

Lower Thames Crossing

6.3 Environment Statement Appendices Appendix 8.22 – Terrestrial Ecology Surveys at Nitrogen Deposition Compensation Sites

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1 Introduction

1.1.1 This document presents the findings of the UK Habitat Classification (UKhab), great crested newt (GCN; *Triturus cristatus*) and badger (*Meles meles*) surveys of the eight nitrogen deposition compensation sites. These surveys will henceforth be collectively referred to as the ‘ecology surveys’. The ecology surveys were undertaken from April to June 2022. This report forms an appendix to Chapter 8: Terrestrial Biodiversity (Application Document 6.1) of the Environmental Statement and provides baseline ecological data which informs the terrestrial biodiversity impact assessment detailed within Chapter 8. As part of the Environmental Impact Assessment (EIA) of the A122 Lower Thames Crossing (the Project), eight sites (hereafter referred to as “compensation sites”) have been identified as suitable areas to provide compensation for the adverse effects of nitrogen deposition on designated sites as a result of the Project’s construction and operation. The methodology used to identify these sites, and detail on the overall compensation strategy, is provided in the Project Air Quality Action Plan (Appendix 5.6, Application Document 6.3). Details regarding the compensation sites are presented in Table 1.1 and their locations are shown in Figure 1 of this report.

Table 1.1 Compensation Site Information

Site Code	Site Name	Orientation to the River Thames	Grid Reference	Site Area (ha)
MAol1_A	Hole Farm East	North	TQ5863989719	75.2
MAol2_A	Buckingham Hill	North	TQ6693781074	24.4
MAol2_B	Hoford Road	North	TQ6613180206	21.6
MAol3_A	Henhurst Hill	South	TQ6584969827	9.1
MAol3_D1	Fenn Wood	South	TQ6889870621	5.8
MAol3_D2	Court Wood	South	TQ6970870954	27.7
MAol4_C1	Blue Bell Hill	South	TQ7631161074	72.2
MAol4_C2	Burham	South	TQ7353661634	9.7

2 Legislation and conservation status

2.1 Priority Habitats

2.1.1 Habitat conservation, enhancement, minimisation of loss and improvement of ecological connectivity and biodiversity form the focus of many environmental acts, most prominently the Natural Environment and Rural Communities Act (2006). This aims to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy.

2.2 Great Crested Newt

2.2.1 In Britain, GCN, their eggs, their breeding sites, and their resting places are afforded protection by the Wildlife and Countryside Act 1981 (as amended). The Act transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats 1979 (commonly referred to as the 'Bern Convention'). GCN is listed on Schedule 5 of the Act in respect of Section 9, which makes it an offence, inter alia, to:

2.2.2 Intentionally or recklessly kill, injure, or take (handle) a GCN;

- a. Deliberately disturb a dormouse, in particular any disturbance that is likely to impair its ability;
- b. Intentionally or recklessly damage, destroy, or obstruct access to any structure or place that a GCN uses for shelter or protection; or
- c. Intentionally or recklessly disturb a GCN while it is occupying a structure or place that it uses for shelter or protection.

2.2.3 GCN receives further protection under Regulation 42 of The Conservation of Habitats and Species Regulations 2017 (as amended), which make provision for the purpose of implementing the European Union Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992. Within this directive, they are listed on Annex IV, which means that member states are required to put in place a system of strict protection as outlined in Article 12, and this is done through inclusion on Schedule 2 of the Regulations, which makes it an offence, inter alia, to:

- a. Deliberately capture, injure, or kill any GCN;
- b. Deliberately disturb a GCN, in particular any disturbance which is likely to:
 - i. Impair their ability to survive, to breed or reproduce, to rear or nurture their young, or to hibernate or migrate;
 - ii. To affect significantly the local distribution or abundance of GCN;
- c. Damage or destroy a breeding site or resting place of a GCN.

2.3 Badger

- 2.3.1 In the UK badger and their active setts are afforded protection under the Protection of Badgers Act (1992). Under this legislation it is illegal to:
- a. Intentionally capture kill, or injure a badger;
 - b. Damage, destroy or block access to their setts;
 - c. Disturb badgers in setts;
 - d. Treat a badger cruelly;
 - e. Deliberately send or intentionally allow a dog into a sett; or
 - f. Bait or dig for badgers
- 2.3.2 A sett is defined within the Protection of Badgers Act 1992 as ‘any structure or place which displays signs of current use by a badger’.
- 2.3.3 Setts, regardless of type, are only protected when in current use. Natural England provides the following guidance on defining current use (Natural England, 2009): ‘As long as there are signs present indicating “current uses” the sett is defined as such in the Act and is therefore protected. The maximum lapse of time between last occupation by badgers and the inspection of a sett for it to be considered in “current use” is how long it takes the signs to disappear, or more precisely, to appear so old as to not indicate “current use”.

3 Background ecology

3.1 Great Crested Newt

- 3.1.1 GCN are generally long-lived with a lifespan of up to 14 years in the wild (Langton et al., 2001). They spend most of their life cycle on land in a terrestrial state. Only breeding and larval development occurs in waterbodies. Courting, mating and egg-laying usually occurs between mid-March and mid-June.
- 3.1.2 In the spring/summer, GCN move to breeding waterbodies where eggs are laid singly on folded leaves and hatch into GCN larvae. These larvae take approximately three months to develop into a young newt, which are then able to leave the water. During the late autumn/winter, they hibernate in underground crevices or cracks, such as a void in a tree stump or bank, or under refugia such as rock piles or dead wood.
- 3.1.3 GCN can occupy a variety of terrestrial habitats for foraging and hibernation, including areas of rough grassland, woodland and scrub that typically, but not exclusively, fall in proximity to breeding sites. Breeding waterbodies are typically unpolluted, free from the presence of fish that eat larval GCN, are interconnected with other waterbodies, and dry out in some years (Langton et al., 2001).
- 3.1.4 The majority of adult GCN stay within approximately 250m of the breeding waterbody, with newts from small populations tending to stay within 100m of the breeding waterbody, depending on the quality of habitats within proximity to the waterbody (English Nature, 2004).
- 3.1.5 The density of individuals gradually decreases away from the waterbody. However, newts may travel further when dispersing for the first time, or where there are areas of high-quality foraging and refuge habitat extending beyond this range (Langton et al., 2001).

3.2 Badger

- 3.2.1 Badgers are generally considered widespread in Britain but are most common in the south west and rarer to the north and the east. Badgers are nocturnal and rarely seen during the day. When not active, badgers usually lie up in an extensive system of underground tunnels and nesting chambers, known as a sett. Each social group usually has a main sett where the majority of the group live most of the time, but there may be odd holes scattered around the territory that are used occasionally. Badgers can live in social groups of two to 23 adults, but usually around six. They defend an area around their main sett as a territory. Badgers leave their faeces in collections of shallow pits, which in aggregate are called latrines. These latrines are used by badgers to mark the boundaries of their territories (English Nature, 2002).
- 3.2.2 Mating takes place between February and May, with implantation delayed until late winter. Only one female badger in a social group normally breeds, although sometimes two or more may do so. Litters of 2-3 cubs are born around February blind and hairless in the safety of the nest. They usually appear above

ground at about 8 weeks and weaning usually takes about 12 weeks (The Mammal Society, 2022).

4 Methodology

4.1 UK Habitat Classification Survey

Desk Study

- 4.1.1 The survey area for the UKhab surveys was defined as all land within the compensation site boundaries.
- 4.1.2 A desk study was undertaken prior to site visits whereby habitats were identified from aerial imagery, online mapping and MAGIC online services, and provisionally mapped using UKhab and Phase 1 symbology within the survey area.

Field Study

- 4.1.3 Site visits and subsequent UKhab surveys were then undertaken where access was granted, as a ground truthing exercise to ensure habitats identified during the desk study were recorded and classified correctly. Information required to complete the condition assessment for each habitat within the survey area was also collected.
- 4.1.4 A UKhab survey was conducted throughout the survey area. UKhab is a relatively recent technique for rapidly obtaining baseline ecological information over a large area of land. It classifies areas of land based on the vegetation present in a hierarchical manner with five levels from broad ecosystem level down to specific habitat type. All habitats on site were identified to Level 3 at a minimum on the habitat hierarchy. In addition to the primary habitats there is a list of secondary habitat codes that can be linked to each primary habitat. These secondary codes allow for the recording of additional information, linked to the primary habitat. For example, g1c bracken which is under forest or woodland canopy which are included in either w1 broadleaved mixed and yew woodland or w2 coniferous woodland will have secondary code 12 scattered bracken (UK Habitat Classification Working Group, 2018).
- 4.1.5 A habitat condition assessment was undertaken for all habitat features which were visited where access was granted, these were mapped following the Defra Biodiversity Metric 3.1 (Panks *et al*, 2022). Conditions were recorded as 'Good', 'Moderate', 'Poor' or 'N/A', assessed using the condition assessment form appropriate to the habitat. For rivers and streams the conditions were recorded as 'Good', 'Moderate', 'Fairly Poor', 'Poor' or 'N/A', The methodology for the rivers and streams component of the biodiversity net gain assessment for nitrogen deposition compensation sites is covered in the Appendix 8.2: Biodiversity Metric Calculations (Application Document 6.3). Where access to habitat parcels was partial in some instances, the condition of the accessible habitat parcel was assumed for the entire habitat parcel.

4.2 Great Crested Newt

Desk Study

- 4.2.1 The survey area for GCN is defined as all land within the compensation site boundaries, inclusive of a 250m buffer of each compensation site.
- 4.2.2 Potential GCN breeding sites (ponds, wet ditches, lakes etc; hereafter referred to as waterbodies) within 250m of each compensation site were initially identified through a detailed review of Ordnance Survey mapping, high resolution aerial imagery, desk study data, and past Phase 1/UKhab data collected as part of the Project.

Field Study

- 4.2.3 An initial assessment was undertaken at all potential GCN breeding waterbodies identified during the desk study. This was to firstly determine whether the waterbody was present and secondly to determine whether it had potential to support GCN or could be screened out of further assessment.
- 4.2.4 All potential waterbodies within the survey area which were separated from the compensation site boundaries by a major dispersal barrier were screened out from further assessment.
- 4.2.5 The remaining potential waterbodies were then examined further to determine if they could comprise suitable breeding habitat for GCN.
- 4.2.6 A waterbody was screened out if it was obviously:
- Filled in or dry for at least most of the year;
 - A slurry pond;
 - A chlorinated swimming pool;
 - A fishing lake or pond which is stocked with fish;
 - Running water (streams and rivers);
 - A lake greater than 2ha in size; or
 - Saline.

Habitat Suitability Index Assessment

- 4.2.7 As part of the field surveys, a Habitat Suitability Index (HSI) assessment was undertaken of all suitable GCN breeding waterbodies identified during the desk study, excluding those which were initially screened out, to assess the potential suitability of such waterbodies for supporting breeding GCN. This methodology considers ten suitability indices that are known to affect GCN. These include geographical location, waterbody area, waterbody permanence, water quality, shade cover, waterfowl presence, fish presence, waterbody density/number of waterbodies within 1km, terrestrial habitat quality and waterbody macrophyte cover.

4.2.8 Each is assessed and assigned a score between 0 and 1, with values closer to 0 being less suitable for GCN and those closer to 1 being more suitable. These values are then multiplied together, and the tenth root calculated to give an overall HSI score for the waterbody (Oldham et al., 2000). The potential outcomes are listed below in Table 4.1.

Table 4.1 Compensation Site Information

HSI Score	Waterbody Suitability
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.8	Good
>0.8	Excellent

eDNA Sampling Surveys and Analysis

4.2.9 Each waterbody was assessed for the presence/likely absence of GCN by collecting 20 water samples from around the perimeter of each waterbody using a 40ml ladle, focusing on areas most likely to be used by GCN. The water samples were then transferred into a whirl Pak bag. Before each sample was taken, the water was gently stirred using the ladle. This is because eDNA will often be present in larger quantities at the bottom of the waterbody as it tends to sink in water. The whirl Pak bag was then gently shaken to mix eDNA across the whole water sample. A pipette was then used to transfer 15ml of water from the whirl Pak bag into each of the six conical tubes containing a preserving fluid. Each conical tube was then vigorously shaken for ten seconds to mix the water sample and the preservative. The six conical tubes were then labelled and sent to the lab for analysis.

4.2.10 The lab creates a section of eDNA known as a primer which is specific to GCN. The primer will bind to the GCN ribonucleic acid (RNA, which acts as a messenger for carrying instruction from DNA for controlling the synthesis of proteins) and initiate the replication process. The polymerase Chain Reaction (PCR) is used to separate the strands of RNA, allowing a primer bonding to occur. The DNA is then amplified in the chain reaction and analysed for GCN DNA presence. If GCN DNA is present, the primer reacts with it and produces readable levels of GCN DNA (Biggs et al., 2014).

4.2.11 All eDNA surveys were undertaken within the eDNA season between mid-April 2022 to June 2022.

4.3 Badger

Desk Study

4.3.1 The survey area for the badger surveys was defined as all the land within the compensation site boundaries, inclusive of a 30m buffer.

