

Updated Preliminary Ecological Assessment

Wood Grange

Henfield Road

Cowfold

West Sussex

RH13 8DT

NGR: TQ 21241 22070



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Sylvatica Ecology Ltd

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<https://se-planning.com>

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LIMITATIONS AND LIABILITIES

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It should be borne in mind that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats, or that they will not occur in locations or habitats that appear unsuitable.

In order to minimise the likelihood of adverse effects on protected animal species over time, it is accepted good practice, in accordance with Natural England (NE) (formerly English Nature) guidance for ecological surveys to be repeated should works be deferred for over 12 months from the date of initial survey.

It is the duty of the landowner, developer and operations managers to act responsibly and to comply with current environmental legislation if protected species are suspected or found prior to, or during works.

The recommendations and information contained within this report are based on the information provided on the development works prior to the surveys being carried out. Should the development proposals change then the findings and recommendations contained within would potentially require revision.

The findings within this report do not constitute legal advice. Should this be required, then a suitably qualified professional practitioner should be contacted.

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1.0 SUMMARY

- 1.1 This Updated Preliminary Ecological Assessment has been prepared in support of a planning application for the conversion of an existing garage (Building 1) to two residential flats and the construction of two new dwellings with associated car parking and landscaping at Wood Grange, Cowfold. An initial Extended Phase 1 Habitat Survey was undertaken on 25 March 2024, with an update survey on 12 June 2026. The total site survey area is 0.2723ha; the predicted development impact area is approximately 0.08ha.
- 1.2 The site occupies the grounds of a residential property on the southern fringe of Cowfold village. Habitats are of low ecological value, comprising modified grassland (a close-cut perennial ryegrass lawn with patches of moss), ornamental garden planting, sealed hard standing, and the garage building. A mixed treeline of ash, sycamore and Leyland cypress that formerly demarcated the western boundary had been entirely removed by the time of the update survey. No statutory designated sites are present within 2.0km of the site.
- 1.3 Historical records within a 2 km radius indicate five bat species: common pipistrelle (5 records), soprano pipistrelle (3), noctule (2), brown long-eared bat (2) and whiskered bat (1). A single mitigation licence for brown long-eared bat and common pipistrelle was granted 1.9km to the south-west. Terrestrial mammal records include hedgehog (20 records), brown hare (4), [REDACTED] and dormouse (2). Reptile and amphibian records include slow worm (14), grass snake (9), common frog (13), common lizard (1), smooth newt (1) and a single record of great crested newt.
- 1.4 **Bats.** The garage roof is constructed of slate tiles in good repair; no gaps were identified through which bats could access the building, and it was assessed as having **negligible** bat roost potential. The trees on site did not exhibit any suitable roost features. Bat-sensitive external lighting will nonetheless be required in accordance with BCT (2023) guidance, adopting a warm-white spectrum (<2700K), motion-sensor controls and no upward light spill into adjacent habitat.
- 1.5 **Breeding birds.** Breeding birds may use vegetation and structures within the site. All vegetation clearance should be undertaken outside the nesting season (March–August inclusive). If clearance within this period is unavoidable, a pre-commencement nesting bird check by a suitably experienced ecologist must be carried out within 24hours of works beginning.
- 1.6 [REDACTED] **dormouse.** [REDACTED]
[REDACTED] Dormouse is not considered a constraint given the site's isolation from connected woodland and hedgerow habitat. Neither species presents a constraint to the development.
- 1.7 **Great crested newt.** Three water bodies are present within 500 m. Pond 1 (52m west, a fishing lake) scored Poor on the Habitat Suitability Index (HSI 0.42), while Pond 3 (481m west) scored

Good (HSI 0.77). Application of the Natural England Impact Risk Calculator returns a score of 0.001 and a result of **Green: Offence Highly Unlikely**. As a precaution, a non-licensed method of works has been drafted, including vegetation removal by hand under ecological supervision, creation of hibernaculum habitat before works begin, and covering of excavations overnight.

- 1.8 **Reptiles, amphibians and other mammals.** No reptiles or invasive species were recorded. Common frog and common toad may be encountered during groundworks and can be relocated by hand. Mammal and amphibian ladders should be installed in any excavations left open overnight to prevent entrapment.
- 1.9 Subject to implementation of the mitigation and working method recommendations set out in this report, no negative residual ecological impacts are predicted, either in isolation or cumulatively. In order to achieve net biodiversity gain, it is recommended that two integrated swift boxes and two integrated bat boxes be incorporated into each new dwelling, and that ornamental planting be supplemented with native trees, shrubs and wildflower species, including oak, hazel, hawthorn, rowan and hornbeam, together with cowslip, oxeye daisy, wild marjoram and associated species.

