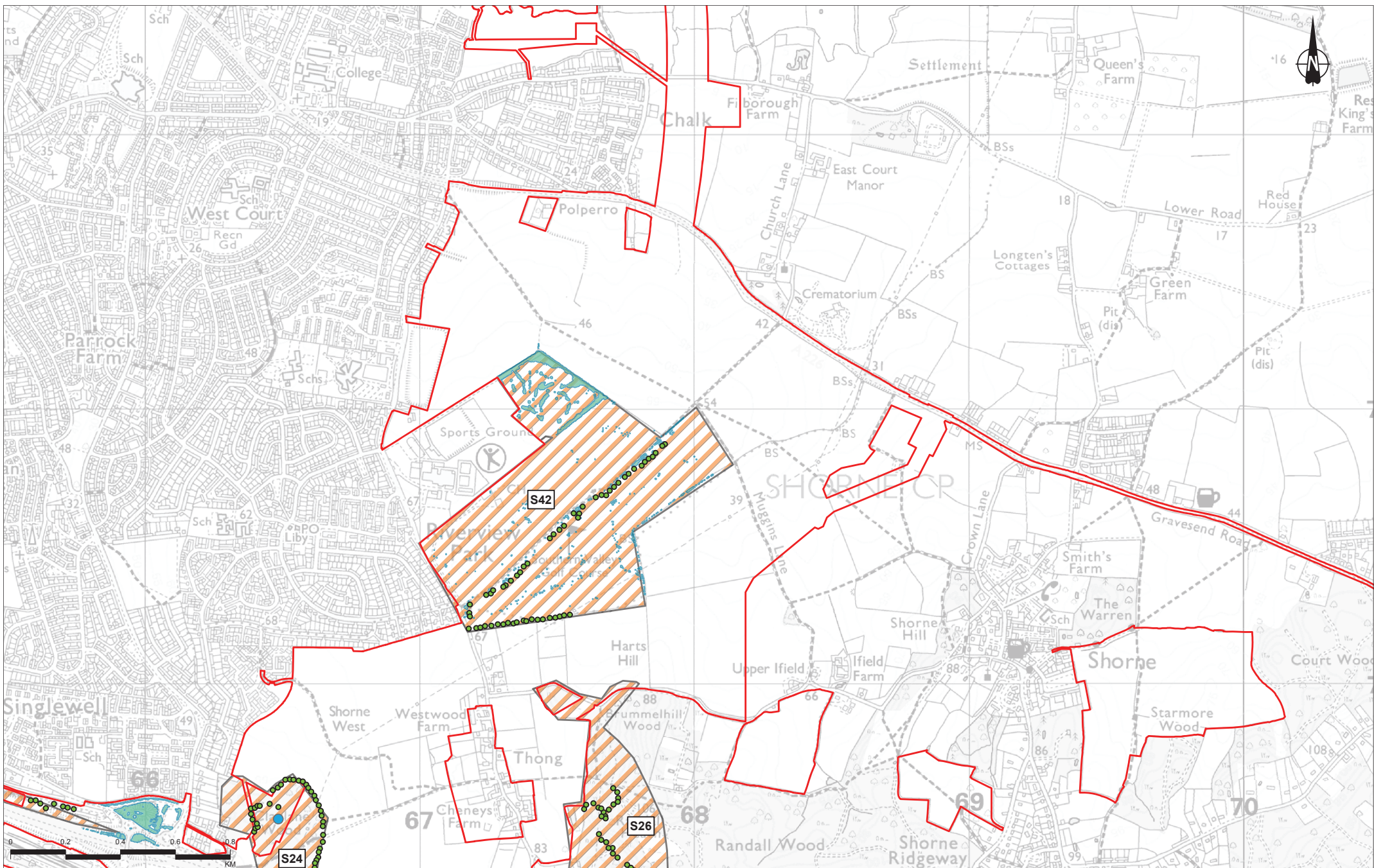
- Areas to be subject to pre-construction surveys to help refine mitigation proposals
- Dormouse tube/box location
- Nut search



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	PD3
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
Drawing Title	Figure C5b - Survey Area				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60004				
Page 1 of 3					



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- Legend**
- Order Limits
 - Dormouse survey area
 - Dormouse area not surveyed
 - Areas to be subject to pre-construction surveys to help refine mitigation proposals
 - Dormouse tube/box location
 - Nut search

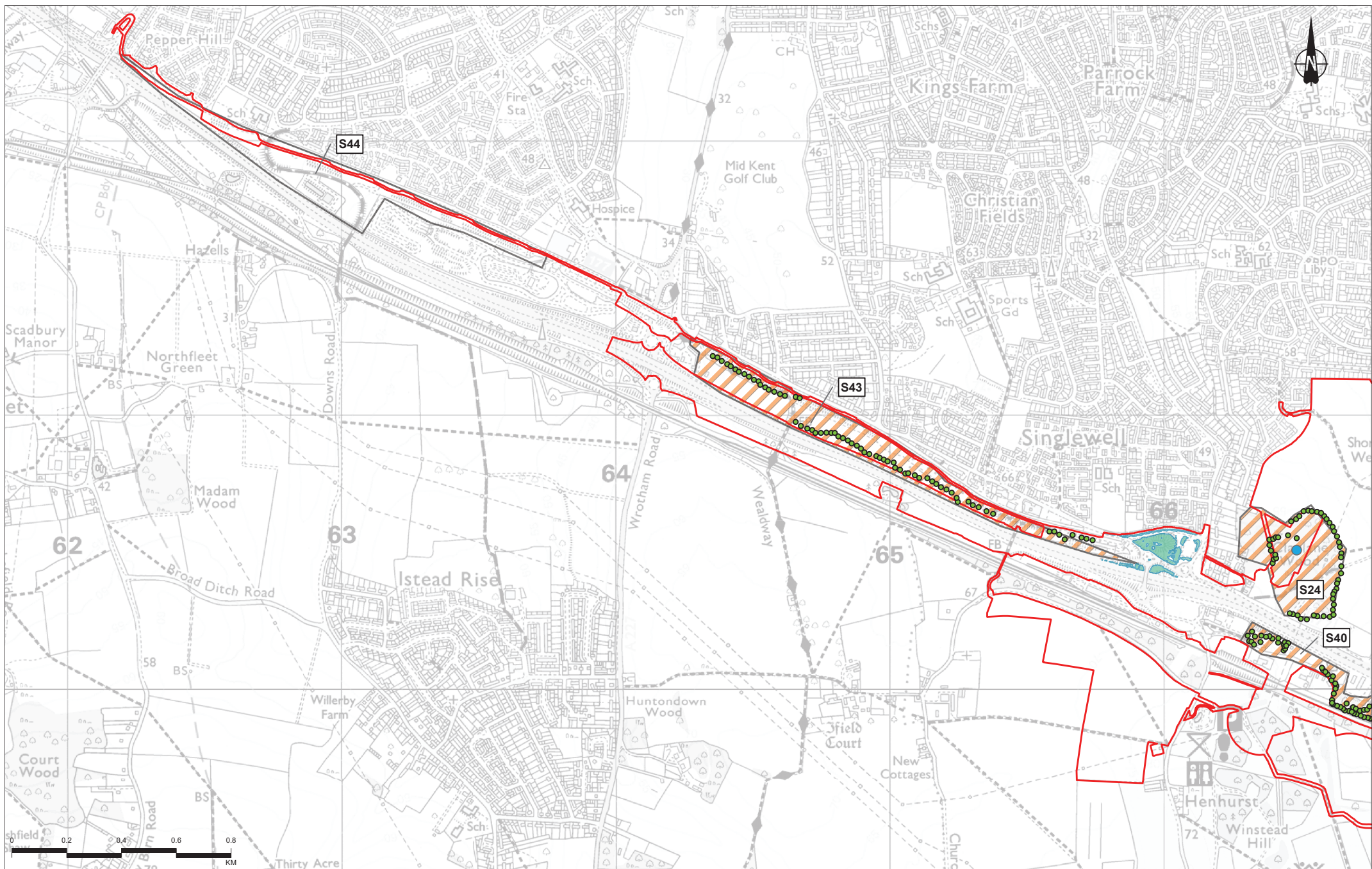
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P03	S9	15/06/2023	Natural England comments	CD	KL	NC
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved



Client: **national highways**

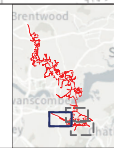
Project: **LOWER THAMES CROSSING**

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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60004				
Page 2 of 3					



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P02	S8	18/08/2022	DCO Application	CD	KL	NC
P03	S9	15/06/2023	Natural England comments	CD	KL	NC
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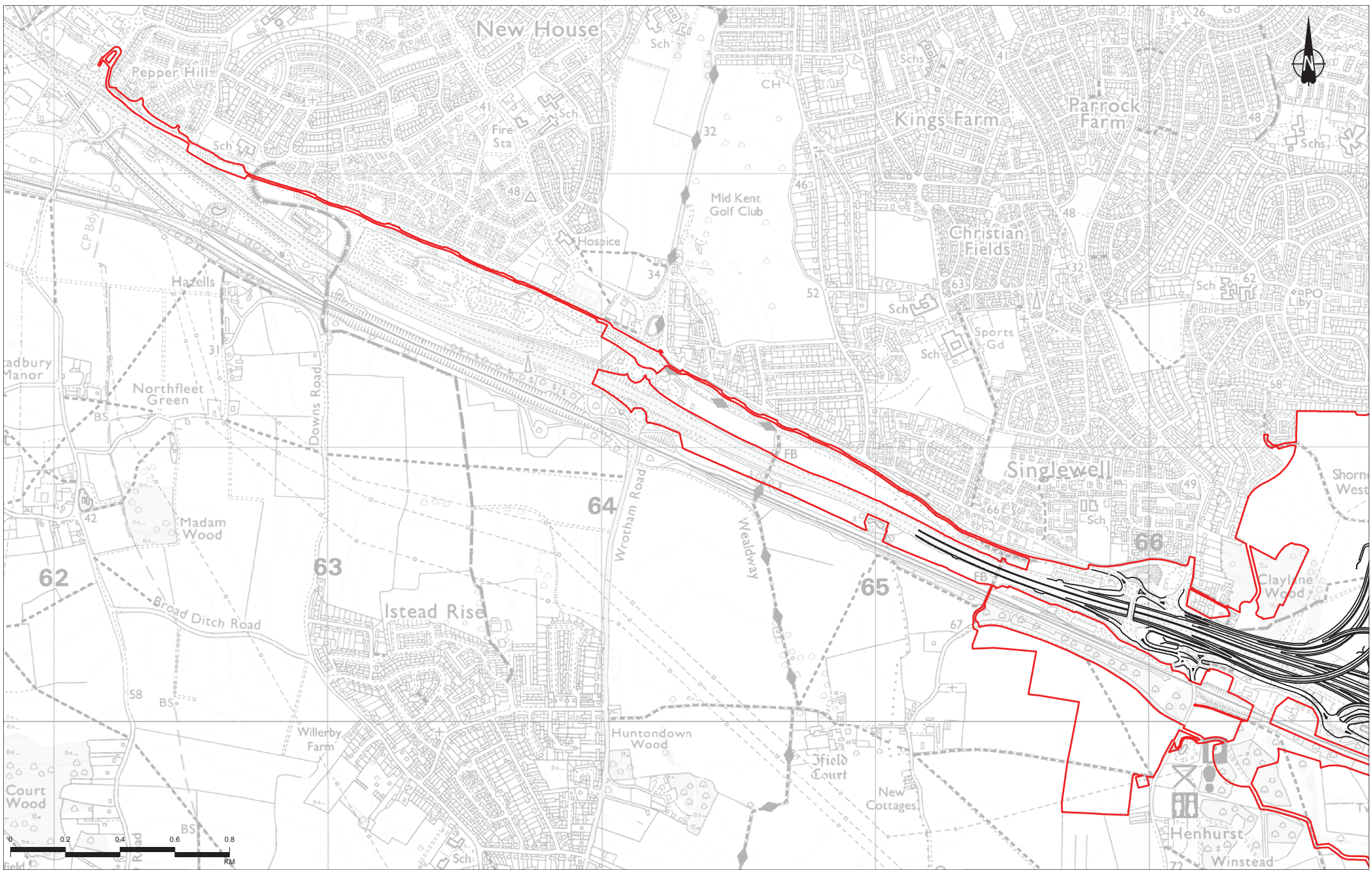
Legend	
	Order Limits
	Dormouse survey area
	Dormouse area not surveyed
	Areas to be subject to pre-construction surveys to help refine mitigation proposals
	Dormouse tube/box location
	Nut search