Field Study

- 4.3.2 Field surveys were undertaken simultaneously as the UKhab and eDNA surveys. These surveys followed Natural England guidance (Natural England, 2011) and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (Hill et al., 2007) and aimed to identify the presence of badgers based on field signs. Field signs comprise badger setts, footprints, latrines, snuffle holes, mammal pathways, hair or physical sightings of badger (alive or dead).
- 4.3.3 Any badger setts found were mapped and the number of individual entrances and tunnel direction recorded. Setts were provisionally categorised according to Natural England (2011), using the following criteria:
- a. Main Sett: Usually appearing well-used, well established and having a large number of holes with big active spoil heaps, often with piles of old bedding outside. Main setts tend to have well-worn pathways between the sett and foraging areas and between sett holes. They are generally considered to be breeding setts (i.e., where cubs are most likely to be born) and are often in use all year round. A social group of badgers would typically only have one main sett within their territory.
 - b. Annex Sett: Always close to the main sett and are usually connected by one or more obvious well-worn pathways. They consist of several holes but are not necessarily in use the whole time, even if the main sett is very active. Should a second litter of cubs be born within the social group, they are likely to be raised within the annex sett.
 - c. Subsidiary Sett: Often have very few holes, are usually at least 50m from the main sett and do not have an obvious pathway connecting them to another sett. Subsidiary setts are not continuously active.
 - d. Outlying Sett: Usually comprise of one or two holes with very little spoil outside (thus indicating that the tunnel system underground is not extensive), have no obvious pathway connecting them with another sett and are used only sporadically.
- 4.3.4 An indication of the level of activity at each sett was also made as follows (Natural England, 2011):
- a. Active:
 - i. In current use: well-used sett entrances contain no debris or vegetation, are obviously regularly used and often show signs of having been recently excavated. Badger field signs such as latrines, dung pits or footprints are present.
 - ii. Partially used: setts or holes with entrances not in regular use and which have debris (twigs, leaves) around the entrance. However, they

could potentially be used regularly in the future with little clearance necessary.

b. Disused:

- i. Setts or holes showing signs of not having been in use for a considerable period of time and would not be used again without extensive clearance by a badger. There would be no other badger field signs at disused setts.
- ii. Natural England guidance relating to ‘signs of current use’ was also used to determine the status of a sett (Natural England, 2009).

4.4 Scope and Survey Objectives

4.4.1 The aim of the surveys undertaken and reported on in this document were to provide a baseline to inform the ecological impact assessment for the Project. The proposed works within these areas is habitat creation, converting the existing agricultural habitat into semi-natural habitat as part of the compensation strategy for the potential increase in nitrogen deposition from the construction and operation of the Project. It is proposed to retain existing semi-natural habitat within these sites (Design Principles (Application Document 7.5) Clause no. LSP.27), retaining their ecological value, increasing opportunity for natural regeneration of habitats, and reducing potential impacts to existing ecology within the sites and the wider landscape. Given the proposal for these sites, the scope of ecological survey undertaken at them was designed to be proportionate to the potential impact pathways. As such, the ecological receptors listed below have been scoped into the assessment of impacts from the Project as the work has the potential to directly affect supporting habitat. Other receptors have been scoped out as it is not considered there would be a pathway to a significant effect on them as a result of these habitat creation proposals, principally because the semi-natural habitat likely to support them, if present, would be retained.

UK Habitat Classification Survey

4.4.2 The aims of the UKhab survey were as follows:

- a. Classify all habitats within the eight compensation site boundaries according to UKhab methodology and Phase 1 methodology;
- b. Undertake a habitat condition assessment for each habitat feature identified on site.

Great Crested Newt

4.4.3 The aims of the GCN survey were as follows:

- a. Identify potential GCN breeding ponds within the eight compensation site boundaries, inclusive of a 250m buffer for each compensation site;

- b. Undertake a screening assessment of each waterbody to determine whether they could be scoped out from further assessment;
- c. Carry out a Habitat Suitability Index (HSI) assessment of all suitable GCN breeding waterbodies to assess its potential to support GCN;
- d. Conduct environmental DNA water sampling (eDNA) on all suitable waterbodies and send samples to the lab for testing, to ascertain presence or absence from suitable waterbodies.

Badger

4.4.4 The aims of the badger survey were as follows:

- a. Conduct a badger survey within the eight compensation site boundaries, inclusive of a 30m buffer, and accurately record any evidence of recent badger activity;
- b. Categorise any setts found as 'active', 'disused' or 'partially active' and categorise the type of sett found i.e., 'main', 'subsidiary', 'annex' or 'outlier'.

5 Results

5.1 UK Habitat Classification Survey

South of the River Thames

5.1.1 The UKhab habitat types for South of the River Thames compensation sites are outlined below. Some condition assessments are missing from the results due to access restrictions identified during the site visits and are labelled N/A. Where habitat types, such as cereal crops, have no condition assessment criteria within the Biodiversity Metric v3.1 guidance, these are also marked as N/A. The distribution of these habitats is provided in Figure 2 of this report. Figures show the habitats within the compensation sites, but also include the surrounding habitats within a 50m radius for better comprehension of the surrounding habitats. Further details pertaining the condition assessments for each habitat type are provided in Annex A of this report.

Table 5.1 Habitat Results for MAol3_A Henhurst Hill

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Line of Trees (Ecologically valuable)	0.13km	A3.1	w1g6	Moderate	A mature line of black poplar (<i>Populus nigra</i>) trees line the southern edge of the compensation site.
Other neutral grassland	0.04ha	B2.2	g3c	Good	A small parcel of <i>Arrhenatherum elatius</i> neutral grassland with ruderal banks and patches of bramble (<i>Rubus fruticosus</i>) and dogwood (<i>Cornus sanguinea</i>) scrub scattered throughout.
Arable field margins tussocky	0.62ha	B3.1	c1a	N/A	N/A
Modified grassland	0.01ha	B6	g4	Moderate	N/A
Cereal crops	8.30ha	J1.1	c1	N/A	N/A
Native Hedgerow	0.12km	J2.1.2	h2a	Good	A priority hedgerow borders the north and east edges of the modified grassland separating the arable land from the grassland. Likely a young, planted hedgerow due to species and age.

Table 5.2 Habitat Results for MAol3_D1 Fenn Wood

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Lowland mixed deciduous woodland	0.26ha	A1.1.1	w1f	Moderate	Priority habitat lowland mixed deciduous woodland borders the eastern extent of the compensation site.
Modified grassland	5.46ha	B6	g4	Moderate	The compensation site is predominantly unmanaged modified grassland with a built-up residential area to the east.
Native Hedgerow	<0.01km	J2.1.2	h2	Good	Linear hedgerow runs parallel to the compensation site boundary and a small section falls within the compensation site.
Vegetated garden	0.01ha	J5-Garden	u1	N/A	A small parcel of private gardens is included within the compensation site within the southern extent.

Table 5.3 Habitat Results for MAol3_D1 Court Wood

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Lowland mixed deciduous woodland	1.02ha	A1.1.1	w1f	Moderate	The northern section of a large parcel of deciduous woodland encroaches into the southern extent of the compensation site. Full access to the extent of the woodland within the compensation site was not permitted so a comprehensive species list was recorded to ensure accurate condition assessment. A small section of a linear parcel of lowland mixed deciduous woodland falls within the compensation sites northern extent.
Bramble scrub	0.33ha	A2.1	h3d	N/A - Other	A patch of bramble scrub in the centre of the compensation site connects a hedgerow to the woodland beyond.
Mixed scrub	0.15ha	A2.1	h3h	Moderate	N/A

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Line of Trees (Ecologically Valuable)	0.16km	A3.1	w1g6	Moderate	A small line of semi mature trees separates the arable land in the northern extent of the compensation site but is replaced further down by hedgerow.
Other neutral grassland	1.08ha	B2.2	g3c	Good	A small parcel of grassland where horse grazing is present, is located in the southern extend of the compensation site.
Other neutral grassland	1.72ha	B2.2	g3c	Moderate	A small parcel of other neutral grassland is located in the southeast extent of the compensation with more diversity in species and structure.
Other neutral grassland	0.34ha	B2.2	g3c	Poor	Isolated parcel of other neutral grassland with a tall herb mosaic structure.
Modified grassland	0.03ha	B6	g4	Moderate	Small section of modified grassland to the south of the compensation site which was unable to be accessed.
Ditches	0.03ha	G2-ditch	r2b	Poor	Wet ditch running most of the length of the northern boundary of the compensation site separating the arable land from the hedgerows beyond.
Cereal crops	23.5ha	J1.1	c1	N/A	Arable land used for crop dominates the majority of the compensation site.
Vegetated garden	0.03ha	J5-Garden	u1	N/A	N/A
Native Hedgerow	0.12km	J2.1.2	h2a	Good	N/A
Native Species Rich Hedgerow	0.37km	J2.2.1	h2a	Good	Linear priority hedgerow running through the centre of the compensation site separating the arable land.
Developed land; sealed surface	<0.01ha	J3.6	u1b5	N/A - Other	N/A

Table 5.4 Habitat Results for MA014_C1 Blue Bell Hill

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Lowland mixed deciduous woodland	0.35ha	A1.1.1	w1f	Moderate	N/A
Arable field margins tussocky	0.21ha	B3.1	c1a	N/A	Field margins are located within the centre of the compensation site where arable land for cereal and non-cereal crops meet. Bands of tussocky grasses separate the crops.
Modified grassland	0.07ha	B4	g4	Moderate	N/A
Modified grassland	0.004ha	B6	g4	Good	N/A
Modified grassland	<0.01ha	B6	g4	Moderate	N/A
Modified grassland	0.83ha	B6	g4	Poor	N/A
Arable field margins cultivated annually	0.75ha	C3.1	c1a	N/A	Field margins are located within the centre of the compensation site where arable land for cereal and non-cereal crops meet.
Developed land; sealed surface	1.16ha	Hardstanding	u1	N/A - Other	N/A
Cereal crops	69.15ha	J1.1	c1	N/A	The southern extent of the compensation site is dominated by arable land used for cereal crop. A large open parcel with woodland borders to the north, east and west which fall outside of the compensation site boundary.
Native Hedgerow	0.30km	J2.1.2	h2a	Good	Priority hedgerow running horizontally through the centre of the compensation site adjacent to another hedgerow forming a double banded hedgerow between northern and southern parcel of arable land.
Native Hedgerow	0.26km	J2.1.2	h2a	Moderate	Priority hedgerow banded with hedgerow above separating the arable land. Different

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
					species and composition concluded different conditions for these hedgerows.
Native Species Rich Hedgerow	0.01km	J2.2.1	h2a	Good	The most northerly situated hedgerow on the compensation site boundary with residential properties adjacent.
Native Species Rich Hedgerow	0.18km	J2.2.1	h2a	Moderate	N/A
Native Hedgerow	0.28km	J2.2.2	h2a	Good	Similar to previously mentioned banded hedgerows; a priority hedgerow with good condition to the north with an adjacent hedgerow running parallel.
Native Hedgerow	0.63km	J2.2.2	h3a	Moderate	Southern banded hedgerow adjacent to good condition hedgerow to the north.
Native Hedgerow	0.02km	J2.3.2	h2a	Good	Situated alongside the most northerly hedgerow within the compensation site, a second hedgerow with trees present continues along the boundary between arable land and residential.

Table 5.5 Habitat Results for MAol4_C2 Burham

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Lowland mixed deciduous woodland	0.01ha	A1.1.1	w1f	Moderate	A small linear parcel of lowland mixed deciduous woodland reaching from larger parcels in the south and separating two arable fields.
Mixed scrub	0.01ha	A2.1	h2h	Poor	N/A
Line of Trees (Ecologically valuable)	0.12km	A3.1	w1g6	Moderate	N/A
Cereal crops	9.55ha	J1.1	c1	N/A	The majority of the compensation site is arable cropland. Three fields surrounded by hedgerows constitutes this site.

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Ruderal/Ephemeral	0.01ha	J1.3-J4	u1c	Good	N/A
Native Species Rich Hedgerow	0.23km	J2.1.1	h2a	N/A - Other	Condition assessments weren't undertaken due to late addition to the ecology survey scope.
Native Hedgerow	0.46km	J2.1.2	h2a	N/A - Other	Hedgerow's border most of the site excluding the Northeast boundary a small section of the southern extent which is wooded. The hedgerows differ in composition however condition assessments weren't undertaken due to late addition to the ecology survey scope.
Vacant/derelict land/bare ground	0.13ha	J4	u1b	Poor	N/A
Vegetated garden	0.01ha	J5-Garden	u1	N/A	N/A

North of the River Thames

5.1.2 The UKHab habitat types for North of the River Thames compensation sites are outlined below. Some condition assessments are missing from the results due to access restrictions identified during the site visits and are labelled N/A. Where habitat types, such as cereal crops, have no condition assessment criteria within the Biodiversity Metric v3.1 guidance, these are also marked as N/A. The distribution of these habitats is provided in Figure 2 of this report. Figures show the habitats within the compensation sites, but also include the surrounding habitats within a 50m radius for better comprehension of the surrounding habitats. Further details pertaining the condition assessments for each habitat type are provided in Annex A of this report.

