

## Lower Thames Crossing

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

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## **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 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) |
|-----------|-----------------|---------------------------------|----------------|----------------|
| MAoI1_A   | Hole Farm East  | North                           | TQ5863989719   | 75.2           |
| MAoI2_A   | Buckingham Hill | North                           | TQ6693781074   | 24.4           |
| MAoI2_B   | Hoford Road     | North                           | TQ6613180206   | 21.6           |
| MAoI3_A   | Henhurst Hill   | South                           | TQ6584969827   | 9.1            |
| MAoI3_D1  | Fenn Wood       | South                           | TQ6889870621   | 5.8            |
| MAoI3_D2  | Court Wood      | South                           | TQ6970870954   | 27.7           |
| MAoI4_C1  | Blue Bell Hill  | South                           | TQ7631161074   | 72.2           |
| MAoI4_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 Environmental 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:
  - 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:
  - a. Filled in or dry for at least most of the year;
  - b. A slurry pond;
  - c. A chlorinated swimming pool;
  - d. A fishing lake or pond which is stocked with fish;
  - e. Running water (streams and rivers);
  - f. A lake greater than 2ha in size; or
  - g. 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:

- 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;
  - 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;

- 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:
  - 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<br>Code | UKHab<br>Code | Condition (3.1) | Description  |
|---|-------------|-----------------|---------------|-----------------|--|
| Line of Trees<br>(Ecologically<br>valuable) | 0.13km      | A3.1            | w1g6          | Moderate        | A mature line if 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<br>Arrhenatherum elatius neutral grassland with ruderal banks<br>and patches of bramble<br>(Rubus fruticosus) and<br>dogwood (Cornus sanguinea)<br>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<br>Hedgerow                          | 0.12km      | J2.1.2          | h2a           | Good            | A priority hedgerow borders<br>the north and east edges of<br>the modified grassland<br>separating the arable land<br>from the grassland. Likely a<br>young, planted hedgerow due<br>to species and age. |

Table 5.2 Habitat Results for MAoI3\_D1 Fenn Wood

| Habitat Type                     | Area/Length | Phase 1<br>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<br>grassland            | 5.46ha      | B6              | g4  | Moderate        | The compensation site is predominantly unmanaged modified grassland with a built-up residential area to the east.       |
| Native<br>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<br>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 MAoI3\_D1 Court Wood

| Habitat Type                     | Area/Length | Phase 1<br>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<br>Code | UKHab<br>Code | Condition (3.1) | Description   |
|---|-------------|-----------------|---------------|-----------------|---|
| Line of Trees<br>(Ecologically<br>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<br>Hedgerow                          | 0.12km      | J2.1.2          | h2a           | Good            | N/A   |
| Native Species<br>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<br>land; sealed<br>surface        | <0.01ha     | J3.6            | u1b5          | N/A - Other     | N/A   |

Table 5.4 Habitat Results for MAoI4\_C1 Blue Bell Hill

| Habitat Type                             | Area/Length | Phase 1<br>Code | UKHab<br>Code | Condition (3.1) | Description  |
|--|-------------|-----------------|---------------|-----------------|--|
| Lowland mixed deciduous woodland         | 0.35ha      | A1.1.1          | w1f           | Moderate        | N/A  |
| Arable field<br>margins<br>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<br>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<br>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<br>Code |     | Condition (3.1) | Description   |
|---------------------------------|-------------|-----------------|-----|-----------------|---|
|                                 |             |                 |     |                 | species and composition concluded different conditions for these hedgerows.   |
| Native Species<br>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<br>Rich Hedgerow | 0.18km      | J2.2.1          | h2a | Moderate        | N/A   |
| Native<br>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<br>Hedgerow              | 0.63km      | J2.2.2          | h3a | Moderate        | Southern banded hedgerow adjacent to good condition hedgerow to the north.  |
| Native<br>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 MAoI4\_C2 Burham

| Habitat Type                                | Area/Length | Phase 1<br>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<br>(Ecologically<br>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<br>Code | UKHab<br>Code | Condition (3.1) | Description  |
|----------------------------------|-------------|-----------------|---------------|-----------------|--|
| Ruderal/Ephemeral                | 0.01ha      | J1.3-J4         | u1c           | Good            | N/A  |
| Native Species<br>Rich Hedgerow  | 0.23km      | J2.1.1          | h2a           | N/A -<br>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 -<br>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 MAoI1\_A Hole Farm East

| Habitat Type                     | Area/Length | Phase 1<br>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<br>Code | UKHab<br>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<br>(Ecologically<br>Valuable) | 0.23km      | A3.1            | w1g6          | Moderate        | Lines of trees bordering the field margins and ditches throughout the compensation site.   |
| Line of Trees<br>(Ecologically<br>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<br>margins pollen<br>& 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<br>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<br>Code       | UKHab<br>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-<br>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<br>Hedgerow               | 1.93km      | J2.3.2                | h2a           | Good            | N/A  |
| Native<br>Hedgerow with<br>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 MAoI2\_A Buckingham Hill

| Habitat Type            | Area/Length | Phase 1<br>Code |     | Condition<br>(3.1) | Description   |
|-------------------------|-------------|-----------------|-----|--------------------|---|
| Other neutral grassland | 19.14ha     | B2.2            | g3c |                    | 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<br>Code | UKHab<br>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<br>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 MAoI2\_B Hoford Road

| Habitat Type                      | Area/Length | Phase 1<br>Code | UKHab<br>Code | Condition<br>(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<br>woodland;<br>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<br>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<br>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</i> elatius 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<br>Rich Hedgerow          | 0.21km      | J2.2.1          | h2a  | Good            | Linear scrubby hedgerow with<br>minimal gaps, filling out to the<br>east. Likely to have developed<br>naturally along the adjacent<br>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:

- 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<br>Score | HSI<br>Suitability | eDNA<br>survey | eDNA Result |
|--------------|-------------------|--------------|--------------------|----------------|-------------|
| HF1          | Hole Farm<br>East | 0.78         | Good               | Yes            | Negative    |
| HF2          | Hole Farm<br>East | 0.35         | Poor               | Yes            | Negative    |
| HF3          | Hole Farm<br>East | 0.76         | Good               | Yes            | Negative    |
| Pond 1a      | Hole Farm<br>East | 0.79         | Good               | Yes            | Negative    |
| Pond 6a      | Hole Farm<br>East | 0.85         | Excellent          | Yes            | Negative    |
| Pond 6b      | Hole Farm<br>East | 0.6          | Average            | Yes            | Negative    |
| Pond 6c      | Hole Farm<br>East | 0.42         | Poor               | Yes            | Negative    |
| Pond 6d      | Hole Farm<br>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 MAol1\_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 |  |
|------------------------------|-----------------------------|---------|---------------------|--|
| MAoI1_A<br>Hole Farm<br>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<br>Hole Farm<br>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

- 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 site 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 MAol2 B. Hoford Road

| Habitat Type                   | No. of<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel |      | Code | Condition<br>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<br>(priority habitat) | 1                 | 0.12  | 0.12 | h2a  | Good             | 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            | Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel |      | Code | Condition<br>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<br>grasses     |         |   |      |      |                  |            |            |            |            |            |            |            |            |            |             |             |             |             |
| Other neutral grassland | 1       | 0.04  | 0.04 | g3c5 | Good             | Yes        | Yes        | No         | Yes        | Yes        | Yes        | Yes        | -          | -          | -           | -           | -           | -           |

#### Table A.2 MAoI3\_D1. Fenn Wood

| Habitat Type                     | No. of<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel |      | Code | Condition<br>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<br>surveyed | N/A         | N/A         | N/A         | N/A         |
| Lowland mixed deciduous woodland | 1                 | 0.26  | 0.26 | w1f  | N/A – Not<br>surveyed | N/A         | N/A         | N/A         | N/A         |
| Hedgerow                         | 1                 | 0.01  | 0.01 | h2   | N/A – Not<br>surveyed | 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<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel | Total<br>Area /<br>Total<br>Length | UKhab<br>Code | Condition<br>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<br>surveyed | N/A         | N/A         | N/A         | N/A         |
| Mixed scrub                      | 3                 | 0.08  | 0.15                               | h3h           | N/A – Not<br>surveyed | 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         |
| 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         |
| Line of trees                    | 2                 | 0.09  | 0.16                               | w1g6          | Moderate              | Yes        | No         | Yes        | No         | Yes        | -          | -          | -          | -          | -           | -           | -           | -           |
| Hedgerow<br>(priority habitat)   | 2                 | 0.37  | 0.49                               | h2a           | Good                  | Yes        | Yes        | Yes        | Yes        | Yes        | No         | Yes        | Yes        | -          | -           | -           | -           | -           |
| Cropland                         | 1                 | 23.5  | 23.5                               | С             | 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                   | Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel | Total<br>Area /<br>Total<br>Length | UKhab<br>Code | Condition<br>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<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel |      | Code | Condition<br>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<br>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<br>(priority habitat)   | 4                 | 0.3   | 0.61 | h2a  | Good             | Yes        | Yes        | Yes        | Yes        | Yes        | No         | Yes        | Yes        | -          | -           |             | -           | -           |
| Hedgerow<br>(priority habitat)   | 3                 | 0.63  | 1.07 | h2a  | Moderate         | Yes        | Yes        | Yes        | Yes        | No         | No         | Yes        | Yes        | -          | -           | -           | -           | -           |

| Habitat Type                              | No. of<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel | Total<br>Area /<br>Total<br>Length | UKhab<br>Code | Condition<br>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<br>surveyed | N/A         | N/A         | N/A         | N/A         |
| Developed land; sealed surface            | 5                 | 1.01  | 1.16                               | u1b           | N/A – not<br>surveyed | N/A         | N/A         | N/A         | N/A         |

