A46 Newark Bypass

Scheme Number: TR010065

7.82 Doddington Hall Agreement

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

April 2025

Volume 7

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

The A46 Newark Bypass
Development Consent Order 202[#]

Doddington Hall Agreement

Regulation Number:	Rule 8(1)(k)
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Author:	A46 Newark Bypass Project Team, National Highways

Version	Date	Status of Version
1	April 2025	Deadline 9 Submission

Contents

1 Introduction

1.1 Purpose of this document

1.1.1 The Doddington Hall Agreement (Agreement) is an agreement under section 253 of the Highways Act 1980 that has been entered into between the Applicant and the landowners of Doddington Hall in relation to the provision of offsite compensatory planting. The purpose of this agreement is to secure off-site compensation planting at Doddington Hall.

DATED 4th April 2025

[redacted] (1)

AND

NATIONAL HIGHWAYS LIMITED (2)

DEED

Pursuant to Section 253 Highways Act 1980

Relating to land Doddington Hall, Doddington

LN6 4RU

THIS DEED is made the 4th day of April Two Thousand and Twenty-Five

BETWEEN:-

(1) **NATIONAL HIGHWAYS LIMITED** (Co. Regn. No. 09346363) of Bridge House 1 Walnut Tree Close Guildford Surrey GU1 4LZ ("National Highways"); and

(2) [redacted] of Doddington Hall, Doddington, Lincoln LN6 4RU (the "Landowner")

collectively referred to as "the Parties"

WHEREAS

(1) National Highways is the highways authority for the Highway.

(2) The Landowner is the registered proprietor of the Land and Buffer Zone free from any encumbrances.

(3) National Highways has made an application for a development consent order under the Planning Act 2008 to the Secretary of State for authorisation to carry out the Scheme. The application was accepted for examination on the 23rd May 2024.

(4) This Deed is entered into by the Parties for the purpose of mitigating any adverse effect which the construction, improvement, existence and/or use of the Scheme will have on the surroundings of the Highway.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. **INTERPRETATION AND CONSTRUCTIONS**

1.1 The following definitions apply to the interpretation of this Deed:-

"1980 Act"	means the Highways Act 1980;
"BNG Scheme"	means any proposed scheme to enhance any part of the Buffer Zone to secure

	biodiversity net gain pursuant to the Environment Act 2021 (or other related or successor policies)
"the Completion Certificate"	means the written notice issued by National Highways;
"the Highway"	means A46 Newark Bypass as shown on Plan 1;
"HMMP"	means the Habitat Management and Monitoring Plan set out in schedule 2 detailing the specifics to be adhered to at all times in management of the Land following completion of the Works;
"the Land"	means the freehold land at Doddington Hall, Doddington LN6 4RU shown hatched blue on Plan 2 registered at the Land Registry under title number LL321149 and labelled "Enhancement Area" and being the land against which this Deed may be enforced against;
"Maintenance Payment"	means the sum of [redacted]o be paid by National Highways to the Landowner in accordance with the terms of this Deed;
" Buffer Zone	means the freehold land at Doddington Hall, Doddington LN6 4RU shown between the blue line and dashed blue line on Plan 2 registered at the Land Registry under title number LL321149 and labelled "enhancement area 50m buffer zone" and being the land against which this Deed may be enforced against;

"Preliminary Payment"	means the sum of [redacted] to be paid by National Highways to the Landowner in accordance with the terms of this Deed;
"Plan 1"	means the Plan attached to the Annex of this Deed drawing number HE551478-SKAG-CONWI-CONW-HGN-DR-LE-00005;
"Plan 2"	means the Plan attached to the Annex of this Deed drawing number frHE551478-SKAG-EBD-CONWI_CONW-DR-LE-00191- C02;
"Prohibited Act"	means offering, giving or agreeing to give to any servant of National Highways any gift or consideration of any kind as an inducement or reward for: (i) doing or not doing (or for having done or not having done) any act in relation to the obtaining or performance of this Deed or any other contract with National Highways; or (ii) showing or not showing favour or disfavour to any person in relation to this Deed or any other contract with National Highways; (iii) entering into this Deed or any other contract with National Highways where a commission has been paid or has been agreed to be paid by the recipient or on its behalf, or to its knowledge, unless before the relevant contract is entered into particulars of any such commission and of the terms and

	conditions of any such contract for the payment thereof have been disclosed in writing to National Highways; (iv) committing any offence: (a) under the Bribery Act; (b) under legislation creating offences in respect of fraudulent acts; or (c) at common law in respect of fraudulent acts in relation to this Deed or any other contract with National Highways; or (v) defrauding or attempting to defraud or conspiring to defraud National Highways;
"the Scheme"	means the A46 Newark Bypass scheme to connect the M1 and Leicester to the A1 and central Lincolnshire;
"**the Works**"	means the works to be undertaken on the Land and set out in Schedule 1; and
"Working Day"	means a day that is not a Saturday or Sunday, Christmas Day, Good Friday or any day that is a bank holiday under the Banking and Financial Dealings Act 1971.

1.2 Where in this Deed reference is made to any Clause, paragraph or Schedule such reference (unless the context otherwise requires) is a reference to a Clause, paragraph or Schedule in this Deed.

1.3 Words importing the singular meaning where the context so admits include the plural meaning and vice versa except where otherwise specified.

1.4 Words of the masculine gender include the feminine and neuter genders and words denoting actual persons include but not exclusively companies, corporations and firms and all such words shall be construed interchangeably.

1.5 Title headings to the Clauses and Schedule are for convenience only and shall not affect the interpretation of this Deed.

1.6 Wherever there is more than one person named as a party and where more than one party undertakes an obligation all their obligations can be enforced against all of them jointly and against each individually unless there is an express provision otherwise.

1.7 Any reference to an Act of Parliament shall include any modification, extension or reenactment of that Act for the time being in force and shall include all instruments, orders, plans regulations, permissions and directions for the time being made, issued or given under that Act or deriving validity from it.

1.8 A reference to any party shall include that party's personal representatives and successors in title and in the case of National Highways the successors to its respective statutory functions.

2. STATUTORY PROVISIONS

2.1 This Deed is made pursuant to section 253 of the 1980 Act.

3. CONDITIONALITY

3.1 This Deed shall take effect from the date of this Deed.

4. LANDOWNER'S COVENANTS

4.1 The Landowner covenants to carry out the Works on the Land and following the issue of the Completion Certificate issued in accordance with clause 4.7 and the receipt of the Maintenance Payment to maintain the Land for the lifetime of the Scheme to the reasonable satisfaction of National Highways in accordance with the terms of this Deed and the obligations in the HMMP.

4.2 Following receipt of the Maintenance Payment the Landowner covenants to ensure that the Buffer Zone is maintained in accordance with paragraph 2.3 of the HMMP for the lifetime of the Scheme and shall inform National Highways of any management activities which are to be carried out on the Buffer Zone prior to such activities taking place

4.3 National Highways hereby agrees not to prevent or otherwise restrict the Landowner from making any applications for BNG Schemes on the Buffer Zone which seek to deliver complementary management of the Buffer Zone under the paragraph 2.3 of the HMMP.

4.3 The Landowner must carry out the Works in accordance with a programme agreed in writing by National Highways and the Parties may make any amendments to such agreed programme at any time provided these are agreed in writing.

4.4 The Landowner will:

4.3.1 replace any Works or native species within the Land which fail; and

4.3.2 will not lop, top, fell, or remove any Works or native species within the Land without the written consent of National Highways save that such consent shall not be required in respect of any such activity comprising good silvicultural or arboricultural practice and such consent shall not in any case be unreasonably withheld.

4.5 From the date of this Deed the Landowner will:

4.5.1 permit National Highways its agents servants and contractors (at its own expense) at all reasonable times to enter the Land and/or the Buffer Zone and remain on it for as long as is reasonably necessary for the purpose of inspecting the Land and/or the Buffer Zone or carrying out any works required in accordance with clause 6.1.2 below;

4.5.2 not put the Land and/or the Buffer Zone to any use which may be detrimental to or otherwise incompatible with the Works and/or HMMP; and

4.5.3 the Landowner shall keep records of its activities in relation to the Land and/or the Buffer Zone, including but not limited to photographs and other appropriate records National Highways deem reasonable to input into the monitoring record to be provided to National Highways.

4.6 When the Landowner considers the Works have reached completion it must notify National Highways within a reasonable period following completion and allow National Highways the opportunity to inspect the Works.

4.7 Following the inspection of the Works referred to at clause 4.6 above, National Highways shall issue a Completion Certificate to certify the Works have been completed within a reasonable period following inspection provided that the Works have been completed to National Highways' reasonable satisfaction and in accordance with the terms of this Deed.

5. PAYMENTS

5.1 As soon as reasonably practicable following the date of this Deed National Highways shall pay the Preliminary Payment to the Landowner.

5.2 Subject to the Development Consent Order for the Scheme being granted by the Secretary of State and the Scheme subsequently being commenced by National Highways in accordance with the Development Consent Order granted, National Highways shall pay to the Landowner the full amount of the Maintenance Payment as soon as reasonably practicable.

5.3 National Highways may require repayment of all or part of any Maintenance Payment already made including any accrued interest if the Landowner fails to comply with any of the terms and conditions set out in this Deed and fails to rectify any such failure within 30 (thirty) days of receiving written notice from National Highways detailing the failure.

5.4 Without prejudice to National Highways' other rights and remedies National Highways may at its absolute discretion withhold or suspend the Maintenance Payment and/or require repayment of all or part of the Maintenance Payment including any accrued interest in accordance with clause 5.3 if:

5.4.1 National Highways considers that the Landowner has not complied with the HMMP;

5.4.2 the Landowner is in the reasonable opinion of National Highways managing the Works in a negligent manner;

5.4.3 the Landowner obtains duplicate funding from a third party in relation to the Land;

5.4.4 the Landowner obtains funding from a third party which in the reasonable opinion of National Highways undertakes activities that are likely to bring the reputation of the Works, HMMP and/or National Highways into disrepute;

5.4.5 the Landowner provides National Highways with any materially misleading or inaccurate information;

5.4.6 the Landowner commits or has committed a Prohibited Act;

5.4.7 any employee or volunteer of the Landowner has (a) acted dishonestly or negligently at any time and directly or indirectly to the detriment of the Works and/or the HMMP or (b) taken any actions which in the reasonable opinion of National Highways, bring or are likely to bring National Highways' name or reputation into disrepute;

5.4.8 the Landowner becomes insolvent, or it is declared bankrupt, or it is placed into receivership, administration or liquidation, or a petition has been presented for its winding up, or it enters into any arrangement or composition for the benefit of its creditors, or it is unable to pay its debts as they fall due;

5.4.9 the Landowner fails to comply with any of the terms and conditions set out in this Deed and fails to rectify any such failure within 30 (thirty) days of receiving written notice detailing the failure; and

5.4.10 National Highways carries out any works in accordance with clause 6.1.2 below.

5.5 National Highways may retain or set off any sums owed to it by the Landowner which have fallen due and are payable against any sums due to the Landowner under this Deed or any other agreement pursuant to which the Landowner provides goods or services to National Highways.

5.6 In the event the Landowner is subject to financial or other difficulties which are capable of having a material impact on its effective delivery of the HMMP or compliance with this Deed it will notify National Highways as soon as possible so that, if possible, and without creating any legal obligation, National Highways will have an opportunity to provide assistance in resolving the problem or to take action to protect National Highways and the Maintenance Payment.

5.7 The Landowner shall not use the Preliminary Payment and Maintenance Payment to:

5.7.1 make any payment to members of its governing body;

5.7.2 purchase buildings or land;

5.7.3 pay for activities of a political or exclusively religious nature;

5.7.4 pay for works or activities that any person has a statutory duty to undertake;

5.7.6 pay for any expenditure commitments of the Landowner entered into before the commencement of the Works;

5.7.7 pay input VAT reclaimable by the funding recipient from H.M. Revenue & Customs;

5.7.8 make interest payments or service charge payments for finance leases;

5.7.9 provide gifts or entertaining; or

5.7.10 pay statutory fines, criminal fines or penalties.

6. NATIONAL HIGHWAYS' POWER IN DEFAULT

6.1 In the event of breach of any of the terms of this Deed National Highways acting reasonably may by giving notice to the Landowner:

6.1.1 direct that the Landowner, at its own expense and within a reasonable period, carry out such works necessary in order for National Highways to be satisfied that such works are in accordance with the terms of this Deed and the maintenance obligations within the HMMP are being complied with; or

6.1.2 inform the Landowner that it intends to enter the Land or the Buffer Zone to carry out any necessary works or maintenance in accordance with the terms of this Deed.

6.2 In the event National Highways has to undertake works pursuant to clause 6.1.2 above, in accordance with clause 5.3 National Highways may require the Landowner to return a proportionate amount of the Maintenance Payment equivalent to National Highways' reasonable and proper costs in doing so.

7. NOTICES

7.1 All notices in relation to this Deed to be served by one party on another shall be in writing and served by first class recorded delivery or by hand in the following manner:

7.1.1 on the Landowner at Doddington Hall, Doddington, Lincoln LN6 4RU and marked [redacted] and

7.1.2 on National Highways at National Highways The Cube, 199 Wharfside Street, Birmingham B1 1RN marked "For the attention of Senior Project Manager A46 Newark Bypass".

8. DISPUTES

8.1 National Highways and the Landowner agree that:

8.1.1 If any dispute arises between the Parties relating to any matter in this Deed then it shall be conclusively determined by an independent person experienced in the field appropriate to the dispute to be resolved ("the **Expert**") appointed by agreement between the Parties or (in default of agreement) upon the application of either party to the President for the time being of the Institution of Civil Engineers such Expert acting as an expert and not as an arbitrator and the Expert's costs shall be in the Expert's award.

8.1.2 The Expert shall give the Parties an opportunity to make written representations to the Expert and to comment upon each other's representation before the Expert makes their decision.

8.1.3 The Expert shall be entitled to obtain opinions from others if the Expert so wishes but shall give the Parties opportunity to comment upon any opinion obtained.

8.1.4 The Expert shall give reasons for their decision and their costs shall be in their award.

9. MISCELLANEOUS

9.1 This Deed is entered into by the Landowner with the intention that it binds the interest held by that person in the Land and the Buffer Zone and their respective successors and assigns pursuant to section 253(3) of the 1980 Act.

9.2 This Deed is a local land charge and shall be registrable as such by National Highways pursuant to s253(4) of the 1980 Act.

and Doddington Farms LLP pursuant to the Trust as part of the Declaration of Trust made on 1st November 2013

9.3 The Landowner warrants that no person other than the Landowner has any legal or equitable interest in the Land and the Buffer Zone.

[redacted]

9.4 National Highways shall pay the Landowners reasonable and proper legal costs occurred in relation to the negotiation and completion of this Deed up to the sum [redacted] on receipt of an invoice from the Landowner or their representative such invoice to show a clear breakdown of costs.

9.5 The Landowner will give to National Highways within 10 Working Days the following details of any conveyance, transfer, lease, assignment, mortgage or other disposition entered into in respect of all or any part of the Land and/or the Buffer Zone:

(a) the name and address of the person or company to whom the disposition was made; and

(b) the nature and extent of the interest disposed of.

9.6 Neither the Landowner nor any successor in title shall be liable for any breach of the covenants or restrictions contained in this Deed occurring after they have parted with their interest in the Land and/or the Buffer Zone or the part in respect of which such breach occurs but without prejudice to liability for any subsisting breach prior to parting with such interest.

9.7 No waiver (whether express or implied) by National Highways of any breach or default by the Landowner in performing or observing any of the obligations terms or conditions of this Deed shall constitute a continuing waiver and no such waiver shall prevent National Highways from enforcing any of the said obligations, terms or conditions or from acting upon any subsequent breach or default in respect thereto by the Landowner.

