

Preliminary Ecological Appraisal – *Final report*

Land south of Rouge's Lane, Hinckley

July 2023

Prepared by Ecologist Elizabeth Fenn BSc (Hons) on behalf of:



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Report Overview	
Scheme reference	Land south of Rouge's Lane, Hinckley, Leicestershire
Works extent	Conversion of existing barn for residential occupancy
Revision	Version 1 (Final)
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Acknowledgements

Archer Ecology Ltd would like to thank Leicestershire and Rutland Environmental Records Centre (LRERC) 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 HSSP Architects Ltd to complete a Preliminary Ecological Appraisal (PEA) in support of proposals to convert an existing barn into a residential dwelling. The application site is located beyond an unnamed road which runs perpendicular to Rogue's Lane. It is situated within a principally rural and agricultural setting at c.2.5km north of Hinckley town centre, Leicestershire. It is understood that a planning application will be submitted for the proposed class Q conversion of the existing barn.

As part of the commission, an Extended Phase 1 Habitat Survey of the application site was carried out by Principal Ecologist Helen Archer BSc (Hons) MCIEEM on 30th June 2023. The walkover was supplemented by a desktop study, comprising a review of historical records of protected species, priority habitats and statutory/non-statutory designated nature conservation sites falling within 2km of the application site; these were obtained through consultation with Leicestershire and Rutland Environmental Records Centre.

A summary of the 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 and Biodiversity
<u>Biodiversity</u> It is proposed that any introduced landscaping incorporates native, species-rich plants, trees and shrubs of local provenance. Species of greatest value to pollinators, and other aerial invertebrate should be sought as this offers a greater potential food source for locally foraging bats, mammals, avifauna and herpetofauna. <u>Safeguarding trees and hedgerows</u> Measures should be employed to appropriately safeguard scattered trees and hedgerows established along the northern and southern peripheries of the application site. Following advice contained within <i>British Standard (BS) 5837 – Trees in Relation to Construction</i>, protective barrier fencing could be installed immediately outside of the Root Protection. Areas (RPAs), which should remain in situ during all phases of the construction works. RPAs chiefly represent the full canopy cover of individual trees and will be considered as Construction Exclusion Zones (CEZs). There must also be no raising or excavating of the ground within the buffer.

Herpetofauna
Any activities resulting in the temporary or permanent uptake of habitats or ecological features with a potential to support reptiles and amphibians should follow a bespoke Amphibian and Reptile Method Statement (see Appendix IV).
Nesting birds
As a precautionary measure, any vegetation removal and works to any built structures 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.
Foraging bats
In order to avoid impacts upon nocturnal bat activity, dark unlit corridors should be maintained around and across the site, allowing bats to pass through and across the site unhindered by artificial light. Should any artificial lighting be introduced on the site, this should be directed away from 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.
Badger
Excavations required as part of the works should be covered overnight to avoid the accidental trapping of badgers and other terrestrial mammals.
Invasive non-native species
Should this stand of cotoneaster require removing, a non-permeable sack should firstly be placed over the plant to contain any berries. The root mass should be excavated, and the entire plant chipped or burnt on site or taken to licensed landfill as controlled waste.

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1.0 INTRODUCTION

1.1 Background

- 1.1.1 Archer Ecology Ltd was commissioned by HSSP Architects to complete a Preliminary Ecological Appraisal (PEA) in support of proposals to convert an existing barn into a residential dwelling. The application site is located beyond an unnamed road which runs perpendicular to Rogue's Lane. It is situated within a principally rural and agricultural setting at c.2.5km north of Hinckley town centre, Leicestershire. It is understood that a planning application will be submitted for the proposed class Q conversion of the existing barn.
- 1.1.2 The location of the application site – centred at Ordnance Survey Grid Reference (OSGR) SP 41966 96532 - is shown in Figure 1, below.



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

1.2 Objectives

- 1.2.1 The purpose of this report is to identify any potential ecological receptors occurring within or adjacent to the proposed works area. 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.

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, 2007¹) 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.
- 2.3.2 Section 15 relates to 'Conserving and enhancing the natural environment'. Relevant policies in relation to planning applications include:

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 2023].

Paragraph 174. 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;*
- 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 179. “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 biodiversity⁶¹; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation⁶²; 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 180. “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 reasons⁶³ 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 181. 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 sites⁶⁴; 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 182. 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 North West Leicestershire Local Plan

The North West Leicestershire Local Plan is a suite of Development Plan Documents (DPDs) which set out the local planning policy for the area. Relevant policies in relation to this planning application include:

Policy EN1: Nature conservation

(1) Proposals for development will be supported which conserve, restore or enhance the biodiversity in the district.

2) Where a proposal for development would result in significant harm to one of the following and which cannot be avoided, or mitigated or compensated for, then planning permission will be refused:

(a) Special Areas of Conservation (SAC);

(b) Sites of Special Scientific Interest (SSSI);

(c) Local and Regionally Important Geodiversity Sites (RIGS) and candidate Regionally Important Geodiversity Sites (cRIGS);

(d) Local Wildlife Sites (LWSs), Local Nature Reserves (LNRs) and candidate Local Wildlife Sites (cLWSs) which meet the Leicester, Leicestershire and Rutland LWS criteria;

(e) Local and National Biodiversity Action Plan-related (BAP) priority habitats;

(f) River corridors;

(g) Irreplaceable habitats (defined as Ancient woodlands; Mature plantation or secondary woodland; Species-rich ancient hedgerows; Aged or veteran trees; Species-rich neutral grassland; Acid grassland and heath grassland; Dry and wet heathland; Bogs and Sphagnum pools and Rock outcrops).