Table 5.6 Habitat Results for MAo11_A Hole Farm East

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Lowland mixed deciduous woodland	2.14ha	A1.1.1	w1f	Moderate	Lowland mixed deciduous woodland is present in the compensation site in the north and southwestern extent. The small parcels to the north are part of larger woodlands which fall outside of the compensation site.
Lowland mixed deciduous woodland	0.41ha	A1.1.1	w1f	Poor	Lowland mixed deciduous woodland is present in the compensation site in the north

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
					and southwestern extent. The small parcels to the north are part of larger woodlands which fall outside of the compensation site.
Bramble scrub	0.12ha	A2.1	h3d	N/A - Other	Four small parcels of bramble scrub, one located on the south-eastern boundary, another centrally located around the farmhouse, and the other two located in the north-east of the site.
Mixed scrub	0.17ha	A2.1	h3h	Moderate	N/A
Mixed scrub	0.11ha	A2.1	h3h	Poor	Two parcels of mixed scrub, one located centrally around the farmhouse and another surrounding the pond to the north of the site.
Line of Trees (Ecologically Valuable)	0.23km	A3.1	w1g6	Moderate	Lines of trees bordering the field margins and ditches throughout the compensation site.
Line of Trees (Ecologically Valuable)	1.43km	A3.1	w1g6	Poor	Lines of trees bordering the field margins and ditches throughout the compensation site.
Arable field margins cultivated annually	5.74ha	B2.2	c1a	N/A	The arable field margins differ in size and composition throughout the compensation site.
Arable field margins pollen & nectar	1.60ha	B2.2	c1a	N/A	The arable field margins differ in size and composition throughout the compensation site.
Modified grassland	0.01ha	B4	g4	Moderate	N/A
Ditches	0.02ha	G1-ditch	r2b	Poor	Wet ditches with scattered mature trees and scrub running either side of the banks. Situated in the western extent of the compensation site.
Ponds (Priority Habitat)	0.05ha	G1-pond	r1a	Poor	One pond south of the residential farmhouse and buildings in the centre of the compensation site. No connection to the arable ditch

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
					systems. Another large pond in the northern extent of the compensation site, surrounded by arable. Situated on high ground so not presumed as runoff system, more likely man made. Surrounded by trees and shrubs and well shaded. Another pond is situated in the woodland to the east.
Ditches	0.02ha	G2-ditch	r2	Fairly Poor	A small seasonally wet ditch draining fields.
Other Rivers and Streams	0.45km	G2-rivers/streams	r2	Fairly Poor	A single stream running through the middle of the site.
Developed land; sealed surface	0.59ha	Hardstanding	u1b	N/A - Other	N/A
Cereal crops	64.31ha	J1.1	c1	N/A	N/A
Native Hedgerow	1.93km	J2.3.2	h2a	Good	N/A
Native Hedgerow with trees	0.15km	J2.3.2	h2a	Good	N/A
Dry ditch	2.84km	J2.6	r2b	N/A	Manmade ditches located throughout the compensation site. When water is present the ditches will create ditch systems running across the arable land aiding runoff. Dry at time of survey.
Vegetated garden	0.01ha	J5-Garden	u1	N/A	A small area of the gardens surrounding the compensation site.

Table 5.7 Habitat Results for MAOl2_A Buckingham Hill

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Other neutral grassland	19.14ha	B2.2	g3c	Good	A large area of other neutral grassland with scattered trees, dominating vetch species and varying sward heights throughout the parcel. Horses present so

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
					minimal level management recorded.
Bramble scrub	0.12ha	A2.1	h3d	N/A - Other	N/A
Mixed scrub	2.82ha	A2.1	h3h	Good	Mosaic mixed scrub habitat with scattered trees, bramble and grasses throughout the site.
Mixed scrub	0.38ha	A2.1	h3h	Moderate	N/A
Mixed scrub	0.14ha	A2.1	h3h	Poor	N/A
Cereal crops	<0.01ha	J1.1	c1	N/A	N/A
Artificial unvegetated, unsealed surface	<0.01ha	J1.3	u1c	N/A	N/A
Dry ditch	0.83km	J2.6	r2b	N/A	Dry ditch running length of western extent of site.
Native Species Rich Hedgerow	0.11km	J2.2.1	h2a	Good	Isolated hedgerow located on the southern edge of the compensation site adjacent to the road.

Table 5.8 Habitat Results for MAol2_B Hoford Road

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Lowland mixed deciduous woodland	0.04ha	A1.1.1	w1f	Poor	Lowland mixed deciduous woodland surrounds the arable land within the compensation site with patches of each woodland falling within the survey boundary.
Other woodland; broadleaved	0.20ha	A1.1.2	w1g	Poor	Other broadleaved woodland located at the western extent of the compensation site between two parcels of lowland woodland.
Bramble scrub	0.15ha	A2.1	h3d	N/A - Other	N/A
Mixed scrub	1.10ha	A2.1	h3h	Good	Three parcels of mixed scrub are situated around the edges of the grassland. Offering good species diversity and glades with grassy edges awards these scrub patches with a good condition.

Habitat Type	Area/Length	Phase 1 Code	UKHab Code	Condition (3.1)	Description
Mixed scrub	0.21ha	A2.1	h3h	Moderate	Small patch of mixed scrub in the northeast corner of the open grassland bordering the northern parcel of woodland. A small parcel of gorse scrub sits within the glades of the other neutral grassland in the northern extent of the compensation site. No evidence of spreading to the other scrub patches was recorded.
Lowland meadows	1.61ha	B2.1	g3c	Good	Open other neutral grassland dominates the northern extent of the compensation site with frequent small patches of scattered scrub throughout.
Other neutral grassland	2.34ha	B2.2	g3c5	Moderate	Small parcel of <i>Arrhenatherum elatius</i> neutral grassland on the eastern edge of the compensation site extent serving as access to arable fields beyond.
Cereal crops	15.14ha	J1.1	c1	N/A	Large arable fields used for crops dominate the compensation site.
Artificial unvegetated, unsealed surface	<0.01ha	J1.3	u1c	N/A	N/A
Native Species Rich Hedgerow	0.21km	J2.2.1	h2a	Good	Linear scrubby hedgerow with minimal gaps, filling out to the east. Likely to have developed naturally along the adjacent track.

5.2 Great Crested Newt

- 5.2.1 HSI and eDNA survey results are outlined below with more detailed results included in Annex B of this document. Figure 3 of this report shows the locations of all waterbodies identified during the desk study and waterbodies which were surveyed.
- 5.2.2 A total of 38 waterbodies were initially identified through a detailed review of Ordnance Survey mapping and high-resolution aerial imagery. Five additional waterbodies were identified during the field surveys. Of these 43 waterbodies, 31 waterbodies had no further GCN assessment or survey due to the following reasons:

- a. Nine waterbodies were deemed unsuitable for HSI and eDNA and subsequently screened out;
- b. 22 waterbodies for which access was not granted.

5.2.3 The 22 waterbodies for which no access was obtained have been classified as 'presence unknown'.

5.2.4 A total of 12 waterbodies subject to HSI assessments. The results of the HSI and eDNA surveys are as shown below in Table 5.9. HSI results are shown in Figure 4 and eDNA results are shown in Figure 5.

Table 5.9 GCN HSI and eDNA Results

Waterbody ID	Site	HSI Score	HSI Suitability	eDNA survey	eDNA Result
HF1	Hole Farm East	0.78	Good	Yes	Negative
HF2	Hole Farm East	0.35	Poor	Yes	Negative
HF3	Hole Farm East	0.76	Good	Yes	Negative
Pond 1a	Hole Farm East	0.79	Good	Yes	Negative
Pond 6a	Hole Farm East	0.85	Excellent	Yes	Negative
Pond 6b	Hole Farm East	0.6	Average	Yes	Negative
Pond 6c	Hole Farm East	0.42	Poor	Yes	Negative
Pond 6d	Hole Farm East	0.61	Average	Yes	Negative
Pond 8	Court Wood	0.66	Average	Yes	Negative
Pond 9	Court Wood	0.66	Average	Yes	Positive
Pond 11	Court Wood	0.76	Good	Yes	Negative

5.3 Badger

5.3.1 The habitats recorded within the compensation sites were identified as being suitable for badgers. Most sites contained farmland with adjacent woodland as a boundary. The adjacent woodlands, often containing earth banks and uneven ground, offer suitable resting and sett building habitat for badger. Some sites had areas of open grassland with dense and scattered scrub throughout, which has the potential to provide further foraging opportunities for badger.

5.3.2 Some suitable habitats for badger within MA011_A Hole Farm East included lowland mixed deciduous woodland, scrub, grassland and numerous arable field margins. A single active sett entrance was recorded within a patch of

woodland in a northern arable field, situated on uneven ground in a heavily canopied area. Further evidence of badger foraging activity was recorded within a southerly situated woodland at the opposite end of the compensation site. Evidence included snuffle holes and digging. The results of the badger surveys are as shown below in Table 5.10. The survey results are shown in Figure 8.34 (Application Document 6.2).

Table 5.10 Badger Survey Results

Site	Evidence of badger activity	Status	Potential sett type	Notes
MAol1_A Hole Farm East	Badger hole	Disused	Outlier	An old disused badger hole was located in a parcel of established woodland within the southern extent of the compensation site. Snuffle holes were apparent across the woodland floor suggesting that the woodland could still be used for foraging by nearby badgers.
MAol1_A Hole Farm East	Badger hole	Active	Outlier	A single active entrance was identified. Evidence of activity included a fresh spoil heap outside the entrance and claw marks in the spoil.

6 Limitations and assumptions

- 6.1.1 No site visits were undertaken at three compensation sites as a result of access constraints: MAol3_D1 Fenn Wood; MAol4_C1 Blue Bell Hill; and MAol4_C2 Burham. These sites therefore did not undergo ground truthing for the habitats present. However, the approach to desk-based habitat analysis detailed in paragraph 4.1.2 proved to be accurate for those sites that could be ground truthed, so it is considered that the accuracy of habitat distinctiveness assigned using desk-study alone is likely to be high. The presence/likely absence of GCN or badger across these three sites therefore cannot be confirmed, however there is suitable habitat for the aforementioned species and thereby both species should be considered present on the three sites.
- 6.1.2 There were some habitat areas within the sites for which access was granted that were inaccessible and as a result had to be mapped using desk-based habitat analysis. The combined area of these habitats is relatively insignificant, given the size of the compensation sites.
- 6.1.3 Large areas of vegetation within the compensation sites were very dense and as a result, a complete assessment of these areas was difficult. However, the scope of the survey was to classify the habitats present, which was possible, so this is not considered to be a significant limitation to the survey results.
- 6.1.4 Some habitats were only able to be partially accessed. Within these habitats, the condition assessment of the habitat parcel was assumed for the entire habitat parcel as the habitats appeared to be predominantly uniform.
- 6.1.5 Within Annex A of this report, for habitats with multiple parcels, the condition assessment for the largest habitat is shown. The full results can be provided upon request.
- 6.1.6 It should be noted that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.
- 6.1.7 GCN presence or likely absence could not be determined at 26 waterbodies due to land access restrictions or unsuitability.
- 6.1.8 eDNA surveys at some waterbodies were conducted from less than 80% of the waterbody perimeter due to dense vegetation and/or health and safety considerations preventing full access, which may have produced false negative results.
- 6.1.9 Summer months are generally considered to be an appropriate time to conduct badger surveys as the badgers will be actively foraging. Vegetation growth can be potentially problematic at this time of year as field signs can be obscured by the undergrowth; however, this was not considered a significant survey constraint in context of the habitat character of those areas that were included in the survey.
- 6.1.10 The information in this report is considered to provide robust baseline for these compensation sites and has been used to inform the Project's ecological impact

assessment detailed within Chapter 8: Terrestrial Biodiversity (Application Document 6.1).

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Annexes

Annex A Habitat Condition Assessments

A.1.1 The tables below show the full condition assessment for the habitats found within each nitrogen deposition compensation sites. All relevant condition criteria have been considered for each habitat type up to a maximum of 13 criteria for lowland mixed deciduous woodland. Criteria not relevant to specific habitats are marked with a dash. Where habitats have no condition assessment criteria within the Biodiversity Metric v3.1 guidance, these are marked as N/A.