9.8 Insofar as any clause or clauses of this Deed are found (for whatever reason) to be invalid, illegal or unenforceable, then such invalidity, illegality or unenforceability shall not affect the validity or enforceability of the remaining provisions of this Deed.

9.9 It is not intended that any third party should have the right to exercise or enforce or take benefit from any provision of this Deed for the purposes of the Contracts (Rights of Third Parties) Act 1999 save as may be expressly mentioned in this Deed.

10. GOVERNING LAW

10.1 This Deed and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) will be governed by and construed in accordance with the laws of England.

11. COUNTERPART

11.1 This Deed may be executed in any number of counterparts, each of which when executed and delivered shall constitute a duplicate original, but all the counterparts shall together constitute the one Deed. Transmission of the executed signature page of a counterpart of this Deed by e-mail (in PDF, JPEG or other agreed format) shall take effect as delivery of an executed counterpart of this Deed. If either method of delivery is adopted, without prejudice to the validity of the Deed thus made, each party shall provide the others with the original of such counterpart as soon as reasonably possible thereafter. No counterpart shall be effective until each party has executed and delivered at least one counterpart.

SCHEDULE 1

WORKS

The woodland works at Doddington Hall aim to enhance 1.3 hectares of mixed woodland to achieve a Lowland Mixed Deciduous Woodland in 'Moderate' condition. Initial enhancement works to be completed before the commencement of maintenance and monitoring include:

1. **Removal of Non-Native Species**: Immediate felling of non-native trees and shrubs, such as Scots pine, European larch, red oak and rhododendron, to promote natural regeneration of native species like silver birch, holly, rowan, and willow. Selected deadwood will be retained within the area to increase standing and fallen deadwood.
2. **Encouraging Natural Regeneration**: Utilising natural processes to establish native tree and shrub cover by allowing species well-adapted to local conditions to colonize the area.
3. **Planting Native Trees and Shrubs**: Planting small groups of native tree and shrub whips including English oak, hawthorn, hazel and holly, to increase woody species diversity and create structural variation within the woodland.

These preparatory actions are crucial for establishing a foundation for future maintenance efforts. This approach is informed by guidelines from the Biodiversity Metric 3.1 and aims to contribute significantly to local biodiversity through strategic enhancement measures.

SCHEDULE 2

HMMP

national highways

A46 Newark Bypass

Biodiversity Net Gain - Habitat Management and Monitoring Plan in relation to land at Doddington Hall, Lincoln

APFP Regulation 5(2)(a)

Planning Act 2008

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

Volume 6

March 2025

Infrastructure Planning

Planning Act 2008

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

A46 Newark Bypass

Development Consent Order 202[x]

Biodiversity Net Gain - Habitat Management and Monitoring Plan in relation to land at Doddington Hall, Lincoln

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Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010065
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Author:	A46 Newark Bypass Project Team, National Highways

Version	Date	Status of Version
Rev 1	September 2024	DRAFT - For review
Rev 2	March 2025	Draft Final agreement
Rev 3	March 2025	Final agreement - ready for sign-off

Contents

1 Project information

1.1 Project overview

1.1.1 This Habitat Management and Monitoring Plan (HMMP) has been prepared in relation to an area of land located at Doddington Hall, near Lincoln. The purpose of the HMMP is to support a legal agreement between National Highways and the landowner that will provide required offsite habitat compensation in relation to the A46 Newark Bypass (hereafter referred to as 'the Scheme'). This Scheme aims to provide a dual carriageway along approximately 6.5 kilometres along the A46 between Farndon and Winthorpe. This document relates exclusively to an offsite area at Doddington Hall and is not a Scheme wide HMMP. Additional information may also be required if the HMMP needs to serve any other purpose such as approval by a third party.

1.1.2 This HMMP should be read in conjunction with the A46 Newark Bypass Biodiversity Net Gain (BNG) Technical Report and the completed Natural England Biodiversity Metric 3.1 hereafter referred to as the 'BNG metric'), submitted with the DCO application[1].

1.1.3 This HMMP contains management and monitoring activities for the enhancement of woodland habitat to help achieve the Scheme's BNG target. The habitat is located off-site. The area to be enhanced forms part of a woodland block known as Pickworth's Plot. This is located at Doddington Hall, Doddington, Lincoln, LN6 4RU as shown in Figure 1.1 in Appendix A.1.

1.1.4 The implementation of the HMMP will commence at the same time as the site clearance works for the A46 Newark Bypass. These clearance works form part of the pre-commencement works which are expected to occur from June 2025 to August 2026. Given that the initial enhancement works covered by this HMMP are seasonally constrained by when is appropriate to clear vegetation and plant trees, October to December 2025 will form Year 0 and need to be completed before the commencement of the management and monitoring period. Year 1 of the HMMP will therefore commence in January 2026.

1.1.5 This document is to remain a 'live' document and will be updated as a result of ongoing monitoring activities to meet the aims of the HMMP.

[1] Mott MacDonald (2024) A46 Newark Bypass Environmental Statement Technical Appendix 8.14 Biodiversity Net Gain Technical Report. [Online] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010065/TR010065-000249-TR010065_A46%20Newark%20Bypass_6.3%20Appendix%208.14%20Biodiversity%20Net%20Gain%20Technical%20Report.pdf (Last accessed July 2024).

1.2 Project background

1.2.1 The area included within this HMMP is located at central Ordnance Survey (OS) grid reference SK 89946 68614, approximately 1.4 kilometres south of the village of Doddington and within the North Kesteven Council planning authority area. The HMMP covers an area of 1.3 hectares in size. Key details are summarised in Table 1.1 below.

1.2.2 The baseline habitat used in the BNG metric comprises 1.3 hectares of 'Other woodland; mixed' in 'Moderate' condition. See Figure 1.2 in Appendix A.1 for baseline habitats plan and Figure 1.3 in Appendix A.1 for baseline distinctiveness and condition. This whole area will be enhanced to 'Lowland Mixed Deciduous Woodland' in 'Moderate' condition. See the BNG Technical Report[2] for how this enhancement measure contributes to the overall BNG performance of the project.

Table 1.1: Summary of the BNG delivery area

Information	Description
Off-site BNG delivery area type	Off-site
Off-site BNG delivery area name	Pickworth's Plot
Off-site BNG delivery area location / address	Doddington Hall Doddington, Lincoln, LN6 4RU
Landowner	[redacted] and their successors to title number LL321149 (hereafter referred to [redacted])
Period covered by this management plan	The duration of the legal agreement and this HMMP is the lifetime of the A46 Newark Bypass Scheme.
Planning authority	North Kesteven Council
Central OS grid reference	SK 89946 68614
Total site area (ha)	1.3
Metric revision / title	Biodiversity Metric 3.1
Author Organisation	Mott MacDonald
Responsible [person / organisation] for creating and enhancing this habitat	[redacted]
Responsible [person / organisation] for managing and monitoring this habitat	[redacted]
Landscape design drawings	No drawings produced other than figures for this document.

[2] Mott MacDonald (2024) A46 Newark Bypass Environmental Statement Technical Appendix 8.14 Biodiversity Net Gain Technical Report. [Online] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010065/TR010065-000249-TR010065_A46%20Newark%20Bypass_6.3%20Appendix%208.14%20Biodiversity%20Net%20Gain%20Technical%20Report.pdf (Last accessed July 2024).

Source: Mott MacDonald, 2024

1.2.3 The management and monitoring requirements, including key timescales to achieve habitat objectives, are summarised in Table 1.2.

Table 1.2: Summary of management plan for off-site BNG delivery area

Habitat to be retained, enhanced and created
The enhancement of 1.3 hectares of 'Other woodland; mixed' in 'Moderate' condition to 'Lowland mixed deciduous woodland' in 'Moderate' condition (habitat of a higher distinctiveness). See Figure 1.4 in Appendix A.1, Habitat Retention Plan for details of the habitat enhancements.
Timescales for actions
Enhancement to commence 2025 in line with the site clearance works for the A46 Newark Bypass.
Monitoring and review requirements
1. Monitoring inspections are planned for Year 1, 2, 3, 5 and then every 5 years after, with the last inspection occurring within Year 30 (subject to section 3.1 below). 2. Collated data from these monitoring inspections (see Table 3.1 and Table 3.2 for overview) will be used to identify any risk factors to target habitat types establishing and reaching their target condition and any changes required to the current habitat management. This HMMP report should be updated to reflect any adaptive management actions made. 3. Reviews to be completed every 5 years (Section 3.4).
Required consents and licences
Works may require the following consents: • Felling licence • Licence to remove rhododendron from site • Permits for herbicide use This list is not exhaustive and securing required consents is the duty of the party responsible for management
Funding
This HMMP will inform a legal agreement under Section 253 of the Highways Act (1980). The legal agreement will provide funding for the planned works and management and monitoring activities described in this HMMP. The duration of the legal agreement and this HMMP is the lifetime of the A46 Newark Bypass Scheme.
Legal agreement
• The legal agreement will be between National Highways and [redacted] • [redacted] will be responsible for the enhancement of habitats within the off-site BNG delivery area in reference to the timescales for action summarised above. • [redacted] will be responsible for the monitoring of habitats within the off-site BNG delivery area for at least 30 years as described in Section 3 below. • [redacted] will be responsible for management of habitats within the off-site BNG delivery area in reference to the timescales for action summarised above.

Source: Mott MacDonald, 2024

1.3 Off-site BNG delivery area context

1.3.1 The area covered by the HMMP falls within the National Character Area (NCA) profile for Trent and Belvoir Vales (48)[3]. NCA Profile 48 recognises the opportunity to enhance woodland to benefit habitat connectivity and a range of ecosystem services, including the regulation of soil erosion, water quality and flow.

1.3.2 The Local Planning Authority (LPA) for the area covered by the HMMP is North Kesteven Council. The relevant local plan for this area is the Central Lincolnshire Local Plan[4]. Policy S59 of the plan aims to work actively with partners to maintain and improve the quantity, quality, accessibility and management of the green infrastructure network.

1.3.3 Policy S61 states that development proposals should create new habitats and links between habitats, in line with central Lincolnshire Biodiversity Opportunity and Green Infrastructure Mapping. This mapping does not include the HMMP location although other areas within the Doddington Estate are identified as opportunities for habitat creation and management.

1.3.4 The 'Wilder Doddington' initiative[5] is a rewilding project operating across the 770 hectares of the Doddington Hall Estate. It aims to expand and connect high quality habitats, including woodlands, to dramatically increase local biodiversity and provide wider benefits to people and the environment. The enhancement area is part of an extensive belt of woodland that forms the southern boundary of the estate.

1.3.5 Much of the Doddington Estate perimeter woodland is included in the deciduous woodland Priority Habitat Inventory[6]. To the north and west are further woodland blocks included in the Ancient Woodland Inventory with Doddington Clay Woods also designated as a Site of Special Scientific Interest (SSSI). Whisby Nature Park forms a large area designated as Local Nature Reserve (LNR) to the south and Swansholme Lakes SSSI and LNR is situated to the east in the suburbs of Lincoln.

1.3.6 Overall, the enhancements within this HMMP will provide a significant benefit in connecting high quality habitats across the local landscape.

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[3] Natural England (2024) National Character Area 48 Trent and Belvoir Vales. [Online] Available at: https://nationalcharacterareas.co.uk/trent-and-belvoir-vales/ (Last accessed August 2024).

[4] Central Lincolnshire Join Strategic Planning Committee (2023) Central Lincolnshire Local Plan. [Online] Available at: https://www.n-kesteven.gov.uk/sites/default/files/2023-04/Local%20Plan%20for%20adoption%20Approved%20by%20Committee.pdf (Last accessed August 2024).

[5] Doddington Hall (2024) Wilder Doddington. [Online] Available at: https://www.doddingtonhall.com/wilder/ [Online] (Last accessed August 2024).

[6] Natural England (2024) Priority Habitats Inventory (England). [Online] Available at: https://www.data.gov.uk/dataset/4b6ddab7-6c0f-4407-946e-d6499f19fcde/priority-habitats-inventory-england (Last accessed August 2024).

The location of the off-site BNG delivery area in relation to relevant features in the surrounding area is detailed in Figure 1.5 in Appendix A.1, Site Context Plan.

1.4 Legislation and policy

1.4.1 This report has been prepared in line with the following legislation and policies. The BNG Technical Report[7] should be consulted for further details of the relevance of each legislation and policy on the BNG process.

National

- Environment Act 2021[8]
- The National Planning Policy Framework[9]

Local

- Newark & Sherwood Amended Core Strategy[10] (Adopted March 2019) for the project area.
- Central Lincolnshire Local Plan[11] (Adopted April 2023) for the HMMP location.

1.5 Phasing strategy

1.5.1 The proposed work measures will not be delivered in phases.

[7] Mott MacDonald (2024) A46 Newark Bypass Environmental Statement Technical Appendix 8.14 Biodiversity Net Gain Technical Report. [Online] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010065/TR010065-000249-TR010065_A46%20Newark%20Bypass_6.3%20Appendix%208.14%20Biodiversity%20Net%20Gain%20Technical%20Report.pdf (Last accessed July 2024).

[8] UK Parliament (2021). Environment Act 2021. [Online] Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted (Last accessed July 2024).

[9] Ministry of Housing, Communities & Local Government (2023). National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2 (Last accessed July 2024).

[10] Newark & Sherwood District Council (2019) Newark & Sherwood Plan Review – Amended Core Strategy. [Online] Available at: https://www.newark-sherwooddc.gov.uk/media/newark-and-sherwood/images-and-files/planning-policy/pdfs/core-strategy/ACS2019.pdf (Last accessed August 2024).

[11] Central Lincolnshire Join Strategic Planning Committee (2023) Central Lincolnshire Local Plan. [Online] Available at: https://www.n-kesteven.gov.uk/sites/default/files/2023-04/Local%20Plan%20for%20adoption%20Approved%20by%20Committee.pdf (Last accessed August 2024).

1.6 Roles and responsibilities

1.6.1 The responsible persons and organisations for delivering this management plan are detailed in Table 1.3.

Table 1.3: Ecologist and other professionals responsible for HMMP

Initials	Organisation	Start Date	End date
NJ., RH., VA., BC	Mott MacDonald	April 2024	September 2024
Responsibility			
Relevant responsibilities of the ecology and GIS consultants include: • Production of this HMMP and associated drawings. Relevant responsibilities of the ecologist include: • Provide advice on the implementation of the HMMP.			
Statement of competency			
The qualification and experience of the BNG assessors of this HMMP are set out in Table 1.4 below. All ecologists involved with the production of this HMMP are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and are bound by its code of professional conduct. All surveys and assessments have been undertaken using the recommendations in the British Standard (BS) 42020 Biodiversity: *Code of practice for planning and development*[12]. The metric calculations and subsequent reports were undertaken by a competent ecologist and BNG practitioner, as defined under *BS 8683*[13], the technical standard for designing and implementing BNG (2021).			

Source: Mott MacDonald, 2024

1.6.2 The qualifications and experience of the BNG assessors of this HMMP are set out in Table 1.4.

Table 1.4: Competency statement

Role	Years experience	Role	Qualifications	Experience summary
Authors	10	Senior Ecologist	CEcol, MSc, BSc	BNG experience in medium scale projects, undertaking habitat condition assessments and calculations using. Has also undertaken formal training in BNG assessment, habitat classification and HMMP.

[12] British Standards Institution (2013). BS 42020 - Biodiversity: Code of practice for planning and development. [Online] Available at: https://www.bsigroup.com/LocalFiles/en-GB/biodiversity/BS-42020-Smart-Guide.pdf. (Last accessed July 2024).