(3) New development will be expected to maintain existing ecological networks, hotspots and landscape features (such as water courses and waterways, disused railway lines, trees and hedgerows) for biodiversity, as well as for other green infrastructure and recreational uses.

(4) Where a proposed development would attract additional visitors to an area or facility it should be demonstrated how any potential impact upon an area or feature of biodiversity interest will be managed as part of the new development.

(5) The use of Sustainable Urban Drainage Systems (SuDS) to create wetland and 101 marshland habitats will be encouraged subject to the provisions of Policy Cc4.

(6) We will prepare a Supplementary Planning Document to provide more guidance on this issue.

3.0 METHODOLOGY

NB: Detailed methodologies pertaining to individual protected species are included under Appendix I 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 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 July 2023. This included a search of data, including protected species and statutory and non-statutory designated nature conservation sites, using the following resources:

- Leicestershire and Rutland Environmental Records Centre (LRERC);
- 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 July 2023

- 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) and non-statutory designated sites (e.g., Local Wildlife Sites (LWS)).

3.3 Field survey

- 3.3.1 An Extended Phase 1 Habitat Survey was completed on 30th June 2023 by Principal Ecologist Helen Archer BSc (Hons) who is a full member of CIEEM and has over thirteen years' experience of undertaking ecological walkover s.
- 3.3.2 The survey was completed in accordance with 'Extended Phase 1' methodology⁴ and involved identifying notable/protected habitats and evidence of protected species on or adjacent to the site as well as determining the potential of the site for protected species inhabitancy, based on habitat quality and known historic presence. Photographs taken during the survey, referenced within Section 4.2 of this report, are shown under Appendix II. A detailed JNCC Phase 1 Habitat Survey Map is included under Appendix III; Ecological features of particular interest are denoted as Target Notes (TN).

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.
- 3.4.2 Phase 1 Habitat survey aims to characterise the habitat on 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 habitat opportunities for otter *Lutra lutra*, water vole *Arvicola amphibius* and white-clawed crayfish *Austropotamobius pallipes*, including rivers and streams, these protected faunae has been scoped out of the assessment.

⁴ Joint Nature Conservation Committee (2010) *Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit*.

4.0 RESULTS

4.1 Statutory Designated Nature Conservation Sites

European / International designated sites for nature conservation

- 4.1.1 No European or internationally statutory designated nature conservation sites were identified within 10km of the application site. Such sites fall outside of the potential zone of influence and are, therefore, not considered to be potential receptors with respect to the proposed works.

Nationally designated sites for nature conservation

- 4.1.2 No nationally statutory designated nature conservation sites were identified within 10km of the application site. Such sites fall outside of the potential zone of influence and are, therefore, not considered to be potential receptors with respect to the proposed works.

Non-statutory designated sites for nature conservation

- 4.1.3 LRERC returned a large volume of non-statutory sites for nature conservation within a 2km radius of the application site. Given the wide level of separation between these sites and the application, and considering that the majority of these non-statutory sites represent single features (such as trees and hedgerows), all such sites falling beyond 1km of the site are considered as falling beyond the potential zone of influence. Details of non-statutory sites falling within 1km of the application site, and their interest features, are given in Table 2, below.

Table 2 – Non-statutory designated sites for nature conservation

Site	Interest features	Proximity to site
Trees north of Normandy way (candidate LWS)	<i>Ash trees with dead wood</i>	578m south
Hedgerow west of Westmoreland farm (potential LWS)	<i>Species rich hedgerow</i>	426m north-west
Stoke golding hedgerow and oak (potential LWS)	<i>No citation provided</i>	804m north-west
Stoke Road hedgerow (potential LWS)	<i>Species-rich hedge with trees</i>	1km west
Stoke Road hedgerow (potential LWS)	<i>Species rich hedge with trees</i>	>1km west

- 4.1.4 In view of the localised nature of the proposed works, and wide level of separation between the application site and these non-statutory sites, the works are not expected to adversely impact upon the integrity of associated interest features. Subsequently, non-statutory designated sites for nature conservation are not considered to be potential receptors with respect to the proposed works.

Priority Habitats

- 4.1.5 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.

4.2 Extended Phase 1 Habitat Survey

- 4.2.1 The application site is situated within a principally rural and agricultural setting and lies 2.5km north of Hinckley town centre. Land surrounding the site typically supports agricultural and pastoral fields which are separated by hedgerows.
- 4.2.2 All habitats recorded within the application site boundary are described under the following sub-headings.