2.0 INTRODUCTION

2.1 This report presents the findings of a Preliminary Ecological Assessment (PEA) at the property of Wood Grange, Henfield Road, Cowfold, West Sussex, RH13 8DT, NGR: TQ 21241 22070. An initial ecological assessment was carried out in March 2024 to support a planning application on this site. A subsequent application is to be made with amendments to the internal structure of the building within the northeaster aspect to the site. No other changes are being proposed. Therefore, an updated ecological assessment has been carried out.

2.2 *Figure 1: Site Survey Location*



Aim of this Report

2.3 The aim of this habitat survey was to assess the habitats present on and adjacent to the survey area and to evaluate the potential for protected species to be present. Recommendations on any further survey requirements, with recommended actions to preserve the habitats present and enhancements have been made, as a result, of the findings of this habitat survey.

2.4 These findings should be used within the planning phase of the proposals to minimise the impacts for biodiversity through careful planning to avoid negative effects where possible. The survey findings then enable a prediction of the potential impacts of any ecological receptors present which can then be made in each specific case.

- 2.5 An assessment of the condition of the habitats to be cleared will be made and a calculation of the area (in hectares) of habitat classification which can then be incorporated into a baseline Biodiversity Net Gain calculation, if required.

Proposed Works

- 2.6 A planning application is to be made to convert the garage unit building situated at the north-eastern corner of the property boundary, to include a ground floor two-bedroom flat and a first floor two-bedroom flat. A garage building and bin store would be incorporated into the grounds. Two, three-bedroom houses are also proposed to be constructed within the grounds of the property, situated centrally. An area of car parking, access route from the main road and associated landscaping to include private garden space for the two houses, will also be installed.
- 2.7 The main residential building had recently undergone renovations as part of a separate project and, therefore, is not included within this assessment, with the exception, of being within the mapping and site/ habitat area calculations.

3.0 METHODOLOGY

Ecological Survey

- 3.1 A initial preliminary ecological survey walkover was carried out at the Site on the 25th March 2024. A follow up survey was carried out on the 12th June 2026 to update the report due to changes to the planning application and resubmission. This update survey was carried out to ensure that the information contained within this report remain pertinent.
- 3.2 The habitats were assessed in accordance to BS 42020 Biodiversity – Code of Practice for Planning and Development and broadly followed the ‘Extended Phase 1’ methodology as set out in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Baseline Ecological Assessment and the Handbook for Phase 1 Habitat Survey. This method of survey provides information on the habitats in the survey area and assesses the potential for legally protected species to occur on or adjacent to the Site. The habitats were classified according to the UK Habitat Classification system (Butcher *et al.* 2020).
- 3.3 Any faunal species identified during the survey were noted. Any evidence for the presence of, or potential for, protected species was also noted. Species that were considered included amphibians, bats, reptiles, mammals and breeding birds.

- 3.4 A search was carried out for evidence of the presence of invasive plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 which are subject to strict legal control. The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats.

Designated Sites and Biological Records

- 3.5 Records of internationally designated statutory sites within the 2.0km of the Site and nationally designated statutory sites within 2.0km were searched for using the Multi-Agency Geographic Information for the Countryside website (MAGIC) <http://www.magic.gov.uk>.
- 3.6 MAGIC was also searched for previously granted Natural England licence applications, which may give an indication of the presence of protected species in the local area. A search of species records within 2km was also made from the National Biodiversity Network.
- 3.7 An assessment of the potential of the property to support roosting and foraging bats was made and categorised according to Table 1 below (BCT 2023a). Only features that had potential for bats have been highlighted. If there is no category given or reference made to the feature, then assume this is of ***negligible*** potential.

