Preliminary Ecological Appraisal – *Final report*

Heather Way House, Fenton Road, Stubton

May 2026

Prepared by Associate Ecologist Rob Coles, PhD on behalf of Archer Ecology Ltd for:

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Report Overview	
Scheme reference	Heather Way House, Stubton
Works description	Development of five detached residential properties
Revision	Version 1 (Final)
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Prepared by	 Rob Coles, PhD – Associate Ecologist
Reviewed by	[redacted] Helen Archer, BSc (Hons) MCIEEM – Principal Ecologist

Acknowledgements

Archer Ecology Ltd would like to thank Lincolnshire Environmental Records Centre (LERC) for the provision of historical ecological records and details of non-statutory designated sites to supplement the findings of this report.

EXECUTIVE SUMMARY

Archer Ecology Ltd was commissioned by Mike Sibthorp Planning to complete a Preliminary Ecological Assessment (PEA) with respect to proposals for the redevelopment of a plot of land at Heather Way House in Stubton, Newark-on-Trent. The application site is located in Stubton, a village encompassed by an agricultural setting, and is situated approximately 8.5km south-east of the market town of Newark-on-Trent. As part of the commission, a UKHabs survey and ecological walkover of the application site were carried out by Associate Ecologist Rob Coles, PhD on 17th April 2026. The walkover was supplemented by historical records of protected species, priority habitats and statutory/non-statutory designated nature conservation sites falling within 2–10km of the application site. These records were obtained through consultation with the Lincolnshire Environmental Records Centre (LERC).

A summary of mitigation advice, pertaining to ecological receptors, is given in Table 1, below. This advice would require revising should the location, nature and/or extent of the works be altered from those stipulated in this report.

Table 1 – Overview of findings and recommendations

Habitats
It is recommended that the trees on the site are retained during and post-development. If this is not possible then the trees should be replaced with similar, native tree species. For any works proposed immediately adjacent to the existing trees, it is recommended that measures are employed to appropriately safeguard the retained specimens. Following advice contained within British Standard (BS) 5837 – Trees in Relation to Construction, protective barrier fencing could be installed immediately outside of the Root Protection Areas (RPA), which will remain in situ during the development works. RPAs chiefly represent the full canopy cover of individual trees and should be considered as Construction Exclusion Zones (CEZs). There must also be no raising or excavating of the ground within the CEZ. Where access routes along the RPAs cannot be avoided during the site preparation works (e.g., to allow access for vehicles carrying aggregate/materials), a product such as CellWeb Tree Root Protection System can be placed and overlain with connecting ground protection boards to provide adequate protection.
Birds
As a precautionary measure, vegetation removal works should be completed outside of the main nesting bird season (nesting season runs March–August, inclusive), where practicable. Should these works be scheduled during the main nesting bird season, all suitable habitats for nesting activity should be firstly checked by a suitably experienced ecologist in advance. If active nests are found, these must be fully safeguarded and left undisturbed until all chicks have fledged.

Amphibians
It will be necessary to ensure sufficient mitigation is in place for GCN in advance of the works commencing. The works can either be pursued under a GCN European Protected Species Mitigation Licence (EPSML), issued by Natural England, or the site can be registered under the District Level Licence (DLL) scheme. In order to purse the site under the EPSML route, it would be necessary to complete six surveys of the pond (including methods such as bottle-trapping and torching), and any other nearby ponds, by licensed ecologists in order to obtain a population size class estimate. Following this, it is likely to be proposed that the site is subjected to the trapping and translocation of newts to an agreed receptor site. The DLL route bypasses the requirement for further pond surveys and simply requires a compensation payment to be made.
Reptiles
In the absence of appropriate mitigation, individual or small numbers of reptile species could be harmed or crushed during the enabling phase of the works. Therefore, it is recommended that a bespoke Amphibian and Reptile Method Statement is followed (see Appendix V) to mitigate the potential to harm single and/or small populations of reptiles during the site preparatory works.
Commuting and Foraging Bats
The on-site trees and hedgerows should be retained, as far as is practicable, as they provide important foraging and commuting features for bats. In order to avoid impacts upon nocturnal bat activity, dark and unlit corridors should be maintained around and across the site, allowing bats to pass through the site unhindered by artificial light. Should any artificial lighting be introduced onto the site, this should be directed away from any potential foraging features. Introduced lighting should be positioned at a minimum of 7m from any existing trees and hedgerows. Mercury or metal halide lamps must also be avoided. The hours of illumination could be restricted to provide a minimum of 8 hours of darkness per night. Introduced lighting should further comprise a maximum of 1 lux which is comparable to moonlight conditions.
Badgers
No open trenches, pits, holes or any other excavation which has the capacity to entrap badgers or other wildlife will be left open overnight. Excavations will be backfilled or completely covered at the end of each day. If it is not possible to backfill or cover any excavations and they must be left open, a means of escape must be provided to allow any animals which may fall in to escape on their own. This can be achieved by placing a suitably sized plank of wood in the hole, at a shallow angle, ensuring that the top of the plank extends out of the hole, which will allow animals to climb out.

Contents

1.0 INTRODUCTION

1.1 Background

1.1.1 Archer Ecology Ltd was commissioned by Mike Sibthorp Planning to complete a Preliminary Ecological Assessment (PEA) with respect to proposals for the redevelopment of a plot of land at Heather Way House in Stubton, Newark-on-Trent (hereafter referred to as 'the application site'). The application site is located in Stubton, a village encompassed by an agricultural setting, and is situated approximately 8.5km south-east of the market town of Newark-on-Trent.

1.1.2 The location of the application site, centred at Ordnance Survey Grid Reference (OSGR) SK 87255 49015, is shown in Figure 1, below.