A2.1 – Scrub – Dense

- 4.2.3 Stands of scrub vegetation are patchily distributed along the peripheries of a large, ornamental pond within the central extent of the application site (see Photograph 1, Appendix II). These comprise a mixture of native and ornamental shrubs, including dominant bramble *Rubus fruticosus* agg. and dogwood *Cornus sanguinea* together with occasional honeysuckle *Lonicera nitida*, gorse *Ulex europaeus*, goat willow *Salix caprea* and bamboo *Bambusa vulgaris*. A single stand of cotoneaster *Cotoneaster* sp. was also observed amongst scrub vegetation occurring close to the north-eastern periphery of the fishing pond (see Photograph 2, Appendix II).
- 4.2.4 In view of the level of connectivity and dense nature of scrub vegetation, this habitat offers potentially moderate nature conservation value on a site scale. This habitat is also considered to be of sufficient density to support potential herpetofaunal, avifaunal and mammal inhabitancy.

A3.1 – Scattered trees - broadleaved

- 4.2.5 Occasional scattered trees (of predominantly native origin) have been introduced along the peripheries of the pond, adjacent to the eastern and western extents of the application site

boundary. These comprise young and sub-mature specimens of field maple *Acer campestre*, alder *Alnus glutinosa* and dogwood (see Photograph 3, Appendix II). In view of the low species diversity and age of the trees, these were appraised as being of 'low' nature conservation value on a site level only. However, there is some potential for these specimens to offer value to nesting birds and foraging bats, particularly upon maturity.

B2.2 – Neutral grassland – semi-improved

- 4.2.6 The application site and wider premises is dominated by a single expanse of semi-improved grassland (see Photograph 4, Appendix II). This is typically composed of grass species which are characteristic of amenity grassland, including occasional perennial rye-grass *Lolium perenne* and annual meadow-grass *Poa annua*, together with dominant cock's-foot *Dactylus glomerata* and occasional Yorkshire fog *Holcus lanatus*. A diversity of forbs and ruderal species were also recorded, including occasional nettle *Urtica dioica*, white clover *Trifolium repens*, broad-leaved dock *Rumex obtusifolius*, sorrel *Rumex acetosa* and great plantain *Plantago major*.
- 4.2.7 In view of the species diversity of this area of grassland, this habitat is assessed as having potentially moderate nature conservation value on a site scale.

G1.2 – Standing water – Mesotrophic

- 4.2.8 A moderate-sized, fishing pond occurs within the central portion of the application site (see Photograph 5, Appendix II). This waterbody appeared to be mesotrophic in nutrient content and supported occasional riparian vegetation along the margins, including bulrush *Typha latifolia*, branched bur-reed *Sparganium erectum* and soft rush *Juncus effusus*. The pond is also flanked by occasional scrub along the peripheries (as described in report Section 4.2.3).
- 4.2.9 Considering the large footprint of the pond and inherent value to avifauna, the waterbody was appraised as having moderate nature conservation value on a local scale.

J2.1.2 – Hedgerow – Intact – Species-poor

- 4.2.10 Intact hedgerows are established along the northern, southern and western site peripheries (see Photograph 6, Appendix II). Combined, these are composed entirely of native, broadleaved specimens, including hawthorn, elder *Sambucus nigra*, bramble, hazel *Corylus avellana* and hornbeam *Carpinus betula*.
- 4.2.11 Considering the predominantly low species diversity of these hedgerow, and a lack of associated qualifying interest features, this was not considered 'important' under the criteria

of the Hedgerow Regulations (1997). This hedgerow was appraised as offering low nature conservation value at a local scale.

J2.4 – Fencing

- 4.2.12 Short lengths of wooden post and panelled fencing occur adjacent to the existing barn within the northern extent of the application site. These do not sustain any significant assemblages of vegetation and are, subsequently, appraised as having negligible nature conservation value.

J3.6 – Buildings

- 4.2.13 Within the northern extent of the application site is a single-storey, detached agricultural barn (see Photograph 7, Appendix II). The building is constructed entirely from corrugated metal sheet panelling which forms the external walls and a single-pitched roof. These are supported by RSJ beam framework. Internally, the structure comprises open room voids which extend to the roof, with no separating loft. The structure features a single, roller-shutter door along the northern elevation and continuous skylights amongst the roof panels.
- 4.2.14 The barn is considered to be in a good condition generally and is appraised as having low nature conservation value on a site scale only.

J4.1 – Bare ground – Hardstanding

- 4.2.15 Within the northern extent of the application site are areas of hardstanding which are mainly formed by compacted aggregate. These areas do not support any significant assemblages of vegetation or standing waterbodies and, subsequently, do not offer any significant value to nature conservation.

4.3 Species

Amphibians

- 4.3.1 Recent records of amphibians were returned by LRERC from within a 2km radius of the application site, including common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and great crested newt *Triturus cristatus*. The closest record for great crested newt is located c.1.25km north-west of the application site.
- 4.3.2 The understories of scrub and hedgerows offer suitable density and structure for amphibians to shelter and forage. Expanses of neutral grassland established on the application site could also provide opportunities for newts to disperse, albeit this was limited by the closely mown sward.

4.3.3 The application site contains a moderate-sized fishing pond, as described under report Section 4.2.8; A Habitat Suitability Index (HSI) assessment of the pond has determined that it has 'poor' suitability to support breeding populations of GCN, as shown in Table 4 below. This is largely attributed to by the fact that the waterbody is currently stocked with fish, for the purpose of recreational fishing. Subsequently, the potential for this waterbody to support breeding populations of GCN is considered to be sufficiently low to avoid the need for further species-specific surveys.