Client: national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	FD3
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
Drawing Title	Figure C5b - Survey Area				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60004				
Page 3 of 3					



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	10/19/2022	DCO Application	CD	KL	NC

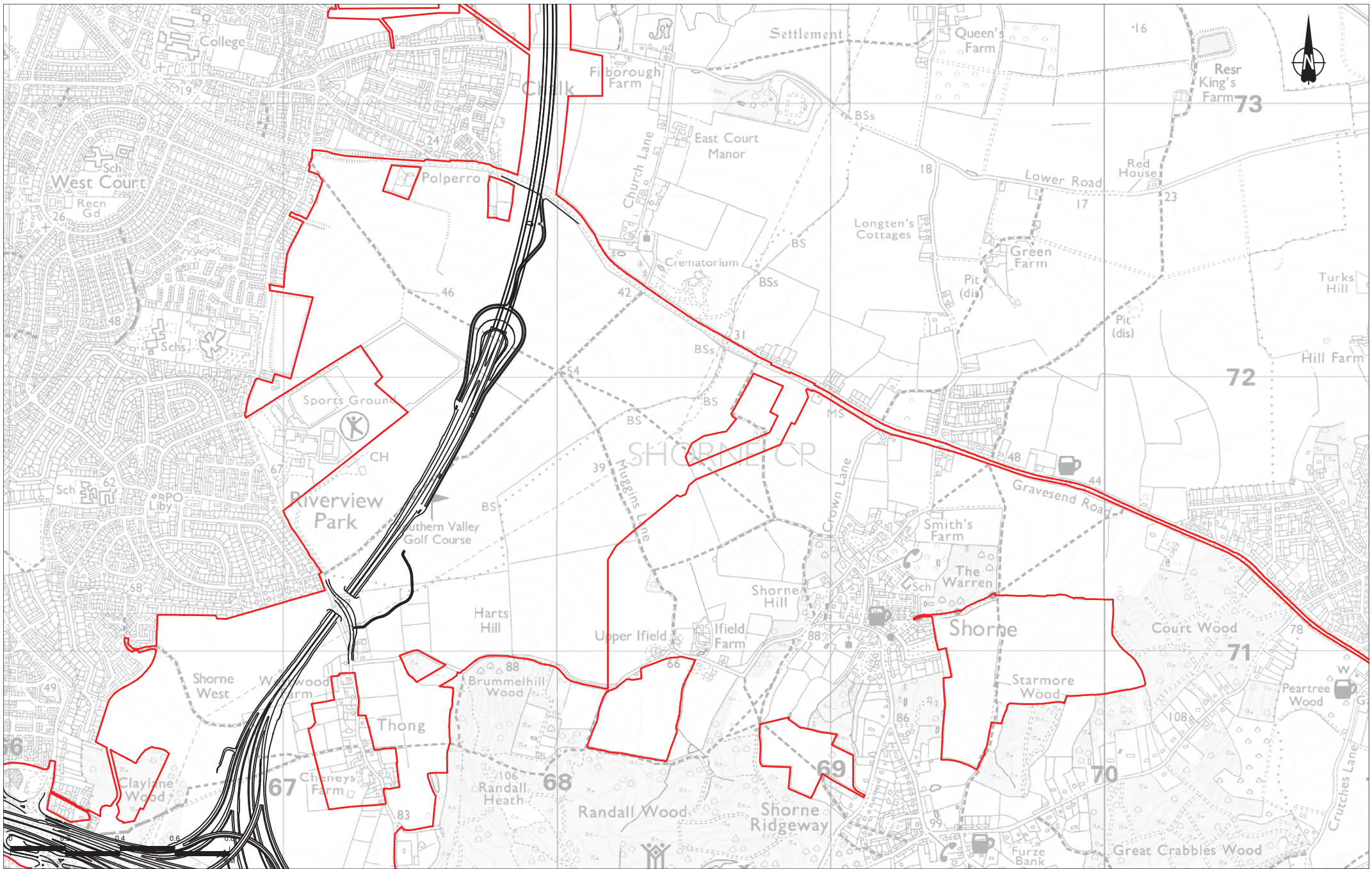
Legend
 Order Limits
 Route alignment



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.2	Scale	1:12,500		
Drawing Title	Dormouse Licence Figure C5a - Location Map Page 2 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60003				



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- Legend**
- Order Limits
 - Route alignment

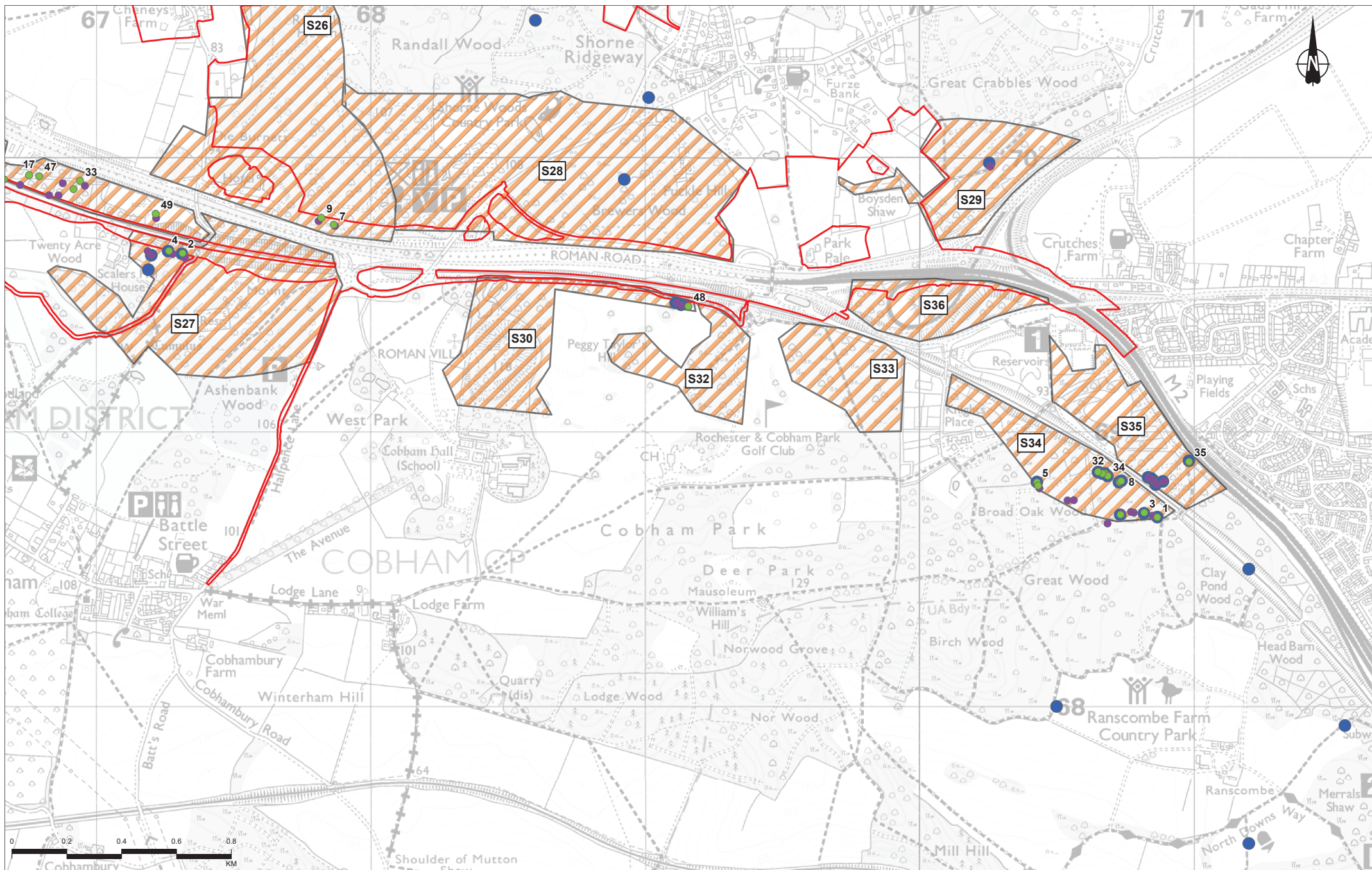
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	10/19/2022	DCO Application	CD	KL	NC



Client: **national highways**

Project: **LOWER THAMES CROSSING**

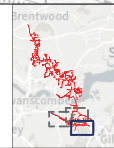
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Application Document Number	TR010032/APP/6.2	Scale	1:12,500		
Drawing Title	Dormouse Licence Figure C5a - Location Map Page 3 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60003				



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
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P03	S8	30/05/2023	Natural England comments	CD	KL	NC