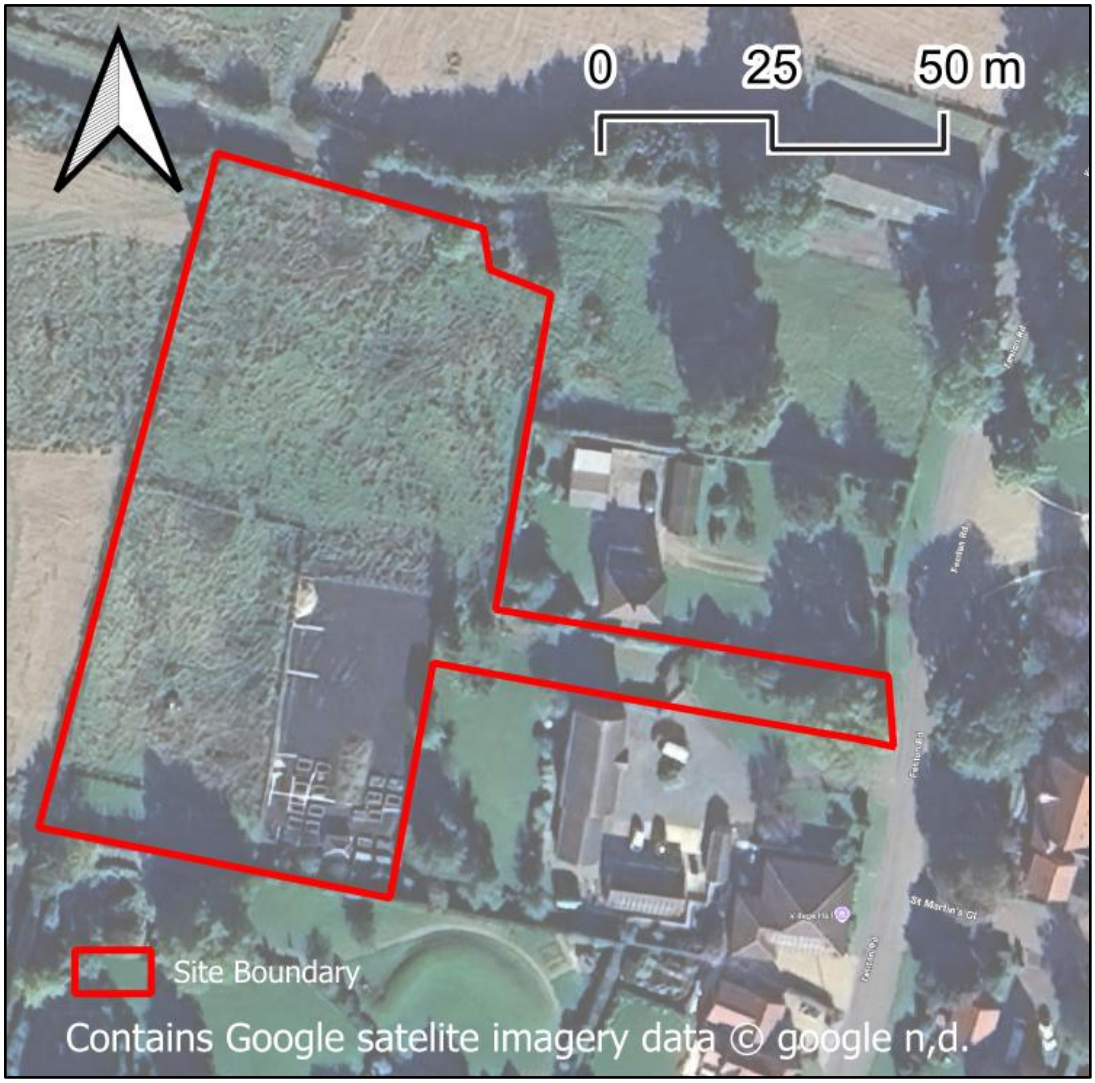

Figure 1 – Location of the site in context with local landscape

1.2 Proposed works

1.2.1 In line with the *Illustrative Block Plan* provided at the time of being commissioned (prepared by Mike Sibthorp Planning – Drawing number MSP.2173; Revision 002c, see Appendix I) the current proposals involve the construction of five detached residential properties together with associated garages and gardens. The proposals also include the provision of a new access road, to the east of the proposed properties, which will extend eastwards to reach Fenton Road.

1.3 Objectives

1.3.1 The purpose of the PEA is to identify any potential ecological receptors occurring within or adjacent to the application site. These include protected species, habitats and designated nature conservation sites. This report also details any potential ecological constraints to the works (e.g., invasive plants), the requirement for any further ecological survey and/or monitoring works and provides details of proportionate mitigation measures, where appropriate.

2.0 PLANNING POLICY AND LEGISLATION

2.1 Natural Environment and Rural Communities Act

2.1.1 There is a requirement under Section 40(1) and (2) for each Secretary of State to take steps '*to be reasonably practicable to further the conservation of the living organisms and types of habitat*' included in the list and there is a legal obligation on public bodies in England to have regard to these organisms and habitats whilst carrying out their functions.

2.1.2 Currently, there are 56 habitats, and 943 species of principal importance included on the S41 list.

2.2 Biodiversity Compliance

2.2.1 The United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, was held in Rio de Janeiro in 1992 and produced the 'Biodiversity: The UK Biodiversity Action Plan (BAP) (UK Biodiversity Partnership, 2007[1]) which lists priority species and habitats in the UK requiring conservation action.

2.2.2 The goal of the UK BAP is to '*Conserve and enhance biological diversity within the UK and contribute to the conservation of global biodiversity through all appropriate mechanisms*.' The UK BAP now includes 1,150 species and 65 habitats; these are allocated individual action plans for conservation known as Species Action Plans (SAPs) and Habitat Action Plans (HAPs).

2.2.3 As a signatory to the Convention on Biological Diversity (CBD) which was opened at the Earth Summit and entered into force in 1993, Local Biodiversity Action Plans (LBAPs) were developed by local authorities and counties to conserve fauna, flora and habitats at a local level.

2.3 National Planning Policy Framework

2.3.1 National Planning Policy Framework (NPPF) is the top tier of planning policy and sets out the government's planning policies for England and how these should be applied. NPPF also sets guidance to local authorities on planning policy within the planning system.

[1] UK BAP. UK Biodiversity Action Plan – Priority Species and Habitats [online]. Available at: https://webarchive.nationalarchives.gov.uk/20110303145245/http://www.ukbap.org.uk/newprioritylist.aspx [Accessed March 2026].

2.3.2 Section 15 relates to 'Conserving and enhancing the natural environment'. Relevant policies in relation to planning applications include:

Paragraph 187. Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*

b) *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*

c) *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*

d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*

e) *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*

f) *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate*

Paragraph 192. "To protect and enhance biodiversity and geodiversity, plans should:

a) *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity[61]; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation[62]; and*

b) *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*

Paragraph 193. "When determining planning applications, local planning authorities should apply the following principles:

if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

a) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*

b) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons[63] and a suitable compensation strategy exists; and*

c) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*

Paragraph 194. The following should be given the same protection as habitats sites:

a) *potential Special Protection Areas and possible Special Areas of Conservation;*

b) *listed or proposed Ramsar sites[64]; and*

c) *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

Paragraph 195. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

2.4 South Kesteven Local Plan 2011–2036

2.4.1 The South Kesteven District Council Local Plan, adopted in January 2020, sets out the local planning policy for the area. Relevant policies in relation to this planning application include:

Policy EN2: Protecting Biodiversity and Geodiversity

The Council, working in partnership with all relevant stakeholders, will facilitate the conservation, enhancement and promotion of the District's biodiversity and geological interest of the natural environment. This includes seeking to enhance ecological networks and seeking to deliver a net gain on all proposals, where possible.

Proposals that are likely to have a significant impact on sites designated internationally, nationally or locally for their biodiversity and geodiversity importance, species populations and habitats identified in the Lincolnshire Biodiversity Action Plan, Geodiversity Strategy and the Natural Environment and Rural Communities (NERC) Act 2006 will only be permitted in exceptional circumstances:

- *In the case of internationally designated sites (alone or in combination), where there is no alternative solution and there are overriding reasons of public interest for the development.*
- *In the case of National Sites (alone or in combination) where the benefits of development in that location clearly outweigh both the impact on the site and any broader impacts on the wider network of National Sites.*
- *In the case of Local Sites (e.g. Local Wildlife Sites) or sites which meet the designation criteria for Local Sites, the reasons for development must clearly outweigh the long term need to protect the site.*

In exceptional circumstances where detrimental impacts of development cannot be avoided (through locating an alternative site) the Council will require appropriate mitigation to be undertaken by the developers or as a final resort compensation. Where none of these can be achieved then planning permission will be refused. Where any mitigation and compensation measures are required, they should be in place before development activities start that may disturb protected or important species.

Planning permission will be refused for development resulting in the loss, deterioration or fragmentation of irreplaceable habitats, including ancient woodland and aged or veteran trees, unless the need for, and benefits of, the development in that location clearly outweigh the loss or harm.

Development proposals that are likely to result in a significant adverse effect, either alone or in combination, on any internationally designated site, must satisfy the requirements of the

Habitats Regulations. Development requiring Appropriate Assessment will only be allowed where it can be determined, taking into account mitigation, that the proposal would not result in significant adverse effects on the site's integrity.

Policy EN3: Green Infrastructure

The Council will maintain and improve the green infrastructure network in the District by enhancing, creating and managing green space within and around settlements that are well connected to each other and the wider countryside.

Development proposals should ensure that existing and new green infrastructure is considered and integrated into the scheme design, taking opportunities to enrich biodiversity habitats, enable greater connectivity and provide sustainable access for all. Proposals which may result in recreational and visitor pressure on designated biodiversity sites will be particularly expected to provide such green infrastructure.

Proposals that cause loss or harm to this network will not be permitted unless the need for and benefits of the development demonstrably outweigh any adverse impacts. Where adverse impacts on green infrastructure are unavoidable, development will only be permitted if suitable mitigation measures for the network are provided.

3.0 METHODOLOGY

NB: Detailed methodologies pertaining to individual protected species are included under Appendix II of this report.

3.1 Overview

3.1.1 A PEA was undertaken of the site following guidance produced by the Chartered Institute of Ecology and Environment Management (CIEEM)[2]. The assessment included:

- A desk-based search for historic records of protected, notable and invasive non-native species on the site and within the local vicinity. Data for locally and nationally designated nature conservation sites were obtained;
- An ecological walkover survey of the proposed works area (shown in Figure 1). The study area was extended beyond the works area, where appropriate, e.g., to undertake species-specific surveys;
- Identification of invasive non-native species; and
- Assessment of the potential impacts of the proposed works on habitat and floral/faunal receptors, as well as designated sites.

3.2 Desk study

3.2.1 To supplement the ecological walkover survey, a desktop study was undertaken in May 2026. This included a search of data, including protected species, priority habitats, and statutory and non-statutory designated nature conservation sites, using the following resources:

- Lincolnshire Environmental Records Centre (LERC);
- Multi Agency Geographic Information for the Countryside (MAGIC)[3]; and
- Aerial imagery.