3.8 ***Table 1: Bat Roost and Foraging Potential of Buildings and Trees (BCT 2023a)***

<i>Category</i>	<i>Roosting Habitat</i>	<i>Commuting and Foraging Habitat</i>
Known Roost	Evidence of bat present (e.g.) droppings, live or dead bats and/ or desk study results.	N/A
High/ PRF-M	Building or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland,

		tree-lined watercourses and grazed parkland.
		Site is close to and connected to known roosts.
Moderate/ PRF-M	Building or tree with one or more potential roosting features that could be used by several bats due to their size, shelter, protection, conditions and surrounding habitats, but unlikely to support a roost of high conservation concern.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low/ PRF-I	Building or tree with one of more potential roost features that could be used by individual bats opportunistically. However, there potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats. (<i>i.e.</i> unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats for example, a fragmented hedgerow or un-vegetated stream, but isolated, <i>i.e.</i> not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Negligible	Building or tree with no potential to support bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

Habitat Mapping, Condition Assessment and Pond Distance Calculation Methods

- 3.x Each specific habitat was assessed according to the condition assessment characteristics on the Biodiversity Net Gain Metric 4.0 Technical Annex 1. This provides specific criteria for each habitat classification utilising the United Kingdom Habitat Classification System. The mapping was carried out using QGIS V 3.22.14-Bailowieza for MacOS 14.1. Habitat areas and pond distances/ areas from site were calculated using this QGIS software.

Qualification of Author

- 3.x The survey work and reporting has been led by Richard Law BSc MRes CEnv MCIEEM FLS. Richard has been undertaking ecological survey work within the last 20 years on many different locations throughout the United Kingdom, for a variety of protected species, including bats (2025-85394-CL18-BAT), reptiles, amphibians including great crested newt *Triturus cristatus* (2025-85909-SCI-CL08) and terrestrial mammals including dormice *Muscardinus avellanarius* (2026-88947-CL10a-DOR) and birds including barn owl *Tyto alba* licence (2026-88948-CL29-OWL). Richard is also qualified in track and sign and trailing *via* an international system of assessment (www.trackercertification.com).

4.0 RESULTS

- 4.1 This section describes the habitats identified during the habitat survey. All the plant species names follow the nomenclature of Stace 1997; a map detailing the locations of the habitats described can be found in Appendix A, habitat condition assessments in Appendix B, locations of water bodies close to the property in Appendix C and photographs of the property taken at the time of the survey can be found in Appendix D. A summary of the protected species and habitats legislation for England and Wales can be found in Appendix E.

Designated Sites

- 4.2 There were not any statutory designated sites within 2.0km of the proposed development.

Historical Species Records

Bats

- 4.3 ***Table 2: Bat Species Records***

<i>Latin Name</i>	<i>Common Name</i>	<i>Records</i>
<i>Plecotus auritus</i>	Brown Long Eared Bat	2
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	5
<i>Myotis mystacinus</i>	Whiskered Bat	1
<i>Nyctalus noctula</i>	Noctule	2
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	3

- 4.4 There were five bat species within the 2.0km historical search radius. Common pipistrelle had the most records, with five, with soprano pipistrelle with three records. Noctule and brown long eared bat both had two records, with a single record present for whiskered bat.

Mammals

4.5 **Table 3: Terrestrial Mammal Records**

<i>Latin Name</i>	<i>Common Name</i>	<i>Records</i>
<i>Erinaceus europaeus</i>	Hedgehog	20
<i>Lepus europaeus</i>	Brown Hare	4
<i>Muscardinus avellanarius</i>	Dormouse	2

- 4.6 There were two records for dormice, with the 2.0km historical records search. four records of brown-hare. There were also 20 records of hedgehog within the search area.

Amphibians and Reptiles

4.7 **Table 4: Reptile and Amphibian Records**

<i>Latin Name</i>	<i>Common Name</i>	<i>Records</i>
<i>Anguis fragilis</i>	Slow Worm	14
<i>Natrix helvetica</i>	Grass-snake	9
<i>Zootoca vivipara</i>	Common Lizard	1
<i>Rana temporaria</i>	Common Frog	13
<i>Lissotriton vulgaris</i>	Smooth Newt	1
<i>Triturus cristatus</i>	Great crested newt	1

- 4.8 There were records of slow worm, grass snake and common lizard within the 2.0km historical search radius. Common frog and smooth newt were also present, with a single record for the great crested newt (GCN).

Granted Mitigation Licences

4.9 **Table 5: Granted Bat Mitigation Licence Applications within 2.0km**

<i>Licence Number</i>	<i>Distance and Direction</i>	<i>Species</i>	<i>Type</i>	<i>Date</i>	<i>NGR</i>
2015-11578-EPS-Mlt	1.9km south-west	Brown Long Eared and Common Pipistrelle	Destruction of a Breeding Site and Resting Place	29/07/2015 to 31/12/2015	TQ: 1948 2120

- 4.10 There was a single granted mitigation licence within 2km of the site. This was for the destruction of a resting place and breeding site of both brown long eared bat and common pipistrelle.