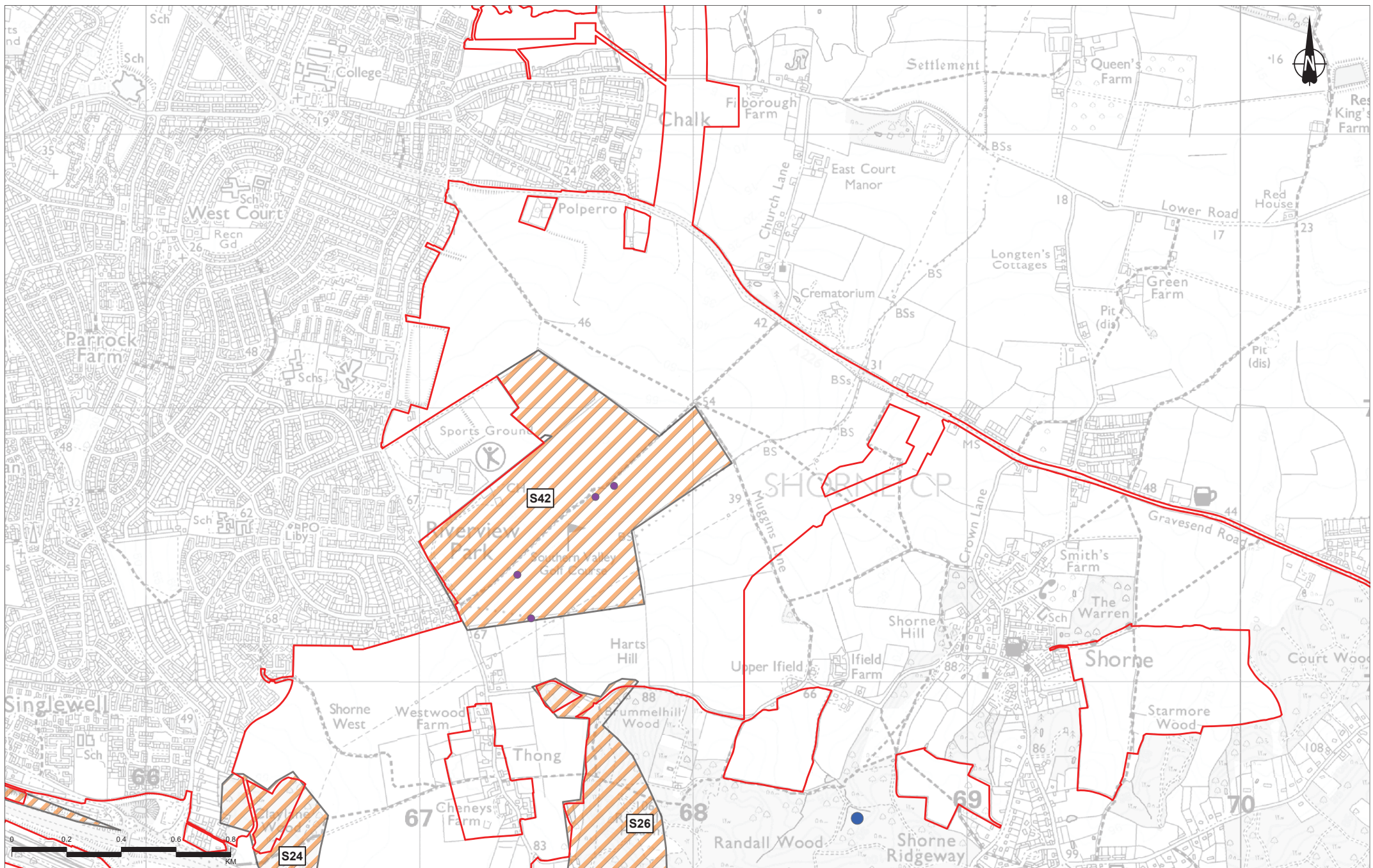
- Legend**
- Order Limits
 - Dormouse survey area
 - Not surveyed
 - Dormouse confined
 - Dormouse nest locations
 - Desk study dormouse record



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION		Original Size	Revision
Application Document Number	TR010032/APP/6.3		A3	P03
Drawing Title	Figure C6 - Survey Results (including data search records)		Scale	1:12,500
	Page 1 of 3			
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60005			



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
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P03	S8	30/05/2023	Natural England comments	CD	KL	NC

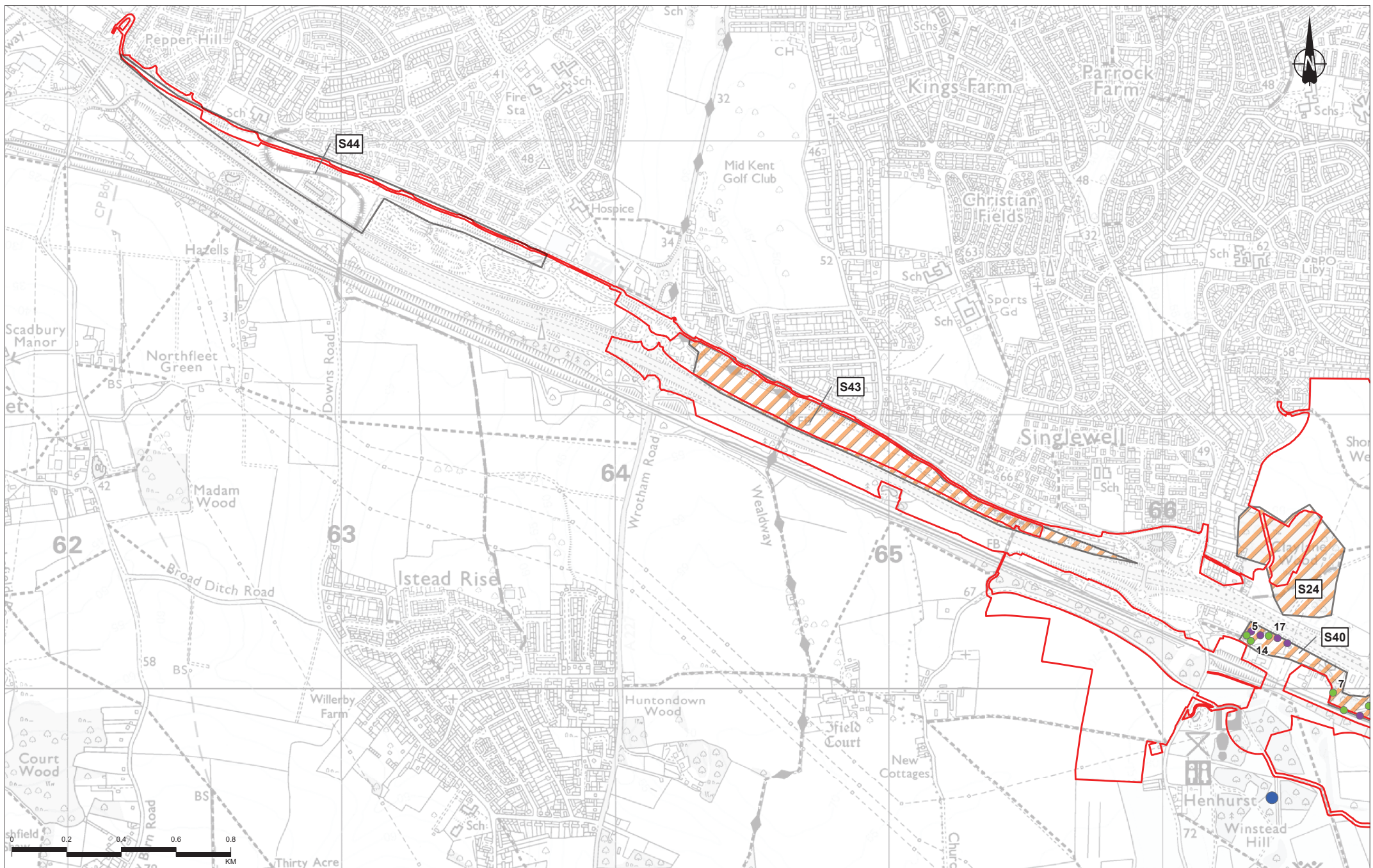
- Legend**
- Order Limits
 - Dormouse survey area
 - Not surveyed
 - Dormouse confined
 - Dormouse nest locations
 - Desk study dormouse record



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P03
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
Drawing Title	Figure C6 - Survey Results (including data search records)				
	Page 2 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60005				



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P02	S8	18/08/2022	DCO Application	CD	KL	NC			
P03	S8	30/05/2023	Natural England comments	CD	KL	NC			
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved			

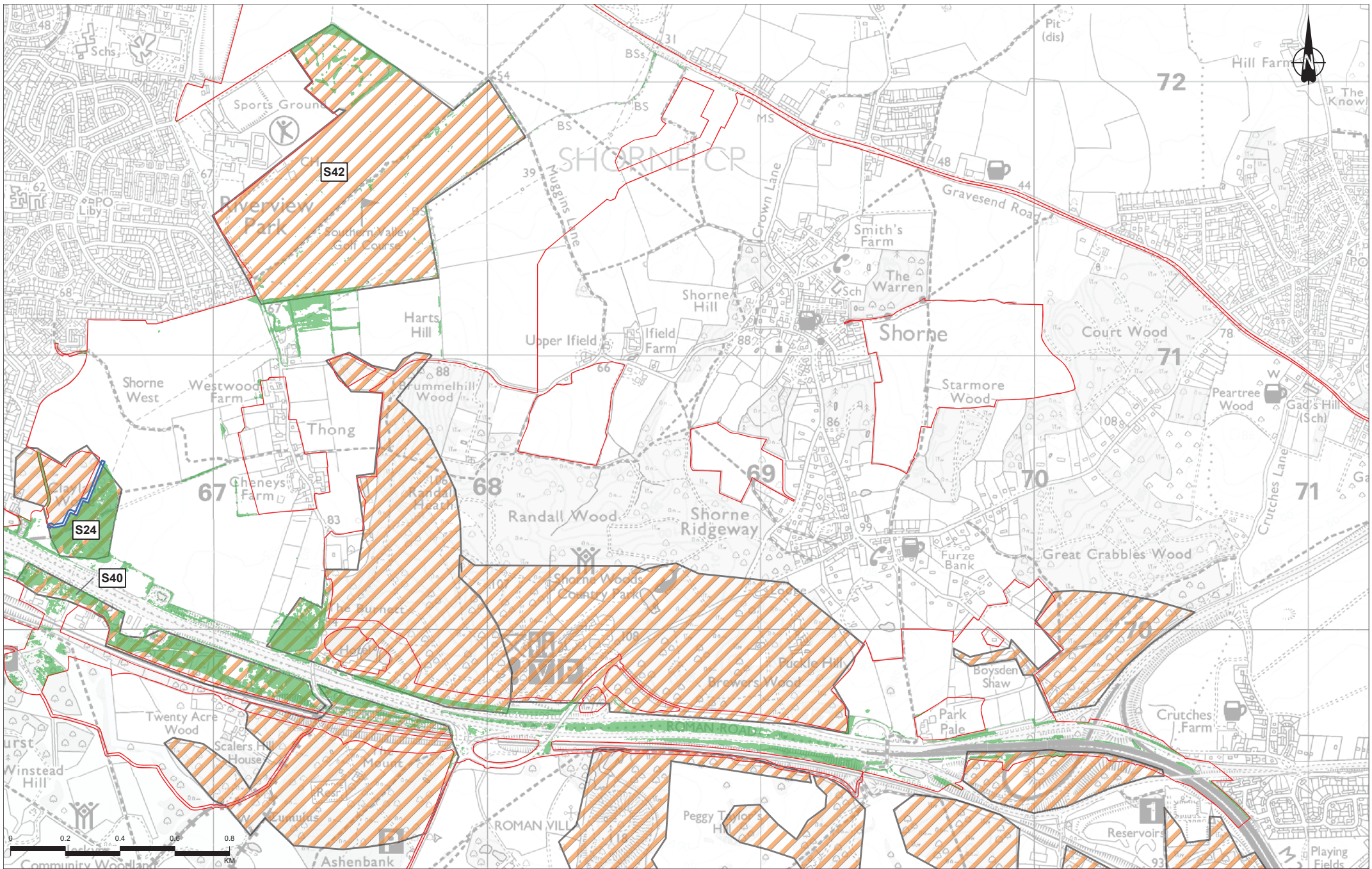
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- Order Limits
 - Dormouse survey area
 - Not surveyed
 - Dormouse confined
 - Dormouse nest locations
 - Desk study dormouse record