3.2.2 The following geographical extents of the search area for potential zones of influence for nature conservation sites were considered to be appropriate:

- 10km from the site for sites of International Importance (e.g., Special Area of Conservation (SAC));

[2] CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

[3] www.magic.gov.uk accessed May 2026

- 2km from the site for sites of National or Regional Importance (e.g., Sites of Special Scientific Interest (SSSI)); and
- 2km from the site for protected/notable species (including biological records, post-2000), priority habitats and non-statutory designated sites (e.g., Local Wildlife Sites (LWS)).

3.3 Field survey

UK Habitat Classification Survey

3.3.1 A UK Habitat Classification Survey was completed on 17th April 2026 by Associate Ecologist Rob Coles PhD who has over 12 years' experience of undertaking ecological surveys. The habitats at the application site and, where considered appropriate adjacent to the application site, were assessed and classified in accordance with the UK Habitat Classification system (UKHab Ltd, 2023). The habitats were mapped using Quantum Geographical Information Systems (QGIS), and target notes (TNs) were used to record important ecological features. A UKHabs plan of the application site is included under Appendix IV.

Protected and Priority Species Scoping Assessment

3.3.2 An ecological walkover was conducted to assess the potential for the application site to support protected, priority or notable species based on habitat quality and known historic presence. Any incidental sightings or field signs of such species such as footprints or droppings were noted during the survey. Photographs taken during the survey, as referenced within Section 4.2 of this report, are shown under Appendix III.

Environmental DNA survey

3.3.3 The Pond 1 was subjected to Environmental DNA (eDNA) sampling by Ecologist and great crested newt class licence holder (2016-20430-CLS-CLS) Rob Coles PhD on 17th April 2026. This testing method is approved by Natural England and is considered a reliable technique for determining the presence or absence of great crested newts within a waterbody based upon the detection of trace eDNA from the collected water samples. This would then render either a 'positive' or 'negative' results for eDNA presence.

3.3.4 The samples were processed by SureScreen Scientifics Ltd following the methods set out in Appendix 5 of the DEFRA Technical Report WC1067[4]. The sampling method involved

[4] Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 2014. Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice

extracting water samples from 10 points evenly spaced around the perimeter of the waterbody, where accessible.

3.4 Survey limitations

3.4.1 An absence of desk study records cannot be relied upon to infer absence of a species/habitat as a lack of records may be a result of under-recording within a given search area. The habitat survey aims to characterise the habitats on the site and is not intended to give a complete list of plant species present.

3.5 Scoped out

3.5.1 Given a lack of suitable aquatic and riparian habitat opportunities for white-clawed crayfish *Austropotamobius pallipes*, otter *Lutra lutra* and water vole *Arvivola amphibius*, these protected faunae have been scoped out of this assessment.

4.0 RESULTS

4.1 Statutory Designated Nature Conservation Sites

European/International designated sites for nature conservation

4.1.1 The application site does not fall within the boundary of any European/internationally statutory designated sites, nor do any such sites occur within a 10km radius of the application site. European/internationally statutory designated sites are, therefore, considered as falling outside of the potential zone of influence and are not appraised to be potential receptors with respect to the proposed works.

Nationally designated sites for nature conservation

4.1.2 The application site does not fall within the boundary of any nationally designated sites for nature conservation nor do any such sites occur within a 2km radius of the application site. Nationally designated sites are, therefore, considered as falling outside of the potential zone of influence and are not appraised to be potential receptors with respect to the proposed works.

Non-statutory designated sites for nature conservation

4.1.5 The application site does not fall within the boundary of any non-statutory designated sites for nature conservation nor do any such sites occur within a 2km radius of the application site. Non-statutory designated sites are, therefore, considered as falling outside of the potential zone of influence and are not appraised to be potential receptors with respect to the proposed works..

Priority Habitats

4.1.6 A search using MAGIC identified that no priority habitats occur on or within significant proximity to the application site. Subsequently, priority habitats are not considered to be potential receptors with respect to the proposed works.

Local Nature Recovery Strategy (LNRS)

4.1.7 The Local Nature Recovery Strategy (LNRS) is a new statutory requirement introduced into The Environment Act (2021) which requires each 'Responsible Authority', in this case, Greater Lincolnshire, to produce a locally led LNRS. The LNRS is a tool designed to guide action for nature recovery by outlining a statement of biodiversity priorities and a local habitat map for the strategy area.

The LNRS identifies two main areas: Existing Areas of Particular Importance for Biodiversity (APIB), and Areas that Could Become of particular importance (ACB). The application site does not fall within the boundaries of either any APIB or ACB sites. Therefore, LNRS areas are not considered to be potential receptors with respect to the proposed works.

4.2 UKHabs Survey

4.2.1 The application site is situated within a mixed residential and rural setting with further residential properties occurring to the north, south and east. Agricultural land is present to the west of the site. All habitats established within the boundary of the application site are described under the following sub-headings, with Polygon (P), Tree (T), and Linear (L) habitats referenced in accordance with the locations shown in the UKHabs map under Appendix IV.

Polygon reference	**-**	**P1 and P3**
Habitat type	**-**	**Urban – Artificial unvegetated, unsealed surface**
UKHabs code	**-**	**u1c**
Habitat value	**-**	**Of site value**

4.2.2 P1 comprises a gravelled area, located to the west of Heather Way House, while P3 is a gravelled path connecting the main entrance of the premises to a large area of modified grassland (see Photograph 1, Appendix II).

Polygon reference	**-**	**P2**
Habitat type	**-**	**Urban – Sparsely Vegetated Urban Land**
UKHabs code	**-**	**u1f**
Habitat value	**-**	**Of site value**

4.2.3 P2 consists of an area of sparsely vegetated urban which comprises ruderal and herbaceous species including common mallow *Malva sylvestris*, opium poppy *Papaver somniferum*, common nettle *Urtica dioica*, red dead-nettle *Lamium purpureum*, groundsel *Senecio vulgaris*, common thistle *Cirsium vulgare*, bristly oxtongue *Helminthotheca echioides* and common mouse-ear *Cerastium fontanum* (see Photograph 2, Appendix I).

Polygon reference	**-**	**P4**
Habitat type	**-**	**Modified grassland**
UKHabs code	**-**	**g4**
Habitat value	**-**	**Of site value**

4.2.4 P4 comprises an area of regularly managed modified grassland consisting predominantly of perennial ryegrass *Lolium perenne* with occasional cleavers *Galium aparine*, creeping buttercup *Ranunculus repens* and small-flowered crane's-bill *Geranium pusillum* (see Photograph 3, Appendix I).

Polygon reference	**-**	**P5 and P6**
Habitat type	**-**	**Heathland and shrub: Bramble scrub**
UKHabs code	**-**	**h3d**
Habitat value	**-**	**Of site value**

4.2.5 P5 and P6 consist of areas of sparse bramble scrub *Rubus fruticosus agg.,* located in the north-western extent of the application site, adjacent to the site boundary (see Photograph 4, Appendix I).

Polygon reference	**-**	**P7**
Habitat type	**-**	**Heathland and shrub: Blackthorn scrub**
UKHabs code	**-**	**h3a**
Habitat value	**-**	**Of site value**

4.2.6 P7 represents an area of blackthorn scrub *Prunus spinosa* located in the north-western corner of the application site adjacent to the site boundary (see Photograph 5, Appendix I).

Polygon reference	**-**	**P8, P9 and P10**
Habitat type	**-**	**Sparsely vegetated land**
UKHabs code	**-**	**u1b6847**
Habitat value	**-**	**Of site value**

4.2.7 P8, P9 and P10 include areas of introduced native and ornamental shrubs consisting of species such as honeysuckle *Lonicera periclymenum*, *Hydrangea* sp., kowhai *Sophora* sp., dogrose *Rosa canina,* and yew *Taxus baccata* (see Photograph 6, Appendix I).

Polygon reference	**-**	**H1 and H3**
Habitat type	**-**	**Hedgerows: Non-native and ornamental hedgerows**
UKHabs code	**-**	**h2b**
Habitat value	**-**	**Of site value**

4.2.8 H1 comprises a hedgerow which includes dominant Himalayan firethorn *Pyracantha crenulate*, frequent beech *Fagus sylvatica*, and occasional privet *Ligustrum* sp. H3, which connects the pathway (P3) to the north-eastern site boundary, comprises solely of *Leylandii* sp. (see Photographs 7 and 8, Appendix I).