Table 4 – HSI assessment of fishing pond

Suitability Index	Factor	Details	Score
SI 1	Location	Zone A	1.0
SI 2	Pond area (m ²)	992	0.8
SI 3	Pond drying	Never	0.9
SI 4	Water quality	Moderate	0.67
SI 5	Shoreline shade	10%	1
SI 6	Fowl	Minor	0.01
SI 7	Fish	Major	0.01
SI 8	No ponds/km ² **	Yes	1
SI 9	Terrestrial habitat	Moderate	0.67
SI 10	Macrophytes	10%	0.4
		HSI Score -	0.32 (Poor)

4.3.4 A search using aerial imagery had also determined the presence of a number of waterbodies within the locality of the site, including two moderate-sized ponds >68m east of the site. Due to access constraints, these were not visited at the time of the walkover and so a HSI of these ponds could not be undertaken. However, with reference to Rapid Risk Assessment Tool issued by Natural England, the combined footprint of habitat loss expected to facilitate the proposals is <0.1ha, which falls outside of the parameters of an offence pertaining to great crested newts, should any of these ponds support breeding populations of this species. The parameters for significant scale and proximity of terrestrial habitat damage/loss are:

- >0.1ha loss or damage to terrestrial habitat within 100m of a pond used by breeding newts
- >0.5ha loss/damage to terrestrial habitat at 100-250m of a pond used by breeding newts
- >5ha loss/damage to terrestrial habitat at >250m of a pond used by breeding newts

- 4.3.1 The probability of encountering great crested newts during the site preparatory works is considered to be significantly low. Nonetheless, the possibility that individual or low numbers of common occurring amphibians could be incidentally encountered should not be discounted.

Reptiles

- 4.3.5 Four recent records of grass snake *Natrix helvetica* were returned by LRERC from within a 2km radius of the application site. The closest record of this species is located c.180m north of the application site.
- 4.3.6 Pockets of dense scrub and hedgerows established on the application site are considered to be of suitable density to promote reptile inhabitancy, whilst areas of mown grassland and hardstanding have the potential to offer basking opportunities.
- 4.3.7 Considering the rural setting of the site and the continued availability of pastoral fields and dense hedgerows within the immediate locality of the site, and given the small footprint of the proposed works, notable/sizable populations of reptiles are not expected to be encountered during the works. Nonetheless, the possibility of encountering single or small numbers of reptiles during the site preparatory works should not be discounted.

Birds

- 4.3.8 LRERC identified numerous records of bird species listed under Schedule 1 of the Wildlife and Countryside Act (1981, as amended) within 2km of the application site, including barn owl *Tyto alba*, brambling *Fringilla montifringilla*, red kite *Milvus milvus*, redwing *Turdus iliacus*, Kingfisher *Alcedo atthis* and fieldfare *Turdus pilaris* amongst a few. No evidence of these species was identified during the walkover, nor do optimal habitat opportunities exist for these species to nest on the site.
- 4.3.9 General bird activity was observed on the site during the walkover, including blackbird *Turdus merula*, feral pigeon *Columba livia*, wren *Troglodytes troglodytes*, magpie *Pica pica* and woodpigeon *Columba palumbus*. No evidence of nesting activity was recorded during the walkover although a number of habitat opportunities for nesting birds were noted on the site during the walkover. Specifically, pockets of scrub, sub-mature trees and intact hedgerows were considered to be of suitable density and structure to accommodate ground nesting birds whilst horizontal ledges associated with the barn could accommodate nesting passerines.
- 4.3.10 In absence of mitigation, nesting birds could be inadvertently impacted by any proposed vegetation removal and building modifications required as part of the works.

Bats

- 4.3.11 Recent records of bats were returned by LRERC from within a 2km radius of the application site, including common pipistrelle *Pipistrellus pipistrellus*, brown long-eared bat *Plecotus auratus*, Leisler's bat *Nyctalus leisleri*, Nathusius's pipistrelle *Pipistrellus nathusii* and noctule *Nyctalus noctule*. The closest, confirmed roost to the application site is located 204m south, dated 2021.

Roosting bats

- 4.3.12 The majority of trees on the site were observed to be in good condition and lacked any inherent features with a potential to sustain bat roosts, such as fissures, lifted bark and splits. Subsequently, these trees were appraised as having 'negligible' potential to support roosting bats in line with categories given within Bat Conservation Trust (BCT) guidelines⁵.
- 4.3.13 Considering the simplistic construction and architectural style of the existing agricultural barn, this inherently lacked any features with a potential to support roosting bats and no apparent access/egress points for bats were observed. Furthermore, the presence of skylights across the roof have contributed to high levels of ambient light internally which, in turn, provide sub-optimal conditions for roosting bats. The building also lacked a number of inherent roosting opportunities, such as loft spaces and wall cavities.
- 4.3.14 Subsequently, the building was appraised as having 'negligible' potential to support roosting bats in line with BCT guideline and no evidence of roosting activity was found to be associated with the internal or external fabric of the building.

Foraging/commuting bats

- 4.3.15 The application site provides some habitats suitable for foraging bats, including boundary trees, the fishing pond, pockets of scrub vegetation and hedgerows. These also retain connectivity to other habitats of value for nocturnal bat activity within the wider landscape, including hedgerows and further ponds occurring within the locality.
- 4.3.16 On this basis, the site was appraised as having potentially 'moderate' value for nocturnal bat activity in line with categories contained within BCT guidelines.