[13] British Standards Institution (2021). BS 8683 - Process for designing and implementing biodiversity net gain. [Online] Available at: https://cbccrmdata.blob.core.windows.net/noteattachment/CD%203.21%20BS8683%202021%20process%20for%20designing%20and%20implementing%20biodiversity%20net%20gain_compressed.pdf. (Last accessed July 2024).

	20	Principal Ecologist	MSc, BSc	BNG experience in small-, medium- and large scale projects, undertaking habitat condition assessments and calculations using Statutory Biodiversity Metric and earlier revisions (such as Biodiversity Metric 3.1 for this Project). Has also undertaken formal training in BNG assessment, habitat classification, management and monitoring.
Checker	11	Principal Ecologist	MSc / BSc	BNG specialist with experience of undertaking and reviewing BNG assessments for large-scale infrastructure projects. Has also undertaken formal training in BNG assessment, habitat classification, management and monitoring]. BNG specialist with experience of undertaking and reviewing BNG assessments for large/medium/small-scale projects, specialising in including overhead lines, utilities and rail projects. Worked on mitigation design and construction, including maintenance, monitoring and management of sites and related HMMPs. Has also undertaken formal training on the use of the Statutory Metric and the transition from Metric 4.0 to the Statutory Biodiversity Metric, as well as for understanding and implementing the Habitat Design Checklist for BNG for a variety of habitats.
Approver	17	Senior Associate - Ecology	CEnv, MRes, BSc	Has undertaken BNG work on a number of projects, and has provided BNG advice and technical assurance to colleagues on other projects. Attended numerous internal and external continuous professional development training sessions relating to BNG over the years to keep up with the most efficient and relevant way of working.

Source: Mott MacDonald, 2024

1.7 Land use summary

Overview of baseline and proposed BNG delivery area use

1.7.1 The off-site BNG delivery area is currently plantation woodland managed for timber production (although timber extraction would cease following the enhancement works). Site photographs are provided in Appendix A.2. The wider Pickworth's Plot includes a cycle track although this does not include the area included within this HMMP. The BNG delivery area will be set aside for wildlife with closed access to the public. The proposed habitats and management regimes within BNG delivery area are summarised in Table 1.5.

Table 1.5: Proposed habitat management operations

Habitat	Management
Woodland	Enhance quality of existing woodland through conversion from plantation to broadleaved semi-natural

Source: Mott MacDonald, 2024

1.8 BNG delivery area baseline and environmental information checklist

1.8.1 Baseline and environmental information relevant to this project that has informed the HMMP proposals and project design are summarised in Table 1.6 below. This information provides important context for the habitat management prescriptions provided later in this document. Justification for exclusion of factors not relevant to the project are also provided in Table 1.6. Table 1.6 identifies information which can be obtained from the county Biological Records Centre, e.g. protected site and species records. This has not been obtained to date as it was not needed for the purpose of scoping and costing of management with the landowner. However, the absence of this information may constitute a limitation if the HMMP is needed for other purposes such as approval by a third party.

Table 1.6: Baseline Environmental Information Checklist

Baseline and environmental information	Relevant to BNG proposal	Document reference or reason if not included
Statutory / non-statutory designated sites	☒	Appendix A.3 Desk Study Technical Note confirms there are no designations on or adjacent to the area included.
Protected and notable species	☒	Suitability for protected species is generally limited. Appendix A.3 Desk Study Technical Note does not highlight any constraints from protected or notable species.
Invasive Non-Native Species (INNS)	☒	Rhododendron recorded on site during UKHab Survey[14] and condition assessment in 2023, see Biodiversity Net Gain Technical Report[15]. Appendix A.3 Desk Study Technical Note includes other species from the surrounding area.
Biological records plan - sites and species	☒	Appendix A.3 Desk Study Technical Note summarises records of designated sites and notable species recorded in the surrounding area.

[14] UKHab Ltd. (2023). The UK Habitat Classification Version 2.0.(Last accessed July 2024).

[15] Mott MacDonald (2024) A46 Newark Bypass Environmental Statement Technical Appendix 8.14 Biodiversity Net Gain Technical Report. [Online] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010065/TR010065-000249-TR010065_A46%20Newark%20Bypass_6.3%20Appendix%208.14%20Biodiversity%20Net%20Gain%20Technical%20Report.pdf (Last accessed July 2024).

Baseline habitats survey (including Landscape Character)	☒	UKHab Survey and condition assessment in 2023, see BNG Design Stage Report. Landscape Character Assessment not undertaken as change to landscape character will be minor although positive.
Public access	☐	There are no public rights of way through the HMMP area although it does border a minor highway and there is permitted access for cycling in the wider woodland block.
Climate conditions / change	☒	No climate change assessment has been completed although climate resilience is discussed in this document.
Geology and topography (including Soils and substrates)	☒	No soil assessment has been carried out although open access soil data, Soilscapes Viewer[16], has been consulted.
Agricultural land status	☐	Not relevant. The HMMP does not affect agricultural land.
Contaminated land	☐	There are no known land contamination issues on the site.
Flood risk zones (including hydrology and drainage)	☐	Area is not thought to be at significant flood risk. Proposed habitats have tolerance for occasional flooding and for impeded drainage.
Historic land use	☐	Not relevant. OS Maps and aerial photos show that land use has not changed in recent decades.
Historic environment and earth heritage	☐	No historic environment or earth heritage assessments have been carried out. This is not considered necessary given that proposals would not introduce new source of ground disturbance, i.e. area would remain as tree cover.

Source: Mott MacDonald, 2024

[16] Cranfield Soil and Agrifood Institute (2024). Soilscapes. Cranfield University. [Online] Available at: https://www.landis.org.uk/soilscapes/indexv1.cfm (Last accessed July 2024).

2 Planned management activities

2.1 Principles informed by design stage

Vision

2.1.1 The enhanced woodland habitat within the off-site BNG delivery area will become part of the natural landscape, providing opportunities for faunal species and contributing to the species diversity of the area. The enhancement measures will contribute to the Wilder Doddington initiative, which aims to restore biodiversity and natural processes across the Doddington Estate. The enhancements will form part of a wider approach to woodland management which maximises environmental value across the local habitat network.

2.1.2 Beyond the HMMP period the woodland will continue to develop an increasing range of habitat features such as higher levels of standing and fallen dead wood and development of veteran trees. The enhancement measures will have created variation in growth stage of trees and thereby avoid the need for ongoing interventions to woodland succession. Species will colonise the enhancement area, dispersing from surrounding habitats as habitat quality continues to increase.

Aims

2.1.3 This HMMP aims to:

- Enhance 1.3 hectares of current baseline 'Other woodland; mixed' (UK Habitat classification (UKHab) – w1h) to Lowland mixed deciduous woodland (UKHab – w1f) in 'Moderate' condition (of a higher distinctiveness). As well as meeting habitat condition targets, monitoring will need to demonstrate a shift in the woodland type towards Lowland Mixed Deciduous Woodland as defined by both UKHab and the UK BAP Priority Habitat description. Survey according to the National Vegetation Classification (NVC)[17] has not been carried out to date as native woodland flora is suppressed by conifer and rhododendron growth so the habitat is unlikely to be a good fit to any NVC community. NVC survey should be undertaken as part of monitoring to help confirm that the habitat is developing as expected. A number of NVC communities can correspond to

[17] Rodwell et al (1991) British Plant Communities Volume 1; Woodland and Scrub. [Online] Available at: https://archive.org/details/britishplantcomm0001unse/mode/2up (Last accessed August 2024).

Lowland mixed deciduous woodland; the most likely of these to develop is a form of W10 woodland[18].

- Allow the establishment of a woodland vegetation community appropriate for site conditions both now and in the future. A range of native woody and herbaceous species are already present at low density or will be able to colonise from nearby areas. By using local populations of trees and shrubs through natural regeneration the vegetation will be well adapted to site conditions such as soil types and therefore resilient to future environmental pressures.

- Promote the re-establishment of natural woodland processes that provide a range of conditions to maximise species diversity. Use of natural regeneration in combination with limited planting will accelerate the development of variation in woodland structure, leading to the formation of features such as fallen trees, open canopy gaps, cooler shaded areas and dense understorey.

2.1.4 Section 2.1.6 sets out the objectives which define quantifiable targets in order to meet these aims. Each objective has associated prescriptions which detail the indicative management works to be implemented to achieve these objectives and aims.

2.1.5 The reference to achieving Moderate condition is defined by the criteria provided by the Biodiversity Metric 3.1 Technical Supplement condition assessment sheets[19].

Objectives and prescriptions

2.1.6 Table 2.1 summarises the management objectives and prescriptions required to achieve the aims of the off-site BNG delivery area. The prescriptions are then described in detail in Table 2.3. The approach has utilised the publication Creating New Native Woodlands[20] which includes advice on topics including use of natural colonisation, species selection for planting and planting patterns.

[18] W10 Pedunculate oak, bracken, bramble woodland is a vegetation community within the NVC defined by the presence of characteristic trees, shrubs and ground flora.

[19] Panks et al. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity - Technical Supplement. [Online] Available at: http://nepubprod.appspot.com/publication/5850908674228224 (Last accessed July 2024).

[20] Rodwell, John S; Patterson, Gordon S. (1994). Creating New Native Woodlands Bulletin 112. HMSO, London, xiii + 82pp. [Online] Available at: https://cdn.forestresearch.gov.uk/1994/03/fcbu112.pdf (Last accessed July 2024).

Table 2.1: Management objectives (O) and prescription (P) summary for off-site BNG delivery area (lowland mixed deciduous woodland (LMDW))

Habitat	Retained / created / enhanced	Objective	Management prescription
Lowland mixed deciduous woodland	Enhanced (from other woodland; mixed)	• **OLMDW1** – Remove non-native tree and shrub species from the enhancement area and prevent these and other invasive species from establishing in the future. • **OLMDW2** – Employ natural regeneration to achieve native woodland vegetation. • **OLMDW3** – Establish groups of planted trees and shrubs to increase woody species diversity and future variation in woodland structure.	• **PLMDW1** – Initial removal of all non-native tree and shrub species • **PLMDW2** – Ongoing removal of non-native trees and shrubs and INNS • **PLMDW3** – Planting of native tree and shrub species • **PLMDW4** – Care of planted trees and shrubs • **PLMDW5** – Promote tree and shrub regeneration • **PLMDW6** – Thinning to avoid tree crowding • **PLMDW7** – Felling to promote age class variation • **PLMDW8** – Maintain good tree health

Source: Mott MacDonald, 2024

2.2 UKHab and condition assessment binding objectives

2.2.1 Table 2.2 shows the target condition assessments each habitat within the on-site areas must reach and be maintained at for the duration of the HMMP. The Biodiversity Metric 3.1 Technical Supplement 'Woodland' Condition Assessment Sheet[21] was used to establish the baseline condition and to identify target condition. This condition sheet

[21] Panks et al. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity - Technical Supplement. [Online] Available at: http://nepubprod.appspot.com/publication/5850908674228224 (Last accessed July 2024).

uses a 'point system' (I, II, III), the number of points equates to a 'score' which indicates whether the woodland is considered low, moderate or high condition. It should be noted that these are the 'minimum' target conditions for each habitat and where possible, additional targets may be met which will help achieve a higher target condition.

Table 2.2: Binding objectives for off-site BNG delivery area

Habitat type	Target condition	Years to target condition	Condition assessment targets	Comments
Lowland mixed deciduous woodland	Moderate	30+	Score: 32 II – A – Two age classes present III – B – No browsing damage evident III – C – No INNS III – D – 5≥ native tree or shrub species III – E – >80% canopy and understorey native I – F – <10% temporary open spaces III – G – 3 classes present III – H – <10% tree mortality, no pests or diseases II – I – Recognisable NVC plant community III – J – 3≥ storeys present or complex woodland I – K – No veteran trees present II – L – 25-50% have standing deadwood III – M – No evidence of nutrient enrichment or damaged ground evident	Woodland habitat condition sheet Total score 26 to 32 = Moderate Note that the targets include an increased score relative to the baseline from I > III for criteria C and E, and from I > II for I and L. For all other criteria the target is to maintain the score from the baseline.

Source: Mott MacDonald, 2024

2.3 Protective measures for habitat retention and enhancement

2.3.1 This section lists the measures that will be implemented to protect enhanced habitat.

- Current use of the Enhancement Area must not change other than to carry out the HMMP measures.
- The Buffer Zone shown on Figure 1.1, which extends 50 metres from the Enhancement Zone, will be retained as woodland.
- The current use of the Buffer Zone shown on Figure 1.1 would not be changed so that it would adversely affect the delivery of the HMMP in the enhancement area. National Highways will be informed of management activities in the Buffer Zone.

2.4 Establishment, management targets and prescriptions

2.4.1 Table 2.3 details the management targets and prescriptions to establish lowland mixed deciduous woodland by means of enhancement.

2.4.2 These prescriptions must be continued as needed for the duration of the HMMP period (as set out in Section 1.2 of this document). It is noted that some prescriptions, e.g. tree planting and establishment, will be short term (if implemented successfully) and others such as the management of INNS and tree health will apply for the duration of the HMMP.

Table 2.3: Establishment, management targets and prescriptions for lowland mixed deciduous woodland

Objective
OLMDW1 – Remove non-native tree and shrub species from the enhancement area and prevent these and other invasive species from establishing in the future: • Planted non-native trees, which are largely Scot's pine but may also include European larch and red oak, should be removed as soon as possible as a first step to allowing more natural woodland to develop. Selected timber should be retained within the area to increase standing and fallen dead wood. • Invasive rhododendron should be removed as soon as possible. Follow up measures may be needed if plants regenerate after the initial removal and ongoing monitoring and removal (including for the possibility of other species that may colonise or reappear). It is recommended that a rhododendron free buffer is also established around the enhancement plot to prevent vegetative and wind bourn spread of this species.
OLMDW2 – Employ natural regeneration to achieve native woodland vegetation • Natural regeneration will be used to establish native tree and shrub cover across the majority of the area. A number of species, particularly silver birch and also holly, rowan and eared willow should colonise readily when the non-natives are removed and this process can be steered to promote species diversity. They should be well adapted to local conditions and variation in establishment speed should add to structural variety. Losses of young plants, e.g. in dry summer weather, will have less impact than with planted saplings as more will establish when conditions are favourable. • Herbaceous species should also increase in abundance or colonise the enhancement area successfully as a result of measures to promote favourable growing conditions for woodland flora including variation in light levels.
OLMDW3 – Establish groups of planted trees and shrubs to increase woody species diversity and future variation in woodland structure • Limited scale planting of groups of native tree and shrub whips will be used to ensure rapid establishment of woody species cover within the area. Planting in relatively small groups rather than across large areas creates structural diversity relatively quickly. Each group should be of a small number of species, all with similar growing speed, e.g., groups of slow growing species that will eventually become large and long lived trees and groups of shrubby species to provide dense shrub layer growth. • Species selection based on trees and shrubs common in surrounding semi-natural woodland and expected to be suitable for site conditions. • Planted whips will need care to ensure successful establishment including possible watering, weed control, protection from browsing and attention to tree health.
Management Prescriptions
PLMDW1 – Initial removal of all non-native tree and shrub species • At Year 0, all non-native trees and shrubs including rhododendron should be felled.

- Care should be taken during these works to retain native trees and shrubs wherever possible.
- Avoid disturbance or damage to woodland soils from use of heavy machinery (e.g., tractors) to prevent compaction of soil and damage to tree root protection areas.
- All tree and scrub works will be undertaken between September and February (inclusive) to avoid the bird-breeding season.
- All tree works will be in accordance with BS 5837:2012: 'Trees in Relation to Design, Demolition and Construction: Recommendations' (BSI, 2012).
- Prior to the felling of any tree, an ecologist will assess the stand for its potential to support roosting bats and nesting birds and will advise on suitable mitigation if required.
- All rhododendron should be manually cut and removed.
- Retain selected disease-free and pest-free felled deadwood within the enhancement area, where possible. This could be a combination of large diameter timber left on the ground, smaller timber used to create log and brash piles and creation of standing dead wood monoliths. Hardwood timber will be particularly valuable for these features. Any felled timber likely to regenerate growth from lying on the ground should be removed from the area and disposed of.