Polygon reference	**-**	**H2**
Habitat type	**-**	**Hedgerows: Native hedgerows**
UKHabs code	**-**	**h2a**
Habitat value	**-**	**Of site value**

4.2.9 H2 represents a beech hedgerow which runs along the entire length of the eastern side of the former paddock P1; See Photograph 9, Appendix I).

Polygon reference	**-**	**T1–T8**
Habitat type	**-**	**Trees**
UKHabs code	**-**	**200**
Habitat value	**-**	**Of site value**

4.2.10 Trees T1–T5 consists of fruit trees, and T6 and T7 are both young hawthorn *Crataegus monogyna*, while T8 is a young ash tree *Fraxinus excelsior* (see Photograph 10, Appendix I).

Polygon reference	**-**	**T9**
Habitat type	**-**	**Trees**
UKHabs code	**-**	**200**
Habitat value	**-**	**Of local value**

4.2.11 T9 is an unidentified species of tree which, with reference to historic satellite imagery, was felled in April 2022 and was situated within the centre of the south-west portion of the field (P4); see Photographs 11 and 12, Appendix I.

Polygon reference	**-**	**T10**
Habitat type	**-**	**Trees**
UKHabs code	**-**	**200**
Habitat value	**-**	**Of local value**

4.2.12 T10 is a mature weeping willow tree *Salix babylonica* which has been recently felled and was situated within the far north-east corner of the application site (see Photograph 13, Appendix I).

4.3 Species

Amphibians

4.3.1 Several records of common toad *Bufo bufo* and one record of common frog *Rana temporaria* were returned by the LERC from within a 2km radius of the application site. The most recent of these records (representing both common toad and common frog) are dated 2012 and are associated with Stubton Drain and Auster Fen Drain, respectively.

4.3.2 The LERC also returned 17 records of great crested newt (GCN) *Triturus cristatus* within a 2km radius of the application site. These include multiple occurrences of individual adults, with the most recent record dated 2019. The closest record to the application site is located approximately 1.5km south of the site.

4.3.3 There are no standing waterbodies within the site itself. However, a search using available online data resources, including aerial imagery, indicates the presence of five ponds and two ditches within 500m of the application site. The locations of these waterbodies relative to the application site boundary are depicted in Figure 2, below.

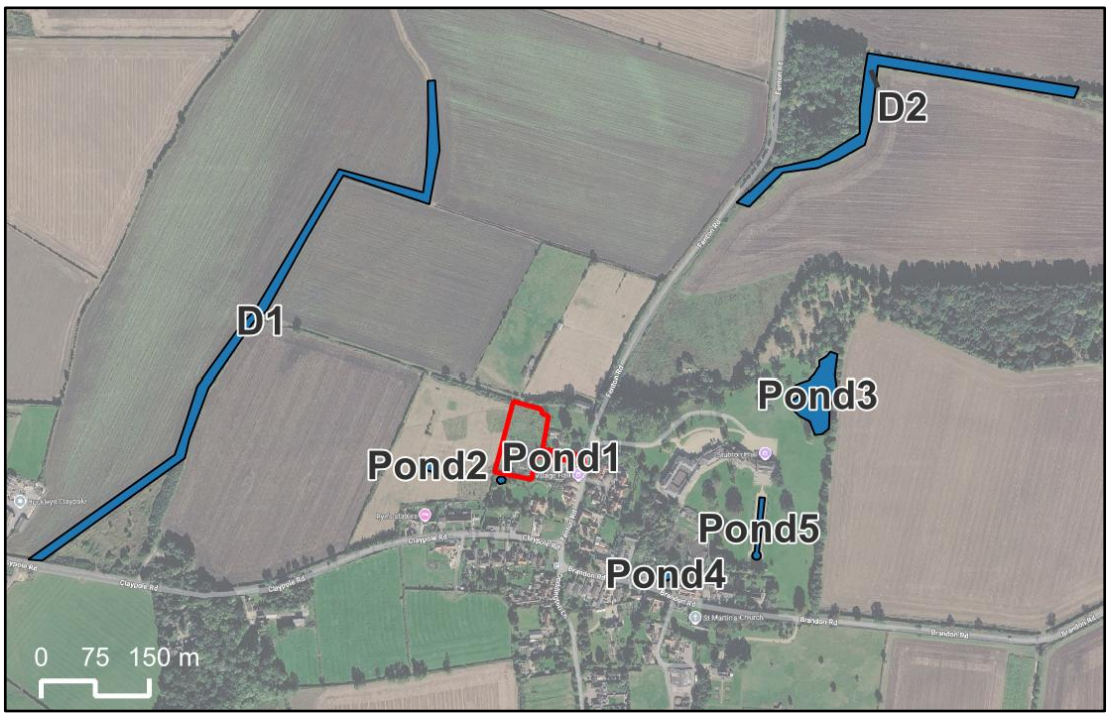

Figure 2 – Locations of waterbodies relative to the application site boundary

4.3.4 Habitat Suitability Assessments (HSIs) of Pond 1 and Pond 2 were performed to evaluate the suitability of these ponds to support breeding populations of GCN. Due to access restrictions, it was not possible to visit Ponds 3, 4 and 5 or Ditches 1 and 2 to enable accurate HSI assessments to be completed of these waterbodies. To mitigate this limitation, HSI

assessments have been completed under a precautionary approach and assuming, in the absence of any other supporting evidence, that the qualifying attributes of each waterbody are optimal for breeding GCN.

4.3.5 The results of the HSI assessments, which were completed following methodologies contained within Oldham et al. (2000), are summarised in Table 2, below, while the outcome of each HSI assessment is presented within Appendix VI.

Table 2 – Results of HSI assessments for Ponds 3–5 and Ditches 1–2

Waterbody reference	HSI score	Suitability for breeding GCN
Pond 1	0.66	Average
Pond 2	0.75	Good
Pond 3	0.51	Below average
Pond 4	0.75	Good
Pond 5	0.81	Excellent
Ditch 1	0.81	Excellent
Ditch 2	0.83	Excellent

4.3.6 Water testing of Pond 1 only was undertaken. The results of the eDNA survey returned a positive result for all 12 laboratory replicates and therefore a positive result of 12/12. This result confirms the presence of GCN within Pond 1 with high confidence.

4.3.7 The proposed works will result in the loss of on-site terrestrial habitats of value to GCN in the form of modified grassland (P4), bramble scrub (P5), blackthorn scrub (P6–P7), introduced shrub (P8–P10), hedgerows (H1–H3), a brick pile (TN1) and a log pile (TN2). These habitats are located at a distance of between 4 and 100 metres from Pond 1.

4.3.8 The Natural England rapid risk assessment (RRA) tool is a simplified calculator which helps to inform the decision as to whether development activities may require a great crested newt derogation licence in advance. The tool appraises the extent and proximity of terrestrial habitat removal (required to facilitate development activities) relative to the location of a confirmed great crested newt breeding pond.

4.3.9 The RRA tool has indicated that an offence is highly likely in the absence of mitigation, as shown in Figure 3, overleaf.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.5 - 1 ha lost or damaged	0.7
Land 100-250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.3
Land >250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.03
Individual great crested newts	No effect	0
	Maximum:	0.7
Rapid risk assessment result:	RED: OFFENCE HIGHLY LIKELY	

Figure 3 – Extract from the RRA tool

4.3.10 Subsequently, GCN are considered to be a receptor with respect to the proposed works. Furthermore, the on-site habitats are suitable for usage by commonly occurring amphibian species and the potential for commonly occurring amphibians to inhabit the site and to be harmed by the proposals should not be discounted.

Reptiles

4.3.11 One record of grass snake *Natrix helvetica* was returned by LERC from within a 2km radius of the application site. This record is situated approximately 1.8km north-east of the application site.

4.3.12 Optimal terrestrial habitats for reptiles are present within the application site in the form of the bramble scrub (P5 and P6), blackthorn scrub (P7), brick pile (TN1) and log pile (TN2). Other habitats of suboptimal value to reptiles are present in the form of the modified grassland (P4) and sparsely vegetated land (P8, P9 and P10).

4.3.13 The on-site habitats with suitability to support reptiles are connected, via hedgerows and field margins, to the wider ecological landscape which also supports optimal habitats for reptiles. For instance, the habitats within the grounds of Stubton Hall in the form of the lake, grassland, hedgerows and woodland, provide optimal habitats and important ecotones where these distinct habitats intersect.