Table A.1 MAoI2_B. Hoford Road

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Other neutral grassland	1	0.04	0.04	g3c5	Good	Yes	Yes	No	Yes	Yes	Yes	Yes	-	-	-	-	-	-
Modified grassland	1	0.01	0.01	g4	Moderate	No	No	Yes	Yes	No	Yes	Yes	-	-	-	-	-	-
Hedgerow (priority habitat)	1	0.12	0.12	h2a	Good	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-
Line of trees	1	0.13	0.13	w1g6	Good	-	-	-	-	-	-	-	-	-	-	-	-	-
Cereal crops	1	8.3	8.3	c1c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arable margins sown with	1	0.62	0.62	c1a5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
tussocky grasses																		
Other neutral grassland	1	0.04	0.04	g3c5	Good	Yes	Yes	No	Yes	Yes	Yes	Yes	-	-	-	-	-	-

Table A.2 MAol3_D1. Fenn Wood

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Modified grassland	2	3.2	5.46	g4	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lowland mixed deciduous woodland	1	0.26	0.26	w1f	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hedgerow	1	0.01	0.01	h2	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Built-up areas and gardens	1	0.01	0.01	u1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A.3 MAol3_D2. Court Wood

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Other neutral grassland	1	1.08	1.08	g3c	Good	No	Yes	Yes	No	Yes	-	-	-	-	-	-	-	-
Other neutral grassland	3	1.14	1.72	g3c	Moderate	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-
Other neutral grassland	1	0.34	0.34	g3c	Poor	No	No	No	Yes	No	-	-	-	-	-	-	-	-
Modified grassland	1	0.02	0.02	g4	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mixed scrub	3	0.08	0.15	h3h	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bramble scrub	3	0.19	0.33	h3d	Poor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lowland mixed deciduous woodland	2	0.53	1.02	w1f	Moderate	2	3	3	2	3	3	2	2	2	2	2	3	3
Other rivers and streams	1	0.03	0.03	r2b	Poor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Line of trees	2	0.09	0.16	w1g6	Moderate	Yes	No	Yes	No	Yes	-	-	-	-	-	-	-	-
Hedgerow (priority habitat)	2	0.37	0.49	h2a	Good	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	-	-	-	-	-
Cropland	1	23.5	23.5	c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Developed land; sealed surface	1	0.12	0.12	u1b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Built-up areas and gardens	1	0.03	0.03	u1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A.4 MAoI4_C1. Blue Bell Hill

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Modified grassland	1	0.07	0.07	g4	Moderate	No	No	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
Lowland mixed deciduous woodland	4	0.08	0.35	w1f	Moderate	2	3	3	3	3	3	2	2	3	2	1	1	2
Hedgerow (priority habitat)	4	0.3	0.61	h2a	Good	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	-	-	--	-	-
Hedgerow (priority habitat)	3	0.63	1.07	h2a	Moderate	Yes	Yes	Yes	Yes	No	No	Yes	Yes	-	-	-	-	-

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Arable field margins	2	0.4	0.75	c1a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arable margins sown with tussocky grasses	1	0.21	0.21	c1a5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cropland	4	29.26	69.15	c1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Modified grassland	3	0.83	0.84	g4	N/A – not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Developed land; sealed surface	5	1.01	1.16	u1b	N/A – not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A.5 MAoI4_C2. Burham

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Lowland mixed deciduous woodland	1	0.01	0.01	w1f	Moderate	2	3	3	3	3	3	2	2	3	2	1	1	2
Mixed scrub	1	0.01	0.01	H2h	Poor	No	No	Yes	No	Yes	-	-	-	-	-	-	-	-

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Line of trees	1	0.12	0.12	w1g6	Moderate	Yes	No	Yes	No	Yes	-	-	-	-	-	-	-	-
Cropland	3	5.92	9.55	c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Built-up areas and gardens	1	0.14	0.14	u1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Artificial unvegetated, unsealed surface	1	0.01	0.01	u1c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hedgerows	5	0.28	0.69	h2	N/A – not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lowland mixed deciduous woodland	1	0.01	0.01	w1f	Moderate	2	3	3	3	3	3	2	2	3	2	1	1	2

Table A.6 MA011_A. Hole Farm East

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Lowland mixed deciduous woodland	3	1.72	2.14	w1f	Moderate	3	3	3	1	3	2	2	3	1	2	1	2	3
Lowland mixed deciduous woodland	2	0.24	0.41	w1f	Poor	2	3	3	1	2	1	2	2	1	2	1	2	3
Mixed scrub	3	0.11	0.17	h3h	Moderate	Yes	Yes	Yes	Yes	No	-	-	-	-	-	-	-	-
Mixed scrub	2	0.08	0.11	h3h	Poor	No	No	Yes	Yes	No	-	-	-	-	-	-	-	-
Bramble scrub	4	0.06	0.12	h3d	Poor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Line of trees	8	0.34	1.43	w1g6	Poor	Yes	No	No	No	Yes	-	-	-	-	-	-	-	-
Line of trees	2	0.17	0.23	w1g6	Moderate	Yes	No	Yes	No	Yes	-	-	-	-	-	-	-	-
Cropland	13	32.85	64.31	c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arable field margins	24	0.71	7.34	c1a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Rivers and streams	1	0.45	0.45	r2	Fairly Poor (see Appendix 8.21 - Biodiversity Metric Calculations (Application Document 6.3))	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eutrophic standing water	2	0.03	0.05	r1a	Poor	Yes	No	Yes	Yes	Yes	Yes	Yes	No	-	-	-	-	-
Other rivers and streams	15	0.79	2.84	r2b	N/A - Dry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other rivers and streams	4	0.02	0.02	r2b	Poor	Yes	No	Yes	No	Yes	No	No	Yes	-	-	-	-	-
Other rivers and streams	1	0.02	0.02	r2b	Fairly Poor (see Appendix 8.21 - Biodiversity Metric Calculations (Application	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
					Document 6.3)													
Hedgerow	4	0.25	0.53	h2	Good	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-
Hedgerow (priority habitat)	6	0.42	1.93	h2a	Good	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	-	-	-	-	-
Other hedgerows	1	0.15	0.15	h2b	Good	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	-	-	-	-	-
Modified grassland	1	0.01	0.01	g4	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Built-up areas and gardens	1	0.01	0.01	u1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Developed land; sealed surface	2	0.43	0.59	u1b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A.7 MA012_A. Buckingham Hill

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Other neutral grassland	1	19.14	19.14	g3c	Good	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-
Mixed scrub	7	2.82	3.95	h3h	Good	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-
Mixed scrub	5	0.38	1.04	h3h	Moderate	Yes	Yes	No	Yes	Yes	-	-	-	-	-	-	-	-
Mixed scrub	1	0.14	0.14	h3h	Poor	No	No	Yes	No	Yes	-	-	-	-	-	-	-	-
Bramble scrub	1	0.12	0.12	h3d	Poor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other rivers and streams	1	0.83	0.83	r2b	N/A - Dry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hedgerow (priority habitat)	1	0.11	0.11	h2a	Good	Yes	Yes	Yes	Yes	No	No	Yes	Yes	-	-	-	-	-
Cropland	1	0.001	0.001	c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Artificial unvegetated, unsealed surface	1	0.0002	0.0002	u1c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Developed land; sealed surface	1	0.008	0.008	u1b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table A.8 MAol2_B. Hoford Road

Habitat Type	No. of Parcels	Area (Ha) /Length (km) of Biggest Parcel	Total Area / Total Length	UKhab Code	Condition 3.1	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13
Other neutral grassland	1	1.61	1.61	g3c	Good	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-
Other neutral grassland	1	2.34	2.34	g3c	Moderate	Yes	Yes	No	Yes	Yes	-	-	-	-	-	-	-	-
Hedgerow (priority habitat)	1	0.21	0.21	h2a	Good	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	-	-	-	-	-
Bramble scrub	1	0.15	0.15	h3d	Poor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mixed scrub	3	0.51	1.1	h3h	Good	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-
Mixed scrub	1	0.1	0.21	h3h	Moderate	Yes	Yes	Yes	Yes	No	-	-	-	-	-	-	-	-
Cropland	4	7.5	15.14	c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lowland mixed deciduous woodland	1	0.04	0.04	w1f	N/A – Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other woodland; broadleaved	1	0.2	0.2	w1g	N/A - Not surveyed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Artificial unvegetated, unsealed surface	1	0.005	0.005	u1c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Annex B GCN HSI results

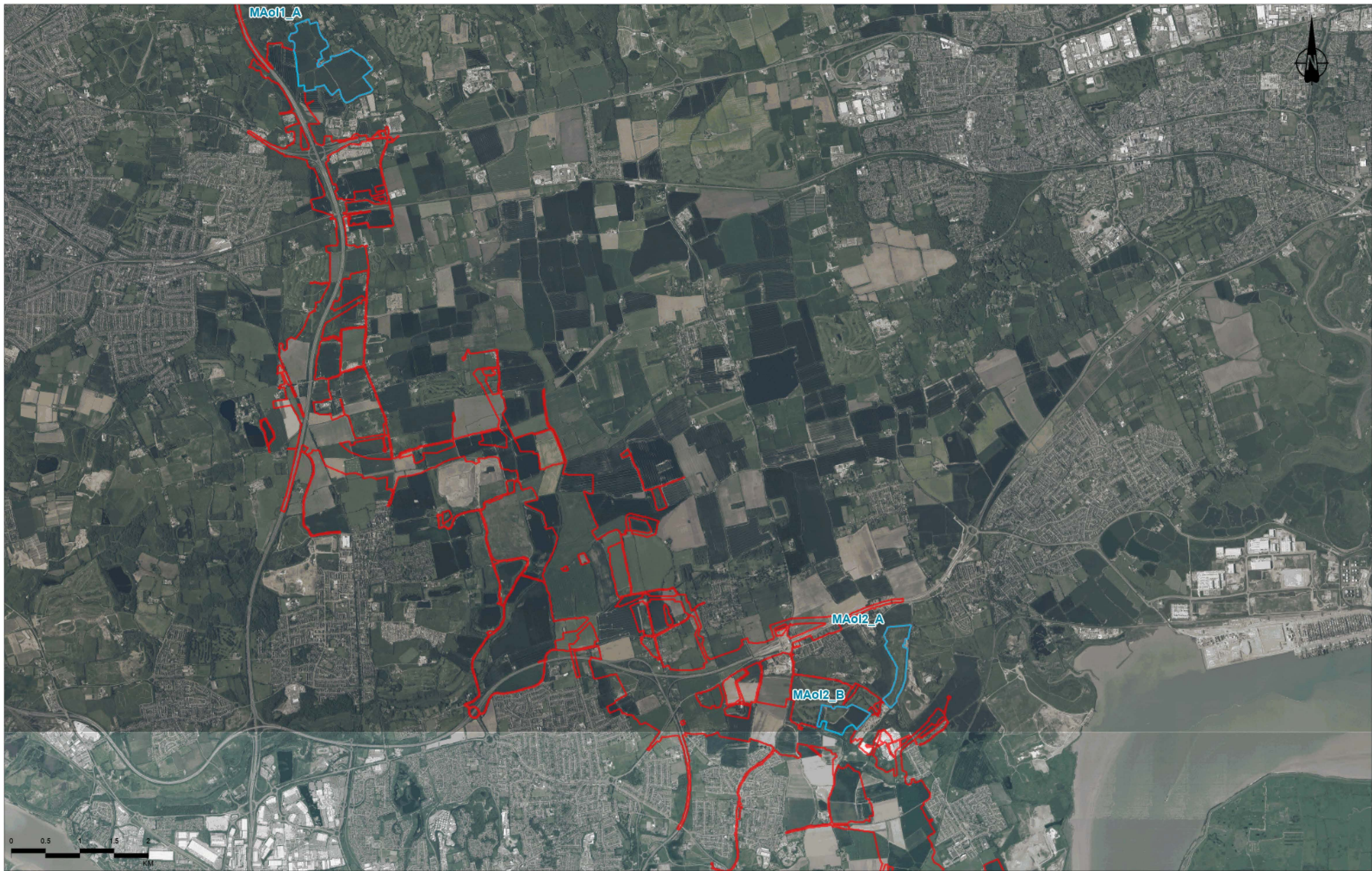
B.1.1 The table below shows the full HSI assessment for each pond surveyed.

Table B.1 GCN HSI results

Name	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	HSI Score	Suitability	eDNA Result
HF1	1	400	Rarely (Dries 2 Years In 10)	Moderate	80	Minor	Absent	17	Moderate	30	0.78	Good	Negative
HF2	1	200	Annually	Bad	100	Absent	Absent	13	Good	0	0.35	Poor	Negative
HF3	1	500	Rarely (Dries 2 Years In 10)	Poor	90	Absent	Absent	15	Good	20	0.76	Good	Negative
Pond 1a	1	875	Rarely (Dries 2 Years In 10)	Poor	80	Absent (Apart From Moorhens)	Possible	17	Good	40	0.79	Good	Negative
Pond 6a	1	600	Never	Good	80	Absent	Absent	15	Good	5	0.85	Excellent	Negative
Pond 6b	1	80	Never	Good	100	Absent	Absent	15	Good	40	0.6	Average	Negative
Pond 6c	1	100	Never	Moderate	15	Absent	Major	15	Poor	10	0.42	Poor	Negative
Pond 6d	1	15	Rarely (Dries 2 Years In 10)	Moderate	50	Absent	Possible	15	Poor	60	0.61	Average	Negative
Pond 8	1	200	Never	Moderate	20	Absent	Possible	8	Poor	5	0.66	Average	Negative
Pond 9	1	300	Sometimes (Dry ~ 3	Good	90	Absent	Possible	8	Moderate	5	0.66	Average	Positive

Name	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	HSI Score	Suitability	eDNA Result
			Years In Ten)										
Pond 11	1	600	Never	Moderate	5	Absent	Possible	3	Poor	40	0.76	Good	Negative
Pond 14	1	800	Rarely (Dries 2 Years In 10)	Poor	100	Absent	Absent	8	Poor	10	0.61	Average	Negative

Figures

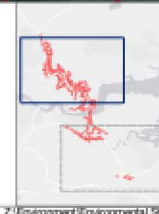


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P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

- Order Limits
- Compensation area for nitrogen deposition



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Status	DCO APPLICATION	Original Size	A3	Revision	1/02
Application Document Number	TR010032/APP/6.3	Scale	1:90,000		
Drawing Title	Figure 1 - Overview of Nitrogen Deposition Compensation Sites North of the River Thames Page 1 of 2				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60100				