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	PD3
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
Drawing Title	Figure C6 - Survey Results (including data search records)				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60005				
Page 3 of 3					



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Legend

- Order Limits
- Dormouse survey area
- Not surveyed
- Dormouse habitat to be destroyed
- Potential dormouse disturbance zone

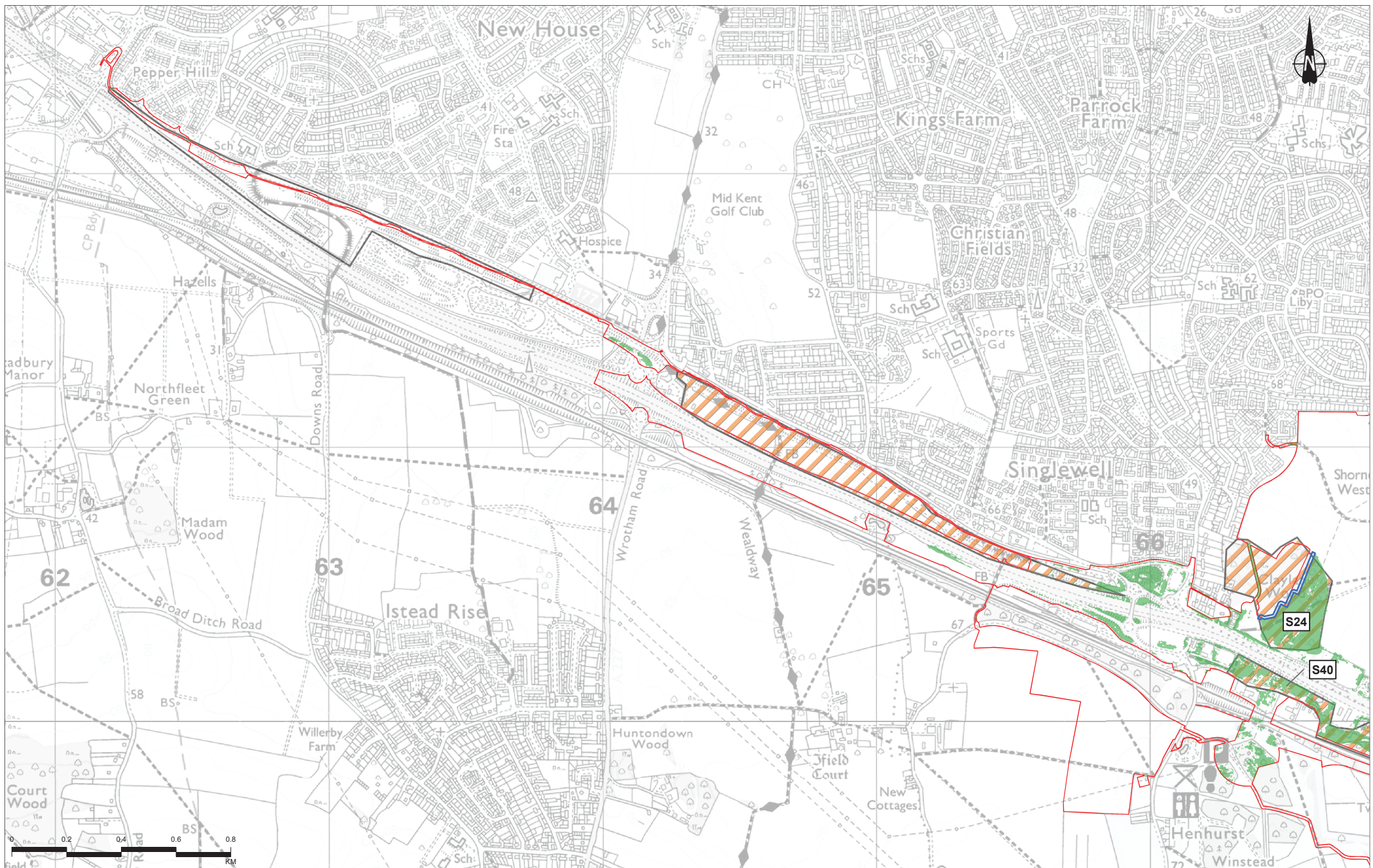
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P03	S9	15/06/2023	Natural England comments	CD	KL	NC
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved



national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	PG3
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
Drawing Title	Figure D - Impacts Plan				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60006				
Page 1 of 2					

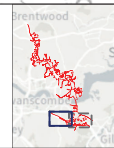


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Legend

- Order Limits
- Dormouse survey area
- Not surveyed
- Dormouse habitat to be destroyed
- Potential dormouse disturbance zone

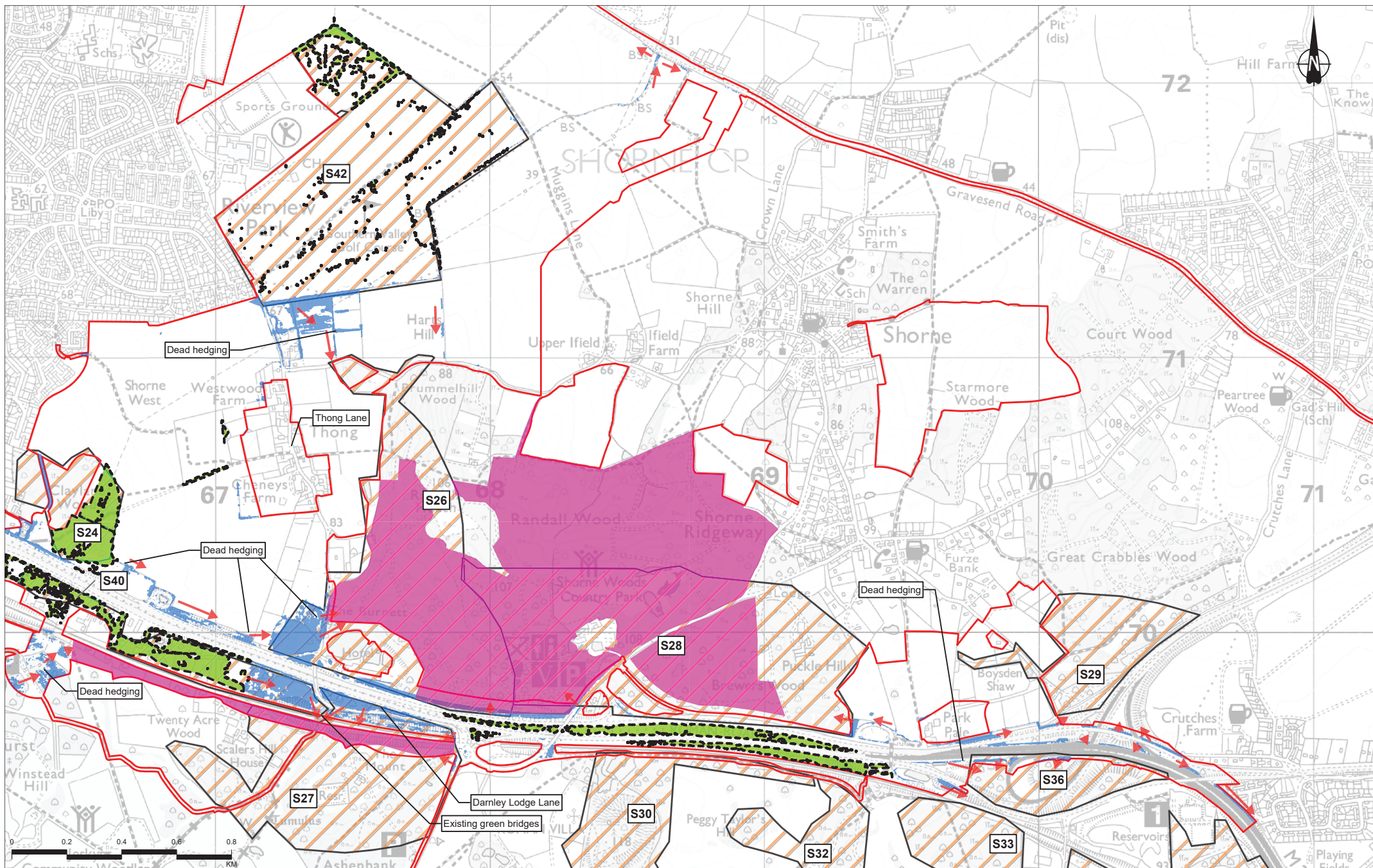
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P03	S9	15/06/2023	Natural England comments	CD	KL	NC
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	PD3
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
Drawing Title	Figure D - Impacts Plan				
	Page 2 of 2				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60006				



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P02	S8	19/10/2022	DCO Application	CD	KL	NC				
P03	S9	15/06/2023	Natural England comments	CD	KL	NC				
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved				

- Legend**
- Order Limits
 - ➔ Direction of displacement
 - Displacement
 - Translocation
 - Boxes to be erected in areas to be cleared
 - Dormouse survey area
 - Receptor
 - Not surveyed