#### Table A.5 MAoI4\_C2. Burham

| <b>7</b>                         | No. of<br>Parcels | of Biggest |      | Code | Condition<br>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<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel |      | UKhab<br>Code | Condition<br>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 | С             | 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<br>surveyed | 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 MA0I1\_A. Hole Farm East

| Habitat Type                     | No. of<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel | Total<br>Area /<br>Total<br>Length | UKhab<br>Code | Condition<br>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         |
| 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                              | С             | 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<br>Parcels | Area (Ha) /Length (km) of Biggest Parcel | Total<br>Area /<br>Total<br>Length | Code | Condition<br>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<br>(see<br>Appendix<br>8.21 -<br>Biodiversity<br>Metric<br>Calculations<br>(Application<br>Document<br>6.3) | 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         |
| 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<br>(see<br>Appendix<br>8.21 -<br>Biodiversity<br>Metric<br>Calculations<br>(Application                     | N/A         | N/A         | N/A         | N/A         |

| Habitat Type                   | No. of<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel | Total<br>Area /<br>Total<br>Length | UKhab<br>Code | Condition<br>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<br>6.3)      |            |            |            |            |            |            |            |            |            |             |             |             |             |
| Hedgerow                       | 4                 | 0.25  | 0.53                               | h2            | Good                  | Yes         | -           | -           | -           |
| Hedgerow<br>(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<br>surveyed | 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 MA0I2\_A. Buckingham Hill

| Habitat Type                             | No. of<br>Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel | Total<br>Area /<br>Total<br>Length | UKhab<br>Code | Condition<br>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         |
| Other rivers and streams                 | 1                 | 0.83  | 0.83                               | r2b           | N/A - Dry        | N/A         | N/A         | N/A         | N/A         |
| Hedgerow<br>(priority habitat)           | 1                 | 0.11  | 0.11                               | h2a           | Good             | Yes        | Yes        | Yes        | Yes        | No         | No         | Yes        | Yes        | -          | -           | -           | -           | -           |
| Cropland                                 | 1                 | 0.001   | 0.001                              | С             | 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;<br>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 MAoI2\_B. Hoford Road

| <i>J</i> :                               | No. of Parcels | Area (Ha)<br>/Length (km)<br>of Biggest<br>Parcel |       | Code | Condition<br>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<br>(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         |
| 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 | С    | 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<br>surveyed | N/A         | N/A         | N/A         | N/A         |
| Other woodland; broadleaved              | 1              | 0.2   | 0.2   | w1g  | N/A - Not<br>surveyed | 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**

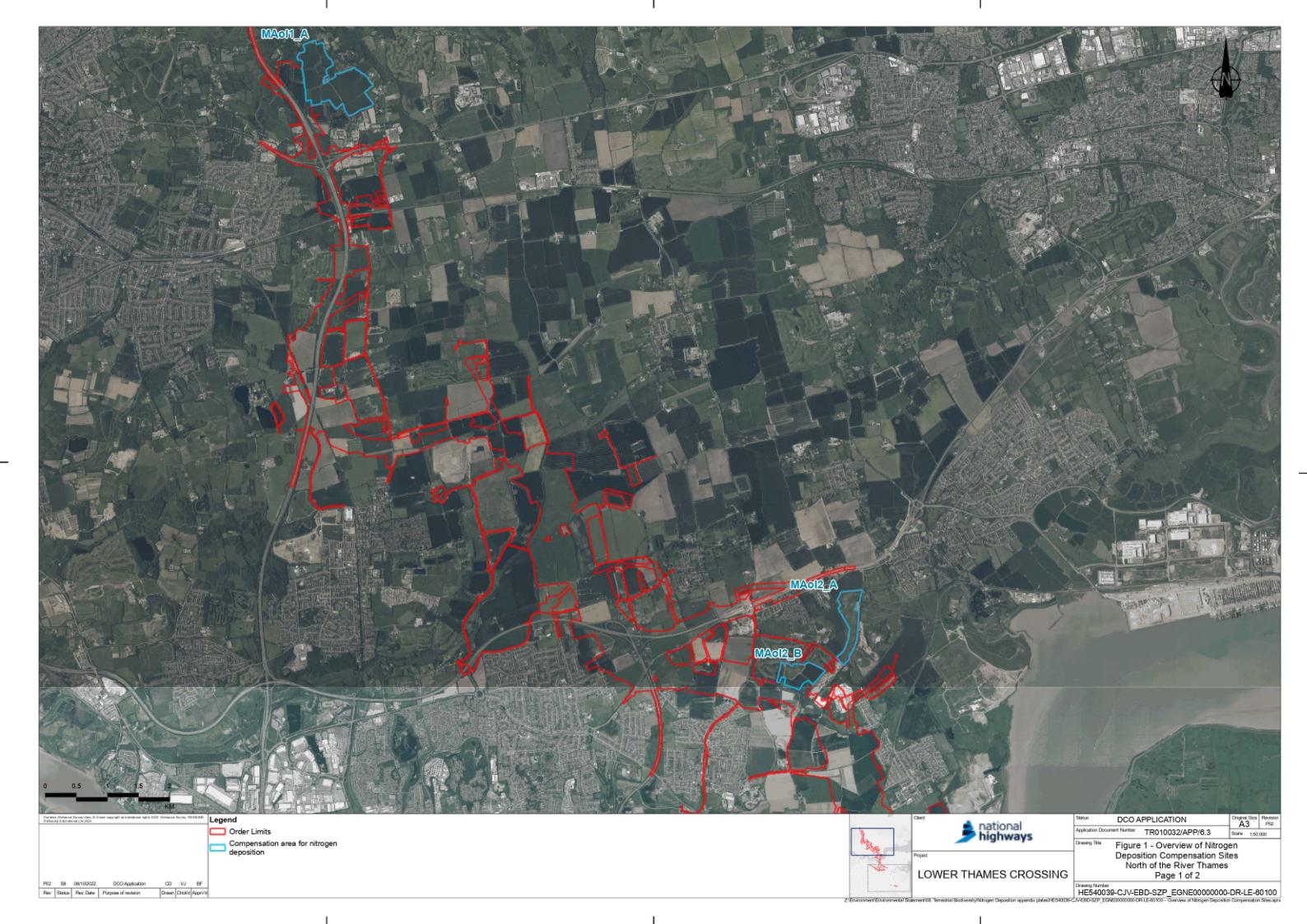
B.1.1 The table below shows the full HSI assessment for each pond surveyed.