PLMDW2 – Ongoing removal of non-native trees and shrubs and INNS

- After Year 0 the area should be checked annually for regeneration or appearance of non-native tree and shrub species and INNS and any present removed.
  - Seedlings or herbaceous plants should be hand pulled where possible or otherwise mechanically removed at an appropriate time of year to prevent seed spread.
  - As a last resort herbicide may also be needed if other control is not effective, for example stem treatment could be used on regenerating rhododendron.
  - Species to be considered as INNS should include as a minimum rhododendron, cherry laurel and other plant species listed in Schedule 9 of the Wildlife and Countryside Act
- After Year 0 an INNS Management Plan should be produced to detail the appropriate and proportional removal approach of INNS within the BNG delivery area and record progress. It is recommended that management of the adjacent connected surrounding woodland (managed by the same responsible person/organisation) aligns with the INNS Management Plan for the enhanced woodland to avoid INNS spreading between the woodland plots.

PLMDW3 – Planting of native tree and shrub species

- At Year 0 after completion of felling activities described in PLMDW1, plant native tree and shrub species in the form of whips in selected areas. Species to be planted include English oak *Quercus robur*, hawthorn *Crataegus monogyna*, hazel *Corylus avellana* and holly *Ilex aquifolium*. These should be of local or at least UK provenance.

- Native trees will be planted in clumps with space left between them for natural regeneration. This will promote a natural and structurally varied tree cover. Clumps will be of a single species or 2-3 species of a well-matched growth rate. Clumps will each consist of 10-20 trees with spacing of 3-5m depending on species. Assuming a typical spacing of 4m, planting will be at a density of 625 trees per hectare but with the planting clumps covering 20% of the site there will be a total of approximately 163 planted trees. The following groupings are proposed: three groups of 11 English oak, five groups of 20 mix of hazel and hawthorn and three groups of 10 holly. See Figure 2.1 in Appendix A.1 for indicative arrangement.
- Planting to take place in either the spring or autumn planting seasons.
- Planting areas should avoid retained native trees and shrubs, if necessary, adapting the group sizes where space is limited.
- Clear existing herbaceous vegetation including bracken from the planting areas.
- 50mm bark mulch applied extending 1 m around each planted whip (preferably using material from tree works).
- The plants will be supported by stakes and guards; to ensure plants remain vertical and to protect from herbivore damage. It is recommended that plastic free and biodegradable guards are used.

PLMDW4 – Care of planted trees and shrubs

- For at least the first three years:
  - Maintain a weed-free area of minimum 1m around the base of each plant.
  - Plants shall be pruned to remove dead, dying or diseased wood to promote growth.
  - Water as required. This should take in to account the appearance of the trees and soil moisture around them. In periods of dry weather watering may be needed on a weekly basis. Whips in their first year after planting may each need 20 litres per week rising to 50 litres per week in year 3.
  - Any required replacements within the first three years shall be like for like species and sizes during next planting season.
  - The guards shall be monitored with any broken or missing items replaced.
- After the first three years:
  - Planting will be inspected to coincide with the monitoring schedule to determine if formative pruning or replanting is required and then carried out at an appropriate time of year.
  - All stakes and guards shall be removed when vegetation is sufficiently established.
  - If any planted trees are observed to be dead/dying prior to the group forming a continuous canopy they will be replaced like-for-like species and of equivalent size to the specimen lost to prevent a delay to the time to achieve the target condition.

PLMDW5 – Promote tree and shrub regeneration

- From Year 0 onwards, after completion of the felling and planting activities promote natural regeneration by allowing native tree and shrub seedlings to establish across the enhancement area (excluding areas around planted trees) through the following actions. Continue until self-

seeded trees and shrubs have established across the area although noting that small open areas (up to 10m across) covering a minority of the area may be beneficial in providing variation in habitat structure. – If regeneration is dense in certain areas selectively remove some of the self-set trees and shrubs where this is likely to increase the number of species present, for example if a single rowan sapling is surrounded by dense silver birch regeneration then clear birch within 1-2m to increase the chance of the rowan reaching maturity – If regeneration is sparse use tree guards to protect selected young trees and shrubs from herbivore damage. Guards shall be removed when vegetation is sufficiently established. Guards shall be reused where possible and it is recommended that plastic free and biodegradable guards are used (considering end of life disposal). Silver birch *Betula pendula* and rowan *Sorbus aucuparia* are anticipated to naturally regenerate easily. – If regenerating tree and shrub species are being outcompeted by other vegetation such as bracken, bramble or weedy species then clear this vegetation annually around selected saplings until they are large enough not to be affected.
PLMDW6 – Thinning to avoid tree crowding • From Year 10 onwards whenever a closed canopy has formed in both planted and self-seeded areas: – undertake thinning of tree species such as oak and birch where individuals are considered dense enough to limit their eventual size and lifespan. For shrub forming species this is not required as dense shrub growth is a valuable feature, e.g. for breeding birds – retain disease-free and pest-free felled deadwood and create brash piles within the enhancement area
PLMDW7 – Felling to promote age class variation • From Year 10 onwards whenever a closed canopy has formed in self-seeded areas: – if self-seeding trees and shrubs have established rapidly across the enhancement area, or parts of the area, leading to very uniform even age growth then carry out small scale clearance, removing woody species from areas around 10x10m (totalling up to 10% of the enhancement area), to create variation in age and growth stage. –retain disease-free and pest-free felled deadwood and create brash piles within the enhancement area
PLMDW8 – Maintain good tree health • Tree health inspections and management of tree disease and pests on an ongoing basis (tree health is inspected by site manager at least annually and also included monitoring programme). • Trees to be pruned to remove diseased wood to promote growth and resilience of the woodland (inspections to advise). • It is recommended that management of the adjacent connected surrounding woodland (managed by the same responsible person/organisation) aligns with the monitoring and management of disease and pests for the enhanced woodland to avoid spread between the woodland plots.

Source: Mott MacDonald, 2024

2.5 Habitat establishment and management – risk register and remedial measures

2.5.1 Table 2.4 should be used as a 'live' document - updated as and when new risks are identified. If other risks are identified, the table will be updated accordingly.

Table 2.4: Risk register and remedial measures

Risk identification date	Habitat type	Risk factor	Trigger for action	Remedial measure
04/07/2024	Lowland mixed deciduous woodland	Control of non-native and invasive species is not successful	Populations are persistent showing no decline towards zero or species repeatedly colonise	Enhanced control with increased frequency of monitoring and control, trialling of different control measures such as herbicides, increased control measures in neighbouring woodland areas.
04/07/2024	Lowland mixed deciduous woodland	Planted trees and shrubs are failing to establish	Dying or dead planted trees are more than occasional	Identify likely cause prior to implementing remedial measures e.g. competition from non-target vegetation dominating; grazed by rabbits/deer; ineffective watering regime. Enhanced management could include: - increased weed control - stock fencing or animal control - watering regime needs to be changed If like for like replanting is ineffective consider changing the species and locations used.
04/07/2024	Lowland mixed deciduous woodland	Natural regeneration of trees and shrubs is unsuccessful	Absence of seedlings and saplings, either locally or across the plot	Identify likely cause prior to implementing remedial measures e.g., competition from non-target vegetation dominating; grazed by rabbits/deer; Enhanced management could include: - increased weed control - stock fencing or animal control

				Additional planting if natural regeneration fails to establish tree and shrub cover across the enhancement area at sufficient density to a form a closed canopy.
04/07/2024	Lowland mixed deciduous woodland	Introduction / spread of disease or pests to the enhancement area, where previously absent (exacerbated by climate change)	Whips or stands of trees appear to be dying or are dead resulting from disease or pests	Identify likely cause/s prior to implementing remedial measures e.g., ensure watering schedule is reactive to anticipated increased frequency of extreme weather events, to reduce stress to trees and therefore vulnerability to disease and pests. Report notifiable tree disease and pests to the Forestry Commission. Produce a management plan to first eliminate and contain the disease or pest to prevent its spread. Replacement planting to comprise a diverse and stress tolerant range of tree species to improve age structure and overall future resilience.
04/07/2024	Lowland mixed deciduous woodland	Cover of woody species is not being maintained due to climate change pressures	Trees and shrubs dying prematurely. Poor tree recruitment not explainable by other factors	Assess whether patterns fit with pressures experienced, for example are drought intolerant or water logging intolerant species disproportionately affected. Consider introduction of additional tree and shrub species or stock of more favourable genetics, e.g., locally occurring species observed to be more resilient than those in the enhancement area or trees from a more southerly provenance in the UK.
04/07/2024	Lowland mixed deciduous woodland	Failed establishment of a varied woodland structure	Two or fewer storeys across the area after 20+ years	Monitoring of age distribution and woodland vertical structure to inform remedial measures, such as coppicing of semi-mature and mature stands or additional planting. Arboriculturist to assess trees suitability for coppicing. Coppicing to be undertaken between September and March (inclusive) during the dormant period (also outside of the core breeding bird season), where possible, as advised by an arboriculturist.
04/07/2024	Lowland mixed deciduous woodland	Disturbance from trespassing activities e.g. motor vehicles, mountain biking	Visible damage e.g. fire remains, compaction from tyres	Example measures include installation of fencing, creation of dead hedges, site management presence, liaison with police.

Source: Mott MacDonald, 2024

2.6 Climate resilience

Prepare

2.6.1 Climate change will introduce both direct and indirect pressures to Lowland mixed deciduous woodland. For example extreme events such as storms and droughts will cause direct stress and mortality and trends such as milder temperatures may lead to increased impacts from pests and disease. The soils at the site are naturally wet which may lead to high levels of water logging from increased winter rain.

2.6.2 The enhancement proposals have taken these threats into account in a number of ways:

1. Species diversity of trees and shrubs will significantly increase resilience as particular threats such as increased disease outbreaks may only affect certain species. Other species will be unaffected and can maintain environmental conditions by increasing their canopy cover in response.
2. Promoting natural regeneration both at the outset and as an ongoing process will utilise tree and shrub populations well adapted to local conditions and evolutionary adaptation as conditions continue to change.
3. The enhancement will act to strengthen the local ecological network by adding to the extent of high-quality woodland habitat which will provide more stable conditions and allow greater species dispersal in response to climate pressures.

Response

2.6.3 The risk register (Table 2.4) recognises that the impact of climate pressures cannot be fully foreseen and prepared for. Should risks such as poor tree health due to climate pressures materialise it is recognised that further measures will be needed. For example, introducing trees of different provenance which have been observed to have greater tolerance to drought.

2.7 Adaptive management for climate change

2.7.1 Adaptive management is a systematic approach to natural resource management that involves monitoring and evaluating the effectiveness of management actions and adjusting as necessary to improve outcomes over time. It is an iterative process in which management actions are followed by targeted monitoring.

2.7.2 The monitoring visits that inform adaptive management should incorporate:

- The habitat responses to climate change conditions;
- Monitoring pests & diseases: outbreaks; revise & improve original biosecurity measures; and
- Previously implemented remediation measures and their success.

2.7.3 Monitoring to assess the success of implemented climate-resilience measures is necessary for ongoing success. Where remedial measures are not achieving the desired outcome, they should be altered until a beneficial outcome is reached.

3 Monitoring schedule

3.1 Monitoring strategy

3.1.1 Monitoring is fundamental to the success of this HMMP and is required to assess biodiversity changes and identify potential issues. It allows assessments of changes to be identified when compared to baseline data. This will not only enable the effectiveness of mitigation or compensation to be identified but will also inform future mitigation proposals on other sites.

3.1.2 The Biodiversity Net Gain: auditing and accounting for biodiversity - Technical Supplement condition assessment sheets[22] will be consulted each time the habitats are monitored. The purposes of monitoring are to assess progress to achieving the target habitat type, the habitat condition status, identify risks and to inform remedial measures to achieve the aims of the HMMP. The habitat will be inspected in years 1, 2, 3 and 5 as this constitutes an important early establishment phase. It will then be subject to monitoring every five years. The detailed habitat type and condition monitoring described in this section should continue for the first 30 years of the HMMP. However, if target habitat type and condition has not been reached by this point then monitoring should continue to take place every 5 years until the relevant objectives have been met. The more general site monitoring referred to in Section 2, including for tree health and presence of INNS, should continue for the duration of the HMMP.

3.1.3 The methods provided in Table 3.1 will be used at the intervals specified. This information can be used to compare habitats from previous years, as well as their baseline condition and subsequent condition. This information can also be used to identify and monitor any risks as outlined in Table 2.4. Whilst the habitat will not meet target condition early in the planned period, the condition assessment criteria provide a useful means of gauging progress and identifying potential problems. The more detailed UKHab and NVC surveys will commence later and be less frequent but will provide data on progress towards the target woodland habitat type.

[22] Panks et al. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity - Technical Supplement. [Online] Available at: http://nepubprod.appspot.com/publication/5850908674228224 (Last accessed July 2024).

Table 3.1: Monitoring methods and intervals

Habitat type	Monitoring methods	Monitoring interval
Woodland	• Adherence to management prescriptions • Condition assessment results including photographic evidence • UKHab and NVC	Years 1,2,3,5,10,15,20,25,30 Years 1,2,3,5,10,15,20,25,30 Years 10,20,30

Source: Mott MacDonald, 2024

3.2 Monitoring reports

3.2.1 The A46 Newark Bypass is a Nationally Significant Infrastructure Project (NSIP), for which BNG is not mandatory. The off-site BNG delivery detailed in this HMMP is for the essential compensation for the loss of Lowland mixed deciduous woodland habitat of principal importance (HPI) on-site. The data gathered during monitoring should be retained to demonstrate habitat progress and the targeted BNG. The timing of monitoring surveys and submission of reports is shown in Table 3.2.

3.2.2 It is not considered appropriate for BNG audit to be applied to this HMMP in isolation. The A46 Newark Bypass project should be subject to audit, and monitoring reports from this off-site enhancement will contribute to those audits.

Table 3.2: Monitoring surveys and report

Project year	Year report to be submitted	Comments
Y1	2026	Monitor prescription progress and carry out condition assessment
Y2	2027	Monitor prescription progress and carry out condition assessment
Y3	2028	Monitor prescription progress and carry out condition assessment
Y5	2030	Monitor prescription progress and carry out condition assessment
Y10	2035	Monitor prescription progress, condition assessment and habitat survey (UKHab and NVC)
Y15	2040	Monitor prescription progress and carry out condition assessment
Y20	2045	Monitor prescription progress, condition assessment and habitat survey (UKHab and NVC)
Y25	2050	Monitor prescription progress and carry out condition assessment
Y30	2055	Monitor prescription progress, condition assessment and habitat survey (UKHab and NVC)

Source: Mott MacDonald, 2024

3.3 Adaptive management

3.3.1 Adaptive management is a systematic approach to natural resource management that involves monitoring and evaluating the effectiveness of management actions and adjusting as necessary to improve outcomes over time. It is an iterative process in which management actions are followed by targeted monitoring.

3.3.2 Monitoring can indicate when management changes may be necessary to make sure aims of the HMMP are met. For example, this may be dealing with a new plant disease or an invasive species that is thriving due to climate change (see A.3 for invasive species recorded in the surrounding area).

3.3.3 Any changes to the habitats identified through the monitoring inspections should be reflected within this management plan and schedule.