Summary of Habitats Present on Site

- 4.11 The habitats present on site comprised of the types that were commonly found in the grounds of a residential property. The grounds consisted of modified grassland, built up areas and gardens, sealed surface, deciduous and coniferous trees and buildings. The total site survey area was 0.2723ha in size, with a predicted impact area of the development approximately 0.08ha in area.

- 4.12 The site was located just on the southern approaches to the large village of Cowfold in West Sussex. Within the beginnings of the more urban spread of this village. To the south and west, beyond the residential development was an arable farm with large fields with hedgerow boundaries. There were also small units of woodland within the wider landscape and a patchwork of fields, hedgerow and trees to the east across Henfield Road.

Habitats Present on Site within the Survey Boundary

- 4.13 ***Urban Development Land Sealed Surface:*** Leading from the road, a driveway provided both vehicle access and parking for the property.
- 4.14 ***Built-up Areas and Gardens :*** Around the periphery of the survey area and around the edges of the lawn were areas of well managed ornamental planting. The species present consisted of those commonly sourced in garden centres.

- 4.15 **Buildings:** There were two buildings within the site survey area. The larger residential building had recently undergone renovations and works as part of a separate application and is not considered as part of this application. The other building (Building 1) was a garage unit that was situated within the north-eastern corner of the survey area.
- 4.16 This was constructed out of concrete blocks covered in cement render, which was in good condition. The roof was pitched with slate roof tiles, with two south facing dormer windows over the garage doors. There was a side unit, connected to the northern face, with a smaller pitched roof and utility space.
- 4.17 **Modified Grassland** - The species diversity of this habitat was very low, comprising of only very close-cut perennial rye grass (*Lolium perenne*). There was a degree of waterlogging and patches of moss were present.
- 4.18 **Deciduous and Coniferous Trees (11)** – The western boundary of the site was demarcated by a tree line comprising of a mixture of ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*) with growth of unmanaged Leyland cypress (*Cupressus x leylandii*) present within this tree line. Part of this habitat along the western boundary had been felled at the time of the previous survey but had now been entirely removed on the update survey.

5.0 POTENTIAL FOR PROTECTED SPECIES

Breeding Birds

- 5.1 The survey was conducted at a time when birds are active but outside of the breeding season. The following species were observed within the vegetation within the site boundary and within close proximity to the site. These species were:

Bats

- 5.2 The roof of Building 1 had slate tiles but was in good condition and was regularly maintained. There were not any gaps present around the tiles that bats could potentially roost and the ridge tiles were very well sealed. Where there were gaps, these were in some of the woodwork and did not offer any suitable ingress into the building that bats could potentially roost. The tiles on the side of the dormer windows were also very well sealed, presenting no suitable gaps for bats to utilise for roosting. As a result of these survey findings this building was categorised as having a **negligible** potential for roosting bats.
- 5.3 The trees onsite did not exhibit any suitable features that could offer roosting potential to bat species.

Terrestrial Mammals

- 5.4 There were records of [REDACTED] dormice within the 2.0km search radius [REDACTED].
- 5.5 The site was relatively isolated in terms of tree/ hedgerow connectivity to the surrounding landscape. Dormice are not considered as a constraint to this development.

Reptile and Amphibian

- 5.6 There were records of both reptile and amphibian within the 2.0km search radius, while the site looks like it is within the red risk zone (the available map is of a low resolution and difficult to interpret) for great crested newt was quite isolated from the surrounding landscape, with very little connectivity of habitats.
- 5.7 There were three water bodies within the 500m search radius, with a large lake 52m to the west, which was likely to be a fishing lake and cattle watering location. There was a pond, 334m to the north-east which was situated within a residential cul-de-sac and isolated from any connective habitat. 481m way to the west was another pond, which was within a small woodland unit. This pond was also isolated from the development site, with very little habitat connectivity other than arable agricultural land. There was also not any suitable habitat for great crested newt within the works impact zone. Access to Pond 1 and Pond 3 was possible, but there was not any access to Pond 2.