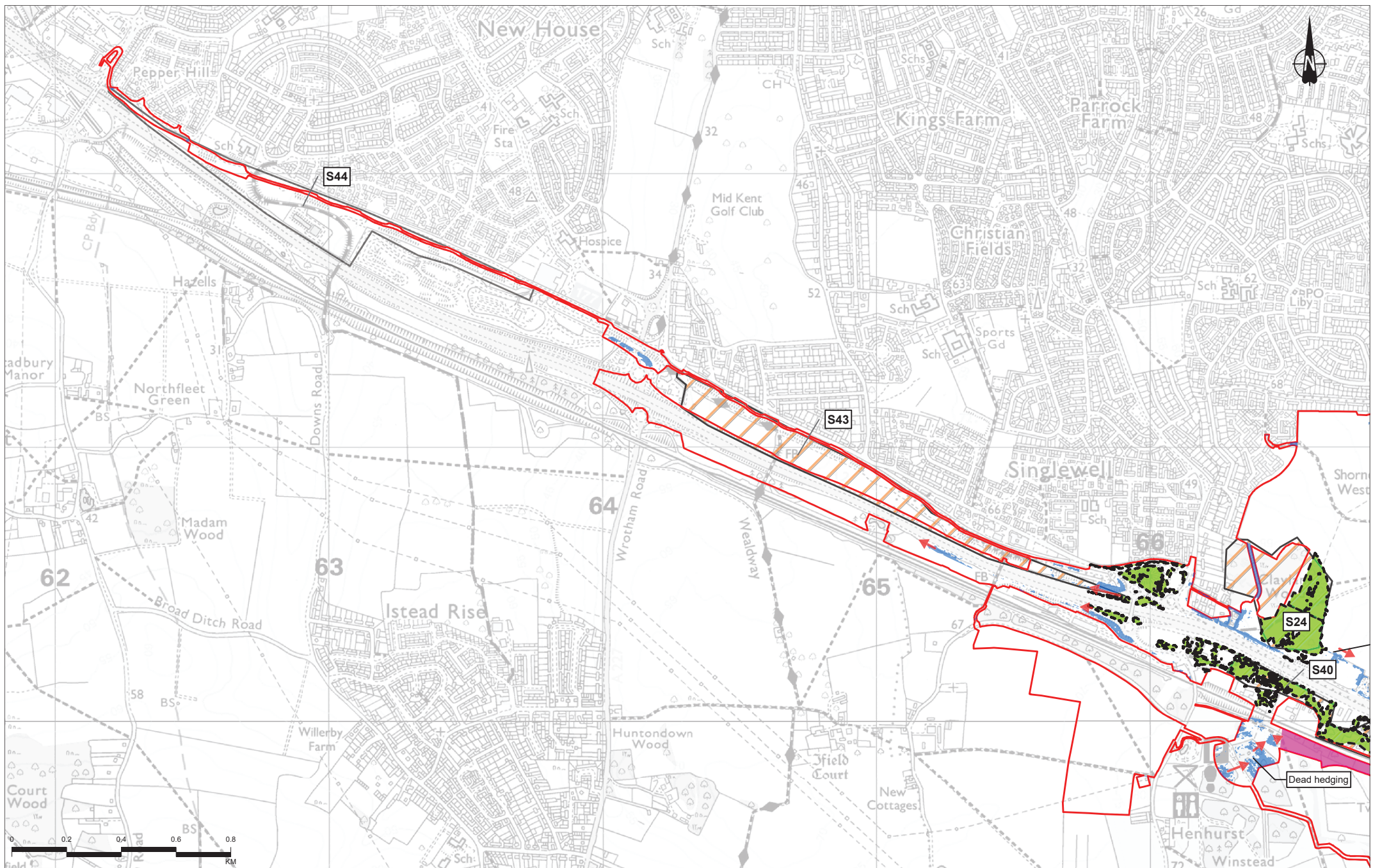
national highways

Client

Project

LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	PG3
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60007				
			Page 1 of 2		

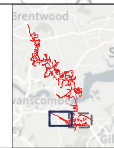


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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	19/10/2022	DCO Application	CD	KL	NC
P03	S9	15/06/2023	Natural England comments	CD	KL	NC

Legend

- Order Limits
- Direction of displacement
- Displacement
- Receptor
- Translocation
- Boxes to be erected in areas to be cleared
- Dormouse survey area
- Not surveyed

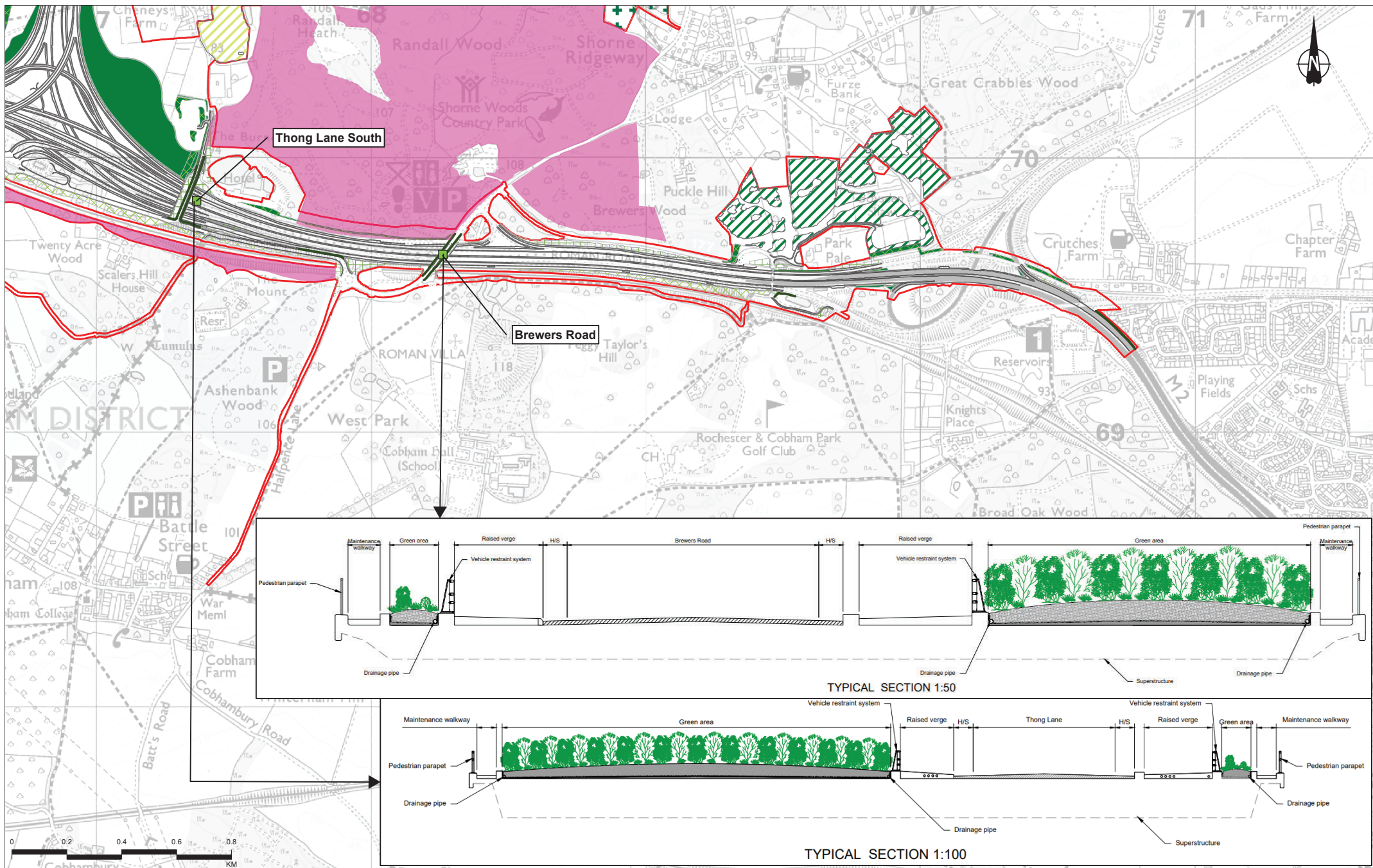


Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	PD3
Application Document Number	TR010032/APP/6.3	Scale	1:12,500		
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60007				

Page 2 of 2



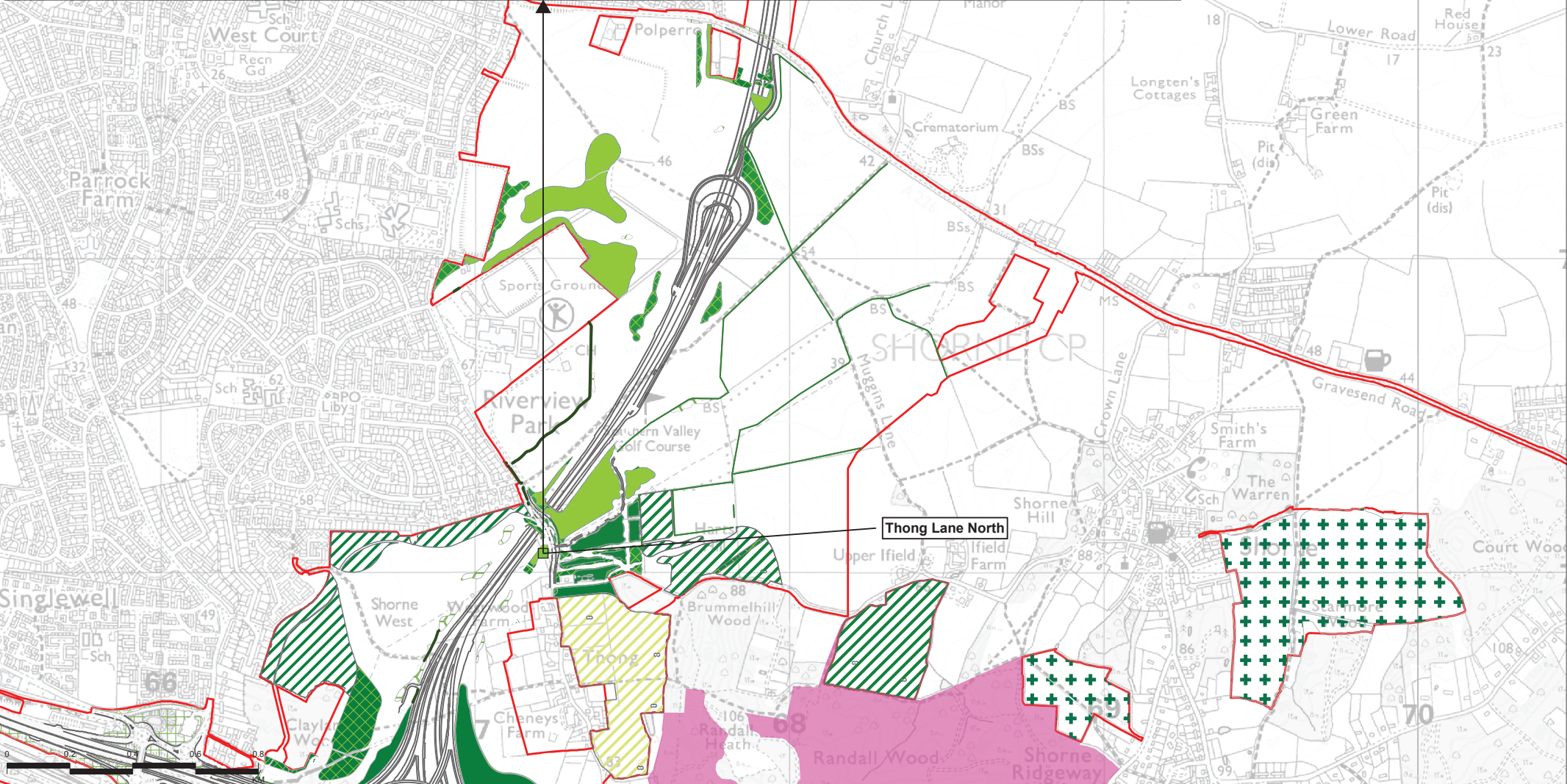
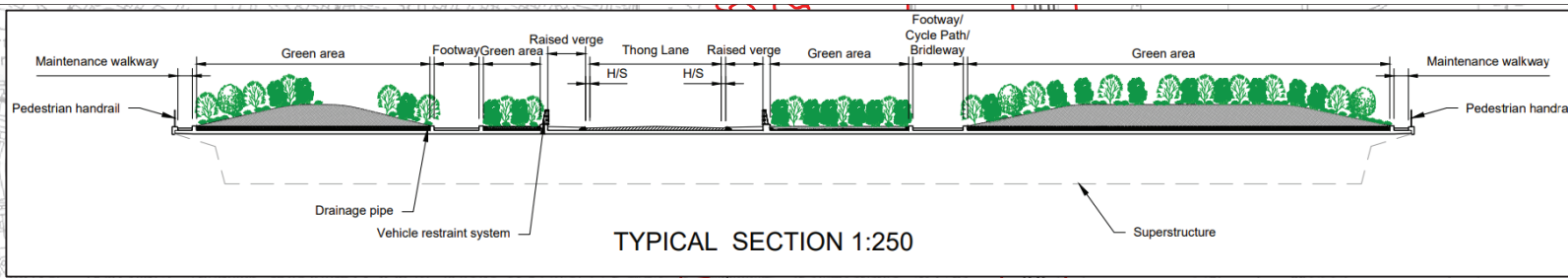
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	2010/2022	DCO Application	CD	KL	NC
P03	S9	28/06/2023	Natural England comments	CD	KL	NC