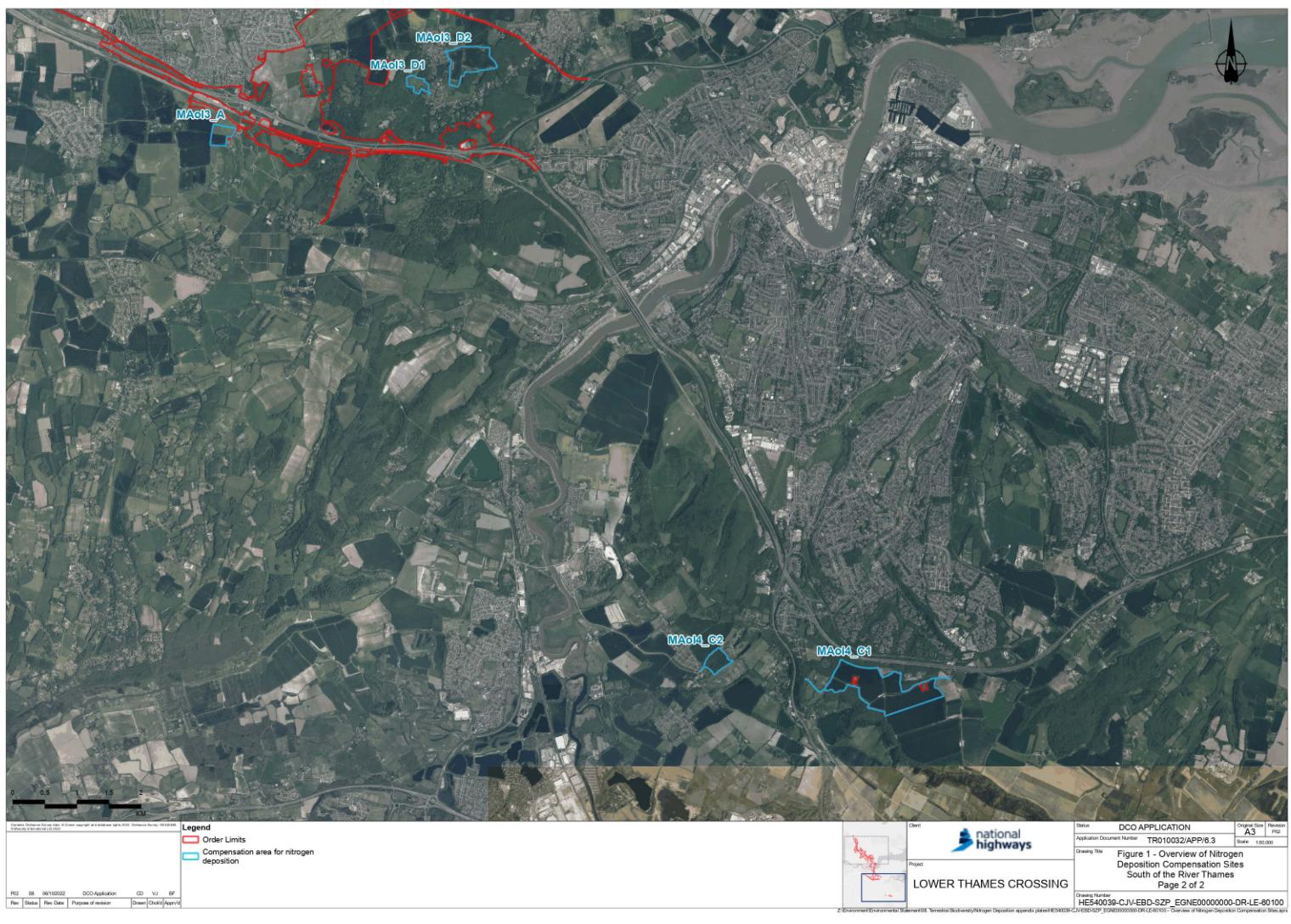
**Table B.1 GCN HSI results** 

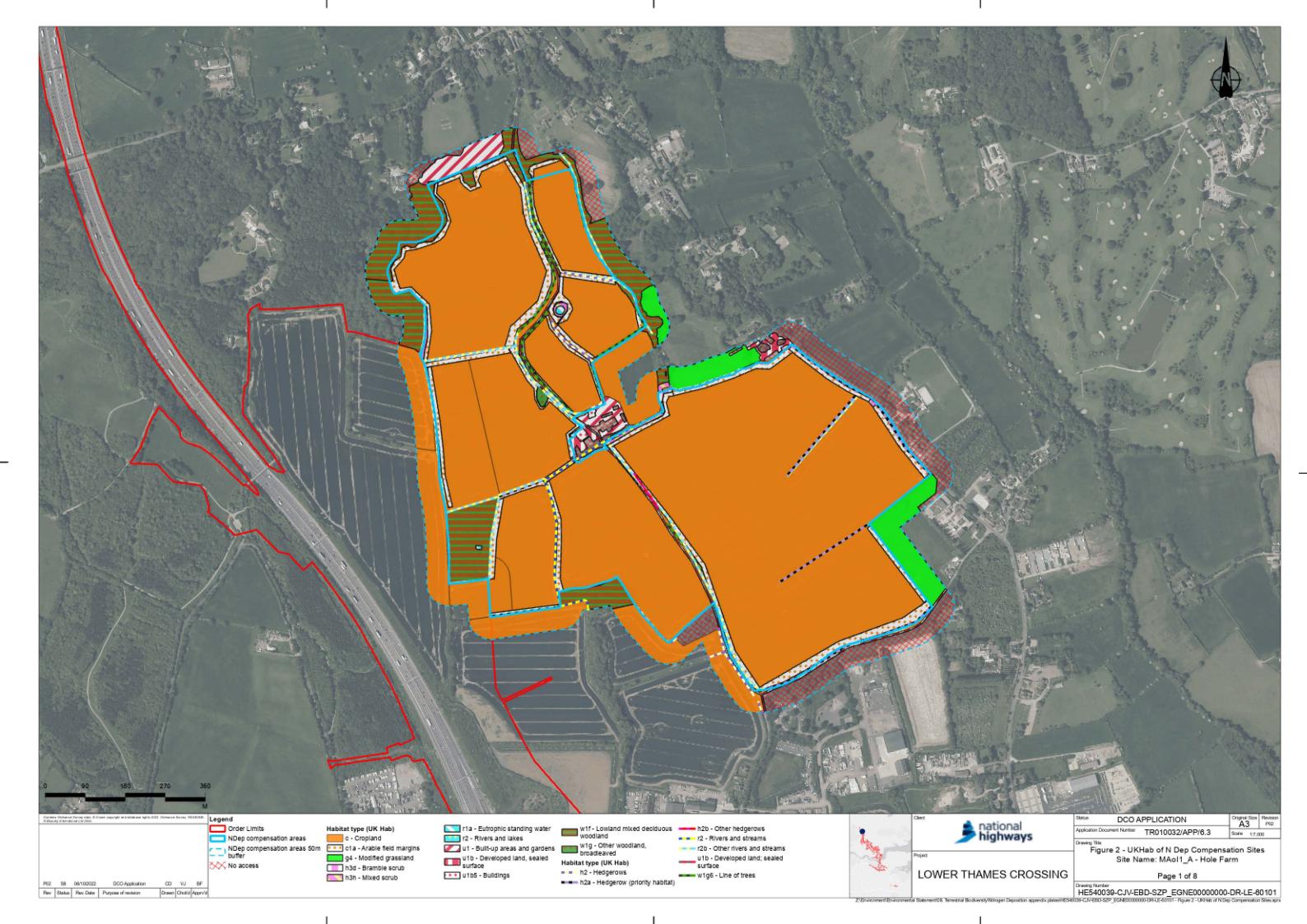
| Name    | F1 | F2  | F3                                 | F4       | F5  | F6                                    | F7       | F8 | F9       | F10 | HSI<br>Score | -         | eDNA<br>Result |
|---------|----|-----|------------------------------------|----------|-----|---------------------------------------|----------|----|----------|-----|--------------|-----------|----------------|
| HF1     | 1  | 400 | Rarely<br>(Dries 2<br>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<br>(Dries 2<br>Years In 10) | Poor     | 90  | Absent                                | Absent   | 15 | Good     | 20  | 0.76         | Good      | Negative       |
| Pond 1a | 1  | 875 | Rarely<br>(Dries 2<br>Years In 10) | Poor     | 80  | Absent<br>(Apart<br>From<br>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<br>(Dries 2<br>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<br>(Dry ~ 3              | Good     | 90  | Absent                                | Possible | 8  | Moderate | 5   | 0.66         | Average   | Positive       |

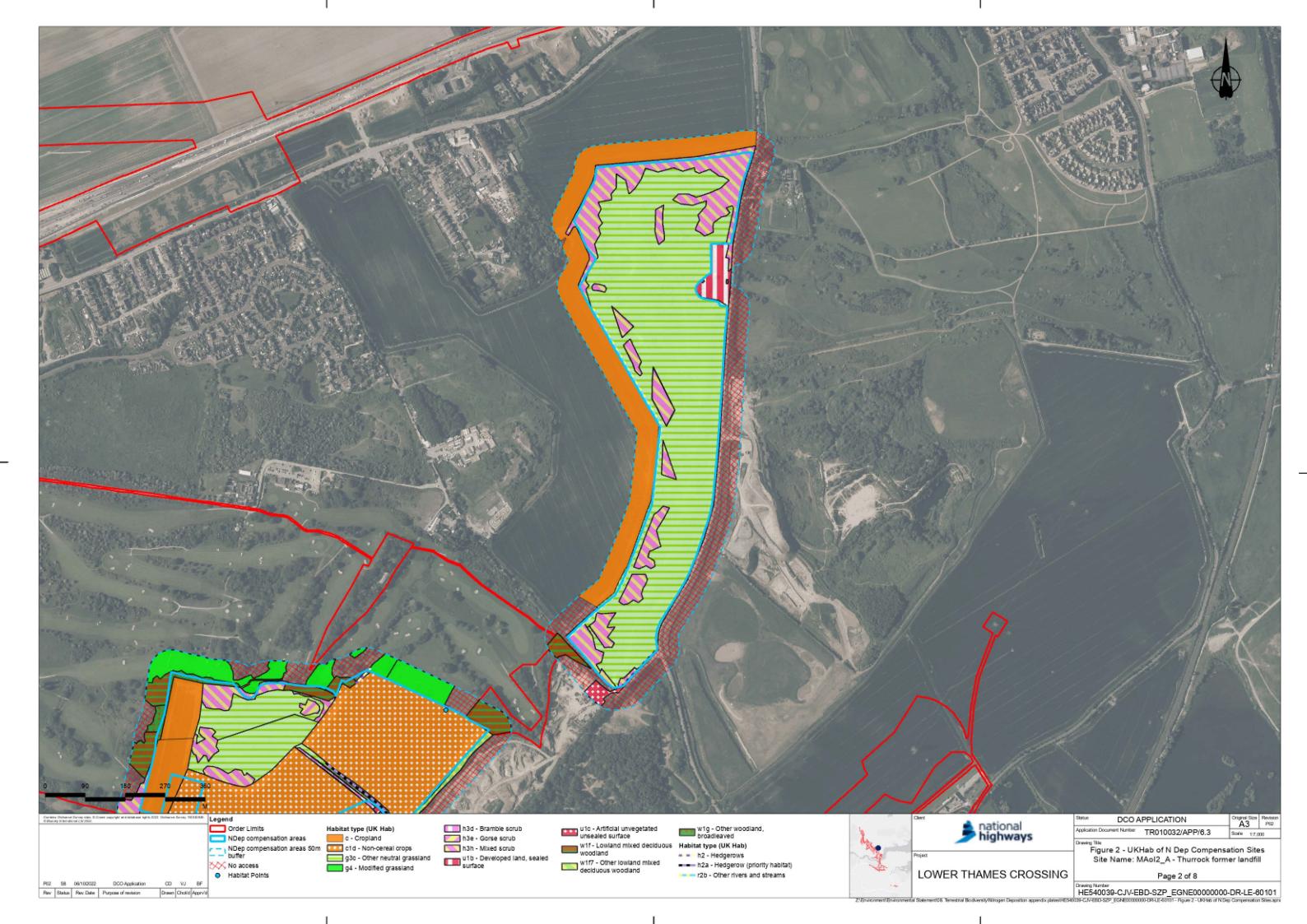
| Name    | F1 | F2  | F3                                 | F4       | F5  | F6     | F7       | F8 | F9   |    | HSI<br>Score | Suitability | eDNA<br>Result |
|---------|----|-----|------------------------------------|----------|-----|--------|----------|----|------|----|--------------|-------------|----------------|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