⁵ Collins (2016) *Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition*. BCT

Badger

- 4.3.17 Multiple records of badger *Meles meles* were returned by LRERC from within a 2km radius of the application site, with the most recent record dated 2018.
- 4.3.18 Topographically, the site is predominantly flat and considered to be of sub-optimal profile for sett excavation and no evidence of badger inhabitancy was identified during the survey. The site does, however, offers suitable foraging habitat for local clans.

Invasive non-native species

- 4.3.19 A single stand of cotoneaster was recorded amongst scrub vegetation occurring close to the north-eastern periphery of the fishing pond (see Photograph 2, Appendix II, denoted as TN1 under Appendix III). It was not possible to identify the cotoneaster down to species level as this genus includes numerous species, sub-species and varieties which have been introduced in the UK as garden plants and can readily hybridise. As a precaution, this specimen should be treated as a plant listed under Schedule 9 of the Wildlife and Countryside Act (1981, as amended) which makes it an offence to spread this plant into the wild.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Habitats and biodiversity

- 5.1.1 The application site does not support habitats of nature conservation value on a county or national scale. All habitats recorded are widespread locally and are considered to be of nature conservation value on a site or local scale.
- 5.1.2 An overview of recommendations pertaining to habitats and biodiversity is given within the following sub-headings.

Landscaping

- 5.1.3 The following measures are recommended to provide ecological enhancements:
- Any new hedgerows to be planted should comprise native species such as blackthorn *Prunus spinosa*, common hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, field maple *Acer campestre*, wild cherry *Prunus avium* and bird cherry *Prunus padus*.
 - Once established, hedgerows should be appropriately managed with traditional techniques where possible to maximise their benefit for wildlife using hedge laying rather than flailing or trimming. If trimming is necessary, ensure it is carried out every two to three years and in sections so that not all parts of the hedgerow are cut at the same time. Further information on the best practice creation and management of hedgerows can be found on the Management Advice page of www.hedgeline.org.uk.
 - Any new trees and shrubs planted on the site as part of a landscaping scheme should comprise native locally appropriate species. If possible, species that provide pollen, nectar and fruit should form part of the landscaping in order to provide a food source for common birds. Species which could be considered include hazel, hawthorn, blackthorn, dog-rose *Rosa canina*, wayfaring tree *Viburnum lantana*, sweet-briar *Rosa rubiginosa*, dogwood *Cornus sanguinea*, common buckthorn *Rhamnus cathartica* and guelder rose *Viburnum opulus*.
 - Plant flower borders within any landscaped areas of the site to include night scented flowers in order to attract moths and other night flying insects (which will provide foraging opportunities for bats). Species should include evening primrose *Oenothera biennis*, sweet rocket *Hesperis matronalis*, honeysuckle species *Lonicera* sp., lavender *Lavendula* sp., white jasmine *Jasminum officinale*, night-scented catchfly *Silene noctiflora*, night-scented stock *Matthiola longipetala* and soapwort *Saponaria officinalis*.

- In order to provide suitable habitats on site to encourage high invertebrate activity, including declining pollinators, the grassed areas on the site should be seeded with appropriate wildflower mixes. Seeding of any amenity areas should use a flowering lawn mixture, such as Emorsgate Seeds EL1 mix (www.wildseed.co.uk), which is resistant to regular mowing. Any areas of longer grass could be seeded with a general wildflower mix such as Emorsgate EM1 mix (basic all-purpose meadow mix).
- It is recommended that any wildflower areas are cut once a year, in late summer/early autumn and the arisings removed after 7 days to enable the wildflowers to flourish and provide food sources for invertebrates. Details of how to adequately prepare the ground prior to seeding as well as ongoing management can also be found on the Emorsgate website. Increasing the levels of invertebrate activity on site will also provide further foraging opportunities for insectivorous species.

Safeguarding trees and hedgerows

- 5.1.4 Measures should be employed to appropriately safeguard scattered trees and hedgerows established on the application site. 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 (RPAs), which should remain in situ during all phases of the construction works. RPAs chiefly represent the full canopy cover of individual trees and will be considered as Construction Exclusion Zones (CEZs). There must also be no raising or excavating of the ground within the buffer.

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 site supports a number of terrestrial habitats of suitable density for amphibians to reside and disperse. The fishing pond on the site was considered to be of poor suitability to be inhabited by breeding populations of great crested newt, although a number of additional ponds also exist within the locality of the site. However, given the small footprint of the

proposed works, these are not expected to significantly impact upon terrestrial habitat with a potential to support great crested newts, should these be inhabiting the nearby ponds.