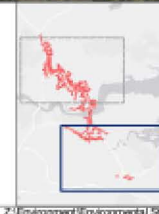


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Legend

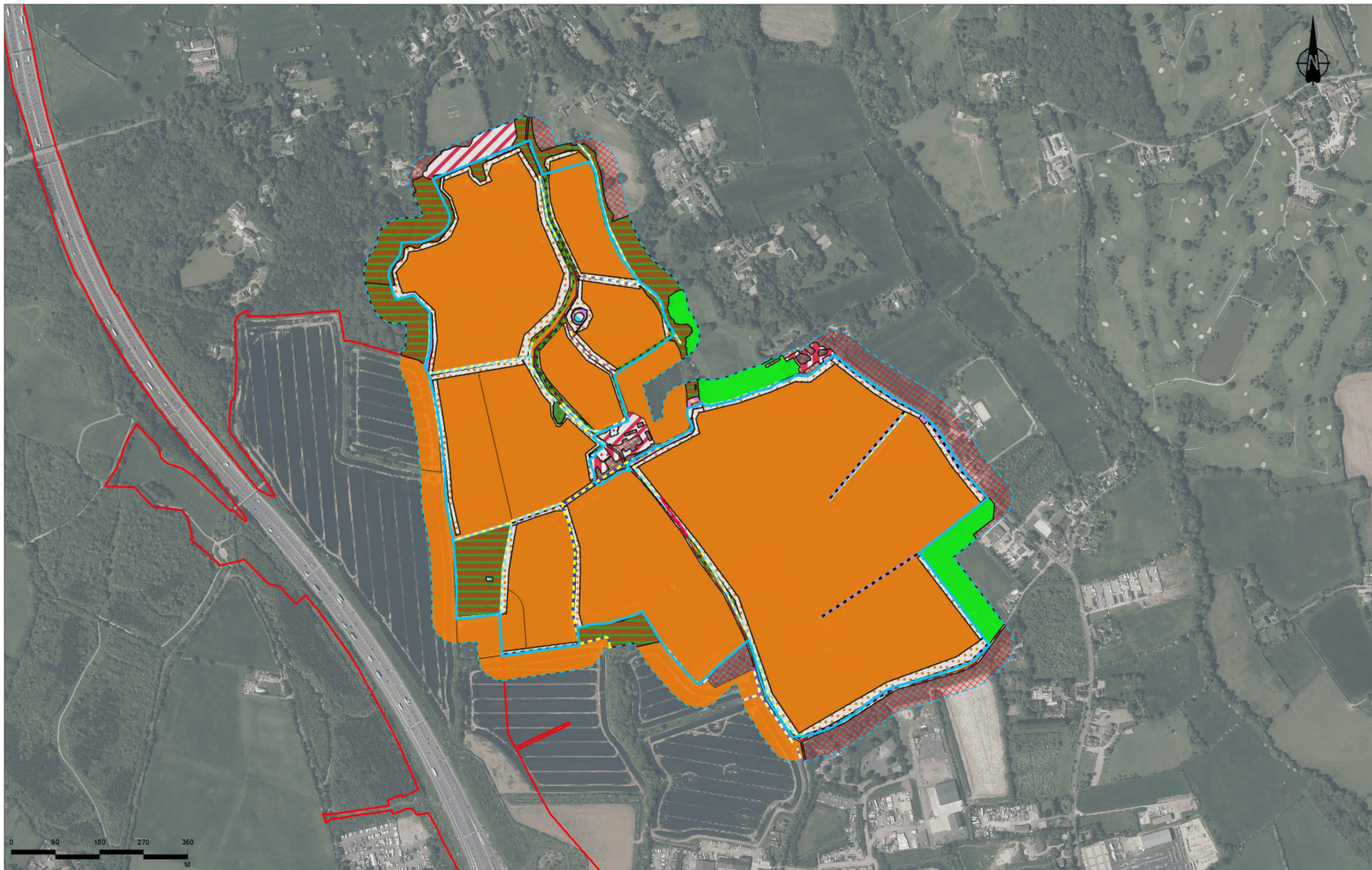
- Order Limits
- Compensation area for nitrogen deposition



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Status	DCO APPLICATION	Original Size	A3	Revision	1/02
Application Document Number	TR010032/APP/6.3	Scale	1:95,000		
Drawing Title	Figure 1 - Overview of Nitrogen Deposition Compensation Sites South of the River Thames Page 2 of 2				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60100				



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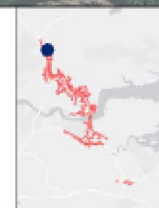
- Order Limits
- NDep compensation areas
- NDep compensation areas 50m buffer
- No access

- Habitat type (UK Hab)**
- c - Cropland
 - c1a - Arable field margins
 - g4 - Modified grassland
 - h3d - Bramble scrub
 - h3h - Mixed scrub

- r1a - Eutrophic standing water
- r2 - Rivers and lakes
- u1 - Built-up areas and gardens
- u1b - Developed land; sealed surface
- u1b5 - Buildings

- Habitat type (UK Hab)**
- w1f - Lowland mixed deciduous woodland
 - w1g - Other woodland, broadleaved
 - h2 - Hedgerows
 - h2a - Hedgerow (priority habitat)

- h2b - Other hedgerows
- r2 - Rivers and streams
- r2b - Other rivers and streams
- u1b - Developed land; sealed surface
- w1g6 - Line of trees

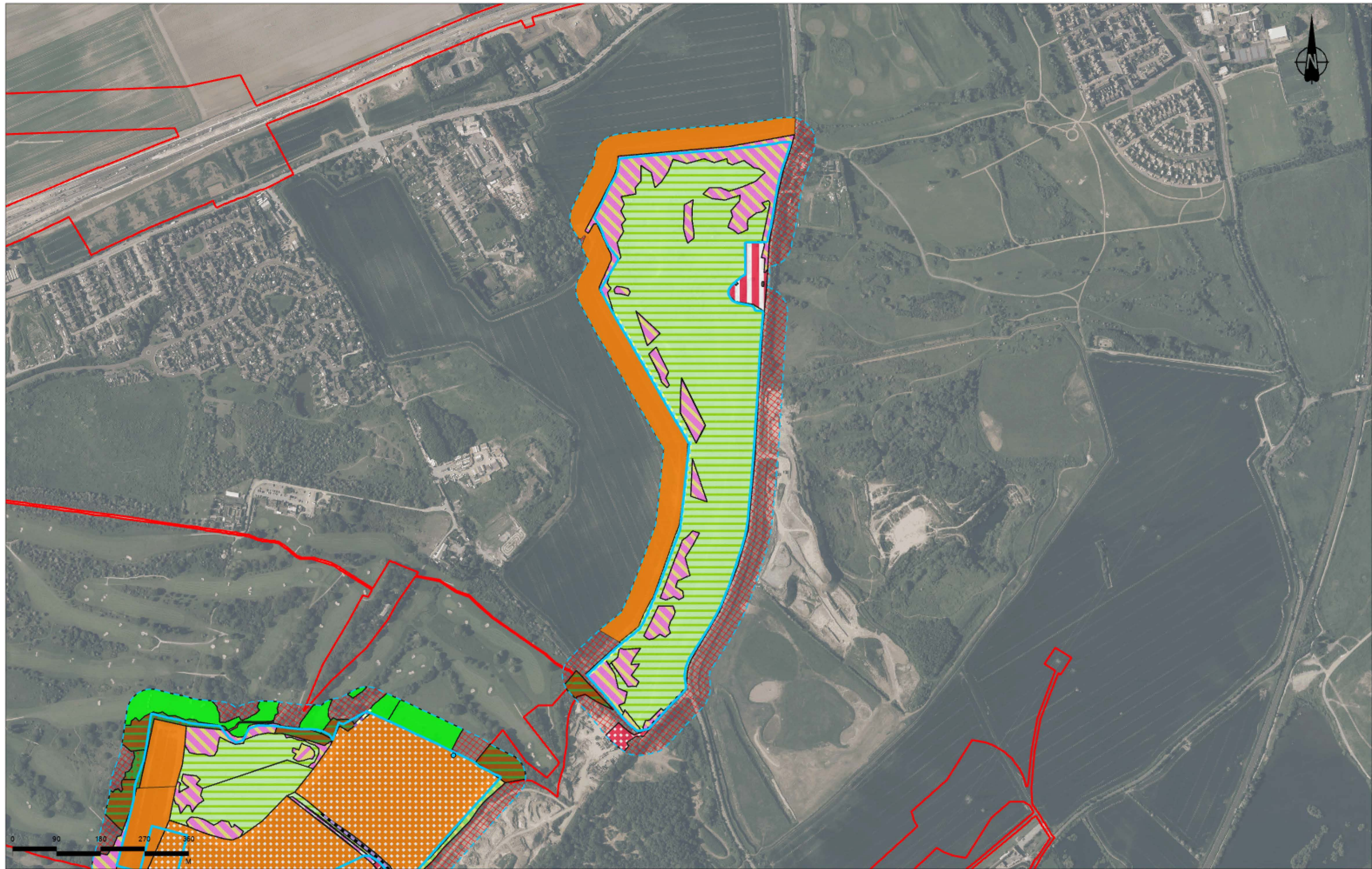


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Application Document Number	TR010032/APP/6.3		Scale	1:7,000		
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101					

Z:\Environment\Environmental Statement\06_Terrestrial Biodiversity\Nitrogen Deposition appendix plans\HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101 - Figure 2 - UKHab of N Dep Compensation Sites.apr



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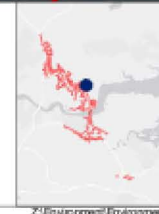
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	NDep compensation areas
	NDep compensation areas 50m buffer
	No access
	Habitat Points

Habitat type (UK Hab)	
	c - Cropland
	c1d - Non-cereal crops
	g3c - Other neutral grassland
	g4 - Modified grassland

	h3d - Bramble scrub
	h3e - Gorse scrub
	h3h - Mixed scrub
	u1b - Developed land, sealed surface

	u1c - Artificial unvegetated unsealed surface
	w1f - Lowland mixed deciduous woodland
	w1f7 - Other lowland mixed deciduous woodland

Habitat type (UK Hab)	
	w1g - Other woodland, broadleaved
	h2 - Hedgerows
	h2a - Hedgerow (priority habitat)
	r2b - Other rivers and streams



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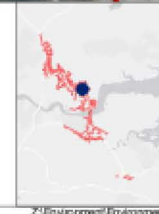
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Application Document Number	TR010032/APP/6.3	A3	P02
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Page 2 of 8			
Drawing Number HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101			



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Legend		Habitat type (UK Hab)		Habitat type (UK Hab)	
	Order Limits		c - Cropland		g4 - Modified grassland
	NDep compensation areas		c1d - Non-cereal crops		h3d - Bramble scrub
	NDep compensation areas 50m buffer		g3c - Other neutral grassland		h3e - Gorse scrub
	No access		g3c5 - Arrhenatherum neutral grassland		h3h - Mixed scrub
	Habitat Points		u1b - Developed land, sealed surface		w1f - Lowland mixed deciduous woodland
			w17 - Other lowland mixed deciduous woodland		w1g - Other woodland, broadleaved
			u1c - Artificial unvegetated unsealed surface		h2 - Hedgerows
			w17 - Other lowland mixed deciduous woodland		h2a - Hedgerow (priority habitat)
			w17 - Other lowland mixed deciduous woodland		r2b - Other rivers and streams



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Application Document Number	TR010032/APP/6.3	A3	P02
Scale	1:3,000		
Drawing Title			
Figure 2 - UKHab of N Dep Compensation Sites			
Site Name: MA012_B - Thurrock - western site			
Page 3 of 8			
Drawing Number			
HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101			

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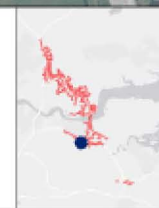
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	NDep compensation areas
	NDep compensation areas 50m buffer
	No access
	Habitat Points