4.3.14 Overall, given the on-site suitable habitats, the habitats within the vicinity to the application site and the scale of the site, it is considered that the site holds value to support individual or low numbers of reptiles.

Birds

4.3.15 The data search identified recent records of bird species listed under Schedule 1 of the Wildlife and Countryside Act (1981, as amended) within a 2km radius of the application site, such as barn owl *Tyto alba*, brambling *Fringilla montifringilla*, merlin *Falco columbarius*, peregrine *Falco peregrinus*, fieldfare *Turdus pilaris*, redwing *Turdus iliacus* and red kite *Milvus milvus*.

The most recent of these records are for fieldfare and red kite, recorded in 2023, which are both located approximately 1.2km south-east of the application site.

4.3.16 No activity, or field signs, pertaining to any Schedule 1 species of bird were observed during the site walkover. However, general passerine bird activity was recorded on the site, including starling *Sturnus vulgaris* and woodpigeon *Columba palumbus.*

4.3.17 No on-site habitats were appraised as having the suitable density to support breeding raptors. The individual trees T1–T8, areas of bramble scrub (P5 and P6), blackthorn scrub (P7), and introduced shrub (P8–P10) on the site provide opportunities for passerines to form nests. Therefore, in the absence of mitigation, nesting birds could be harmed by any vegetation removal works required to facilitate the proposed development.

Bats

4.3.18 The data search included multiple records of bats from within a 2km radius of the application site. These included records of unidentified bat species *Chiroptera* spp., common pipistrelle *Pipistrellus pipistrellus,* soprano pipistrelle *Pipistrellus pygmaeus,* Nathusius's pipistrelle *Pipistrellus nathusii,* brown long-eared bat *Plecotus auritus*, common noctule *Nyctalus noctula*, and *Myotis* sp. Two of these records represent bat roosts for *Pipistrellus* sp. from 2023 and *Chiroptera* sp. from an unknown date with the closest of these located approximately 0.18km west of the application site.

Roosting bats – trees

4.3.19 During the ecological walkover, the individual trees (T1–T8) were appraised for the presence of Potential Roost Features (PRFs); none of which exhibited any observable PRFs. No buildings are present within the application site. Therefore, roosting bats are no longer considered within the assessment.

Foraging and commuting bats

4.3.20 The individual trees T1–T8, areas of bramble scrub (P5 and P6), blackthorn scrub (P7), and introduced shrub (P8–P10) on the site have the potential to provide foraging opportunities for locally occurring bat populations. These habitats, particularly the areas of bramble and blackthorn scrub, are well connected to wider ecological habitats with high suitability to support foraging and commuting bats. For example, the habitats within the grounds of Stubton Hall in the form of the lake, grassland, hedgerows and woodland. Taken together, the application site is considered to be of **'Moderate'** suitability for foraging and commuting bats in line with categories contained within current BCT guidelines.

Other priority species

4.3.22 The data search included several records of west European hedgehog *Erinaceus europaeus* and brown hare *Lepus europaeus* within a 2km radius of the application site. The application site does not sustain suitable habitat for brown hare; However, the site is well connected to wider habitat with suitability to support this species. These habitats include the surrounding arable fields, pastures, hedgerows and woodland edges. The site sustains habitats with suitability to support hedgehogs in the form of the bramble and blackthorn scrub and modified grassland.

4.3.23 It is considered that hedgehogs and brown hare could inhabit or venture onto the site, such that individuals of these species could become entrapped, harmed or killed during the enabling and construction phases of the proposed works. Hedgehogs may also be harmed during vegetation clearance works, or during clearance of the log pile found on the site (TN2).

Invasive non-native species

4.3.24 No evidence of invasive non-native species (INNS) was identified during the walkover and so no interactions with such species are expected during the proposed works. Subsequently, INNS are not considered to be a constraint at the site and are not considered further within this report.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Habitats and biodiversity

Safeguarding trees

5.1.1 **It is recommended that the trees on the site are retained during and post-development. If this is not possible then the trees should be replaced with similar, native tree species. For any works proposed immediately adjacent to the existing trees, it is recommended that measures are employed to appropriately safeguard the retained specimens. Following advice contained within *British Standard (BS) 5837 – Trees in Relation to Construction*[5], protective barrier fencing could be installed immediately outside of the Root Protection Areas (RPA), which will remain in situ during the development works. RPAs chiefly represent the full canopy cover of individual trees and should be considered as Construction Exclusion Zones (CEZs). There must also be no raising or excavating of the ground within the CEZ.**

5.1.2 **Where access routes along the RPAs cannot be avoided during the site preparation works (e.g., to allow access for vehicles carrying aggregate/materials), a product such as CellWeb Tree Root Protection System can be placed and overlain with connecting ground protection boards to provide adequate protection.**

5.2 Species

Amphibians

5.2.1 Amphibians are protected under the Wildlife and Countryside Act 1981 (as amended) against being killed and injured and included as Priority Species under the NERC Act (2006). Great crested newts are further protected by British and European law which also makes it an offence to capture or disturb them and to damage or destroy their habitat.

5.2.2 The proposed works are expected to result in the loss of terrestrial habitats of value to great crested newts for example, the modified grassland and areas of scrub.

5.2.3 The Environmental DNA (eDNA) testing returned a positive result for Pond 1 indicating that GCN are, or have recently been, active within this pond. Therefore, **it will be necessary to ensure sufficient mitigation is in place for GCN in advance of the works commencing. The works can either be pursued under a GCN European Protected Species Mitigation Licence (EPSML), issued by Natural England, or the site can be registered under the**

[5] BSI Standard Publications BS 5837:2010 Trees in relation to design, demolition and construction. Recommendations

District Level Licence (DLL) scheme. In order to purse the site under the EPSML route, it would be necessary to complete six surveys of the pond (including methods such as bottle-trapping and torching), and any other nearby ponds, by licensed ecologists in order to obtain a population size class estimate. Following this, it is likely to be proposed that the site is subjected to the trapping and translocation of newts to an agreed receptor site. The DLL route bypasses the requirement for further pond surveys and simply requires a compensation payment to be made.

5.2.4 Furthermore, the on-site habitats are suitable for usage by commonly occurring amphibian species and the potential for commonly occurring amphibians to inhabit the site and to be harmed by the proposals should not be discounted.

5.2.5 In the absence of appropriate mitigation, individual or small numbers of commonly occurring amphibian species could be harmed or crushed during the enabling phase of the works.

5.2.6 Therefore, **it is recommended that a bespoke Amphibian and Reptile Method Statement is followed (see Appendix V) to mitigate the potential to harm single and/or small populations of amphibians during the site preparatory works.**

Reptiles

5.2.7 All four of the common species of native reptiles, that is common lizard *Zootoca vivipara*, grass snake, slow worm *Anguis fragilis* and adder *Vipera berus*, are given partial protection under the Wildlife and Countryside Act 1981 (as amended) which prohibits the intentional killing, injury or taking of these species.

5.2.8 The site supports a number of habitats of suitable density to promote reptile inhabitancy, including the hedgerows and areas of scrub. Furthermore, rubble/log piles deposited on the site are considered to be suitable for utilisation as hibernacula and to promote breeding.

5.2.9 In the absence of appropriate mitigation, individual or small numbers of reptile species could be harmed or crushed during the enabling phase of the works.

5.2.10 **Therefore, it is recommended that a bespoke Amphibian and Reptile Method Statement is followed (see Appendix V) to mitigate the potential to harm single and/or small populations of reptiles during the site preparatory works.**

Nesting birds

5.2.11 All nesting birds and active nests are protected under the Wildlife and Countryside Act (1981, as amended) which makes it an offence to take, damage or destroy the nest of any wild bird while it is in use or being built, and to take or destroy the egg of any wild bird. Certain birds,

listed under Schedule 1 of the Act, are also protected against disturbance whilst building a nest, or when on or near a nest containing eggs/unfledged young.

5.2.12 **Suitable habitats for nesting birds within the application site include the individual trees (T1–T8), the hedgerows (L1–L3), the bramble scrub (P5 and P6) and blackthorn scrub (P7).**

5.2.13 **As a precautionary measure, vegetation removal works should be completed outside of the main nesting bird season (nesting season runs March–August, inclusive), where practicable. Should these works be scheduled during the main nesting bird season, all suitable habitats for nesting activity should be firstly checked by a suitably experienced ecologist in advance. If active nests are found, these must be fully safeguarded and left undisturbed until all chicks have fledged.**

Bats

5.2.14 Bats receive protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). It is an offence to take, kill or injure a bat, damage or destroy a resting place of a bat, or disturb a bat whilst it is occupying a place of shelter.