- 5.2.3 **As a precautionary measure to mitigate the potential to harm single and/or small populations of amphibians during the site preparatory works, it is advised that a bespoke Amphibian and Reptile Method Statement is followed (see Appendix IV).**

Reptiles

- 5.2.4 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.
- 5.2.5 Permitted development or a development which has received planning permission is clearly a lawful activity but the law does require that a reasonable effort is made to avoid killing or injury of these animals during the implementation of this permission.
- 5.2.6 Dense scrub, hedgerow understories and expanses of grassland established within the application site were appraised as being of suitable density for reptiles to shelter, forage and/or disperse.
- 5.2.7 **As a precautionary measure to mitigate the potential to harm single and/or small populations of reptiles during site preparatory works, it is advised that a bespoke Amphibian and Reptile Method Statement is followed (see Appendix IV).**

Birds

- 5.2.8 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.
- 5.2.9 The site offers habitat opportunities for birds to establish nests in the form of scrub vegetation, scattered trees, grassland, hedgerows and horizontal ledges associated within the existing barn. Therefore, the possibility of encountering nesting birds during the enabling phase of the proposals should be considered.
- 5.2.10 **As a precautionary measure, any vegetation removal and works to any built structures 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

- 5.2.11 **Bats receive protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).**
- 5.2.12 **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 bats

- 5.2.13 **In order to avoid impacts upon nocturnal bat activity, dark unlit corridors should be maintained around and across the site, allowing bats to pass through and across the site unhindered by artificial light.**
- 5.2.14 **Should any artificial lighting be introduced on the site, this should be directed away from potential foraging features.**
- 5.2.15 **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.**

Badger

- 5.2.16 **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.**
- 5.2.17 **Excavations required as part of the works should be covered overnight to avoid the accidental trapping of badgers and other terrestrial mammals.**

Cotoneaster

- 5.2.18 A single stand of cotoneaster was recorded amongst scrub vegetation occurring close to the north-eastern periphery of the fishing pond (see Photograph 2, Appendix II, denoted as TN1 under Appendix III). This invasive non-native species is likely to be listed under Schedule 9 of the Wildlife and Countryside Act (1981, as amended) which makes it an offence to cause this plant to spread into the wild. It is also classified as controlled waste within Part II of the Environmental Protection Act (1990) and any waste containing this plant material, including contaminated soils, must be disposed of at an authorised landfill site.
- 5.2.19 **Should this stand of cotoneaster require removing, a non-permeable sack should firstly be placed over the plant to contain any berries. The root mass should be excavated, and the entire plant chipped or burnt on site or taken to licensed landfill as controlled waste.**

APPENDIX I – SPECIES METHODOLOGIES

The fauna included within this assessment is based on the habitats present, data from the desk-based searches, and the following legislation⁶:

- 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 imagery⁷ 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 undertaken⁹.

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.

⁶ See www.legislation.gov.uk

⁷ www.bing.com/maps accessed July 2023

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 internal and external inspection of buildings on the site was completed by Principal Ecologist and bat licence holder Helen Archer BSc (Hons) (Level 2 Class Licence issued by Natural England; 2015-14111-CLSCLS). Helen is a full member CIEEM and has over thirteen years' experience of completing ecology and bat surveys. The buildings were subjected to a detailed inspection from ground level with the use of a Cluson Clulite torch (1 million candle power).

The inspection was carried out in line with methodologies contained within the survey guidelines issued by Bat Conservation Trust (Collins, 2016)¹⁰ and involved identifying potential roosting features associated with the buildings with evidence of roosting bats, including urine staining, guano, feeding remains and live/dead bats.

Tree assessments were undertaken from ground level with the aid of a torch and binoculars, where required. During the survey Potential Roosting Features (PRF) for bats following current best practice^{11, 12, 13} 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.

Badger

Areas of suitable habitat were surveyed for evidence of badger activity, such as mammal paths, setts, snuffle holes or latrines¹⁴.

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 (2016). *Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition*. Bat Conservation Trust.

¹¹ Collins (2016). *Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition*. BCT

¹² Mitchell-Jones, A.J., & McLeish, A.P. Ed. (2004). *Bat Workers' Manual 3rd Edition*

¹³ BCT (2015) *Surveying for Bats in Trees and Woodland – Guide*. BCT

¹⁴ Natural England (2015) *Badgers: surveys and mitigation for development projects*. Natural England