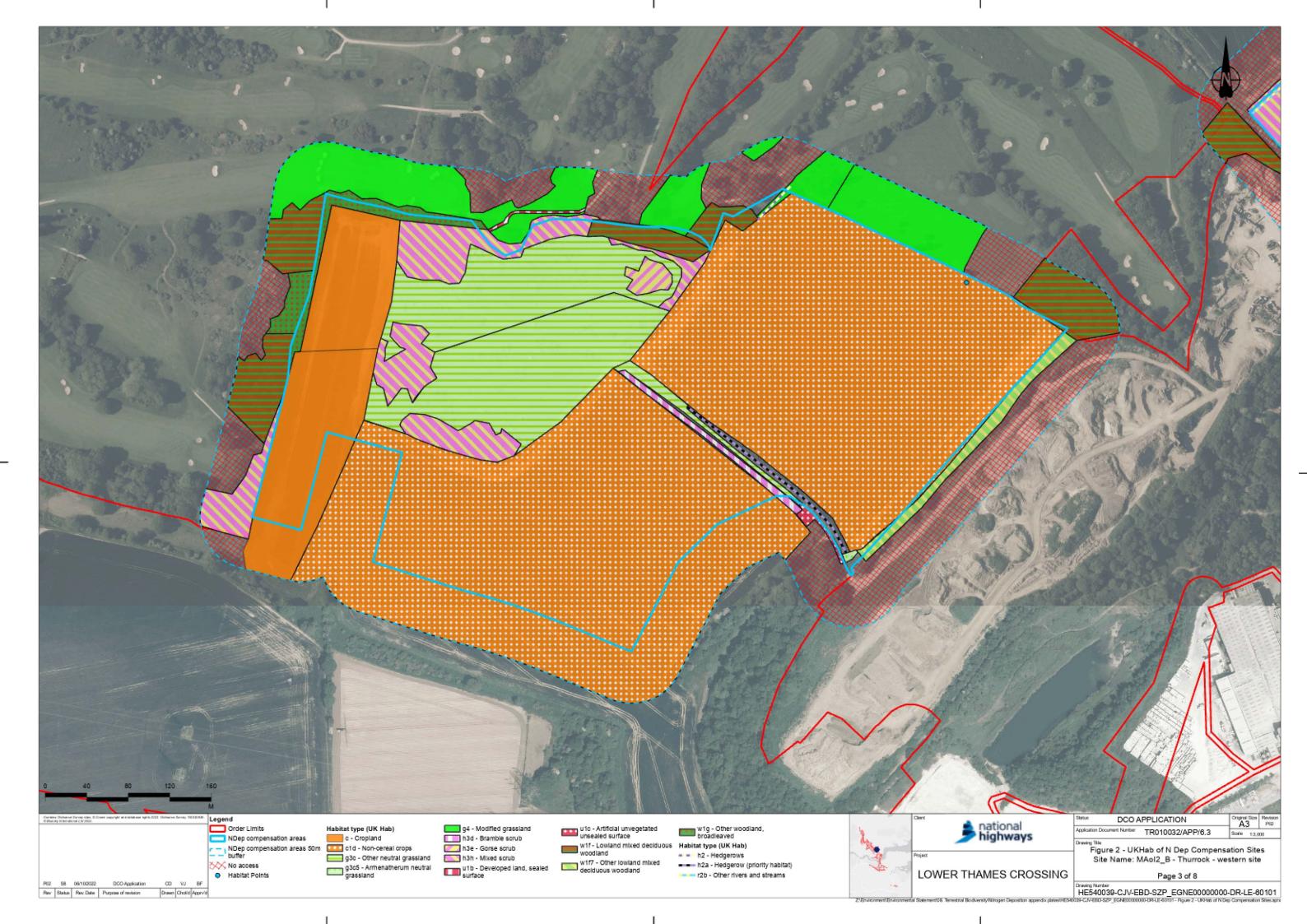
## **Figures**

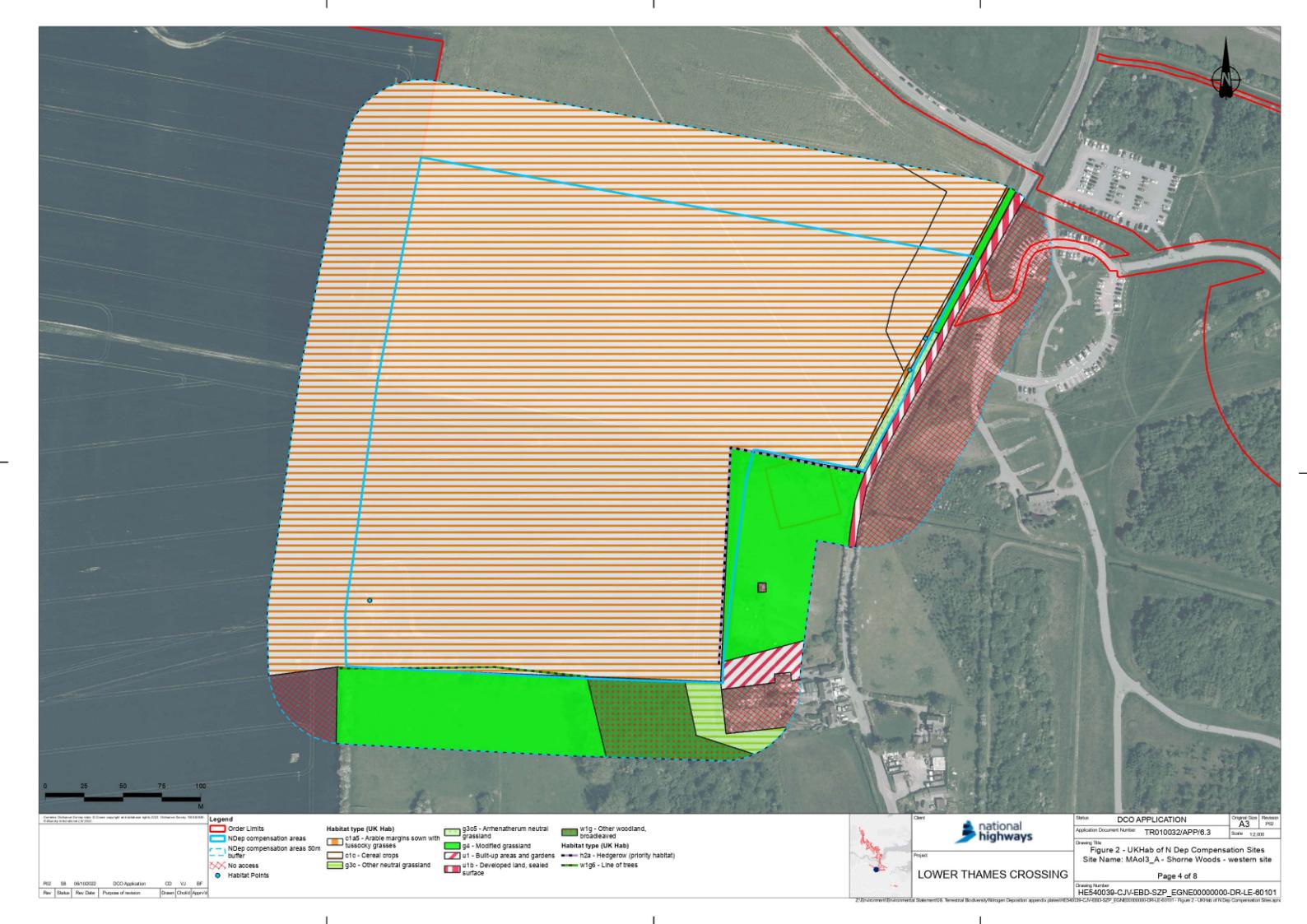


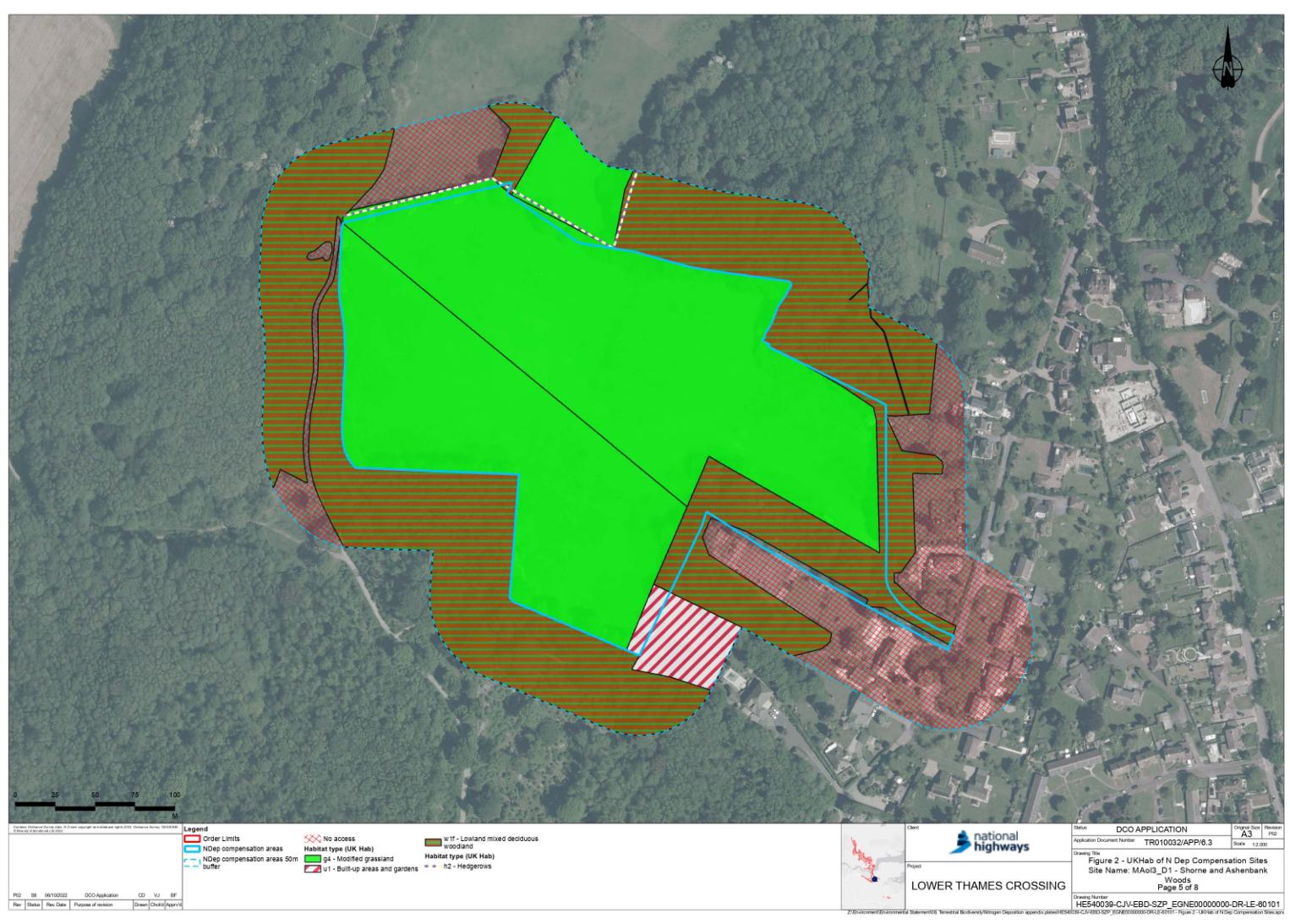


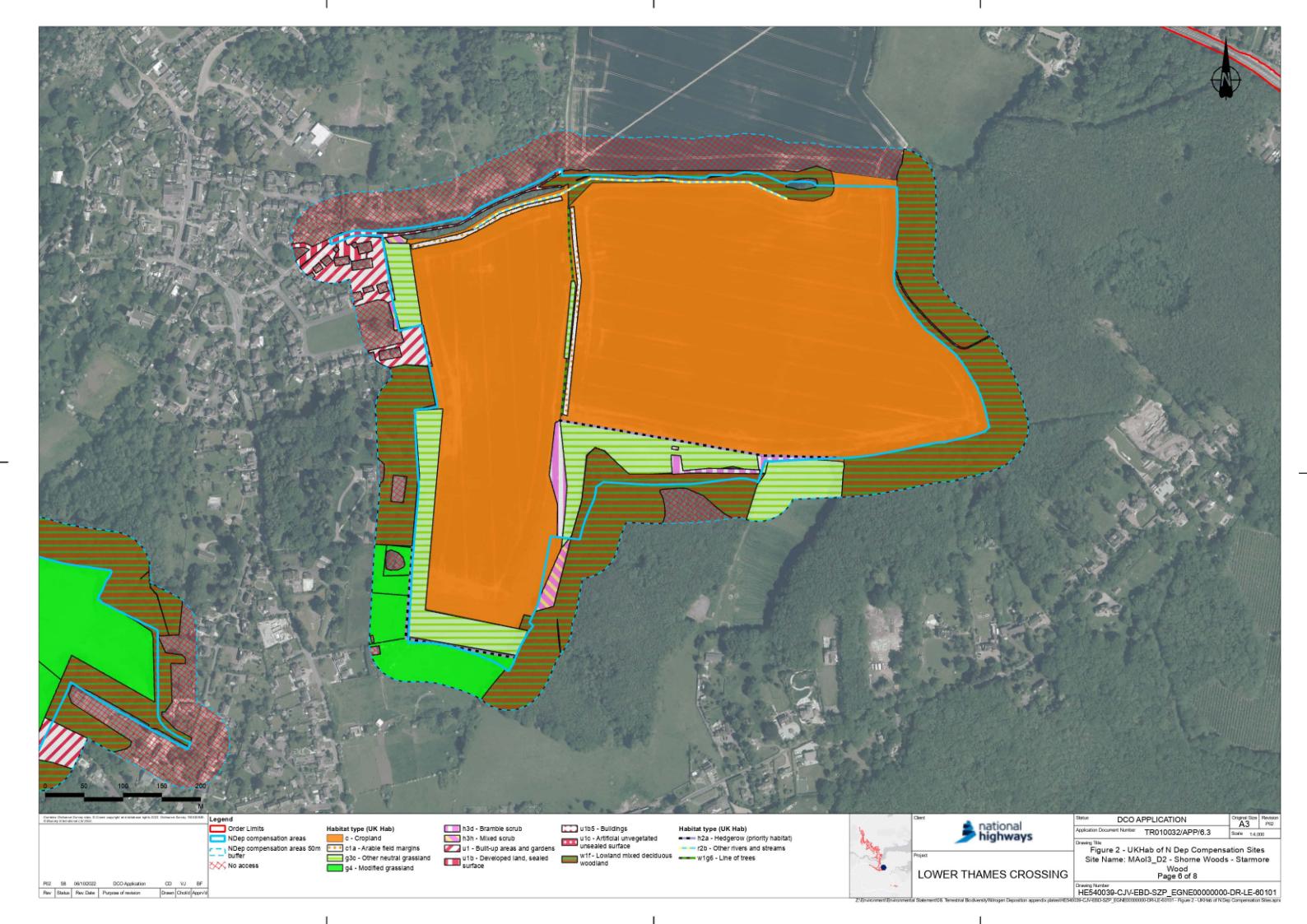


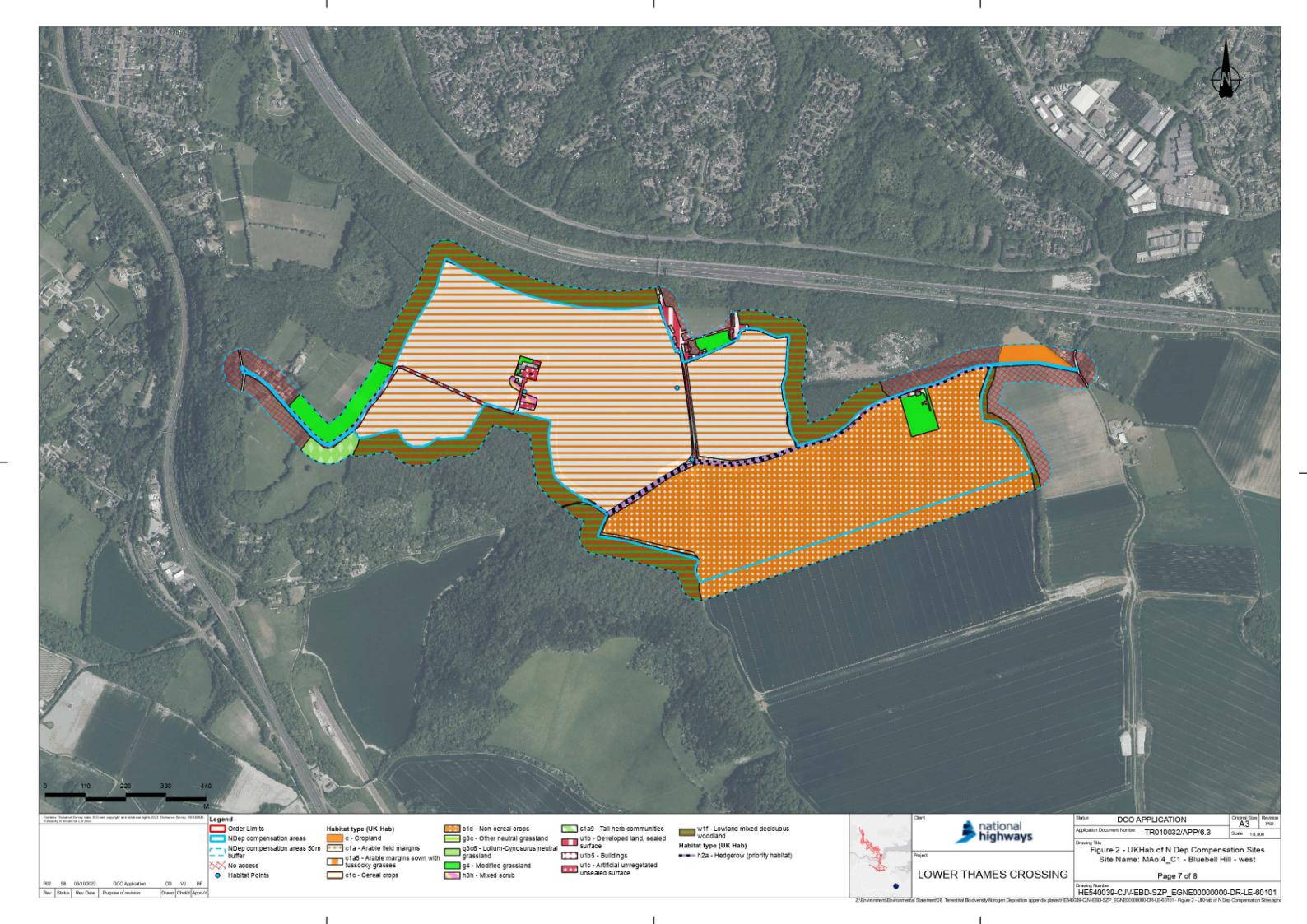