3.3.4 Adaptive management can be incorporated into the monitoring and management plan timeline. The aim is to have a feedback loop between monitoring, then reporting, and how any proposed changes are subsequently reflected in this plan.

3.4 Review of management plan

3.4.1 Table 3.3 sets out the review schedule for the HMMP. The HMMP may be reviewed beyond this date as needed based on the effectiveness of the prescriptions in Section 2.

Table 3.3: HMMP review timeline

BNG delivery year	Year for plan to be reviewed	Comments
Y5	2030	Monitoring reports to be reviewed against aims of the HMMP including binding condition objectives in Table 2.3. The risk register (Table 2.5) should be updated and if any risks are realised then relevant remedial actions should be added to the management objectives and prescriptions in Table 2.2 for following years (adaptive management).
Y10	2035	
Y15	2040	
Y20	2045	
Y25	2050	
Y30	2055	

Source: Mott MacDonald, 2024

3.4.2 [redacted] are responsible for management plan reviews based on the review schedule. The review process involves:

1. Monitoring inspections are made in Year 1, 2, 3, 5 and every 5 years after, with the last inspection occurring within Year 30 (assuming HMMP objectives are met by that time).
2. Collated data from the above monitoring inspections (see Table 3.1 and Table 3.3 for overview) is used to identify any risk factors to habitat

progression; and any changes required to the current habitat management. This HMMP report should be updated to reflect any adaptive management actions made.

3. If the monitoring report completed in Year 30 identifies that the planned habitat type and condition criteria have not been reached or is not on course to be reached then the management plan review should outline what adaptive management actions need to take place to achieve them.

4 References

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[19,21,22] Panks et al. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity - Technical Supplement. [Online] Available at: http://nepubprod.appspot.com/publication/5850908674228224 (Last accessed July 2024).

[20] Rodwell, John S; Patterson, Gordon S. (1994). Creating New Native Woodlands Bulletin 112. HMSO, London, xiii + 82pp. [Online] Available at: https://cdn.forestresearch.gov.uk/1994/03/fcbu112.pdf (Last accessed July 2024).

A.1 Report Figures

N

NOTES

Enhancement area = 1.3ha

Source
Enhancement area, Mott MacDonald 2024.
Service Layer Credits
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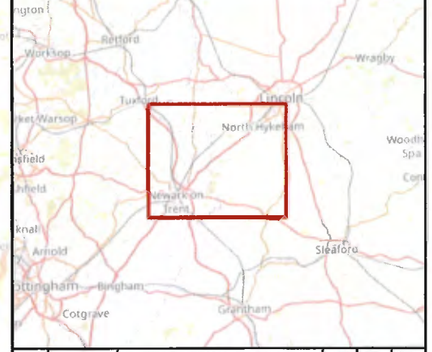
KEY TO SYMBOLS

- Order Limits
- Enhancement area
- Ehancement area 50m buffer zone



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C02	26/02/25	UPDATED FOR LEGAL AGREEMENT	MH	DT	RH

CLIENT
national highways

PURPOSE OF ISSUE
LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

PROJECT TITLE
A46 NEWARK BYPASS

DRAWING TITLE
Figure 1.1
Off-site BNG Delivery Area Boundary Plan

ORIGINAL SIZE A3 SCALE 1:70,000

DRAWING NUMBER
HE PIN | ORIGINATOR | VOLUME | LOCATION | TYPE | ROLE | NUMBER
HE551478 SKAG EBD CONWI_CONW DR LE 00191

PROJECT REF NO. HE551478

REVISION C02

0 1 2 3 4 5 km

NOTES

Enhancement area = 1.3ha

Source
Enhancement area, Metric Habitat, Mott MacDonald 2024.
Service Layer Credits
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KEY TO SYMBOLS

Metric Habitat

Other woodland; mixed

REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C01	09/07/24	FIRST ISSUE	JB	RH	BC

CLIENT

national highways

PURPOSE OF ISSUE
LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

PROJECT TITLE
A46 NEWARK BYPASS

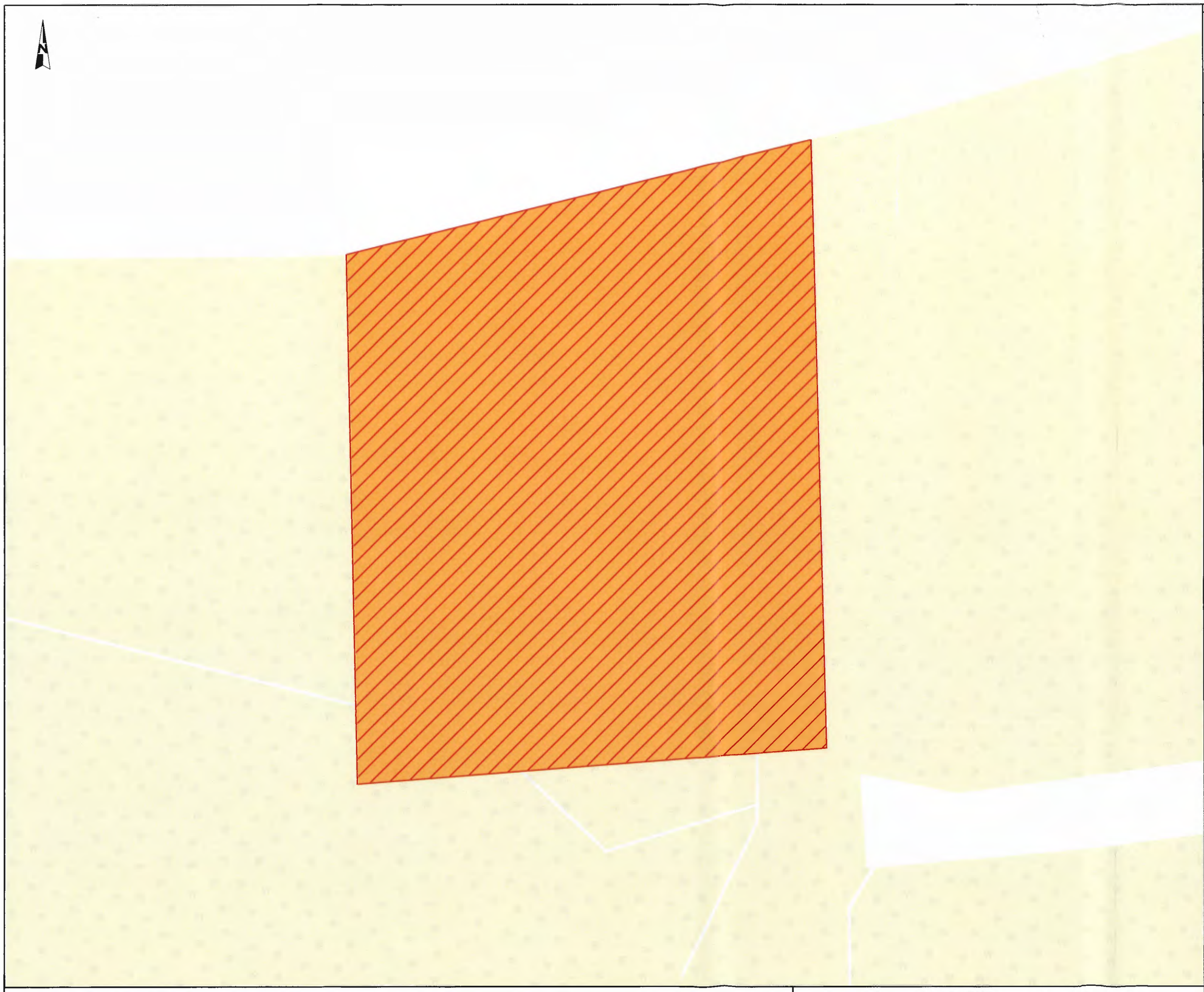
DRAWING TITLE
Figure 1.2
Baseline Habitats Plan

ORIGINAL SIZE A3 SCALE 1:800

DRAWING NUMBER HE PIN	ORIGINATOR	VOLUME	PROJECT REF NO
HE551478	SKAG	EBD	HE551478
CONWI_CONW LOCATION	DR TYPE	LE ROLE	REVISION C01

NUMBER

0 10 20 30 40 50 m



NOTES

Enhancement area = 1.3ha

Source
Enhancement area, Distinctiveness, Condition, Mott MacDonald 2024.
Service Layer Credits
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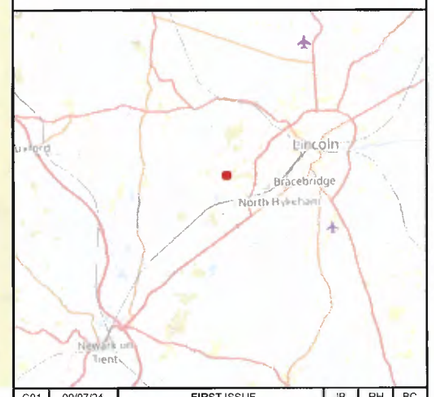
KEY TO SYMBOLS

Distinctiveness

Medium

Condition

Moderate



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C01	09/07/24	FIRST ISSUE	JB	RH	BC

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PURPOSE OF ISSUE
LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

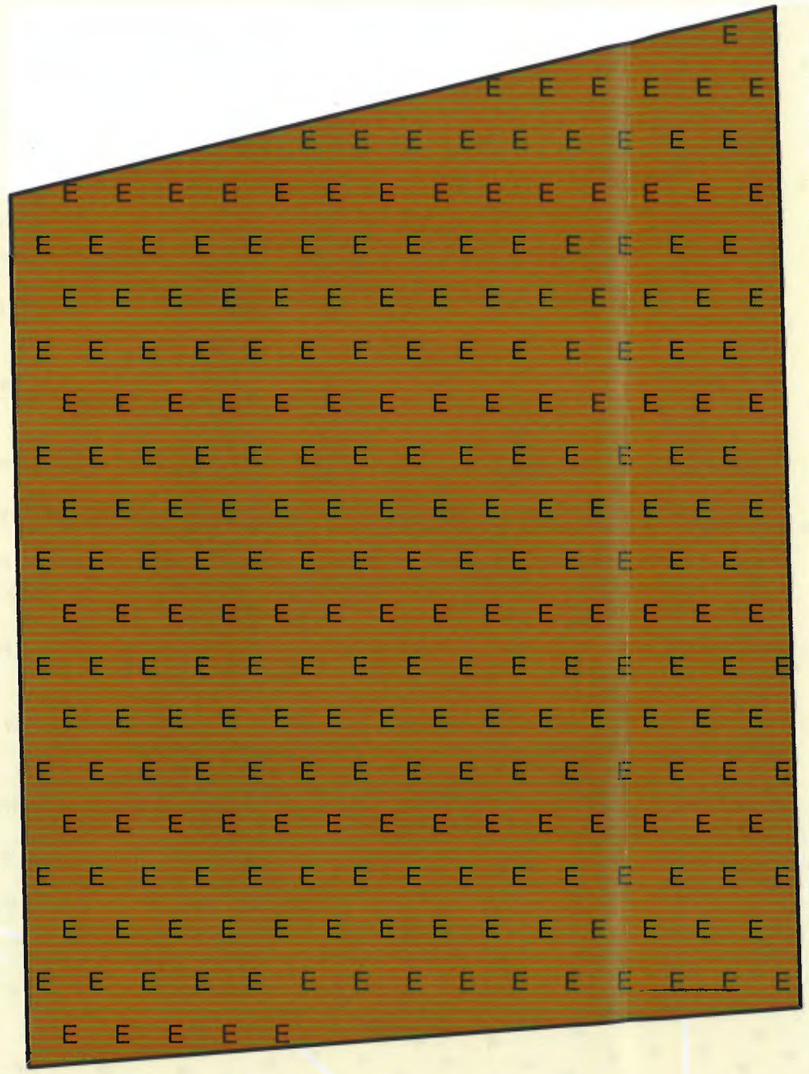
PROJECT TITLE
A46 NEWARK BYPASS

DRAWING TITLE
Figure 1.3
Baseline **Distinctiveness** Plan

ORIGINAL SIZE A3 SCALE 1:800

DRAWING NUMBER HE PIN	ORIGINATOR	VOLUME	PROJECT REF NO.
HE551478	SKAG	EBD	HE551478
CONWI_CONW LOCATION	DR TYPE	LE ROLE	REVISION C01
		NUMBER	

0 10 20 30 40 50 m



NOTES

Enhancement area = 1.3ha

Source
Enhancement area, Metric Habitat, Mott MacDonald 2024.
Service Layer Credits
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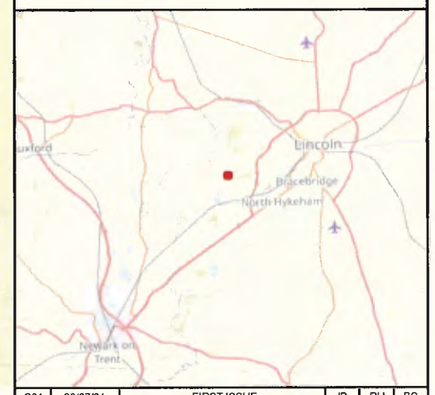
KEY TO SYMBOLS

Metric Habitat

Lowland mixed deciduous woodland

E Enhanced



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C01	09/07/24	FIRST ISSUE	JB	RH	BC

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PURPOSE OF ISSUE
LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

PROJECT TITLE
A46 NEWARK BYPASS

DRAWING TITLE
Figure 1.4
Habitat Retention Plan

ORIGINAL SIZE A3 SCALE 1:800

DRAWING NUMBER
HE PIN | ORIGINATOR | VOLUME
HE551478 SKAG EBD
CONWI_CONW DR LE
LOCATION | TYPE | ROLE | NUMBER

PROJECT REF NO
HE551478

REVISION
C01

0 10 20 30 40 50 m

Enhancement Area

Whisby Quarry

NOTES

Enhancement area = 1.3ha

Source
Enhancement area, Mott MacDonald 2024.
Ancient Woodland, Local Nature Reserves, Priority Habitat Inventory, Sites of Special Scientific Interests, Natural England 2024.
Service Layer Credits
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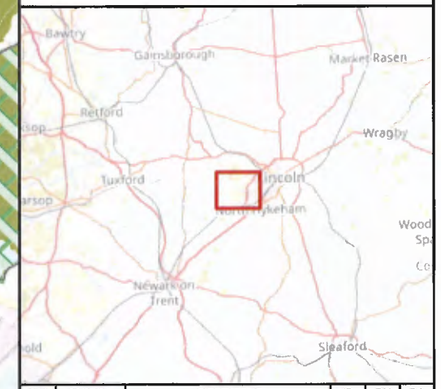
KEY TO SYMBOLS

- Enhancement area
- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland
- Local Nature Reserve (LNR)
- Site of Special Scientific Interests (SSSI)
- Priority Habitat Inventory: Deciduous woodland



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C01	09/07/24	FIRST ISSUE	JB	RH	BC

CLIENT: national highways

PURPOSE OF ISSUE: LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER: TR010065