Foraging and commuting bats

5.2.15 **The on-site trees and hedgerows should be retained, as far as is practicable, as they provide important foraging and commuting features for bats. In order to avoid impacts upon nocturnal bat activity, dark and unlit corridors should be maintained around and across the site, allowing bats to pass through the site unhindered by artificial light. Should any artificial lighting be introduced onto the site, this should be directed away from any potential foraging features.**

5.2.16 **Introduced lighting should be positioned at a minimum of 7m from any existing trees and hedgerows. Mercury or metal halide lamps must also be avoided. The hours of illumination could be restricted to provide a minimum of 8 hours of darkness per night. Introduced lighting should further comprise a maximum of 1 lux which is comparable to moonlight conditions.**

5.2.17 **As a positive, optional enhancement, artificial roosting features could be incorporated onto any new buildings or extensions proposed. These could comprise a minimum of one roost box suitable for crevice-dwelling bats per building, which should be placed on the southern elevations of each property.**

Badger

5.2.18 Badgers are protected and so are the setts (burrows) they live in under the Protection of Badgers Act 1992 making it is an offence to; wilfully kill, injure or take a badger (or attempt to do so), cruelly ill-treat a badger, dig for a badger, intentionally or recklessly damage or destroy a badger sett, or obstruct access to it, cause a dog to enter a badger sett or disturb a badger when it is occupying a sett. Badgers are highly mobile and could commute onto and through the site during night.

5.2.19 **No open trenches, pits, holes or any other excavation which has the capacity to entrap badgers or other wildlife will be left open overnight. Excavations will be backfilled or completely covered at the end of each day.**

5.2.20 **If it is not possible to backfill or cover any excavations and they must be left open, a means of escape must be provided to allow any animals which may fall in to escape on their own. This can be achieved by placing a suitably sized plank of wood in the hole, at a shallow angle, ensuring that the top of the plank extends out of the hole, which will allow animals to climb out. This recommendation also extends to safeguard other protected mammals, such as hedgehog and brown hare.**

APPENDIX I – DEVELOPMENT PROPOSALS

APPENDIX II – SPECIES METHODOLOGIES

The fauna included within this assessment is based on the habitats present, data from the desk-based searches, and the following legislation[6]:

- Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992;
- The Conservation of Habitats and Species Regulations 2017, and
- The NERC Act 2006 – S41 Species of Principal Importance (SPI) for the conservation of biodiversity.

Amphibians

Where accessible, waterbodies within 500m of the site boundary were identified using online Ordnance Survey maps and aerial imagery[7] and were assessed for their suitability to support great-crested newts using a Habitat Suitability Index (HSI).

The HSI is a numerical index, between 0 and 1. Values close to 0 indicate unsuitable habitat, 1 represents optimal habitat (Oldham et al., 2000) [8].

Reptiles

An assessment of the suitability of the habitats present to support common reptile species was undertaken[9].

In accordance with current guidance this assessment involved a review of habitats and habitat structure for suitable shelter for reptiles such as areas of scrub and woodpiles, grassland with well-developed and varied structure, areas suitable for basking and large tussocks etc.

Birds

Based upon vegetation maturity, structure and density, an assessment of habitats was undertaken to determine the likely value to breeding and foraging birds.

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6 See www.legislation.gov.uk

7 www.bing.com/maps accessed February 2026

8 Oldham et al., (2000). *Evaluating the suitability of habitat for the Great Crested Newt* (*Triturus cristatus*). Herpetological Journal 10, 143-155

9 Froglife (1999). *Froglife Advice Sheet 10: reptile survey*. Froglife, London.

Bats

A detailed external and internal inspection of the building proposed for development, and a ground level tree inspection of the trees, was carried out by Associate Ecologist and Level 1 Bat Licence holder (2019-39334-CLS-CLS).

The inspection was carried out in line with methodologies contained within the survey guidelines issued by Bat Conservation Trust (Collins, 2023)[10] and involved identifying potential roosting features associated with the trees and buildings, with evidence of roosting bats, including urine staining, guano, feeding remains and live/dead bats.

During the survey Potential Roosting Features (PRF) for bats following current best practice[11],[12] were recorded. The potential for the site and immediate surrounds to support foraging and commuting bats was also assessed, with particular regard given to the presence of continuous tree lines, watercourses and hedgerows providing good connectivity in the landscape, and the presence of varied habitat such as scrub, woodland, grassland and hedgerows in the vicinity.

[redacted]

Legally controlled species

Evidence of species listed on Schedule 9 of the Wildlife and Countryside Act (1981) as amended was recorded as seen.

[10] Collins (2023). *Bat Surveys for Professional Ecologists, Good Practice Guidelines, 4th Edition.* Bat Conservation Trust.

[11] Mitchell-Jones, A.J, & McLeish, A.P. Ed. (2004). Bat *Workers' Manual 3rd Edition*

[12] BCT (2015) *Surveying for Bats in Trees and Woodland – Guide. BCT*

[13] Natural England (2015) *Badgers: surveys and mitigation for development projects*. Natural England

APPENDIX III – PHOTOGRAPHS

Photograph 1 – Artificial unvegetated, unsealed surface (P1)

Photograph 2 – Sparsely vegetated urban land (P2)

Photograph 3 – Modified grassland (P4)

Photograph 4 – Bramble scrub (P6)

Photograph 5 – Blackthorn scrub (P7)

Photograph 6 – Introduced shrub (P10)

Photograph 7 – Non-native hedgerow (H1)

Photograph 8 – Native hedgerow (H2)

Photograph 9 – Non-native hedgerow (H3)

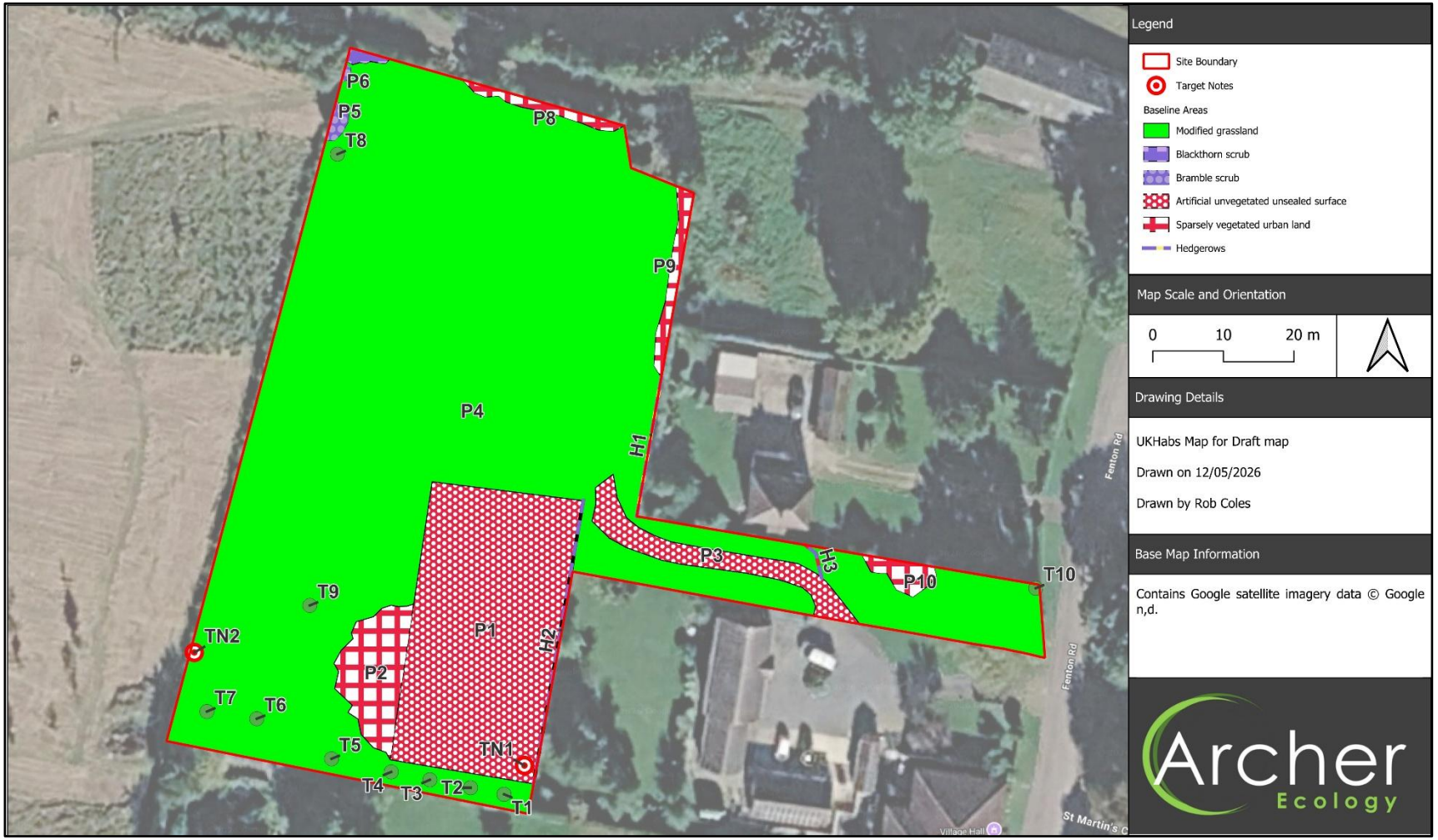
Photograph 10 – Ash tree (T8)