Habitat type (UK Hab)	
	c1a5 - Arable margins sown with tussocky grasses
	c1c - Cereal crops
	g3c - Other neutral grassland

	g3c5 - Arrhenatherum neutral grassland
	g4 - Modified grassland
	u1 - Built-up areas and gardens
	u1b - Developed land, sealed surface

	w1g - Other woodland, broadleaved
--	-----------------------------------

Habitat type (UK Hab)	
	h2a - Hedgerow (priority habitat)
	w1g6 - Line of trees

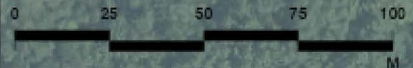
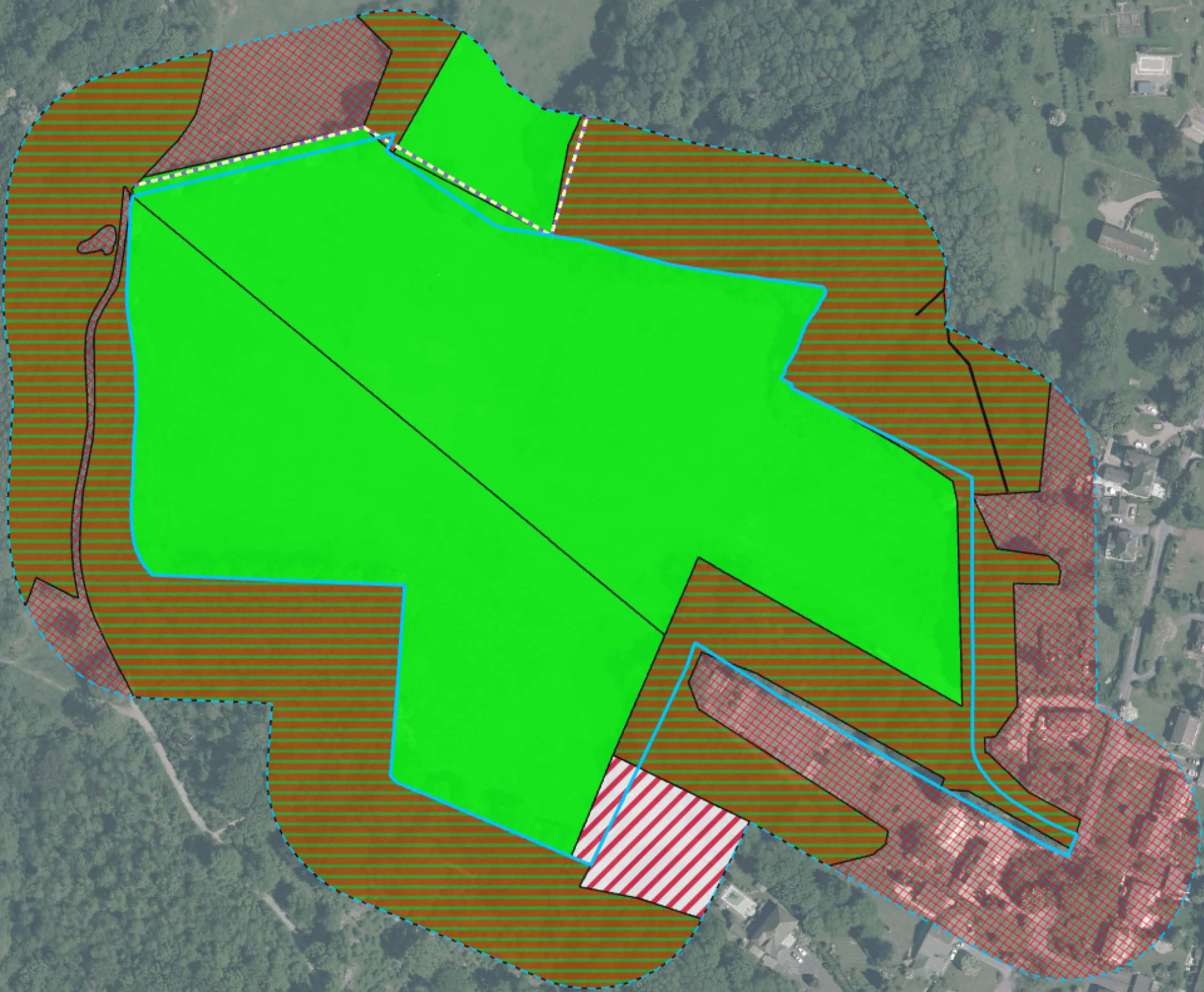


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Status	DCO APPLICATION	Original Size	A3	Revision	1/02
Application Document Number	TR010032/APP/6.3	Scale	1:2,000		
Drawing Title	Figure 2 - UKHab of N Dep Compensation Sites Site Name: MA03_A - Shorne Woods - western site				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101				
Page 4 of 8					

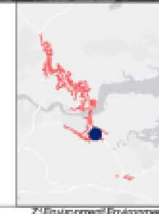
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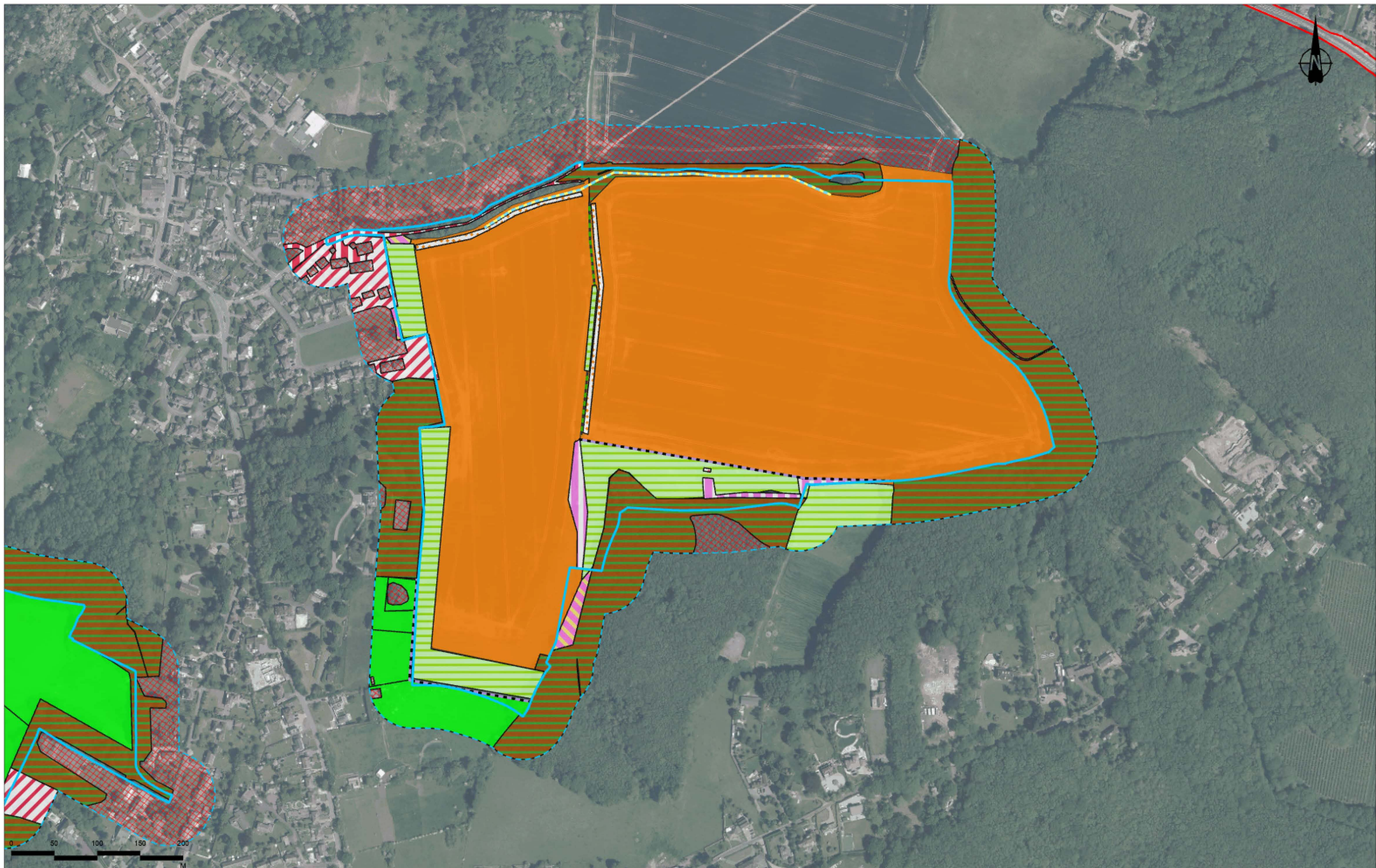
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NDep compensation areas	Habitat type (UK Hab) g4 - Modified grassland
NDep compensation areas 50m buffer	u1 - Built-up areas and gardens
w1f - Lowland mixed deciduous woodland	Habitat type (UK Hab) n2 - Hedgerows



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Status	DCO APPLICATION		Original Size	A3	Revision	1/02
Application Document Number	TR010032/APP/6.3		Scale	1:2,000		
Drawing Title	Figure 2 - UKHab of N Dep Compensation Sites Site Name: MA03_D1 - Shorne and Ashenbank Woods Page 5 of 8					
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101					



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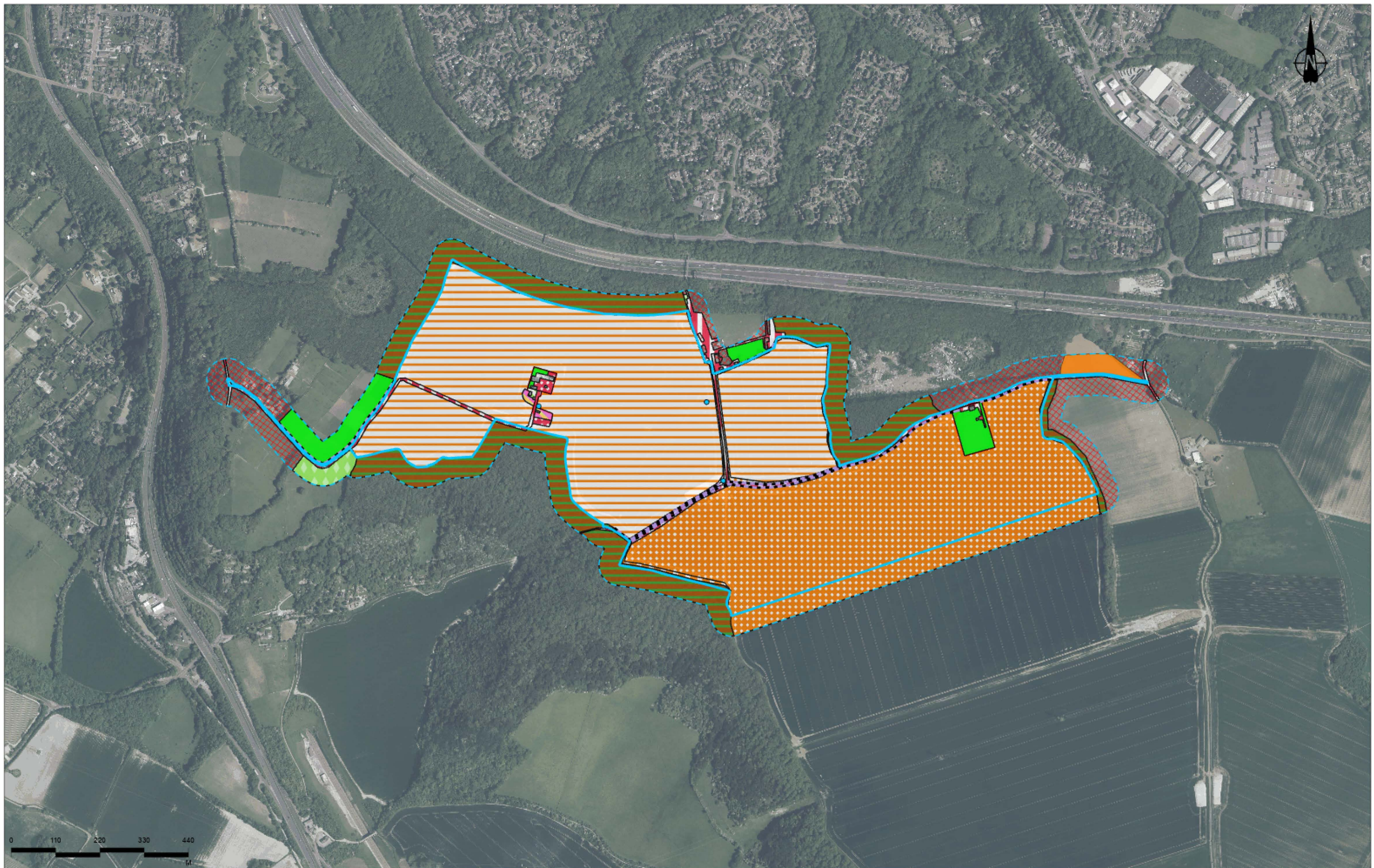
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	Order Limits		c - Cropland		u1b5 - Buildings
	NDep compensation areas		c1a - Arable field margins		u1c - Artificial unvegetated unsealed surface
	NDep compensation areas 50m buffer		g3c - Other neutral grassland		u1 - Built-up areas and gardens
	No access		g4 - Modified grassland		u1b - Developed land, sealed surface
			h3d - Bramble scrub		w1f - Lowland mixed deciduous woodland
			h3h - Mixed scrub		h2a - Hedgerow (priority habitat)
			u1 - Built-up areas and gardens		r2b - Other rivers and streams
			u1b - Developed land, sealed surface		w1g6 - Line of trees

Client:

Project: LOWER THAMES CROSSING

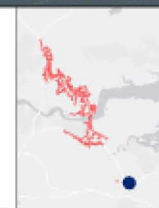
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Drawing Title	Figure 2 - UKHab of N Dep Compensation Sites				
Site Name	MAoI3_D2 - Shorne Woods - Starmore Wood				
	Page 6 of 8				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101				

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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend		Habitat type (UK Hab)		Habitat type (UK Hab)	
	Order Limits		c - Cropland		s1a9 - Tall herb communities
	NDep compensation areas		c1a - Arable field margins		u1b - Developed land, sealed surface
	NDep compensation areas 50m buffer		c1a5 - Arable margins sown with tussocky grasses		u1b5 - Buildings
	No access		c1c - Cereal crops		u1c - Artificial unvegetated unsealed surface
	Habitat Points		g3c - Other neutral grassland		g4 - Modified grassland
			g3o5 - Lolium-Cynosurus neutral grassland		n3h - Mixed scrub
			g4 - Modified grassland		s1a9 - Tall herb communities
			n3h - Mixed scrub		w1f - Lowland mixed deciduous woodland
			s1a9 - Tall herb communities		h2a - Hedgerow (priority habitat)