PROJECT TITLE: A46 NEWARK BYPASS

DRAWING TITLE: Figure 1.5 Site Context Plan

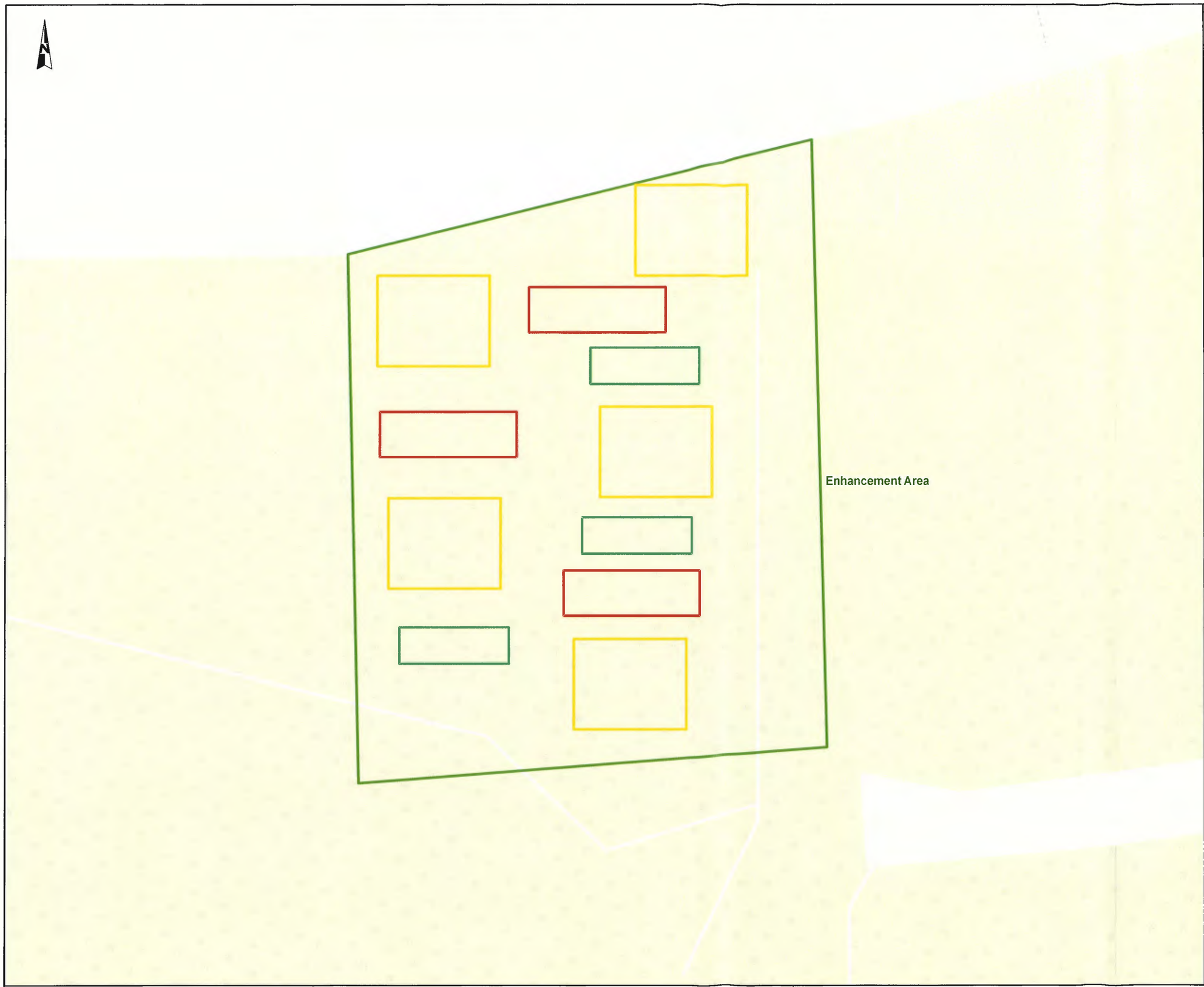
ORIGINAL SIZE: A3 SCALE: 1:20,000

DRAWING NUMBER: HE PIN HE551478 | ORIGINATOR SKAG | VOLUME EBD | LOCATION CONWI_CONW | TYPE DR | ROLE LE | NUMBER

PROJECT REF NO.: HE551478

REVISION: C01

0 0.25 0.5 0.75 1 1.25 km



NOTES

Enhancement area = 1.3ha

Tree planting locations are indicative and should be informed by site conditions.

Source
Enhancement area, Planting trees areas, Mott MacDonald 2024.
Service Layer Credits
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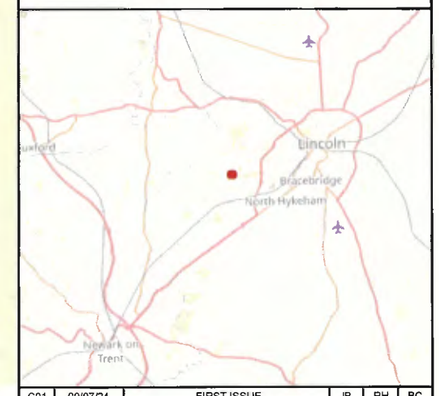
KEY TO SYMBOLS

- Enhancement area
- Plant 20 x common hawthorn and hazel saplings (10 of each) at 4m spacings
- Plant 10 x holly saplings at 4m spacings
- Plant 11 x pedunculate oak saplings at 5m spacings



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C01	09/07/24	FIRST ISSUE	JB	RH	BC

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PURPOSE OF ISSUE
LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

PROJECT TITLE
A46 NEWARK BYPASS

DRAWING TITLE
Figure 2.1
Habitat Creation, Enhancement and Management Measures

ORIGINAL SIZE A3 SCALE 1:800

DRAWING NUMBER
HE PIN | ORIGINATOR | VOLUME | LOCATION | TYPE | ROLE | NUMBER
HE551478 SKAG EBD CONWI_CONW DR LE

PROJECT REF NO.
HE551478

REVISION
C01

0 10 20 30 40 50 m

A.2 Off-site BNG delivery area baseline photos

Description
Typical views in the plantation woodland area, showing canopy dominance by planted Scot's pine but scattered self seeded native trees, mainly silver birch. Field layer species poor dominated by bracken with abundant bramble

Source: Mott MacDonald, June 2023

A.3 Desk Study Technical Note

Contents

1 Introduction

1.1 Purpose

1.1.1 This technical note has been produced to inform a Habitat Management and Monitoring Plan (HMMP) in relation to land at Doddington Hall, Lincoln which is required to provide offsite habitat compensation in relation to the proposed works at the A46 Newark Bypass (the Scheme). The HMMP provides prescriptions for the enhancement of an area of 1.3 hectares of mixed plantation woodland to lowland mixed deciduous woodland. Actions will include felling and removal of non-native tree species including Scot's pine, ongoing removal of rhododendron and planting with native species of trees and shrubs. Please see "Biodiversity Net Gain - Habitat Management and Monitoring Plan in relation to land at Doddington Hall, Lincoln" (the HMMP) for full details of the proposed works.

1.1.2 The area included within the HMMP is part of a block of woodland known as Pickworth's Plot. It is located at central Ordnance Survey (OS) national grid reference SK 89946 68614, approximately 1.4 kilometres south of the village of Doddington and within the North Kesteven Council planning authority area.

1.1.3 The purpose of the technical note is to check whether there is any ecological data held for the site, or surrounding area, that needs to be taken account in developing the HMMP. Data relating to designations is relevant as if there were any within or close to the HMMP area the proposed management could require consent and would need to consider the features that any designation has been made for. Data relating to protected species is also relevant as their presence would need to be taken in to account to ensure there was no breach of environmental legislation.

1.2 Context

1.2.1 The purpose of the HMMP is to support a legal agreement between National Highways and the landowner that will provide required offsite habitat compensation in relation to the proposed works at the A46 Newark Bypass. This Scheme aims to provide a dual carriageway along approximately 6.5 kilometres of the route along the A46 between Farndon and Winthorpe.

2 Methodology

2.1 Assessment Process

2.1.1 Biological records for the site and surrounding area were obtained from Lincolnshire Environmental Records Centre (LERC) and received on 25th September 2024. This included both designations and species records.

2.1.2 Designations were assessed by summarising the distances of nearby Sites of Special Scientific Interest (SSSI), Local Nature Reserves (LNR), Local Wildlife Sites (LWS) and Ancient Woodland within 2km of the HMMP area.

2.1.3 Protected species records were provided in a Microsoft Excel file and recent records, based on observations within the last 10 years (from 2014 onwards), were uploaded to a GIS system based on the grid reference provided. GIS was then used to summarise the distance, dates number of records for each species. Record type was also distinguished in the results summary, for example records of bat roosts or badger setts have been separated from general observations of activity.

2.1.4 Some species records related to 'tetrads' which are 2x2km squares. These could not be readily uploaded to GIS so were reformatted as 'hectads' which are 10x10km squares. Due to the low resolution of many of the species records provided a high proportion appear as zero distance from the HMMP area. The location provided was often for a two figure or 4 figure grid reference so represents a 1x1km or 10x10km grid square. The record therefore often overlaps with the HMMP area even though its true location may be a significant distance away.

2.1.5 The data also included records of national and local priority species as well as non-native species. Records of these species are summarised in a simple list for the surrounding 10km radius.

2.1.6 Following analysis the implications of the results are discussed and, where relevant, used to inform the HMMP.

3 Designated Site Results

3.1 Statutory Designated Sites

3.1.1 Table 1 below, presents the results of an assessment of statutory designated sites within a 2km radius of the site. The designation, proximity, description and habitats and species of ecological value, are also detailed in Table 1.

Table 1. Statutory Designated Sites within 2km of the site

Designation	Name	Distance (m)	Description	Reasons for Designation
SSSI	Doddington Clay Woods	1971	Comprised of two ancient semi-natural woodlands; Old Hag and Little Sale Woods, which have developed on the heavy clay soils found in the Doddington area. Wet ash-wych elm woodland, acid birch-ash-lime woodland and lowland maple-ash-lime woodlands are present.	W10 - Quercus robur - Pteridium aquilinum - Rubus fruticosus woodland W8 - Fraxinus excelsior - Acer campestre - Mercurialis perennis woodland
LNR	Whisby Nature Park	1249	Flooded gravel pits and wetlands, scrub woodland and grassland managed by Lincolnshire Wildlife Trust.	Water Vole (*Arvicola amphibius*), Bats including; pipistrelle (*Pipistrellus*), brown-long eared *(Plecotus auritus)* and noctule (*Nyctalus noctula*), birds including; skylark (*Alauda arvensis*), reed bunting (*Emberiza schoeniclus*) and turtle dove *(Streptopelia turtur).*

3.2 Local Wildlife Sites

3.2.1 Table 2 below, presents the results of an assessment of local wildlife sites within a 2km radius of the site. The designation, proximity, description and reason for designation are also detailed in Table 2 The main habitat types and additional features or species of ecological significance was identified from local wildlife citation and is presented in Table 2.

Table 2. Local Wildlife sites within 2km of the site

Designation	Name	Distance (m)	Description	Reason for designation (main habitats in local wildlife sites citation)
LWS	Ash Lound and Brick Kiln Holt	1963	Ash Lound is a slightly acid woodland dominated by silver birch (*Betula pendula*), downy birch (*Betula pubescens*) and pedunculate oak (*Quercus robur*). Brick Kiln Holt is a smaller disturbed area of open woodland, which includes a degree of ornamental planting.	Main habitat; Woodland Additional habitats; running and standing water. Additional features; planted specimen tress, standing/falling dead wood and tussocky vegetation.
LWS	Birchwood Nature Park	1153	Plantation woodland dominated by birch and willow. There is also grassland and a small pond. This nature park is utilised by the public contains a network of paths.	Main habitat: Mixed woodland and semi-improved neutral grassland. Additional habitat: Pond and ditch. Significant fauna species: Skylark (*Alauda arvensis*), glow worms (*Lampyris noctiluca*). Significant flora species: Corn chamomile (*Anthemis arvensis*), heath rush (*Juncus squarrosus*) and bee orchid (*Ophrys apifera*).
LWS	Cinder Plot	373	An acid woodland site with significant heathland and ancient woodland elements. It is under active timber	Main habitat: Plantation Additional habitats: woodland, wet woodland, acid grassland, heathland, drain/ditch.

			management and conifer plantation, predominantly Scot's pine (*Pinus sylvestris*).	Additional features: veteran/pollarded trees, seasonally wet/damp areas, deep dry ditches.
LWS	Donkey Close Meadow	1672	An area of hummocky old herb-rich damp grassland, with seasonal pools bordered by a large field, recently (2009) sown with meadow grass species.	Main habitat: damp grassland Additional habitat: scattered scrub, natural grassland, pond Additional features: veteran/pollarded trees, tussocky vegetation, abundant nectar sources, structural diversity, seasonally wet/damp areas, earthworks/hummocky ground.
LWS	Fox Holt	1415	An old ash (*Fraxinus excelsior*) and hazel (*Corylus avellana)* coppice with pedunculate oak (*Quercus robur).*	Main habitat: semi-natural woodland. Additional features: standing/fallen dead wood.
LWS	Hospital Plantation	1964	200 acre mixed woodland, containing remnants of lowland acid-heath owned by Lincoln City Council.	Main habitat: semi-natural woodland Additional habitats: semi-improved neutral grassland, scattered/ dense scrub, coarse or rank grassland.
LWS	Hurn Wood, Eagle	1037	A small wood largely surrounded by open farmland. The wood is dominated by oak (*Quercus robur)*, ash (*Fraxinus excelsior)* and hazel *(Corylus avellana)* but in places there are significant numbers of sycamore *(Acer pseudoplatanus)* and silver birch *(Betula pendula)*	Main Habitat: woodland Additional habitat: Running water, bracken Additional features: standing/fallen dead wood, deep ditches seasonally wet/damp areas. Significant fauna species include: common buzzard *(Buteo buteo),* marsh tit *(Poecile palustris),* treecreeper (*Certhia familiaris)* and badger *(Meles meles).*
LWS	Hykeham Railway Line, Whisby Nature Park	1901	A section of active railway line running through Whisby Nature Park. The railway embankment is mostly bare of	Main habitat: ruderal Additional habitat: neutral grassland, scrub Additional features: fallen dead wood, deep ditches.

			vegetation, however there is some vegetation cover on both sides of the railway adjacent to the fenceline, which is a narrow (c1-2m wide) belt, comprised of bramble, scrub and tall ruderal vegetation.	
LWS	Mr Nevile's Pits East, Whisby Pits Complex	1558	A large lake (flooded gravel pit) with numerous smaller peripheral, seasonally flooded, hollows. The water bodies are surrounded by dense silver birch (*Betula pendula)* and grey willow *(Salix cinerea)* woodland. Rough grassland and acid scrub is present in more open areas of the woodland.	Main habitat: standing water Additional habitat: semi-natural woodland, wet woodland, damp grassland, ruderal Additional features: standing/fallen dead wood, tussocky vegetation, areas with frequent/prolonged flooding, seasonally wet/damp areas.
LWS	Mr Nevile's Pits West, Whisby Pits Complex	1420	A flooded sand and gravel pit bordered by willow woodland. This woodland is dense and of significant value to birds. There is a smaller pit to the south-west of the site, which is comprised of acid marsh which becomes flooded seasonally.	Main habitat: Lake Additional habitat: wet woodland, dense scrub, acid grassland, drain, marsh. Additional features: standing/fallen dead wood, abundant nectar sources, structural diversity, steep sloped, south-facing slopes, areas with frequent/ prolonged flooding, seasonally wet/damp areas.
LWS	Whisby Nature park, Whisby Pits Complex	1249	Flooded gravel pits and wetlands, scrub woodland and grassland managed by Lincolnshire Wildlife Trust.	Water Vole (*Arvicola amphibius*), Bats including; pipistrelle (*Pipistrellus*), brown-long eared *(Plecotus auritus)* and noctule (*Nyctalus noctula*), birds including; skylark (*Alauda arvensis*), reed bunting (*Emberiza schoeniclus*) and turtle dove *(Streptopelia turtur).*
LWS	Whisby Stocking	408	A damp woodland dominated by ash *(Fraxinus excelsior)*	Main habitat: semi-natural woodland

			with downy birch *(Betula pubescens)*, with beech *(Fagus sylvatica)* and pedunculate oak *(Quercus robur)* occurring near the edges.	Additional features: standing/fallen dead wood, seasonally wet/damp areas

3.3 Ancient Woodland

3.3.1 Table 3 below shows the results of a search for Ancient woodland sites within 2km of the site, the proximity of these woodlands and the corresponding status.