Photograph 11 – Felled tree (T9)

Photograph 12 – Felled tree (T9)

Photograph 13 – Felled tree (T10)

APPENDIX IV – UKHABS MAP



APPENDIX V – AMPHIBIAN AND REPTILE METHOD STATEMENT

Amphibians

Legal Protection

Common amphibian species are protected under the Wildlife and Countryside Act 1981 (as amended) against being killed and injured and included as Priority Species under the NERC Act (2006).

In England great crested newts *Triturus cristatus* are fully protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CRoW) Act 2000. They are also protected by European legislation; the EC Habitats Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017. This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019, which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit. Taken together, this legislation makes it illegal to:

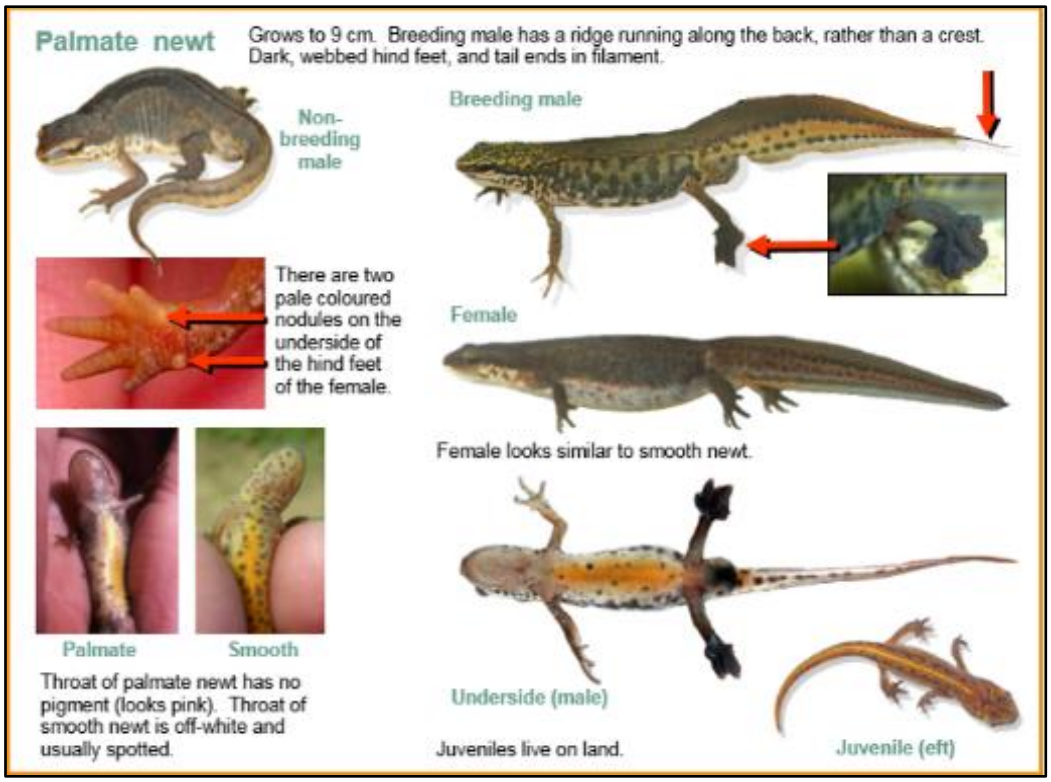
- Intentionally or recklessly kill, injure or capture a great crested newt
- Damage or destroy habitat which a great crested newt uses for shelter or protection
- Deliberately disturb a great crested newt when it is occupying a place it uses for shelter and protection