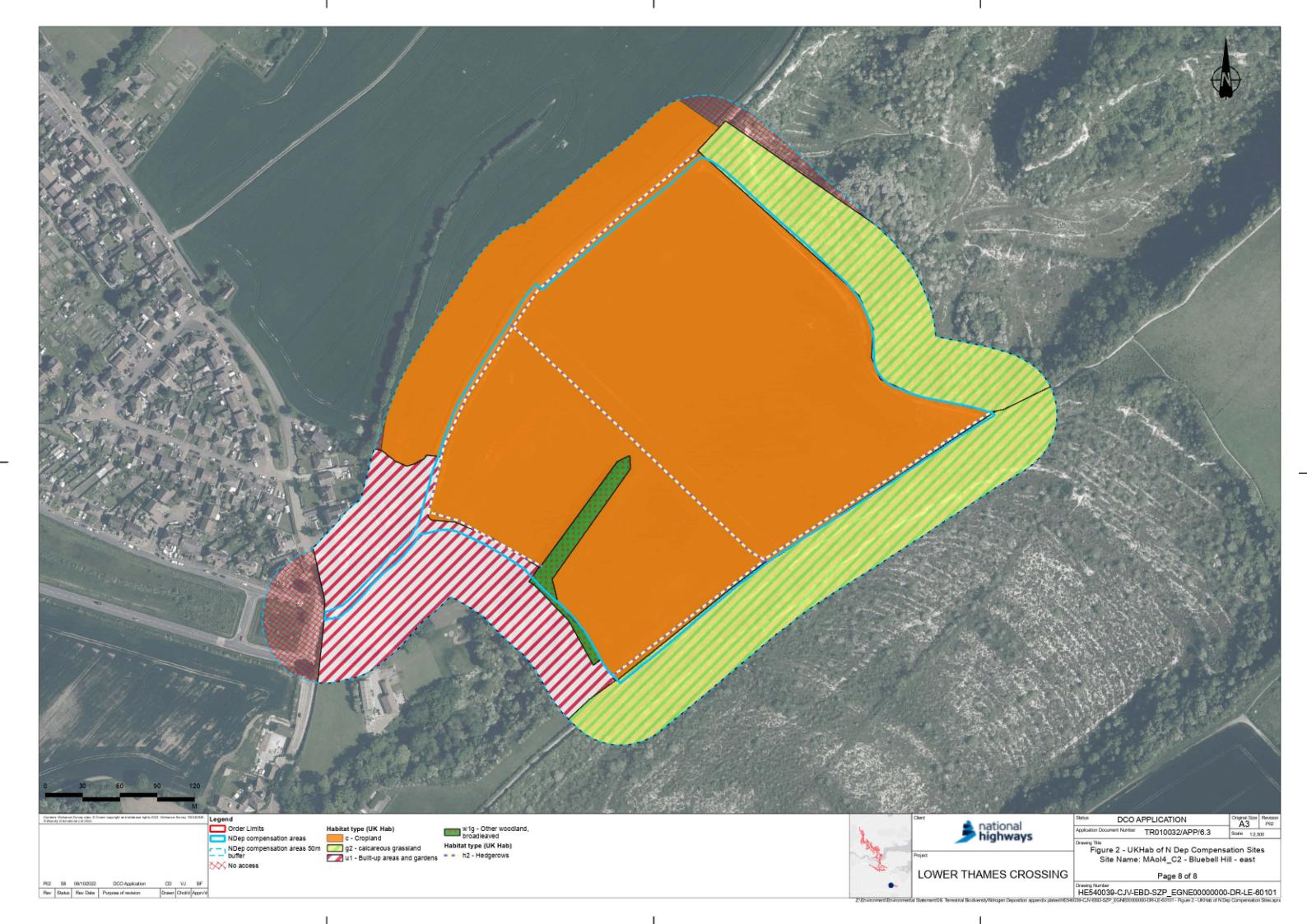


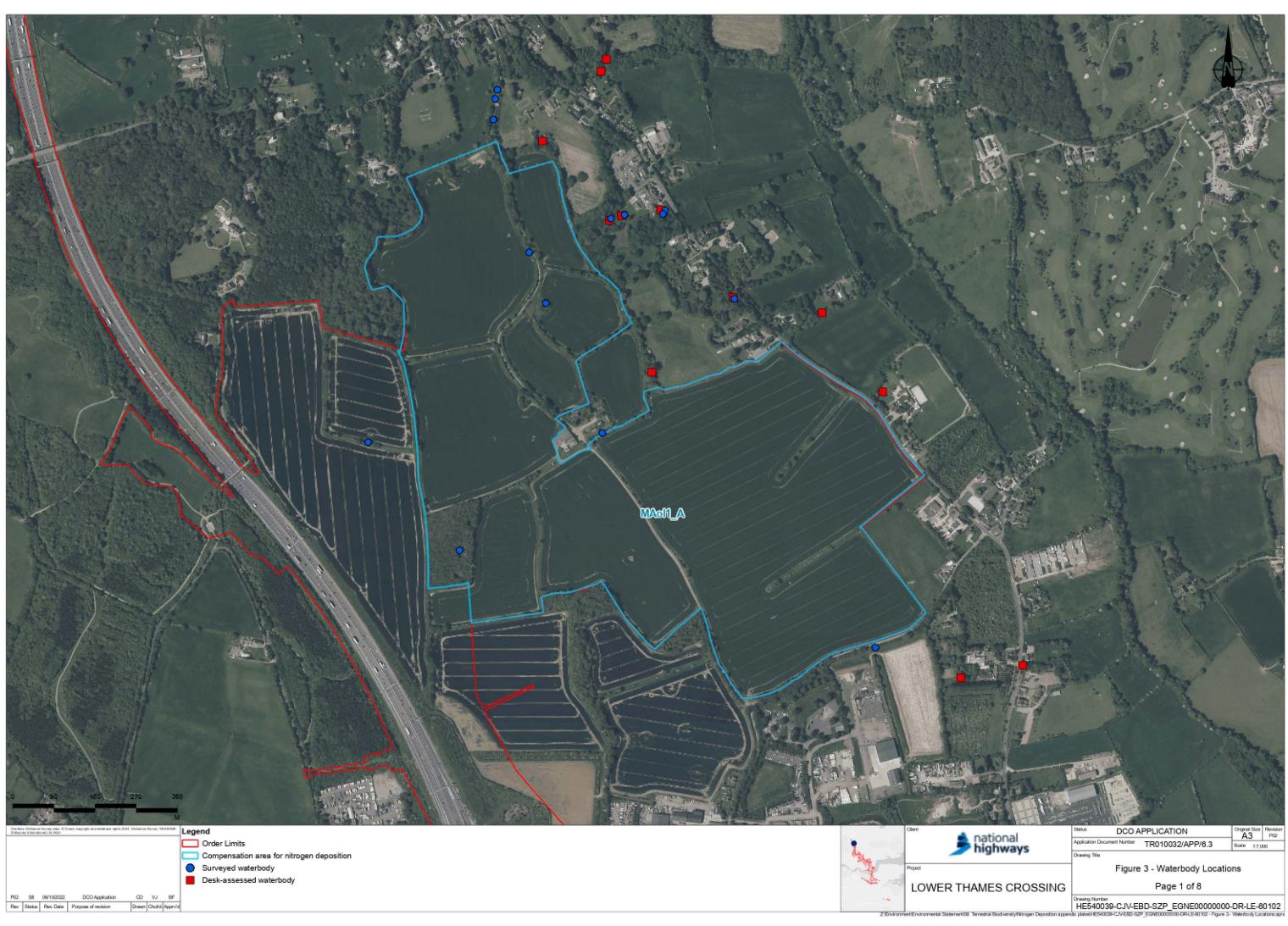






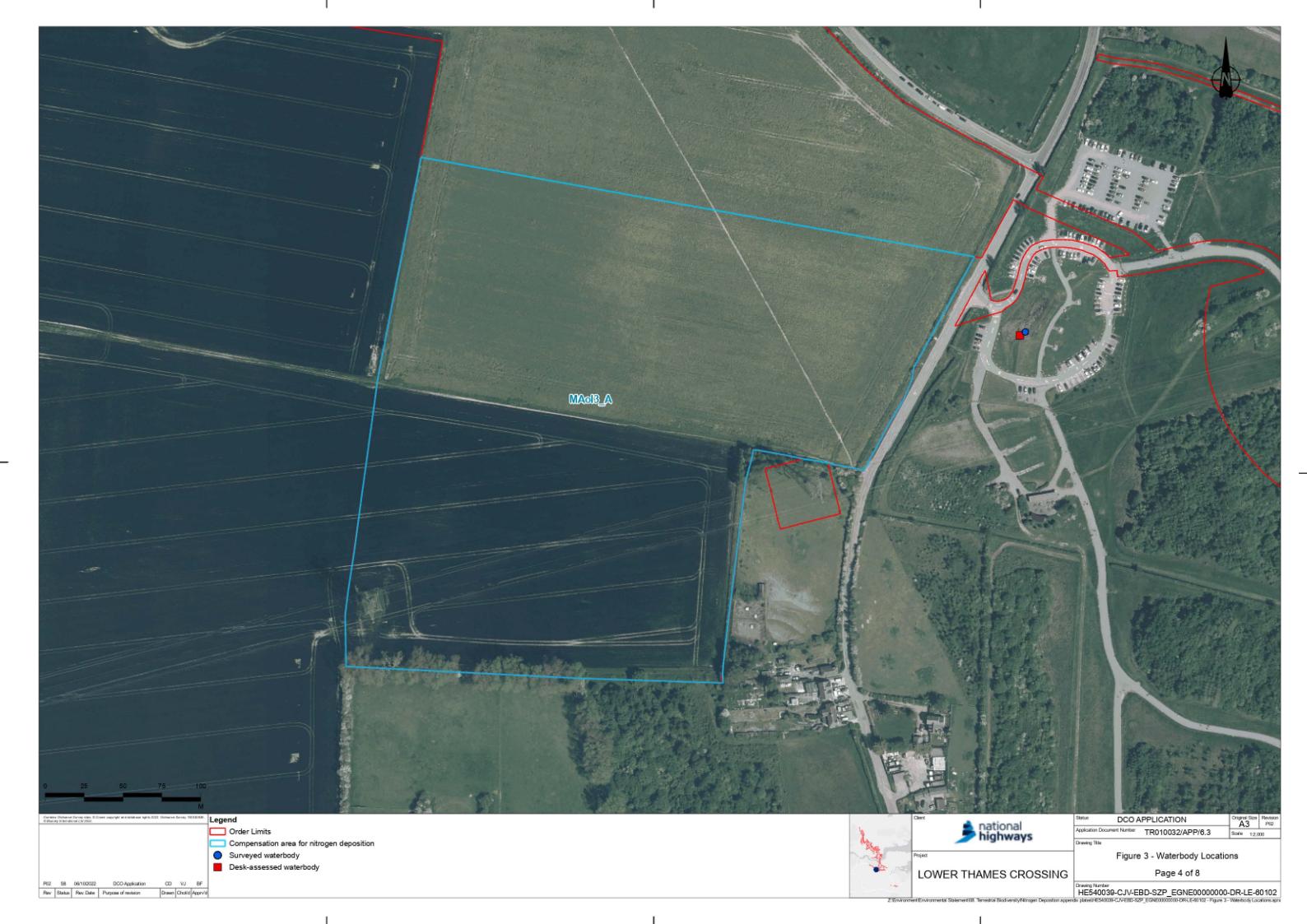






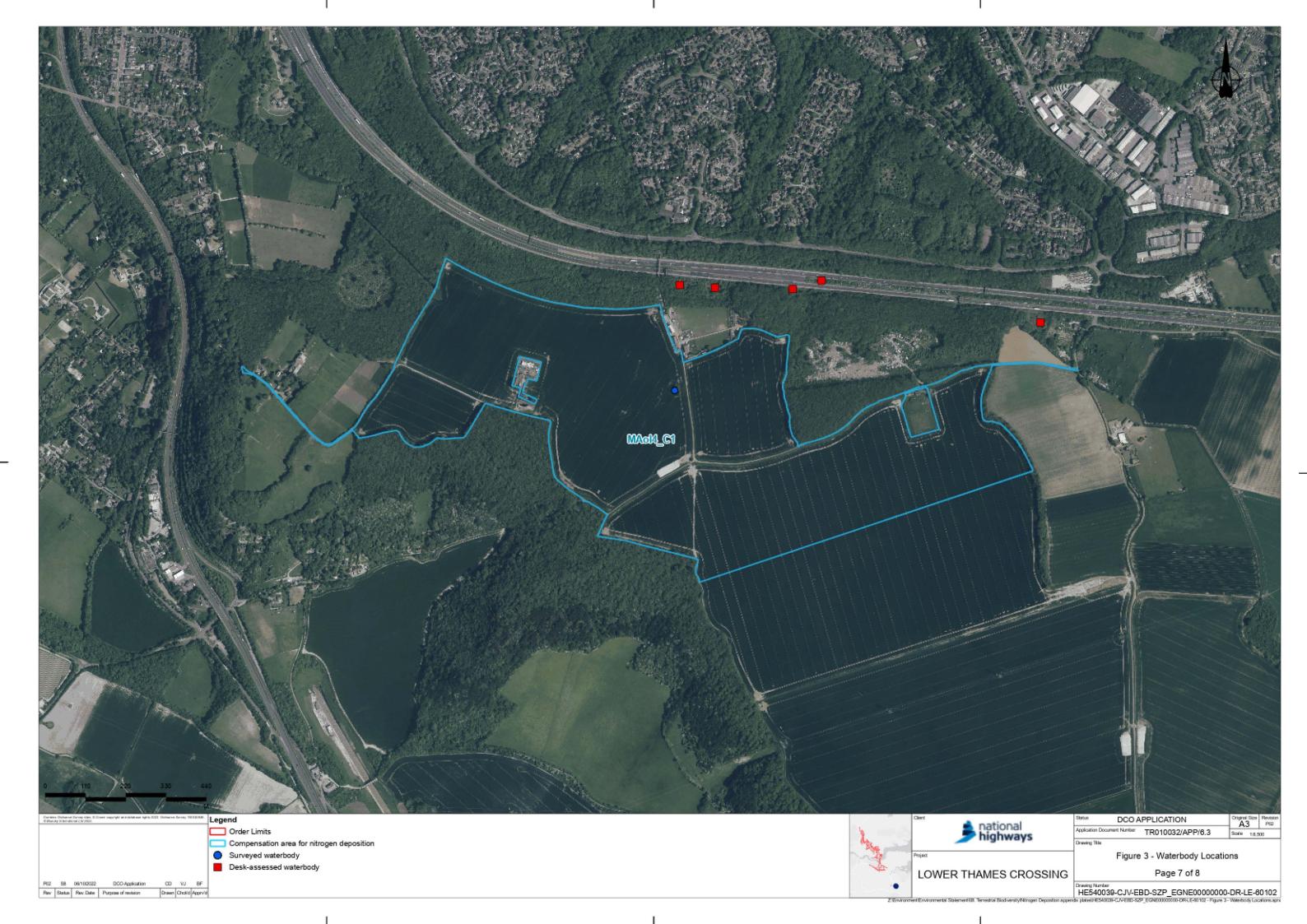