Legend	
	Order Limits
	Route Alignment
	Green bridge location
	Receptor site
	LE2.4 Linear belt of shrubs and trees
	LE2.14 Wet/carr woodland
	LE2.22 Scrub woodland
	LE8.1 Open mosaic habitat
	LE8.7 Nitrogen deposition mitigation planting (to comprise 70% woodland and 30% grassland as rides and glades)
	LE8.3 Woodland mitigation planting
	LE2.1 Native Woodland
	LE2.11 Woodland with Non Native Species
	LE2.2 Woodland Edge
	LE2.5 Shrubs with Intermittent Trees
	LE2.7 Scattered Trees
	LE2.8 Scrub
	LE5.1 Individual Trees
	LE8.2 Ancient Woodland mitigation planting
	LE4.3 Native Species Hedgerow (untrimmed)
	LE4.4 Native Hedgerow with Trees

Client: national highways

Project: LOWER THAMES CROSSING

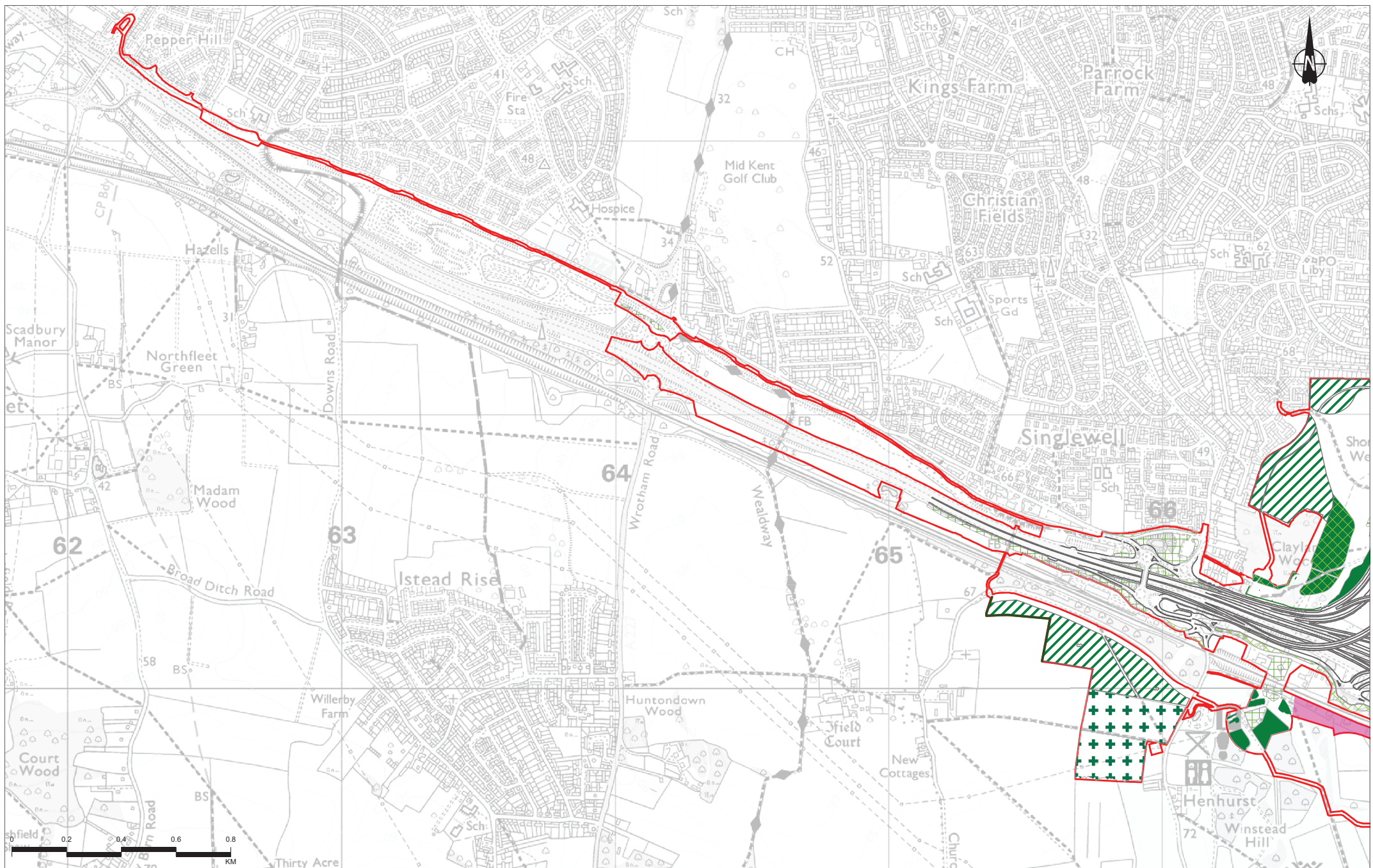
Status	DCO APPLICATION	Original Size	Revision
Application Document Number	TR010032/APP/6.3	A3	P03
Drawing Title	Figure E3 - Specifications for Mitigation/ Compensation Page 1 of 3		
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60008		



PO2	S8	2010/2022	DCO Application	CD	KL	NC
PO3	S9	28/06/2023	Natural England comments	CD	KL	NC
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved

Order Limits	LE2.14 Wet/carr woodland	LE8.7 Nitrogen deposition mitigation planting (to comprise 70% woodland and 30% grassland as rides and glades)	LE8.3 Woodland mitigation planting	LE2.5 Shrubs with Intermittent Trees	LE8.2 Ancient Woodland mitigation planting
Route Alignment	LE2.22 Scrub woodland	LE2.1 Native Woodland	LE2.11 Woodland with Non Native Species	LE2.7 Scattered Trees	LE4.3 Native Species Hedgerow (untrimmed)
Green bridge location	LE8.1 Open mosaic habitat	LE2.2 Woodland Edge	LE5.1 Individual Trees	LE4.4 Native Hedgerow with Trees	
Receptor site					
LE2.4 Linear belt of shrubs and trees					

	Client	DCO APPLICATION	Original Size	Revision
	Application Document Number	TR010032/APP/6.3	A3	P03
	Project	LOWER THAMES CROSSING	Scale	1:12,500
	Drawing Title	Figure E3 - Specifications for Mitigation/ Compensation Page 2 of 3		
Drawing Number	HE540039-CJV-EBD-SZP_EGNE0000000-DR-LE-60008			



P02	S8	2010/2022	DCO Application	CD	KL	NC
P03	S9	28/06/2023	Natural England comments	CD	KL	NC
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved

Legend

- Order Limits
- Route Alignment
- Green bridge location
- Receptor site
- LE2.4 Linear belt of shrubs and trees

- LE2.14 Wet/carr woodland
- LE2.22 Scrub woodland
- LE8.1 Open mosaic habitat
- LE2.1 Native Woodland
- LE2.11 Woodland with Non Native Species
- LE2.2 Woodland Edge

- LE8.7 Nitrogen deposition mitigation planting (to comprise 70% woodland and 30% grassland as rides and glades)
- LE8.3 Woodland mitigation planting
- LE2.5 Shrubs with Intermittent Trees
- LE2.7 Scattered Trees
- LE5.1 Individual Trees

- LE8.2 Ancient Woodland mitigation planting
- LE4.3 Native Species Hedgerow (untrimmed)
- LE4.4 Native Hedgerow with Trees