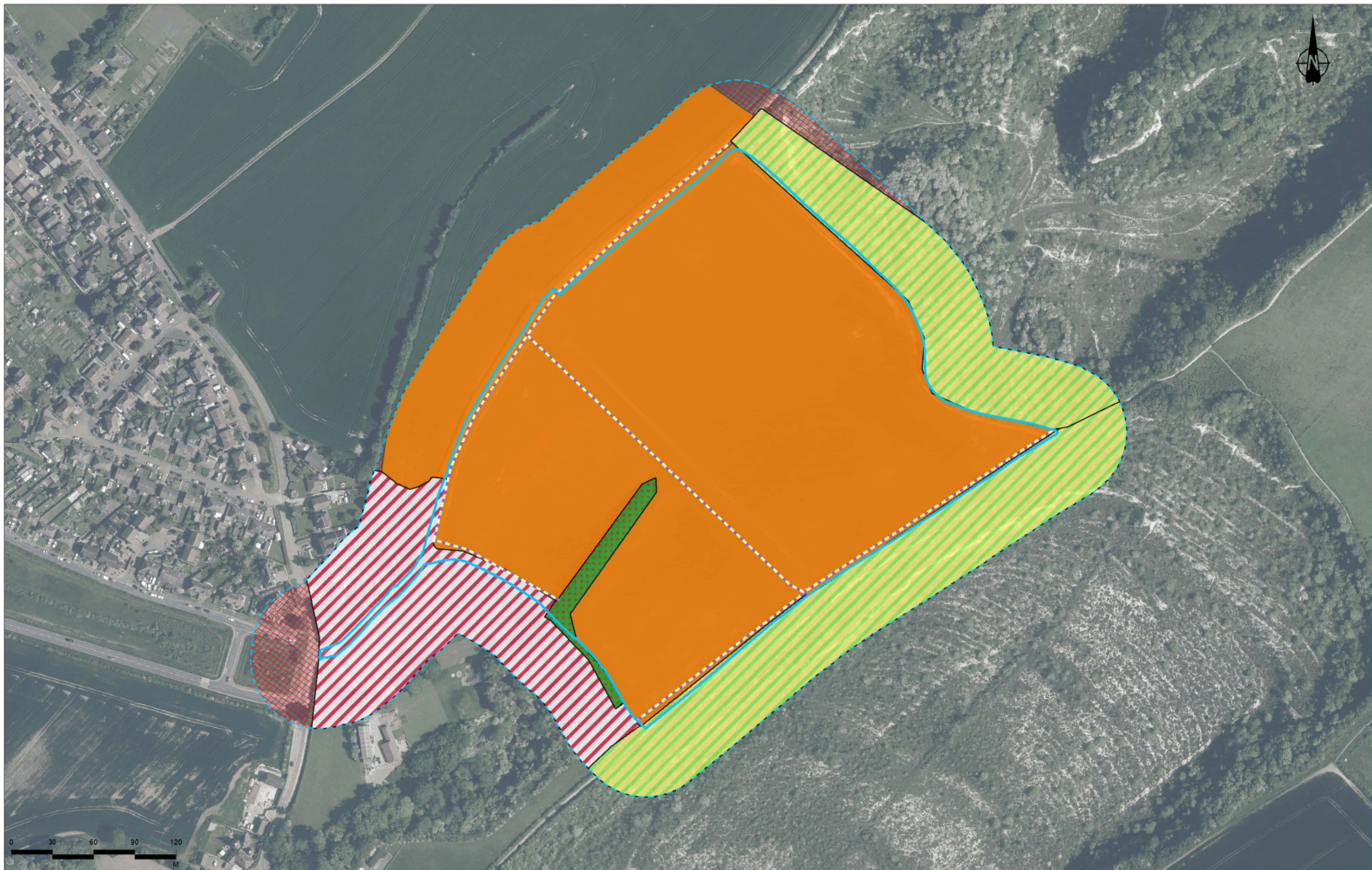


Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION		Original Size	Revision
Application Document Number	TR010032/APP/6.3		A3	P02
Scale	1:8,500			
Drawing Title	Figure 2 - UKHab of N Dep Compensation Sites			
Site Name	MA014_C1 - Bluebell Hill - west			
Page	Page 7 of 8			
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101			

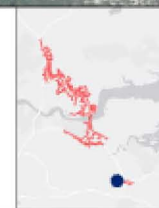
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend	
	Order Limits
	NDep compensation areas
	NDep compensation areas 50m buffer
	No access
Habitat type (UK Hab)	
	c - Cropland
	g2 - calcareous grassland
	u1 - Built-up areas and gardens
Habitat type (UK Hab)	
	w1g - Other woodland, broadleaved
	n2 - Hedgerows



Client
national highways

Project
LOWER THAMES CROSSING

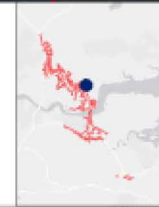
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60101				
Page 8 of 8					



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Desk-assessed waterbody



Client

 Project
LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3	Scale	1:7,000		
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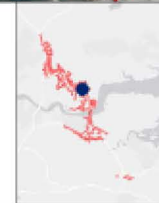
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Desk-assessed waterbody



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	Revision
Application Document Number	TR010032/APP/6.3		A3	P02
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60102			



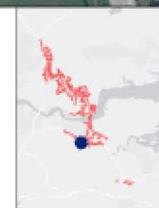
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Appr'd
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Surveyed waterbody
 - Desk-assessed waterbody



Client

 Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:2,000		
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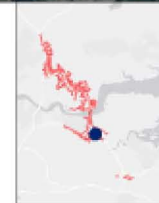


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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Appr'd
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

- Order Limits
- Compensation area for nitrogen deposition
- Desk-assessed waterbody



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:2,000		
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HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60102						

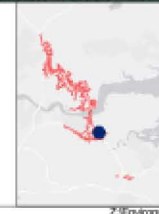


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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

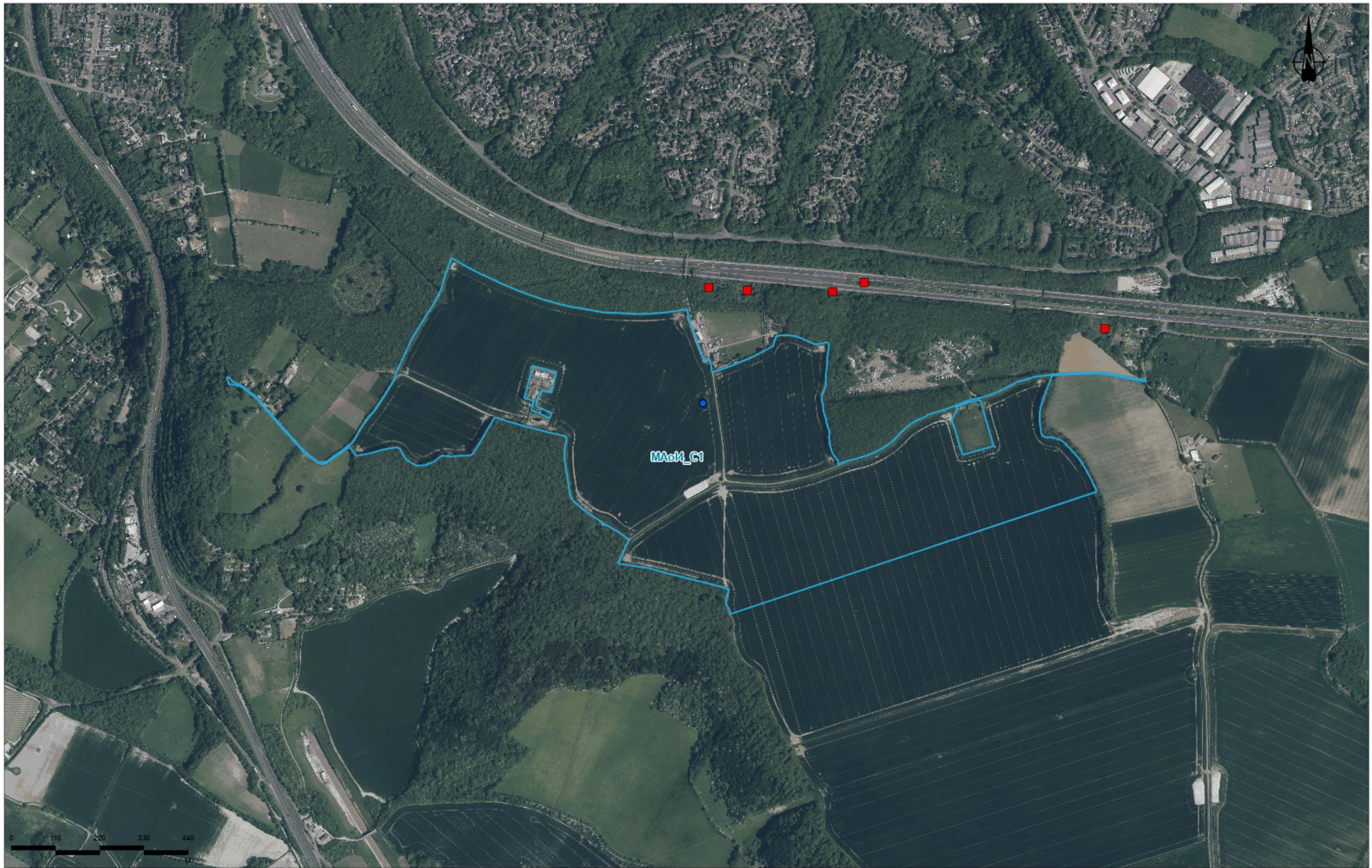
- Order Limits
- Compensation area for nitrogen deposition
- Surveyed waterbody
- Desk-assessed waterbody



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:10,000		
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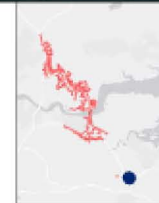


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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

- Order Limits
- Compensation area for nitrogen deposition
- Surveyed waterbody
- Desk-assessed waterbody



Client

 Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:8,500		
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60102					

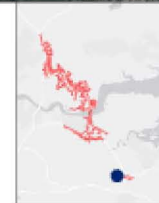


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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

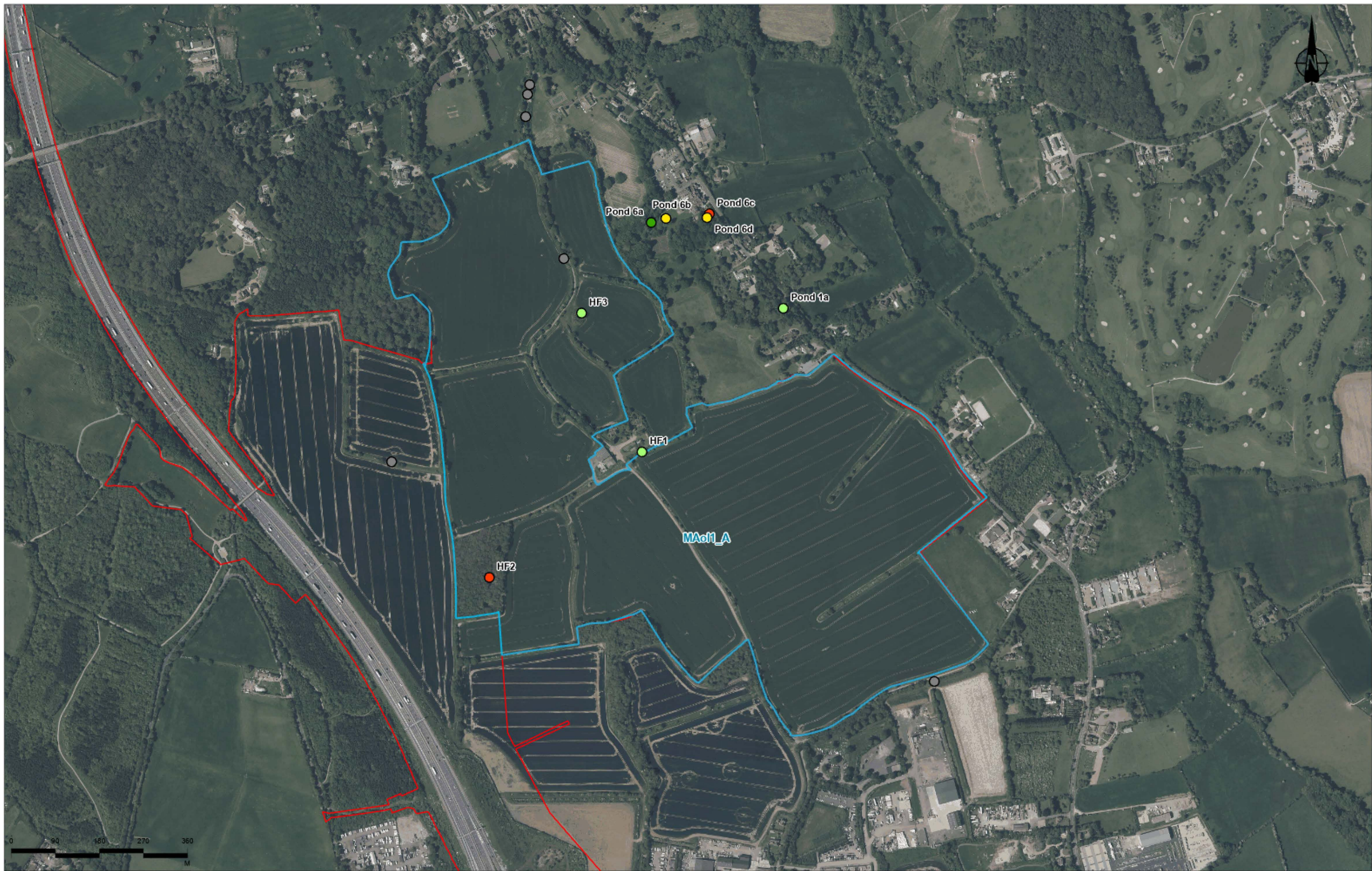
- Order Limits
- Compensation area for nitrogen deposition