Table 3. Ancient woodland sites within 2km of the site

Designation	Status	Name	Distance (m)
Ancient Woodland	Ancient & Semi-Natural Woodland	Fox Holt	1411
Ancient Woodland	Ancient & Semi-Natural Woodland	Crow Wood	1039
Ancient Woodland	Ancient & Semi-Natural Woodland	Parson's Wood	916
Ancient Woodland	Ancient & Semi-Natural Woodland	Hurn Wood	1044
Ancient Woodland	Ancient Replanted Woodland	Ash Lound	1960
Ancient Woodland	Ancient & Semi-Natural Woodland	Strunch Hill	1618
Ancient Woodland	Ancient & Semi-Natural Woodland	Whisby Stocking	408
Ancient Woodland	Ancient & Semi-Natural Woodland	Old Hag Wood	1968

4 Species Results

4.1 Protected Species Results

Bats

4.1.1 A search for biological records of bats (including roosts) within a 2km radius of the site was conducted and the results presented in Table 4 below. The species, record type, proximity, number and date of each record is detailed in table 4 below.

Table 4. Biological record results for bats within 2km of the site.

Scientific Name	Common Name	Record type	Closest Record (m)	Most Recent Record	Number of Records
Chiroptera	Bat	Field observation	0	01/07/2020	4
Pipistrellus	Pipistrelle sp.	Field observation	0	2020	2
Pipistrellus	Pipistrelle sp.	Field observation (roost)	1992	03/06/2020	1
Pipistrellus pipistrellus	Common pipistrelle	Field observation	0	10/08/2017	1
Pipistrellus pygmaeus	Soprano pipistrelle	Field observation	0	10/08/2017	1
Myotis	Myotis sp.	Field observation	0	10/08/2017	1
Nyctalus noctula	Noctule	Field observation	0	10/08/2017	1

Badgers

4.1.2 A search for biological records of badgers within a 2km radius of the site was conducted and the results presented in Table 5 below. The species, record type, proximity, number and date of each record is detailed in table 5 below.

Table 5. Biological record results for badgers within 2km of the site

Scientific Name	Common Name	Record type	Closest Record (m)	Most Recent Record	Number of Records
Meles meles	Eurasian badger	Field observation	0	17/06/2022	29
Meles meles	Eurasian badger	Field observation (dead)	0	14/02/2019	1

Otters and Water Voles

4.1.3 A search for biological records for otter and water vole within a 2km radius of the site was conducted and the results presented in Table 6 below. The species, record type, proximity, number and date of each record is detailed in Table 6 below.

Table 6. Biological records for otter and water vole within 2km of the site

Scientific Name	Common Name	Record type	Closest Record (m)	Most Recent Record	Number of Records
Arvicola amphibius	European water vole	Field observation	0	10/07/2018	28
Lutra lutra	Eurasian otter	Field observation	0	20/10/2021	59

Amphibians

4.1.4 A search for biological records for amphibians within a 2km radius of the site was conducted and the results presented in Table 7 below. The species, record type, proximity, number and date of each record is detailed in Table 7 below.

Table 7. Biological records for amphibians within 2km of the site

Scientific Name	Common Name	Record type	Closest Record (m)	Most Recent Record	Number of Records
Bufo bufo	Common toad	Field observation	1673	29/03/2021	2
Lissotriton vulgaris	Smooth newt	Pond netting	0	29/06/2021	1
Lissotriton vulgaris	Smooth newt	Field observation	0	22/03/2022	11

Rana temporaria	Common frog	Pond netting	0	29/06/2021	1
Rana temporaria	Common frog	Field observation	0	01/03/2024	6
Triturus cristatus	Great crested newt	eDNA analysis	1410	2016	1
Triturus cristatus	Great crested newt	Pond netting	0	29/06/2021	2

Reptiles

4.1.5 A search for biological records for reptiles within a 2km radius of the site was conducted and the results presented in Table 8 below. The species, record type, proximity, number and date of each record is detailed in Table 8 below.

Table 8. Biological records for reptiles within a 2km of the site

Scientific Name	Common Name	Record Type	Closest Record (m)	Most Recent Record	Number of Records
Anguis fragilis	Slow-worm	Field observation	0	22/06/2018	4
Natrix helvetica	Grass snake	Field observation	0	31/10/2022	97
Zootoca vivipara	Common lizard	Field observation	0	31/07/2022	78

Birds (Schedule 1 only)

4.1.6 A search for biological records for birds (species listed in Schedule 1 of the Wildlife and Countryside Act only) within a 2km radius of the site was conducted and the results presented in Table 9 below. The species, record type, proximity, number and date of each record is detailed in Table 9 below.

Table 9. Biological records for Schedule 1 birds within 2km of the site

Scientific Name	Common Name	Record Type	Closest Record (m)	Most Recent Record	Number of Records
Recurvirostra avosetta	Avocet	Field observation	0	13/05/2018	13

Tyto alba	Barn owl	Field observation	0	16/12/2022	142
Panurus biarmicus	Bearded tit	Field observation	0	18/11/2022	9
Calcarius lapponicus	Lapland bunting	Field observation	0	18/11/2015	1
Botaurus stellaris	Bittern	Field observation	0	31/12/2022	586
Phoenicurus ochruros	Black redstart	Field observation	0	31/03/2021	3
Chlidonias niger	Black tern	Field observation	0	30/04/2022	51
Podiceps nigricollis	Black-necked grebe	Field observation	0	09/06/2020	39
Limosa limosa	Black-tailed godwit	Field observation	0	22/08/2022	127
Gavia arctica	Black-throated diver	Field observation	0	28/11/2021	47
Fringilla montifringilla	Brambling	Field observation	0	25/11/2022	149
Cettia cetti	Cetti's warbler	Field observation	0	29/12/2022	631
Melanitta nigra	Common scoter	Field observation	0	14/04/2018	24
Crex crex	Corncrake	Field observation	0	22/07/2015	1
Loxia curvirostra	Crossbill	Field observation	0	03/03/2021	17
Turdus pilaris	Fieldfare	Field observation	0	30/12/2022	586
Regulus ignicapilla	Firecrest	Field observation	0	01/11/2022	1
Spatula querquedula	Garganey	Field observation	0	04/09/2022	149
Oriolus oriolus	Golden oriole	Field observation	0	25/05/2020	3
Accipiter gentilis	Goshawk	Field observation	0	18/04/2021	1
Tringa ochropus	Green sandpiper	Field observation	0	22/12/2022	131
Tringa nebularia	Greenshank	Field observation	0	19/08/2022	47
Circus cyaneus	Hen Harrier	Field observation	0	20/05/2017	2
Falco subbuteo	Hobby	Field	0	09/10/2022	430

		observation			
Upupa epops	Hoopoe	Field observation	0	30/03/2021	1
Alcedo atthis	Kingfisher	Field observation	0	31/12/2022	1729
Hydrocoloeus minutus	Little gull	Field observation	0	25/04/2020	29
Charadrius dubius	Little ringed plover	Field observation	0	06/06/2022	482
Sternula albifrons	Little tern	Field observation	0	22/07/2022	20
Clangula hyemalis	Long-tailed duck	Field observation	0	21/01/2020	41
Circus aeruginosus	Marsh harrier	Field observation	0	13/12/2022	159
Ichthyaetus melanocephalus	Mediterranean gull	Field observation	0	21/07/2022	781
Falco columbarius	Merlin	Field observation	0	21/09/2022	8
Pandion haliaetus	Osprey	Field observation	0	19/08/2022	12
Falco peregrinus	Peregrine	Field observation	0	18/12/2022	600
Coturnix coturnix	Quail	Field observation	0	23/06/2021	14
Milvus milvus	Red kite	Field observation	0	05/11/2022	110
Turdus iliacus	Redwing	Field observation	0	31/12/2022	921
Calidris pugnax	Ruff	Field observation	0	17/08/2022	74
Aythya marila	Scaup	Field observation	0	16/11/2021	309
Platalea leucorodia	Spoonbill	Field observation	0	19/05/2015	2
Porzana porzana	Spotted crake	Field observation	1300	29/08/2022	1
Calidris temminckii	Temminck's stint	Field observation	0	23/08/2016	2
Numenius phaeopus	Whimbrel	Field observation	0	08/05/2021	38
Cygnus cygnus	Whooper swan	Field observation	0	13/10/2022	293
Tringa glareola	Wood sandpiper	Field observation	0	02/07/2022	19

Invertebrates

4.1.7 A search for biological records for invertebrates (listed in Schedule 5 of the Wildlife and Countryside Act only) within a 2km radius of the site was conducted and the results presented in Table 10 below. The species, record type, proximity, number and date of each record is detailed in Table 10 below.

Table 10. Biological records for invertebrates within 2km of the site

Scientific Name	Common Name	Record Type	Closest Record (m)	Most Recent Record	Number of Records
Apatura iris	Purple emperor	Field observation	0	03/07/2018	1

Flora

4.1.8 A search for biological records for protected flora species (listed within Schedule 8 of the Wildlife and Countryside Act) within a 2km radius of the site was conducted and the results presented in Table 11 below. The species, record type, proximity, number and date of each record is detailed in Table 11 below.

Table 11. Biological records for protected flora species within 2km of the site

Scientific Name	Common Name	Record Type	Closest Record (m)	Most Recent Record	Number of Records
No records found					0

4.2 Local and National Priority Species

4.2.1 A search for biological records for local and national priority species within a 10km radius of the site was conducted and the results presented in Table 12 below.

Table 12. Records of Local and National Priority species within 10km of the site

Group	Scientific Name	Latin Name
amphibian	*Bufo bufo*	Common Toad
amphibian	*Triturus cristatus*	Great Crested Newt
amphibian	*Lissotriton vulgaris*	Smooth Newt
amphibian	*Lissotriton helveticus*	Palmate Newt

bird	*Passer domesticus*	House Sparrow
bird	*Tyto alba*	Barn Owl
bird	*Apus apus*	Swift
bird	*Turdus philomelos*	Song Thrush
bird	*Perdix perdix*	Grey Partridge
bird	*Passer montanus*	Tree Sparrow
bird	*Emberiza schoeniclus*	Reed Bunting
bird	*Alauda arvensis*	Skylark
bird	*Linaria cannabina*	Linnet
bird	*Sturnus vulgaris*	Starling
bird	*Emberiza calandra*	Corn Bunting
bird	*Emberiza citrinella*	Yellowhammer
bird	*Cuculus canorus*	Cuckoo
bird	*Gallinago gallinago*	Snipe
bird	*Vanellus vanellus*	Lapwing
bird	*Pyrrhula pyrrhula*	Bullfinch
bird	*Acanthis cabaret*	Lesser Redpoll
bird	*Aythya marila*	Scaup
bird	*Numenius arquata*	Curlew
bird	*Botaurus stellaris*	Bittern
bird	*Motacilla flava*	Yellow Wagtail
bird	*Muscicapa striata*	Spotted Flycatcher
bird	*Melanitta nigra*	Common Scoter
bird	*Streptopelia turtur*	Turtle Dove
bird	*Tringa totanus*	Redshank
bird	*Coccothraustes coccothraustes*	Hawfinch
bird	*Turdus torquatus*	Ring Ouzel
bird	*Caprimulgus europaeus*	Nightjar
bird	*Anthus trivialis*	Tree Pipit
bird	*Crex crex*	Corncrake
bird	*Gavia arctica*	Black-throated Diver
bird	*Lullula arborea*	Woodlark
bird	*Branta bernicla bernicla*	Dark-bellied Brent Goose
bird	*Locustella naevia*	Grasshopper Warbler
bird	*Cuculus canorus canorus*	Cuculus canorus canorus
bird	*Apus apus apus*	Apus apus apus

bird	*Linaria cannabina cannabina*	Linaria cannabina cannabina
bird	*Emberiza schoeniclus schoeniclus*	Emberiza schoeniclus schoeniclus
bird	*Sturnus vulgaris vulgaris*	Sturnus vulgaris vulgaris
bird	*Alauda arvensis arvensis*	Alauda arvensis arvensis
bird	*Passer domesticus domesticus*	Passer domesticus domesticus
bird	*Motacilla flava flavissima*	Yellow Wagtail
bird	*Pyrrhula pyrrhula pileata*	Pyrrhula pyrrhula pileata
bird	*Turdus philomelos clarkei*	Turdus philomelos clarkei
bird	*Tringa totanus totanus*	Tringa totanus totanus
bird	*Prunella modularis occidentalis*	Hedge Accentor
bird	*Emberiza schoeniclus lusitanica*	
bird	*Streptopelia turtur turtur*	Streptopelia turtur turtur
bird	*Perdix perdix perdix*	Perdix perdix perdix
bird	*Motacilla flava flava/beema*	
bony fish (Actinopterygii)	*Cobitis taenia*	Spined Loach
bony fish (Actinopterygii)	*Anguilla anguilla*	European Eel
fern	*Pilularia globulifera*	Pillwort
flowering plant	*Sium latifolium*	Greater Water-parsnip
flowering plant	*Oenanthe fistulosa*	Tubular Water-dropwort
flowering plant	*Centaurea cyanus*	Cornflower
insect - beetle (Coleoptera)	*Panagaeus cruxmajor*	Crucifix Ground Beetle
insect - beetle (Coleoptera)	*Cryptocephalus coryli*	Hazel Pot Beetle
insect - butterfly	*Lasiommata megera*	Wall
insect - butterfly	*Coenonympha pamphilus*	Small Heath
insect - butterfly	*Limenitis camilla*	White Admiral
insect - butterfly	*Satyrium w-album*	White-letter Hairstreak
insect - butterfly	*Erynnis tages tages*	Dingy Skipper
insect - butterfly	*Coenonympha pamphilus pamphilus*	Small Heath
insect - hymenopteran	*Bombus ruderarius*	Red-shanked Carder Bee
insect - moth	*Aporophyla lutulenta*	Deep-brown Dart
insect - moth	*Timandra comae*	Blood-vein

insect - moth	*Tyria jacobaeae*	Cinnabar
insect - moth	*Adscita statices*	Forester
insect - moth	*Scotopteryx chenopodiata*	Shaded Broad-bar
insect - moth	*Hepialus humuli*	Ghost Moth
insect - moth	*Watsonalla binaria*	Oak Hook-tip
insect - moth	*Trichiura crataegi*	Pale Eggar
insect - moth	*Caradrina morpheus*	Mottled Rustic
insect - moth	*Lycia hirtaria*	Brindled Beauty
insect - moth	*Xanthorhoe ferrugata*	Dark-barred Twin-spot Carpet
insect - moth	*Spilosoma lubricipeda*	White Ermine
insect - moth	*Rhizedra lutosa*	Large Wainscot
insect - moth	*Atethmia centrago*	Centre-barred Sallow
insect - moth	*Xestia agathina*	Heath Rustic
insect - moth	*Asteroscopus sphinx*	Sprawler
insect - moth	*Ennomos erosaria*	September Thorn
insect - moth	*Chiasmia clathrata*	Latticed Heath
insect - moth	*Pelurga comitata*	Dark Spinach
insect - moth	*Amphipyra tragopoginis*	Mouse Moth
insect - moth	*Diarsia rubi*	Small Square-spot
insect - moth	*Melanchra persicariae*	Dot Moth
insect - moth	*Acronicta rumicis*	Knot Grass
insect - moth	*Anchoscelis litura*	Brown-spot Pinion
insect - moth	*Allophyes oxyacanthae*	Green-brindled Crescent
insect - moth	*Agrochola lychnidis*	Beaded Chestnut
insect - moth	*Ecliptopera silaceata*	Small Phoenix
insect - moth	*Hoplodrina blanda*	Rustic
insect - moth	*Apamea remissa*	Dusky Brocade
insect - moth	*Apamea anceps*	Large Nutmeg
insect - moth	*Amphipoea oculea*	Ear Moth
insect - moth	*Euxoa tritici*	White-line Dart
insect - moth	*Orthosia gracilis*	Powdered Quaker
insect - moth	*Malacosoma neustria*	Lackey
insect - moth	*Hydraecia micacea*	Rosy Rustic
insect - moth	*Ennomos fuscantaria*	Dusky Thorn
insect - moth	*Acronicta psi*	Grey Dagger
insect - moth	*Tholera cespitis*	Hedge Rustic