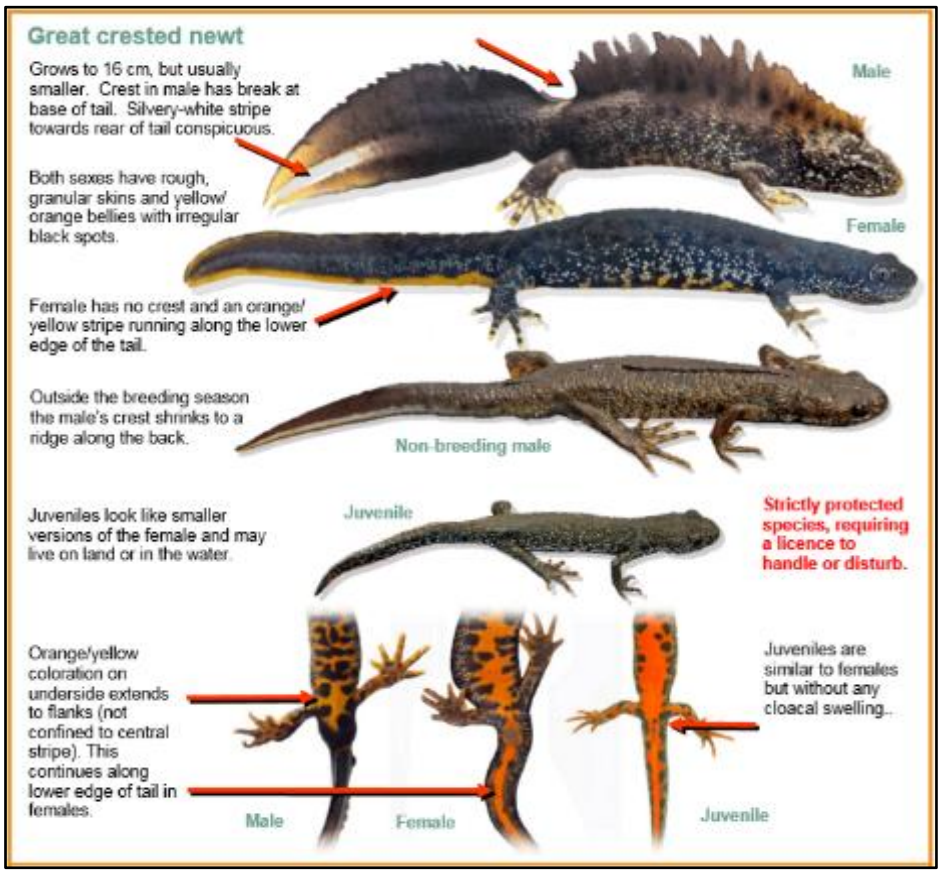
Identification

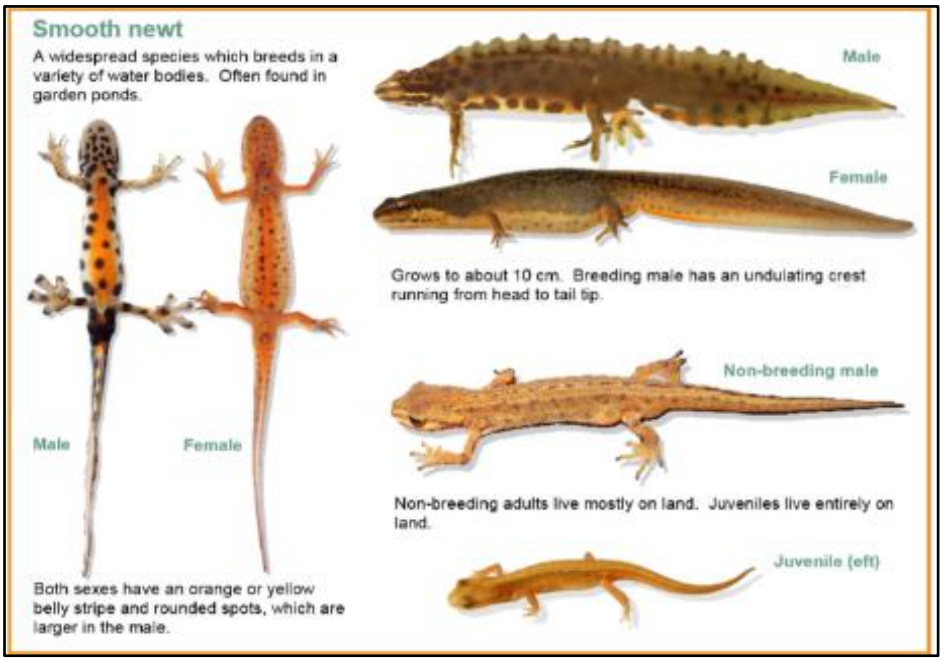
There are seven species of native amphibian within the UK. Of these seven, there is potential for the following species to be encountered during the works:

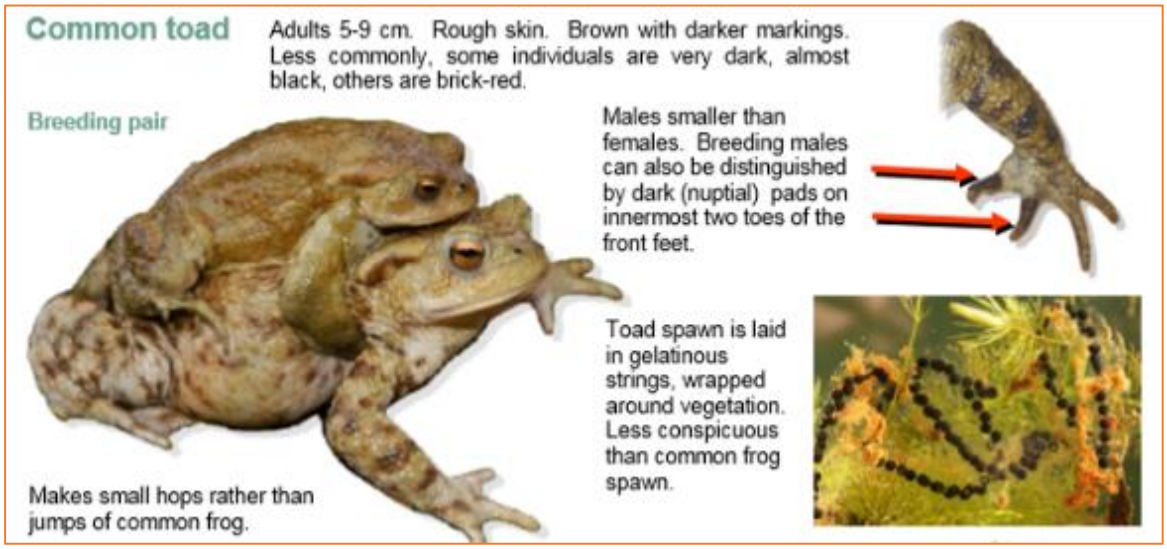
- great crested newt
- common frog *Rana temporaria*
- common toad *Bufo*
- smooth newt *Lissotriton vulgaris*
- palmate newt *Lissotriton helveticus*


Common frog
Adults 6-7 cm. Smooth skin, which appears moist.
Coloration variable, includes brown, yellow and orange. Some females have red markings on lower body.
Usually has a dark 'mask' marking behind the eye.
Breeding male
Grey/pale blue throat.
Thick front legs.
Dark (nuptial) pad on inner toes of the front feet.
Spawn is laid in gelatinous clumps.
Markings also variable, including varying amounts of black spots and stripes.
Young froglets look like smaller versions of the adults.


Palmate newt
Grows to 9 cm. Breeding male has a ridge running along the back, rather than a crest. Dark, webbed hind feet, and tail ends in filament.
Non-breeding male
There are two pale coloured nodules on the underside of the hind feet of the female.
Palmate
Smooth
Throat of palmate newt has no pigment (looks pink). Throat of smooth newt is off-white and usually spotted.
Breeding male
Female
Female looks similar to smooth newt.
Underside (male)
Juveniles live on land.
Juvenile (eft)


Great crested newt
Grows to 16 cm, but usually smaller. Crest in male has break at base of tail. Silvery-white stripe towards rear of tail conspicuous.
Male
Both sexes have rough, granular skins and yellow/ orange bellies with irregular black spots.
Female
Female has no crest and an orange/ yellow stripe running along the lower edge of the tail.
Outside the breeding season the male's crest shrinks to a ridge along the back.
Non-breeding male
Juveniles look like smaller versions of the female and may live on land or in the water.
Juvenile
Strictly protected species, requiring a licence to handle or disturb.
Orange/yellow coloration on underside extends to flanks (not confined to central stripe). This continues along lower edge of tail in females.
Juveniles are similar to females but without any cloacal swelling.
Male
Female
Juvenile


Smooth newt
A widespread species which breeds in a variety of water bodies. Often found in garden ponds.
Male
Female
Grows to about 10 cm. Breeding male has an undulating crest running from head to tail tip.
Male
Female
Non-breeding male
Non-breeding adults live mostly on land. Juveniles live entirely on land.
Juvenile (eft)
Both sexes have an orange or yellow belly stripe and rounded spots, which are larger in the male.



Reptiles

Legal Protection

All native reptiles are protected under Wildlife and Countryside Act (1981, as amended) from:

- Killing or injuring and
- Trading/selling

Identification

There are six species of native reptile within the UK. Of these six, there is potential for the following species to be encountered during the works:

- common European adder *Vipera berus*
- grass snake *Natrix natrix*
- common lizard *Lacerta vivipara* and
- slow worm *Anguis fragilis*

Common European Adder:

Grass Snake:

Common Lizard:

Slow Worm:

- Site preparatory works resulting in disturbances to habitats of value to reptiles and amphibians, including the understories of hedgerows, bramble and blackthorn scrub, and disturbances to any potential refugia, including brick and log piles, should avoid the period in which reptiles and amphibians are hibernating (between November and March, inclusive).
- For the initial stages of the development, the clearance of the above habitats/features should be undertaken in a phased manner and preferably under the supervision of an experienced ecologist. Ground vegetation clearance should follow a detailed search around all potential refugia, in a careful and controlled manner, with constant vigilance for any sheltering newts and reptiles.
- Any building materials should be stored on pallets to deter reptiles and amphibians taking shelter underneath them.
- All site operatives will stay vigilant for the presence of reptiles and amphibians.
- Any amphibians or reptiles, if found, will be carefully gathered up by hand by a suitably licensed ecologist and placed in a suitable holding receptacle for safe transportation away from the area of site clearance operations and released.

APPENDIX VI – HSI ASSESSMENTS

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m^2)	99	0.1
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Good	1
SI 5	Shoreline shade %	50	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	15	0.45
Pond1 - OSGR :		**HSI Score -**	**0.66 (Average)**

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m^2)	189	0.4
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade %	10	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	25	0.55
Pond2 - OSGR :		**HSI Score -**	**0.75 (Good)**

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m^2)	4081	0.01
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade %	30	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	20	0.5
Pond3 - OSGR :		**HSI Score -**	**0.51 (Below Average)**

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m2)	200	0.4
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade %	50	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	30	0.6
Pond4 - OSGR :		**HSI Score -**	**0.75 (Good)**

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m2)	620	1
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade %	10	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	20	0.5
Pond5 - OSGR :		**HSI Score -**	**0.81 (Excellent)**

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m2)	1000	0.95
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade %	25	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	20	0.5
Ditch1 - OSGR :		**HSI Score -**	**0.81 (Excellent)**

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1
SI 2	Waterbody area (m2)	1000	0.95
SI 3	Waterbody drying	Never dries	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade %	60	1
SI 6	Fowl	Minor	0.67
SI 7	Fish	Absent	1
SI 8	No waterbodies/km^{2**}	7	0.89
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes %	40	0.7
Ditch2 - OSGR :		**HSI Score -**	**0.83 (Excellent)**