APPENDIX II – PHOTOGRAPHS



Photograph 1: Dense scrub along periphery of the pond



Photograph 2: Stand of cotoneaster



Photograph 3: Scattered trees along site periphery



Photograph 4: Expanse of neutral grassland



Photograph 5: Ornamental fishing pond

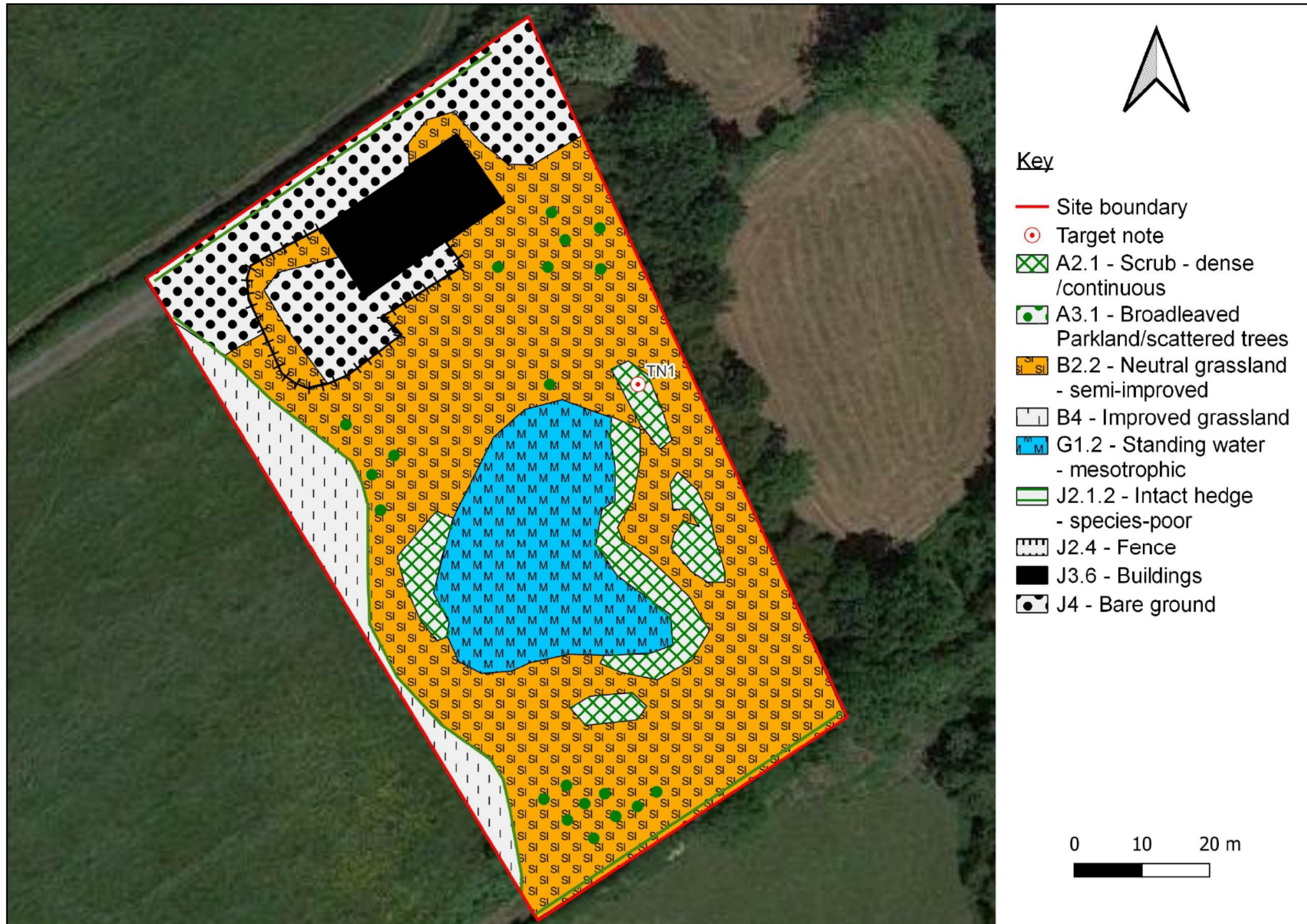


Photograph 6: Intact hedgerow along northern site periphery



Photograph 7: Agricultural barn at northern extent of site

APPENDIX III – JNCC PHASE 1 HABITAT MAP



APPENDIX IV – 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).

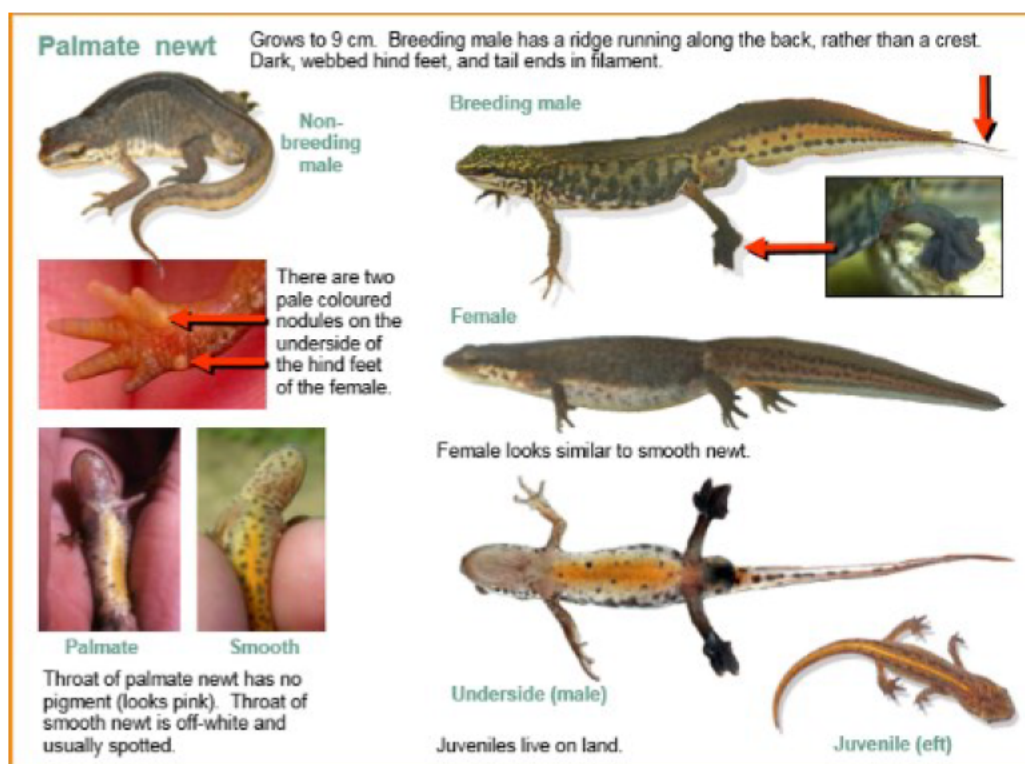
In England great crested newts *Triturus cristatus* are fully protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CROW) Act 2000. They are also protected by European legislation; the EC Habitats Directive is transposed into UK law by The Conservation 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 the 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*



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.