insect - moth	*Spilosoma lutea*	Buff Ermine
insect - moth	*Litoligia literosa*	Rosy Minor
insect - moth	*Brachylomia viminalis*	Minor Shoulder-knot
insect - moth	*Helotropha leucostigma*	Crescent
insect - moth	*Cirrhia icteritia*	Sallow
insect - moth	*Leucania comma*	Shoulder-striped Wainscot
insect - moth	*Ennomos quercinaria*	August Thorn
insect - moth	*Celaena haworthii*	Haworth's Minor
insect - moth	*Xanthorhoe decoloraria*	Red Carpet
insect - moth	*Xestia agathina agathina*	Heath Rustic
insect - moth	*Euxoa nigricans*	Garden Dart
reptile	*Natrix helvetica*	Grass Snake
reptile	*Zootoca vivipara*	Common Lizard
reptile	*Anguis fragilis*	Slow-worm
reptile	*Vipera berus*	Adder
terrestrial mammal	*Erinaceus europaeus*	West European Hedgehog
terrestrial mammal	*Arvicola amphibius*	European Water Vole
terrestrial mammal	*Lepus europaeus*	Brown Hare
terrestrial mammal	*Lutra lutra*	Eurasian Otter
terrestrial mammal	*Micromys minutus*	Harvest Mouse
terrestrial mammal	*Mustela putorius subsp. furo*	Feral Ferret
terrestrial mammal (bat)	*Chiroptera*	Bat
terrestrial mammal (bat)	*Myotis nattereri*	Natterer's Bat
terrestrial mammal (bat)	*Myotis*	Myotis Bat species
terrestrial mammal (bat)	*Plecotus auritus*	Brown Long-eared Bat
terrestrial mammal (bat)	*Nyctalus noctula*	Noctule Bat
terrestrial mammal (bat)	*Pipistrellus pipistrellus sensu stricto*	Common Pipistrelle
terrestrial mammal (bat)	*Pipistrellus pygmaeus*	Soprano Pipistrelle
terrestrial mammal (bat)	*Pipistrellus*	Pipistrelle Bat species
terrestrial mammal (bat)	*Myotis daubentonii*	Daubenton's Bat
terrestrial mammal (bat)	*Pipistrellus nathusii*	Nathusius's Pipistrelle

terrestrial mammal (bat)	*Myotis brandtii*	Brandt's Bat
terrestrial mammal (bat)	*Nyctalus leisleri*	Leisler's Bat
terrestrial mammal (bat)	*Myotis mystacinus*	Whiskered Bat
terrestrial mammal (bat)	*Barbastella barbastellus*	Western Barbastelle

4.3 Non-Native Species

4.3.1 A search for biological records for non-native species within a 10km radius of the site was conducted and the results presented in Table 13 below. The species, proximity, number and date of each record is detailed in Table 13 below.

Table 13 Records of non-native species within 10km of the site

Group	Scientific Name	Latin Name
amphibian	*Pelophylax ridibundus*	Marsh Frog
bird	*Alopochen aegyptiaca*	Egyptian Goose
bird	*Branta canadensis*	Canada Goose
bird	*Netta rufina*	Red-crested Pochard
bird	*Grus grus*	Crane
bird	*Branta leucopsis*	Barnacle Goose
bird	*Aix galericulata*	Mandarin Duck
bird	*Tadorna ferruginea*	Ruddy Shelduck
crustacean	*Crangonyx pseudogracilis/floridanus sens. lat.*	*Crangonyx pseudogracilis/floridanus*
crustacean	*Eriocheir sinensis*	Chinese Mitten Crab
crustacean	*Crangonyx pseudogracilis sens. str.*	*Crangonyx pseudogracilis*
fern	*Azolla filiculoides*	Water Fern
flowering plant	*Buddleja davidii*	Butterfly-bush
flowering plant	*Crocosmia pottsii x aurea = C. x crocosmiiflora*	Montbretia
flowering plant	*Fallopia japonica*	Japanese Knotweed
flowering plant	*Elodea nuttallii*	Nuttall's Waterweed
flowering plant	*Impatiens glandulifera*	Himalayan Balsam
flowering plant	*Alnus cordata*	Italian Alder

flowering plant	*Lamiastrum galeobdolon subsp. argentatum*	*Lamiastrum galeobdolon subsp. argentatum*
flowering plant	*Cotoneaster horizontalis*	Wall Cotoneaster
flowering plant	*Lemna minuta*	Least Duckweed
flowering plant	*Petasites fragrans*	Winter Heliotrope
flowering plant	*Robinia pseudoacacia*	False-acacia
flowering plant	*Elodea canadensis*	Canadian Waterweed
flowering plant	*Hydrocotyle ranunculoides*	Floating Pennywort
flowering plant	*Rhododendron ponticum*	Rhododendron ponticum
flowering plant	*Rosa rugosa*	Japanese Rose
flowering plant	*Myriophyllum aquaticum*	Parrot's-feather
flowering plant	*Lagarosiphon major*	Curly Waterweed
flowering plant	*Fallopia baldschuanica*	Russian-vine
flowering plant	*Cotoneaster simonsii*	Himalayan Cotoneaster
flowering plant	*Crassula helmsii*	New Zealand Pigmyweed
flowering plant	*Acaena novae-zelandiae*	Pirri-pirri-bur
insect - beetle (Coleoptera)	*Harmonia axyridis*	Harlequin Ladybird
mollusc	*Dreissena rostriformis bugensis*	Quagga Mussel
reptile	*Trachemys scripta*	Red-eared Terrapin
terrestrial mammal	*Sciurus carolinensis*	Eastern Grey Squirrel
terrestrial mammal	*Neovison vison*	American Mink
terrestrial mammal	*Muntiacus reevesi*	Chinese Muntjac
terrestrial mammal	*Glis glis*	Fat Dormouse
terrestrial mammal	*Hydropotes inermis*	Chinese Water Deer

5 Discussion

5.1.1 The desk study has confirmed there are no ecological designations overlapping with the HMMP area. The closest ecological designations are several hundred metres away and would not be affected by the proposed works in the HMMP.

5.1.2 A high proportion of the protected species records are shown as zero distance from the HMMP area. This is due to the low resolution of many of the species records provided and should not be taken to mean that the species was recorded from this location.

5.1.3 It should be noted that the vast majority of protected species records were classed as general observations and are likely to relate to animals that were active. There were few records relating to a resting or breeding place, such as a bat roost or badger sett, overlapping with the HMMP area. The only instance of records for a breeding place overlapping with the HMMP related to netting records of amphibians which were provided at a 100x100km square resolution. However the HMMP site and surrounding woodland does not contain ponds and the closest known ponds are approximately 400 metres away so the site is unlikely to be used by this species. Overall the records do not highlight any particular protected species constraints to the works proposed within the HMMP. Any protected species present in the area are likely to be either unaffected or benefit from the habitat enhancement.

5.1.4 The summarised records of Local and National Priority species include a large number of species. The majority relate to species with a preference for habitats other than woodland. All of the Local and National Priority species identified would be either unaffected or else benefit from the proposed habitat enhancements in the HMMP.

5.1.5 The summarised records for non-native species include a significant number of species. Only a low number of these might use woodland habitat. The HMMP contains measures to ensure the identification and control of any non-native species present. The list provided here does not suggest any changes are needed to the HMMP but will provide a useful reference for monitoring non-natives in the HMMP area.

ANNEX

PLANS

NOTES

Source
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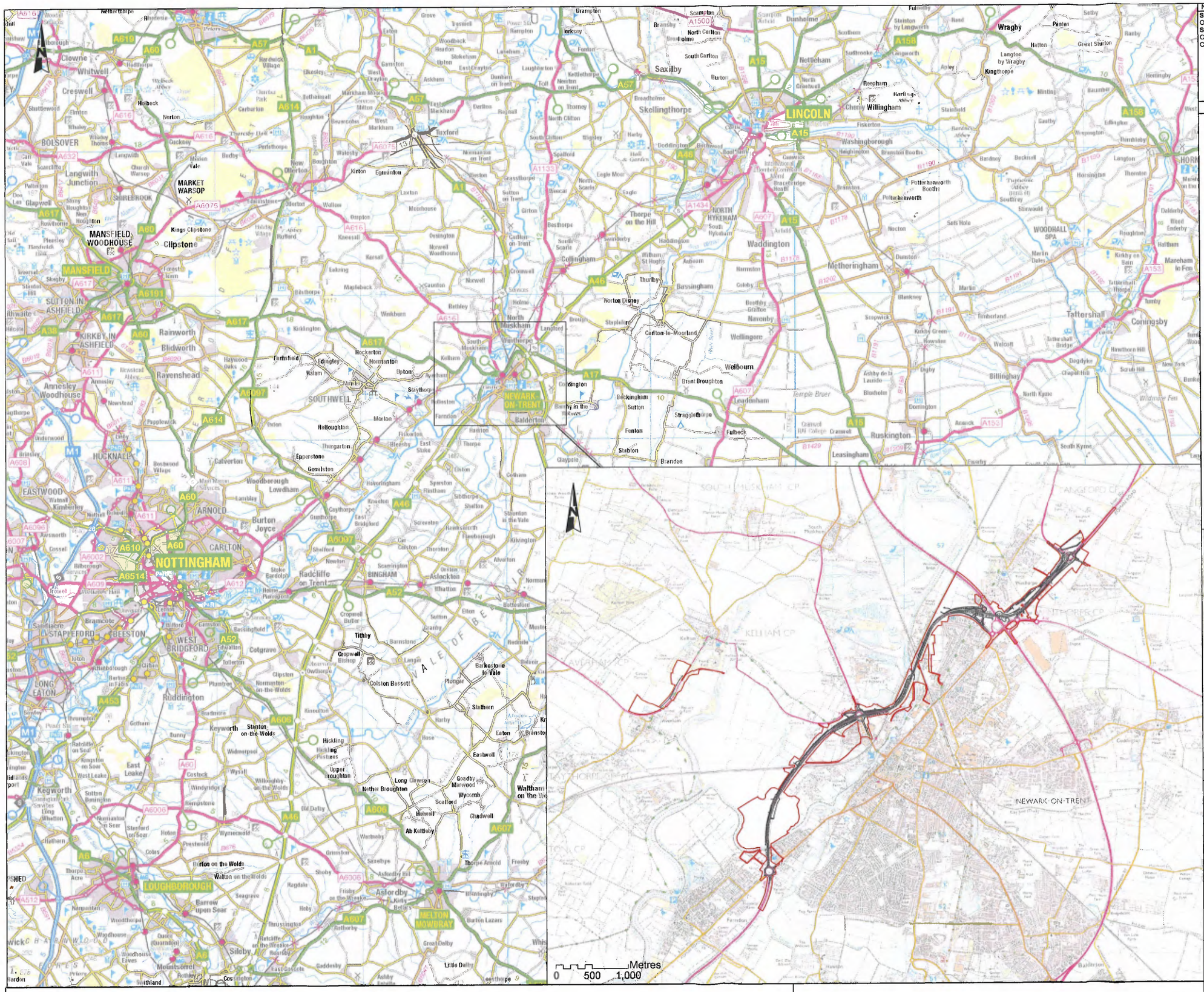
Service Layer Credits
Contains OS data © Crown Copyright and database right 2023
Contains data from OS Zoomstack

KEY TO SYMBOLS

Order Limits
Scheme alignment

[redacted]



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C01	08/12/23	DCO APPLICATION	DT	SB	HF

CLIENT
national highways

PURPOSE OF ISSUE
DCO APPLICATION

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

PROJECT TITLE
A46 NEWARK BYPASS

DRAWING TITLE
Figure 2.1
Scheme Location Plan

ORIGINAL SIZE A1 SCALE 1:125,000

DRAWING NUMBER
HE PIN | ORIGINATOR | VOLUME
HE551478 SKAG HGN
CONWI_CONW DR LE 00005
LOCATION | TYPE | ROLE | NUMBER

PROJECT REF NO.
HE551478

REVISION
C01

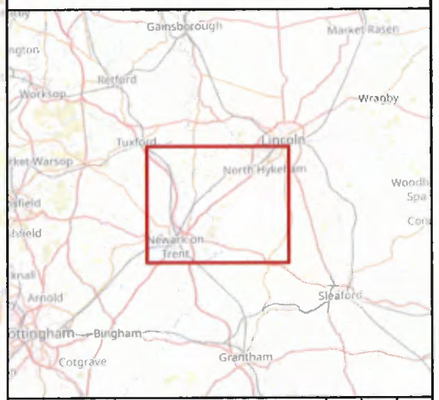
Enhancement area = 1.3ha

Source
Enhancement area, Mott MacDonald 2024.
Service Layer Credits
© OpenStreetMap (and) contributors, CC-BY-SA

KEY TO SYMBOLS

- Order Limits
- Enhancement area
- Ehancement area 50m buffer zone

[redacted]



REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
C02	26/02/25	UPDATED FOR LEGAL AGREEMENT	MH	DT	RH

CLIENT
national highways

PURPOSE OF ISSUE
LEGAL AGREEMENT

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

PROJECT TITLE
A46 NEWARK BYPASS

DRAWING TITLE
Figure 1.1
Off-site BNG Delivery Area Boundary Plan

ORIGINAL SIZE A3 SCALE 1:70,000

DRAWING NUMBER HE PIN	ORIGINATOR	VOLUME	LOCATION	TYPE	ROLE	NUMBER	PROJECT REF NO.	REVISION
HE551478	SKAG	EBD	CONWI_CONW	DR	LE	00191	HE551478	C02

0 1 2 3 4 5 km

IN WITNESS whereof the Parties have delivered this Deed the day and year first above written.

Executed as a Deed by affixing the common seal of National Highways Limited in the presence of)
)
)

Director or Authorised Signatory

.....)
.....
)

In the presence of a witness)

.....)
.....
)

Witness Name:
.....)
.....)

Witness Address:)

.....)
.....
.....)
.....
.....

Witness Occupation:

.....
.....

Executed as a Deed signed by [redacted]

In the presence of a witness: .....

Witness Name: [redacted]

Witness Occupation: [redacted]

Witness Address: [redacted]

.....

Executed as a Deed signed by [redacted]

In the presence of a witness: .....

Witness Name: [redacted]

Witness Occupation: [redacted]

Witness Address: [redacted]

.....

IN WITNESS whereof the Parties have delivered this Deed the day and year first above written.

Executed as a Deed by affixing the common seal of National Highways Limited in the presence of)

Director or Authorised Signatory

[redacted])

.....)

In the presence of a witness)

[redacted] .....)

.....)

Witness Name:

[redacted])

)

Witness Address:)

[redacted]

Witness Occupation:

[redacted] .....

Executed as a Deed signed by [redacted]

.....

In the presence of a witness: .....

Witness Name: .....

Witness Occupation: .....

Witness Address: .....

.....

Executed as a Deed signed by [redacted]

.....

In the presence of a witness: .....

Witness Name: .....

Witness Occupation: .....

Witness Address: .....

.....