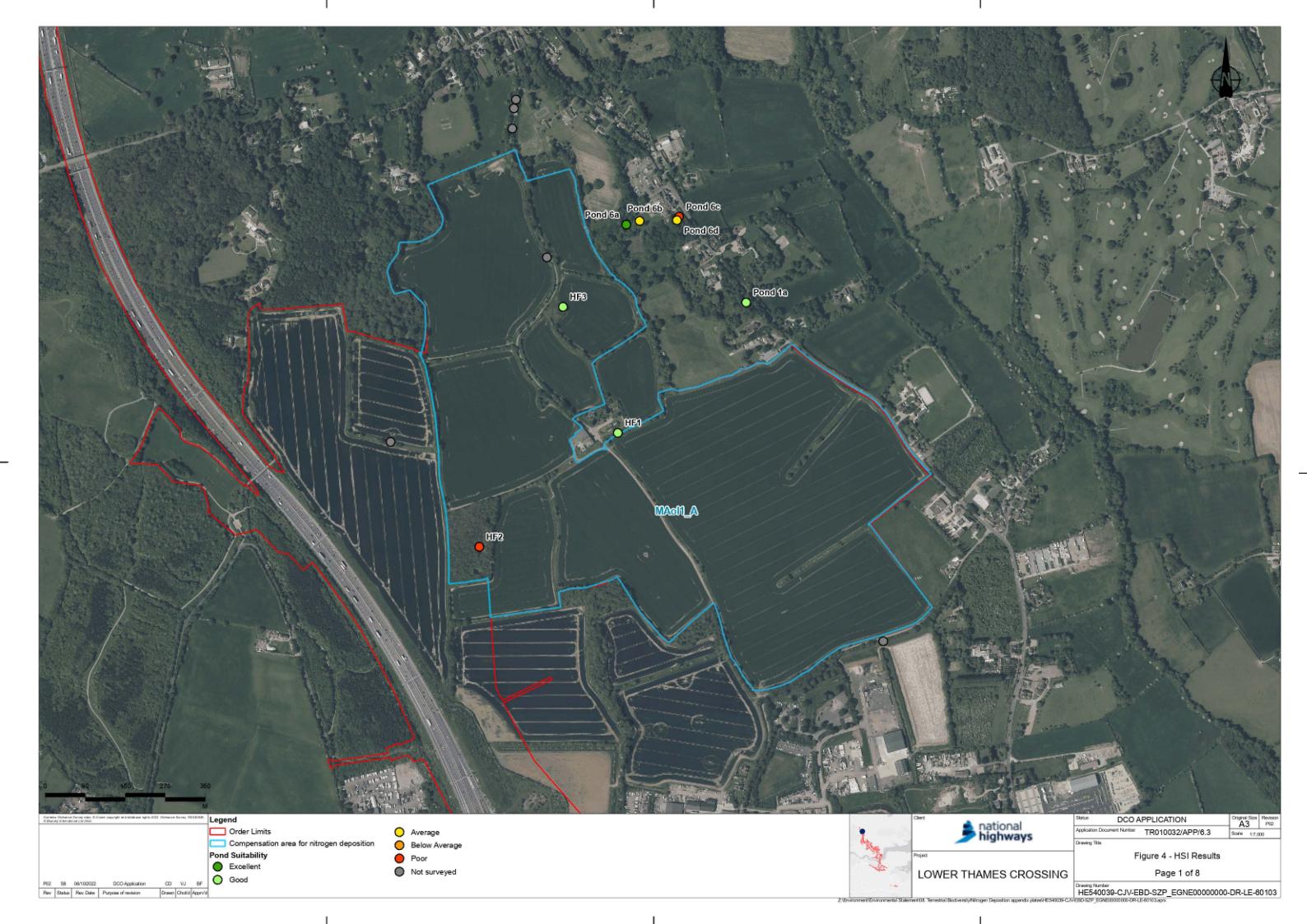










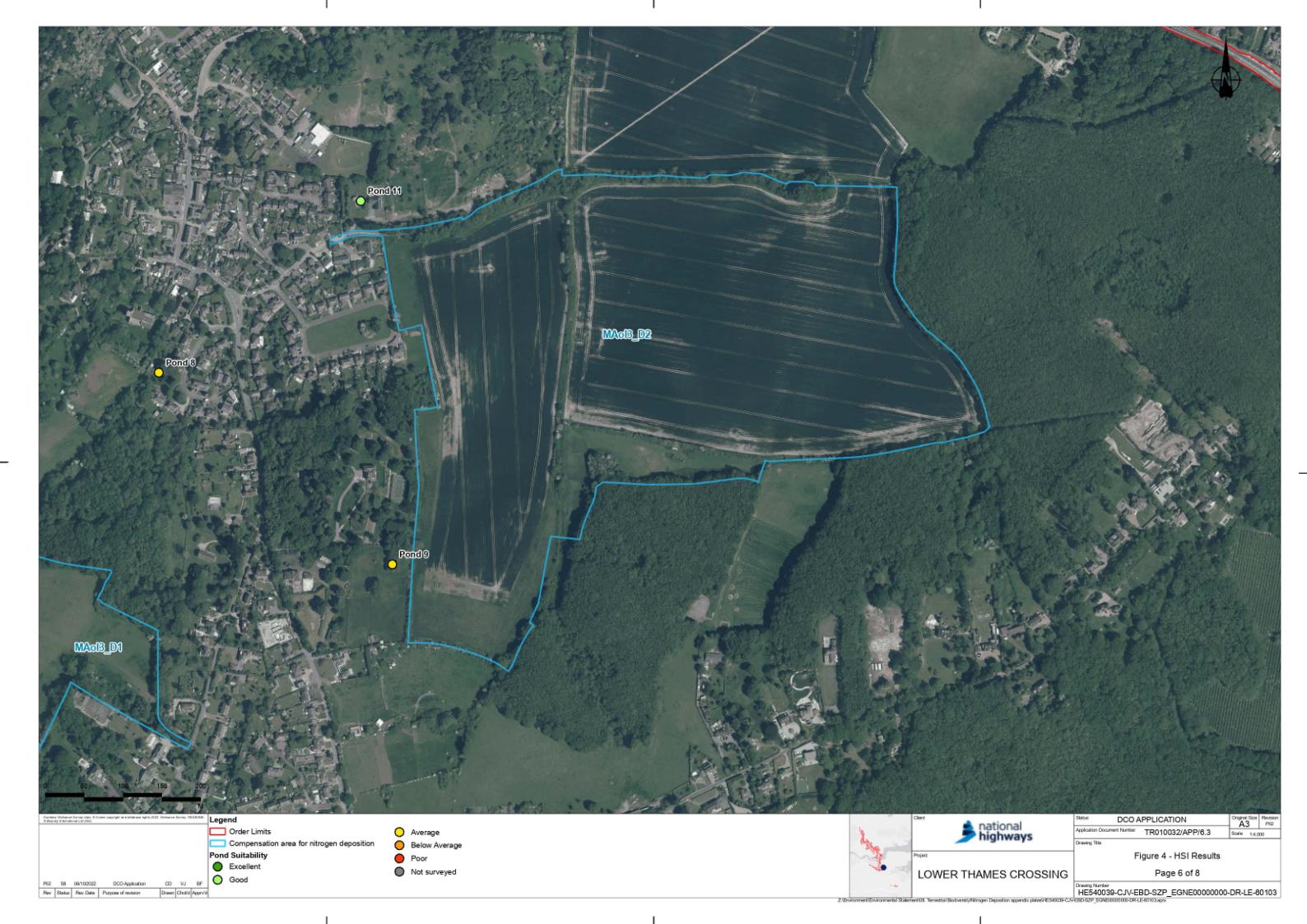


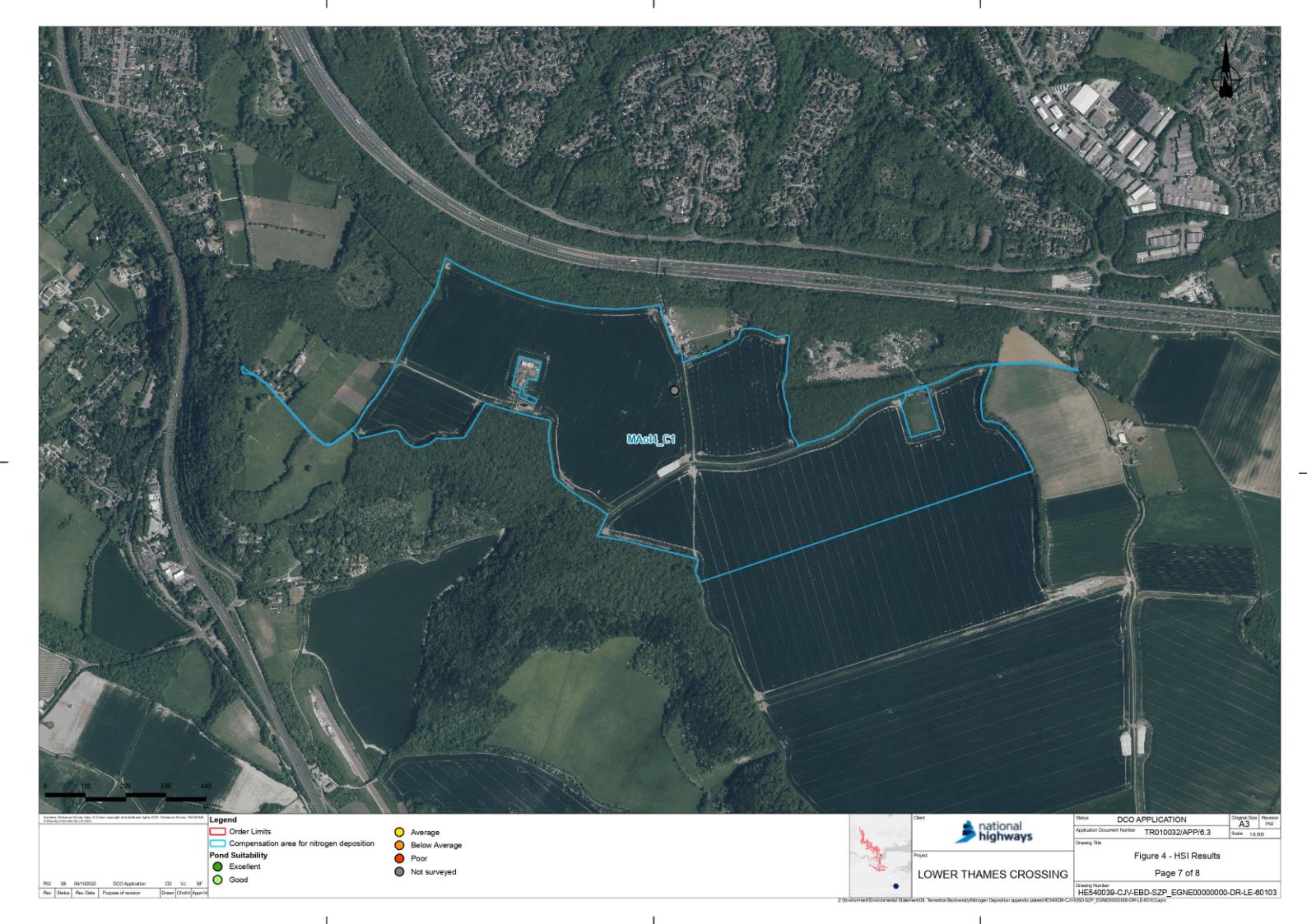




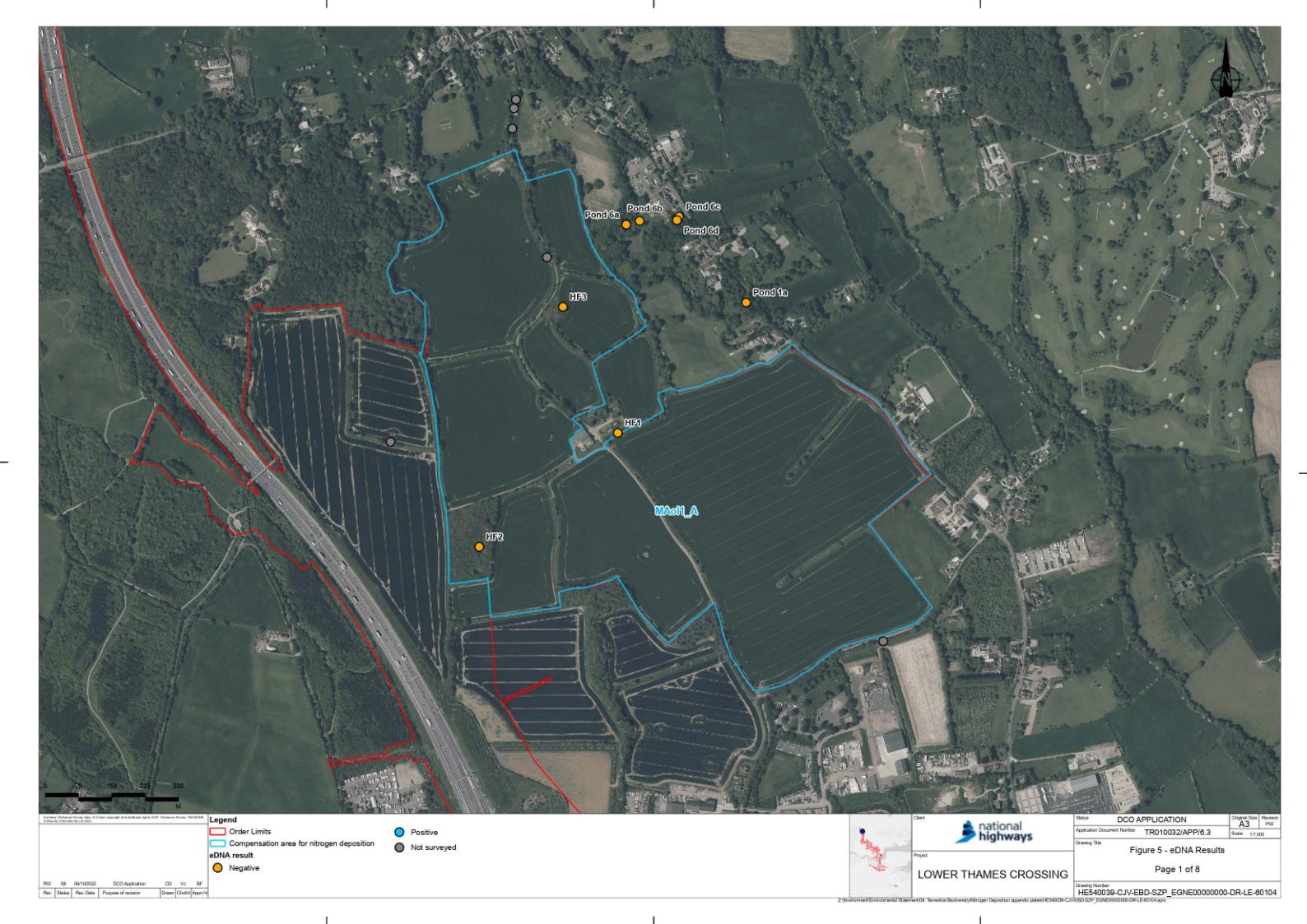














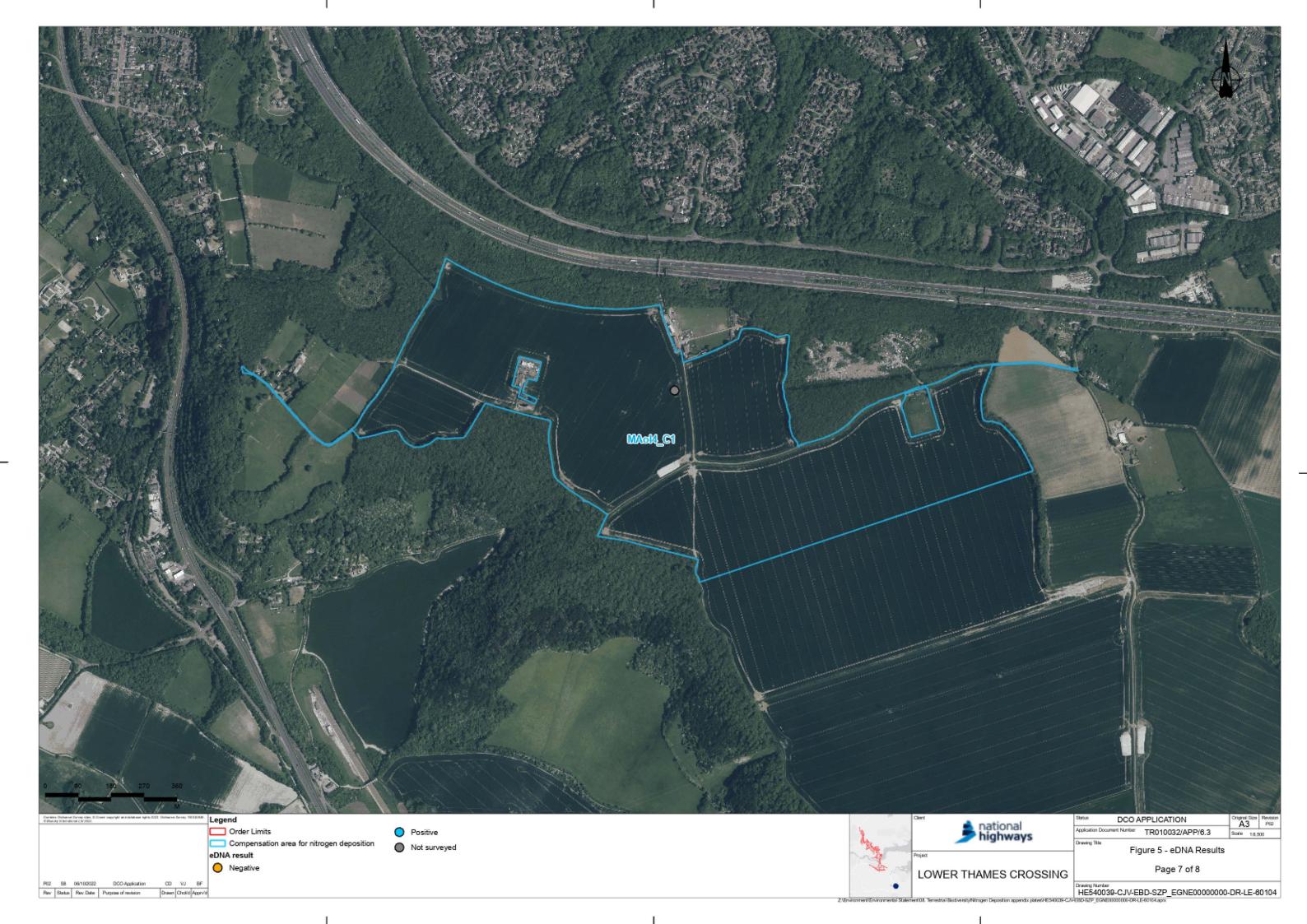


Legend DCO APPLICATION national highways Order Limits Application Document Number TR010032/APP/6.3 Positive Compensation area for nitrogen deposition Not surveyed Figure 5 - eDNA Results eDNA result Negative Page 4 of 8 Drawing Number HE540039-CJV-EBD-SZP\_EGNE00000000-DR-LE-60104 on appendix plained-E54009-CJV-EBD-SZP\_EGNE00000000-DR-LE-60104



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