Both sexes have rough, granular skins and yellow/orange bellies with irregular black spots.

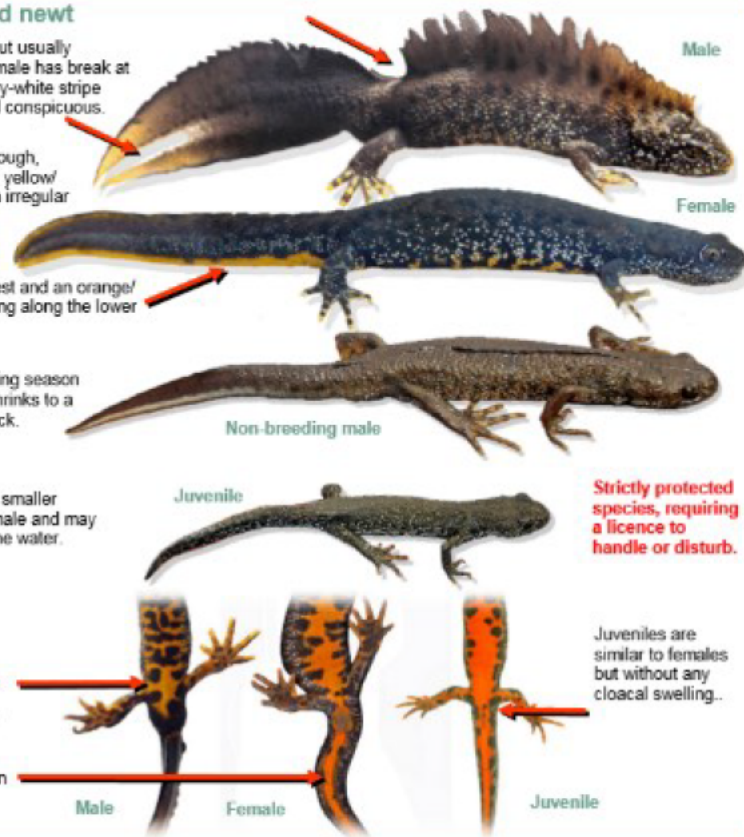
Female has no crest and an orange/yellow stripe running along the lower edge of the tail.

Outside the breeding season the male's crest shrinks to a ridge along the back.

Juveniles look like smaller versions of the female and may live on land or in the water.

Orange/yellow coloration on underside extends to flanks (not confined to central stripe). This continues along lower edge of tail in females.

Strictly protected species, requiring a licence to handle or disturb.

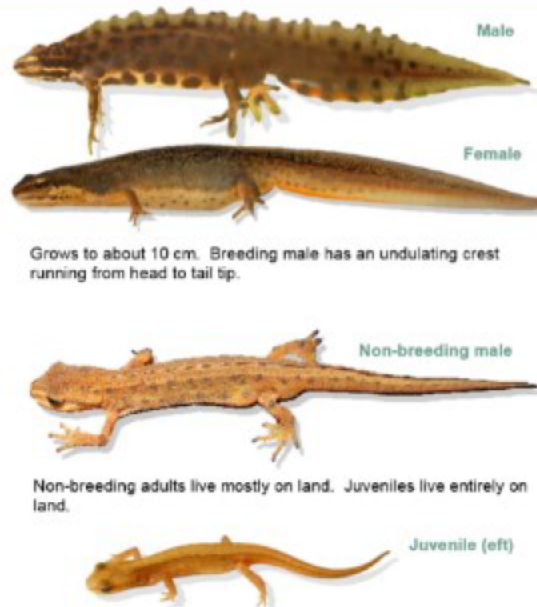


Smooth newt

A widespread species which breeds in a variety of water bodies. Often found in garden ponds.



Both sexes have an orange or yellow belly stripe and rounded spots, which are larger in the male.



Grows to about 10 cm. Breeding male has an undulating crest running from head to tail tip.

Non-breeding adults live mostly on land. Juveniles live entirely on land.



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, including disturbances to habitats of value to reptiles, and disturbances to any potential refugia, including brash 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 amphibians taking shelter underneath them.
- All site operatives will stay vigilant for the presence of reptiles and amphibians, particularly great crested newts, during the works.
- If great crested newts are found at any point, the works should stop immediately, and an ecologist be appointed to advise the way forward.
- Any amphibians or reptiles if found, will be carefully gathered up by hand by a suitable licensed ecologist and placed in a suitable holding receptacle for safe transportation away from the area of site clearance operations and released. This rescue method will also be extended to any other amphibian species or reptiles found.
- The ecology contact for this activity is **Helen Archer (Principal Ecologist) 07583 802069**.