Client
national highways

Project
LOWER THAMES CROSSING

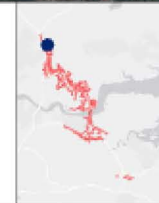
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60102					



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability**
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client
national highways

Project
LOWER THAMES CROSSING

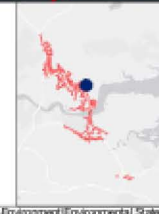
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60103				



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P02	SB	06/10/2022	DCO Application	CD	VJ	BF

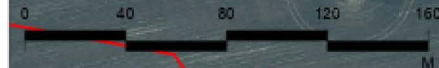
- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability**
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client
national highways

Project
LOWER THAMES CROSSING

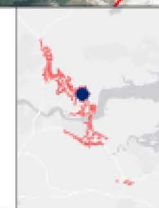
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	Page 2 of 8				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60103				



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability**
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client
national highways

Project
LOWER THAMES CROSSING

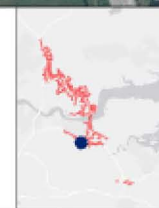
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60103			



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Appr'd
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

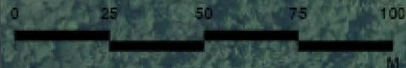
- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client: national highways

Project: LOWER THAMES CROSSING

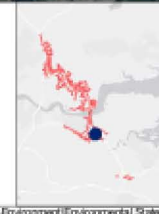
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Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60103				



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:2,000		
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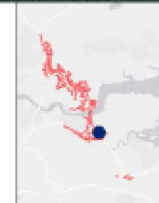
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

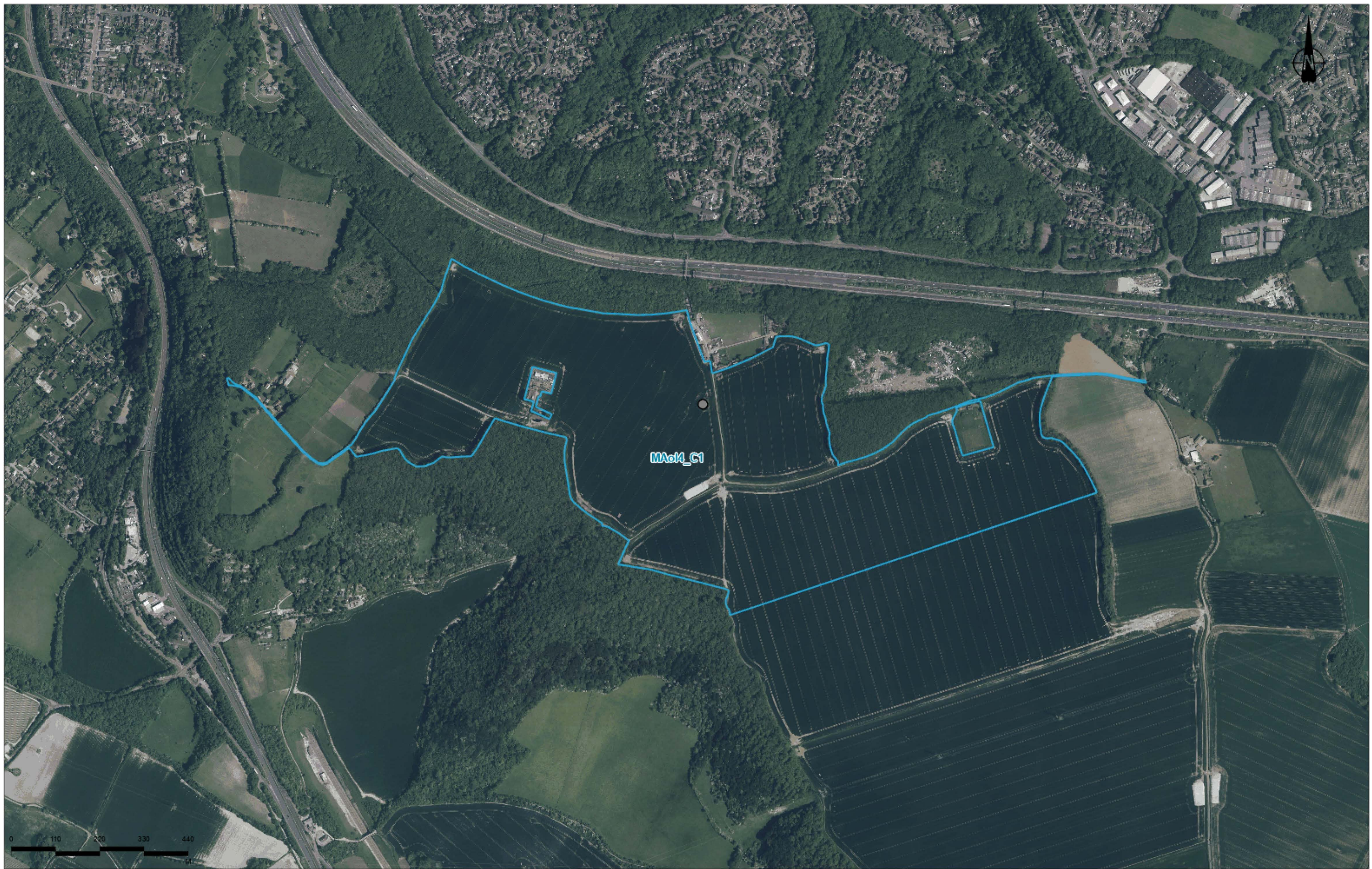
- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability**
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client

 Project
LOWER THAMES CROSSING

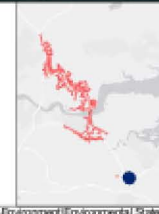
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Pond Suitability**
 - Excellent
 - Good
 - Average
 - Below Average
 - Poor
 - Not surveyed



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:8,500		
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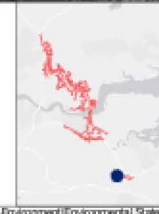


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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

- Order Limits
- Compensation area for nitrogen deposition
- Pond Suitability
- Excellent
- Good
- Average
- Below Average
- Poor
- Not surveyed



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P102
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	Page 8 of 8				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60103				



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Legend

- Order Limits
- Compensation area for nitrogen deposition
- eDNA result
- Negative
- Positive
- Not surveyed

Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

	Client		Status	DCO APPLICATION	Original Size	A3	Revision	1/02
	Project	LOWER THAMES CROSSING	Application Document Number	TR010032/APP/6.3	Scale	1:7,000		
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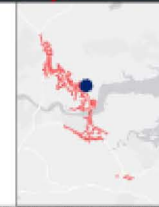
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Positive
 - Not surveyed
 - Negative



Client: 

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3	Scale	1:7,000		
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Page 2 of 8					
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60104				



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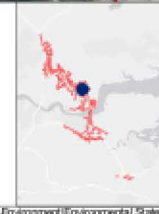
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Appr'd
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

Order Limits	Compensation area for nitrogen deposition	Positive	Not surveyed
eDNA result		Negative	



Client
national highways

Project
LOWER THAMES CROSSING

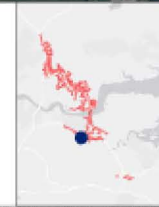
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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Positive
 - Not surveyed
 - eDNA result**
 - Negative



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:2,000		
Drawing Title	Figure 5 - eDNA Results					
	Page 4 of 8					
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60104					



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Positive
 - Not surveyed
 - eDNA result**
 - Negative



Client
national highways

Project
LOWER THAMES CROSSING

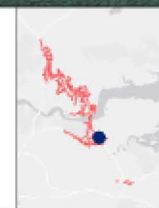
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Drawing Title	Figure 5 - eDNA Results				
	Page 5 of 8				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60104				



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Rev	Status	Rev Date	Purpose of revision	Drawn	Checked	Approved
P02	S8	06/10/2022	DCO Application	CD	VJ	BF

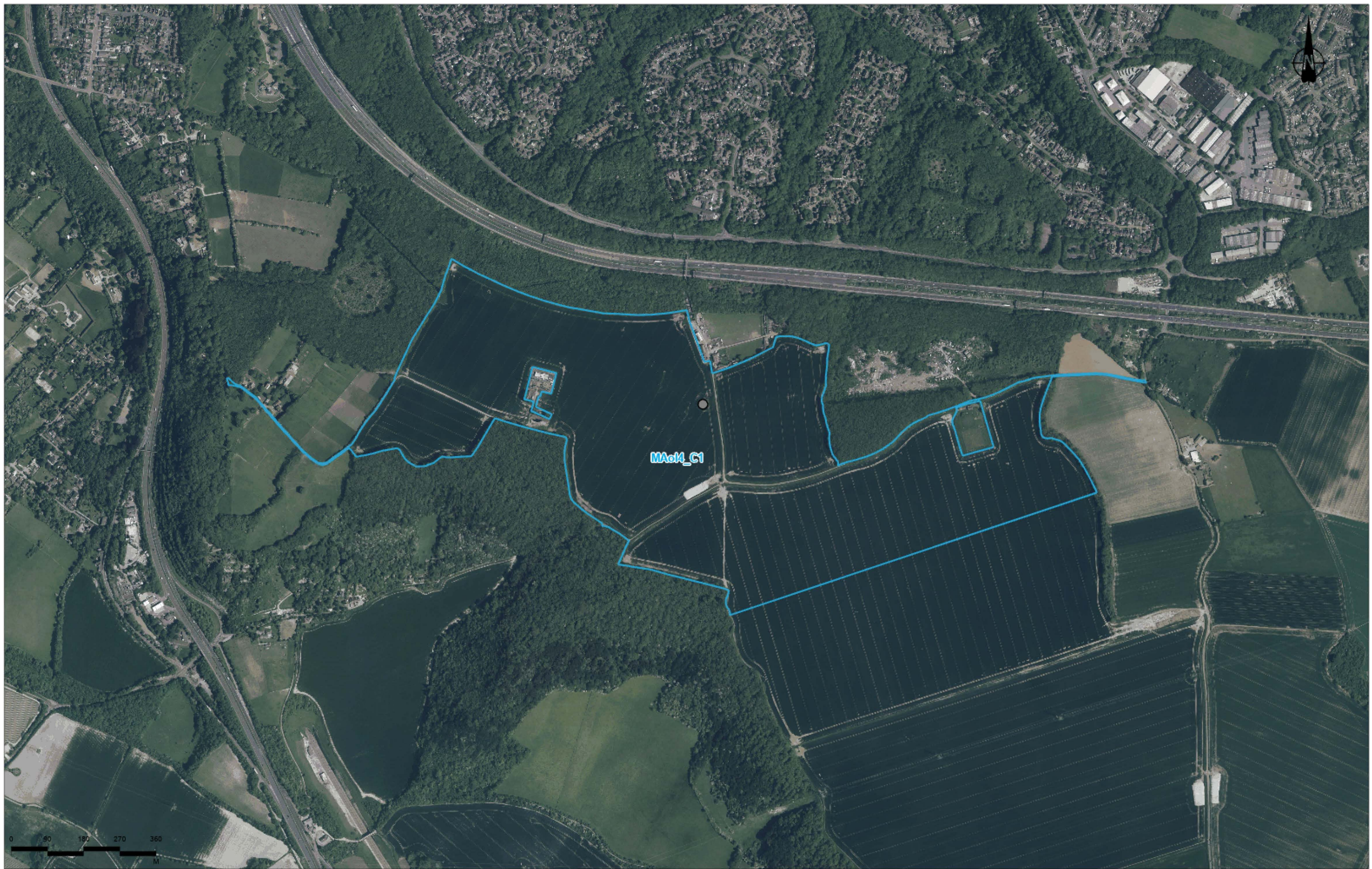
Legend	
	Order Limits
	Compensation area for nitrogen deposition
eDNA result	
	Negative
	Positive
	Not surveyed



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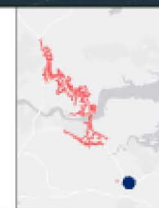
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Application Document Number	TR010032/APP/6.3	Scale	1:4,000		
Drawing Title	Figure 5 - eDNA Results				
Page 6 of 8					
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60104				



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P02	S8	06/10/2022	DCO Application	CD	VJ	BF

- Legend**
- Order Limits
 - Compensation area for nitrogen deposition
 - Positive
 - Not surveyed
 - Negative



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Status	DCO APPLICATION		Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3		Scale	1:8,500		
Drawing Title	Figure 5 - eDNA Results					
	Page 7 of 8					
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60104					

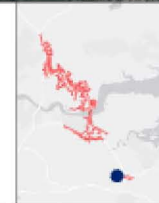


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P02	S8	06/10/2022	DCO Application	CD	VJ	BF

Legend

- Order Limits
- Compensation area for nitrogen deposition
- Positive
- Not surveyed
- eDNA result**
- Negative



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LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P02
Application Document Number	TR010032/APP/6.3	Scale	1:2,500		
Drawing Title	Figure 5 - eDNA Results				
	Page 8 of 8				
Drawing Number	HE540039-CJV-EBD-SZP_EGNE00000000-DR-LE-60104				

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