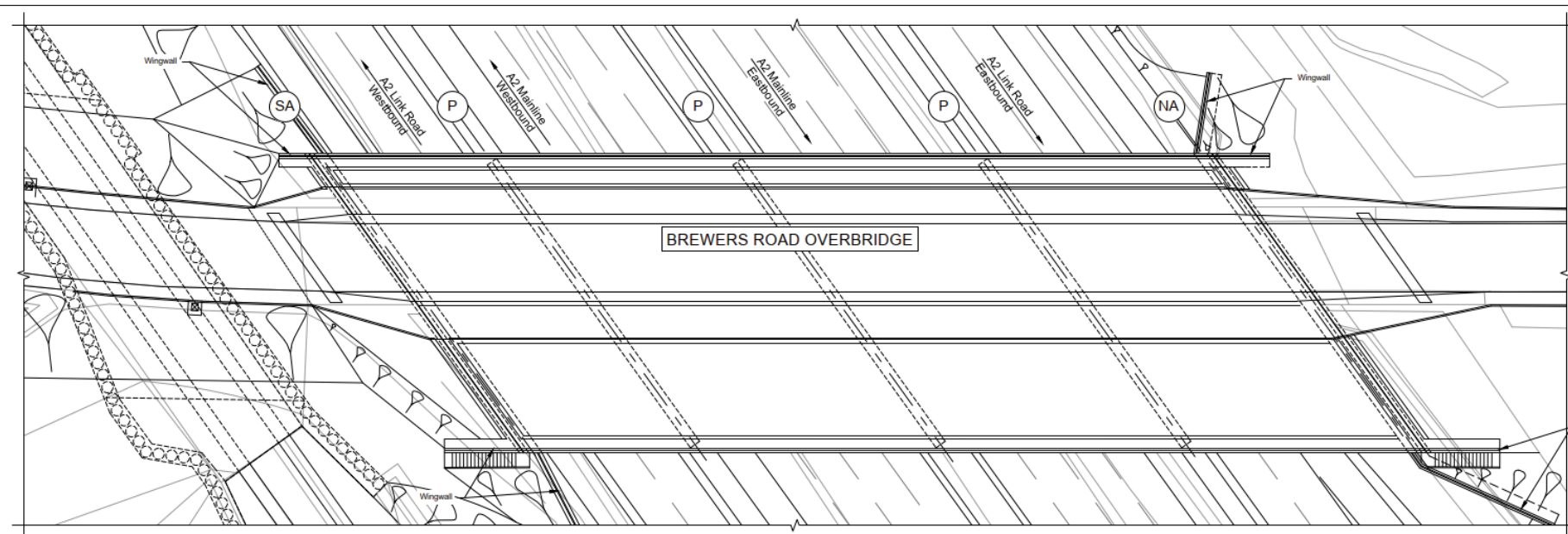
- LE2.8 Scrub
- LE5.1 Individual Trees



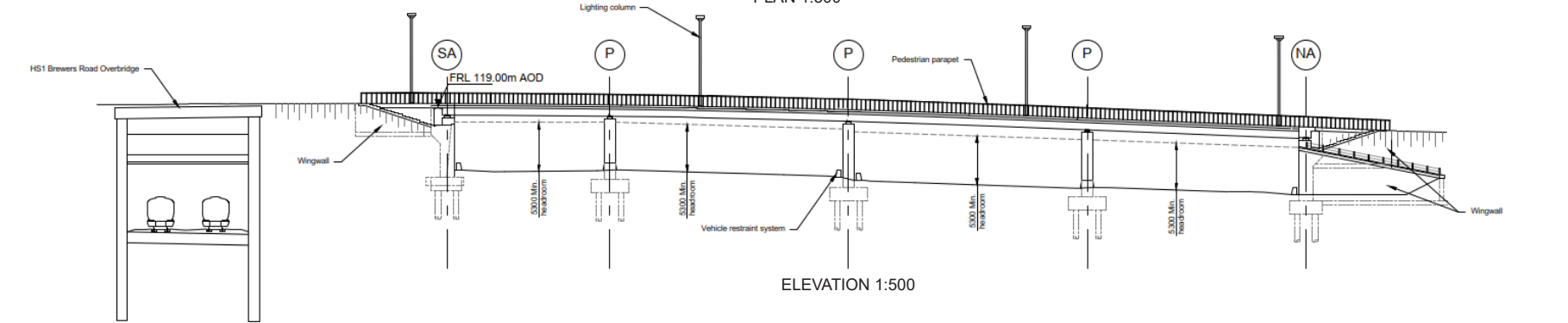
Client: **national highways**

Project: **LOWER THAMES CROSSING**

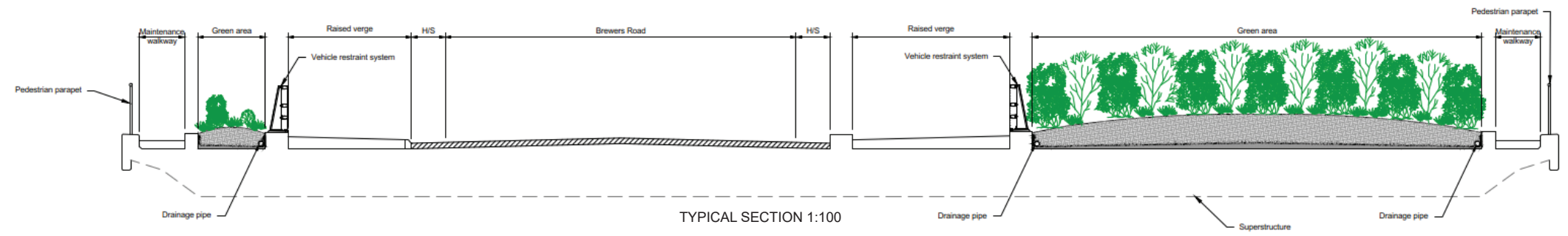
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Drawing Title	Figure E3 - Specifications for Mitigation/Compensation Page 3 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60008				



PLAN 1:500



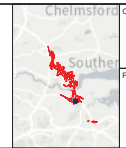
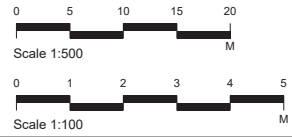
ELEVATION 1:500



TYPICAL SECTION 1:100

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CO000	DRAWING(S) OUTLINE				
(SA)	SOUTH/EAST				
(P)	PBR				
(NA)	NORTH/EAST				
HS	HIGH SPEED				
FRL	FINISHED ROAD LEVEL				
P01	S8	18/11/2022	DCO Application	LK	SM BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked/Approved

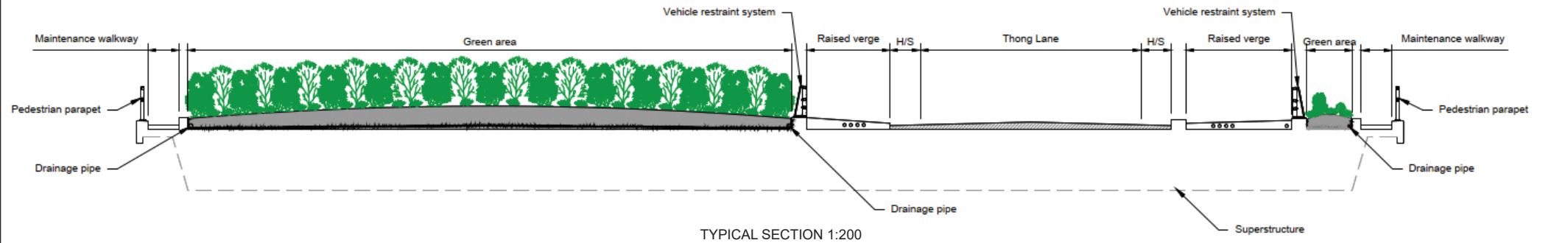
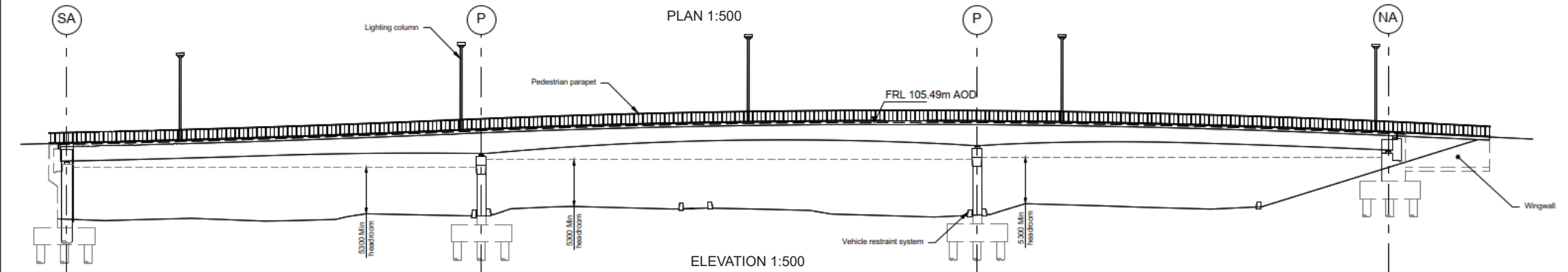
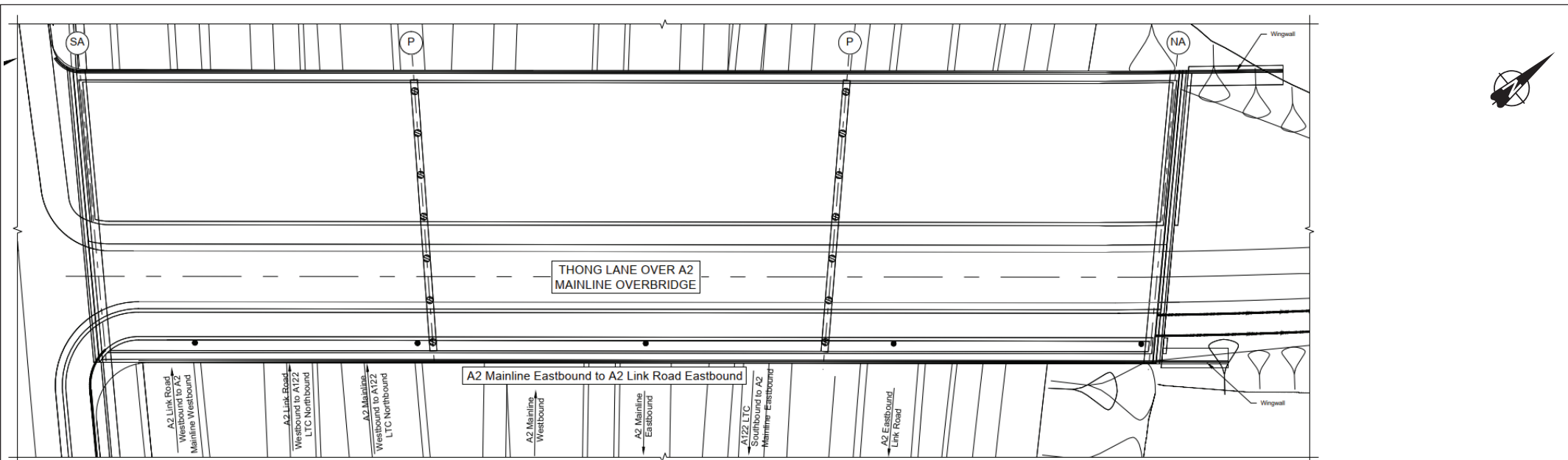
- Notes:
- The design and location of the structure is shown here for illustrative purposes only and will be subject to detailed design development in accordance with the provisions of the Development Consent Order (TR010032/APP/3.1).
 - For Environmental details refer to the Environmental Masterplan (TR010032/APP/6.2 Fig. 2.4) and Environmental Constraints Plan (TR010032/APP/6.2 Fig. 2.3) and associated drawings and documents.
 - Drawings show engineering earthworks only. Landscaping earthworks are shown in General Arrangements Plans (TR010032/APP/2.5).
 - Works numbers are described in Schedule 1 (Authorised Development) of the Development Consent Order (TR010032/APP/3.1).
 - The Highways design is shown in the Engineering Section and Drawings (TR010032/APP/2.9).



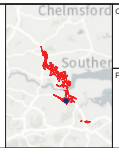
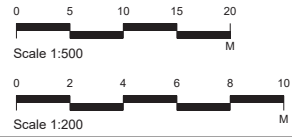
Client: national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.2	Scale	AS SHOWN		
Drawing Title	Figure E3a - Specifications for Green Bridge Design - Brewers Road Page 1 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60115				



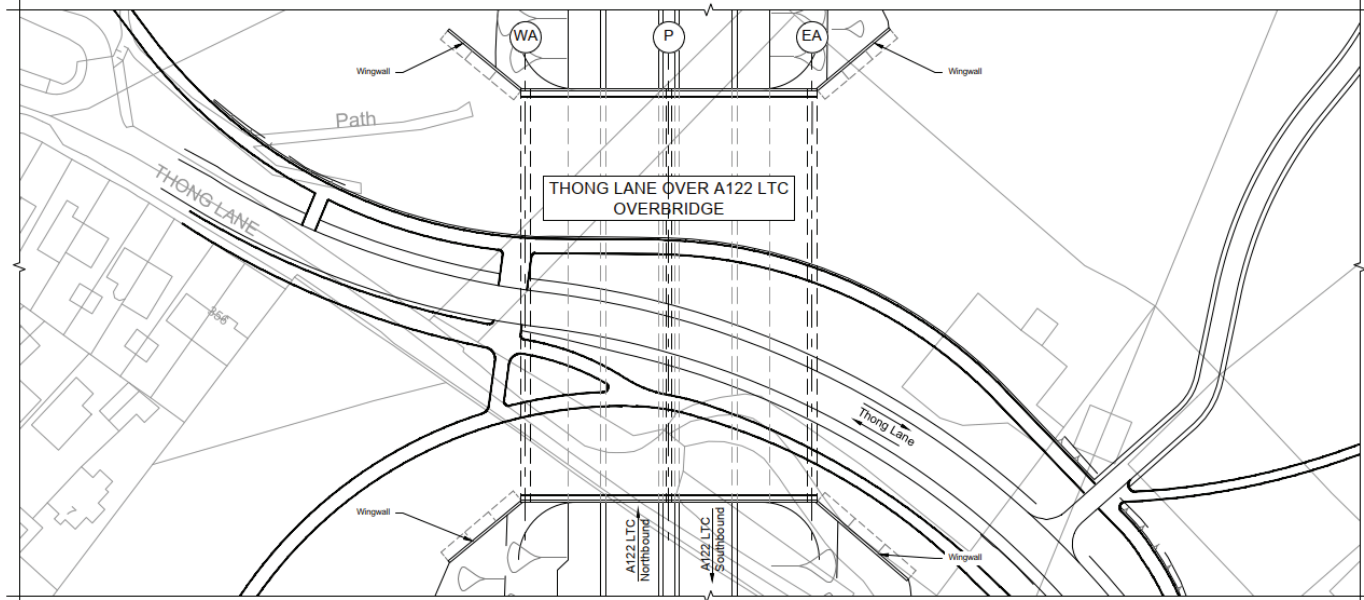
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P01	S8	18/11/2022	DCO Application	LK	SM	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved



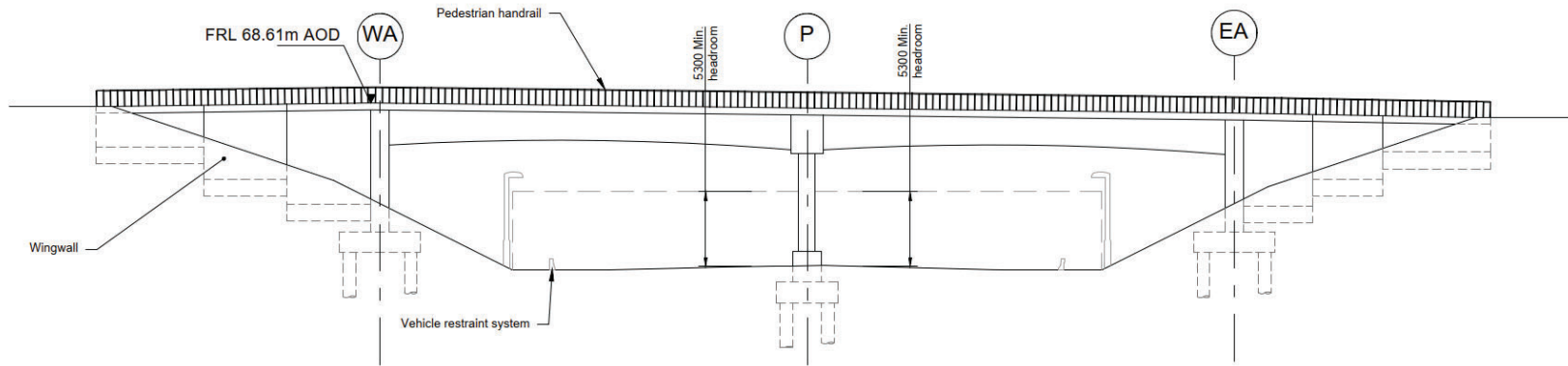
Client: **national highways**

Project: **LOWER THAMES CROSSING**

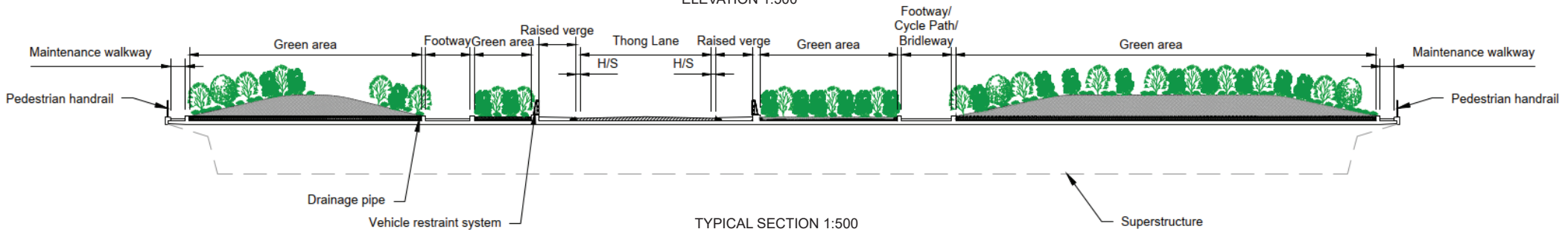
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Application Document Number	TR010032/APP/6.2	Scale	AS SHOWN		
Drawing Title	Figure E3a - Specifications for Green Bridge Design - Thong Lane South Page 2 of 3				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60115				



PLAN 1:1000



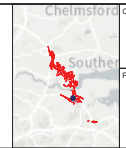
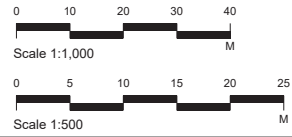
ELEVATION 1:500



TYPICAL SECTION 1:500

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LEGEND WEST ABUTMENT EAST ABUTMENT PIER HARDSTRIP FINISHED ROAD LEVEL					
P01	S8	18/11/2022	DCO Application	LK	SM BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked/Approved

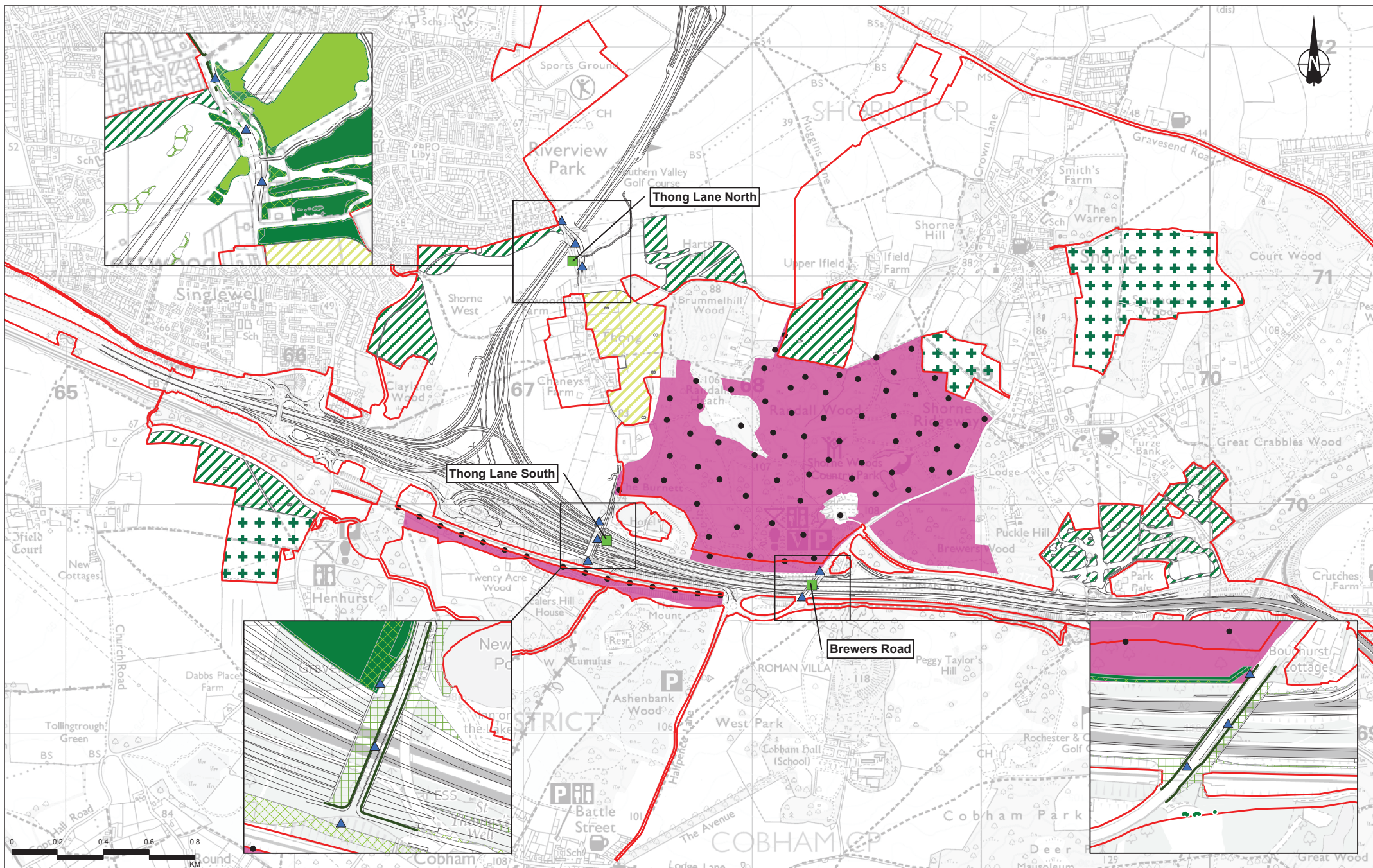
- Notes:**
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 - For Environmental details refer to the Environmental Masterplan (TR010032/APP/6.2 Fig. 2.4) and Environmental Constraints Plan (TR010032/APP/6.2 Fig. 2.3) and associated drawings and documents.
 - Drawings show engineering earthworks only. Landscaping earthworks are shown in General Arrangements Plans (TR010032/APP/2.5).
 - Works numbers are described in Schedule 1 (Authorised Development) of the Development Consent Order (TR010032/APP/3.1).
 - The Highways design is shown in the Engineering Section and Drawings (TR010032/APP/2.9).



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	IP01
Application Document Number	TR010032/APP/6.2	Scale	AS SHOWN		
Drawing Title: Figure E3a - Specifications for Green Bridge Design - Thong Lane North Page 3 of 3					
Drawing Number: HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60115					



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P02	S8	2010/2022	DCO Application	CD	KL	NC				
P03	S9	29/06/2023	Natural England comments	CD	KL	NC				
Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved				

<p>Legend</p> <ul style="list-style-type: none"> Order Limits Route alignment Receptor sites Green bridge location Indicative locations for nest boxes subject to post release monitoring Areas to be monitored and maintained as suitable habitat for dormice adjacent to green bridges Open mosaic habitat Ancient Woodland mitigation planting Nitrogen deposition mitigation planting (to comprise 70% woodland and 30% grassland as rides and glades) LE2.7 Scattered tree LE2.5 Shrubs with intermittent trees LE2.2 Woodland edge LE2.1 Native woodland LE4.3 Native species hedge (untrimmied) 		<p>national highways</p> <p>Client</p> <p>Project</p> <p>LOWER THAMES CROSSING</p>	<p>Status: DCO APPLICATION</p> <p>Application Document Number: TR010032/APP/6.3</p> <p>Drawing Title: Figure E4 - Monitoring, Management and Maintenance</p> <p>Drawing Number: HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60009</p>	<table border="1"> <tr> <td>Original Size</td> <td>Revision</td> </tr> <tr> <td>A3</td> <td>P03</td> </tr> <tr> <td>Scale</td> <td>1:15,000</td> </tr> </table>	Original Size	Revision	A3	P03	Scale	1:15,000
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A3	P03									
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