5.8 ***Table 6: Habitat Suitability Index of Ponds 1 and 3***

<i>Component</i>	<i>Pond 1</i>	<i>Pond 3</i>
Number of Waterfowl	8 (0.25)	0 (1.00)
Shape	Ellipse	Circle
Calculated Area (m ²)	3536 m ²	144m ²
% Shaded Area	25% (1.00)	25% (1.00)
% Macrophyte Cover	5% (0.35)	50% (0.81)
Fish	Major (0.01)	Nil (1.00)
	Mod (0.67)	Mod (0.67)

Water Quality		
Ponds within 500m	3 (1.00)	3 (1.00)
Years Dry per Decade	0 (0.90)	0 (0.90)
Barriers to Newt Migration	Minor	Major
Geographic Zone	A	A
Area of Good Habitat on Map (m ²)	10000 m ² (0.58)	10000m ² (0.58)
Length of Good Hedges on Map (mm)	2500 m ²	2500 m ²
Habitat Suitability Index (HS) for Site	0.42	0.77
HSI Category	Poor	Good

- 5.9 The HSI score of Pond 1 was 0.42 (Poor) and the score for Pond 3 was 0.77 (Good). With the assumption that the next closest pond (334m away to the northeast) could potentially support a breeding population of great crested newt, with a good HSI score. The site survey area falls within the 0.01ha to 0.1ha (0.08ha approximately) lost or damaged category, therefore the national offence probability score is 0.001. The risk assessment category is given as Green: Offence Highly Unlikely. However, as a precaution a non-licensed method of works has been drafted to further reduce any risk to this species.

5.10 **Table 7: Great Crested Newt Impact Risk Calculator (from Natural England)**

Component	Likely Effect	Notional Offence Probability Score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0

Land >250m from any breeding pond(s)	0.01ha – 0.1ha lost or damaged	0.001
Individual great crested newts	No effect	0
Maximum:		0.001

Rapid risk assessment result:

GREEN: OFFENCE HIGHLY UNLIKELY

Invasive Species

- 5.11 No evidence of invasive species was observed within the site boundary.

6.0 DISCUSSION AND RECOMMENDATIONS

Designated Sites and Habitats

- 6.1 There were not any statutory designated sites within 2.0km of the site. It is recommended to protect adjacent habitats using Heras fencing during the construction phase or the works.

Breeding Birds

- 6.2 Throughout the survey area, there was potential for breeding birds to be present within the vegetation and within the building. Breeding birds are protected, making it an offence to intentionally (or recklessly) kill, injure or take any wild bird, and to take, damage or destroy the nest of any wild bird while that nest is in use or being built, or take or destroy an egg of any wild bird. As a result, any vegetation clearance should avoid the breeding season (March to August inclusive). Nests are protected throughout the year, not just within the specified nesting season.
- 6.3 If this were not possible, a suitably experienced ecologist would be required to check areas of vegetation, immediately prior to works being carried out (within 24hrs). If birds were found to be breeding at this time in these locations, clearance works would not be permitted to proceed until the young had fledged the nest and at least a 10m works exclusion zone be placed around the nest. If any vegetation is cleared outside of the bird nesting season, then all resultant brash should be removed from site to ensure that it does not provide suitable nesting habitat.

Bats

- 6.4 To account for the foraging activity of bat species within the local area, any lighting installed at the property will conform to the specifications which are outlined within BCT Guidance Note (2023b). This will reduce any light pollution would have on nocturnal activity of fauna, namely

bat species, some of which are extremely sensitive to light pollution. Light spill into adjacent habitats will be reduced and avoided by the following:

- *All luminaries will lack UV elements; metal halide and fluorescent sources will be avoided,*
- *A warm white light spectrum on external lighting will be adopted (<2700kelvin) to reduce the blue light component,*
- *LED luminaries will be used where a sharp cut off is required to avoid light spill into adjacent habitat,*
- *External luminaries will feature wavelengths higher than 550nm to avoid the component of light most disturbing to bats,*
- *Column heights of external lighting will be limited,*
- *Luminaries will be mounted on the horizontal plane, with no upwards tilt,*
- *Security lighting will be set on motion sensors and on short timers (<1min.)*

- 6.5 In the highly unlikely event that a bat is found during the development works, then works should cease, the bat left undisturbed *in situ* and consultation be made with a suitably qualified ecological consultant as to the most appropriate way to proceed. If the bat is injured, then contact should be made with the National Bat Helpline on 0345 1300 228.

Terrestrial Mammals

- 6.6 The potential presence of [REDACTED] dormice are not considered a constraint at this location. Hedgehog could potentially be present and found during the works. These can be moved out or harms way and placed in a sheltered location, if found. To ensure that mammals don't become trapped in any excavation over-night, a suitable 'mammal ladder' would be installed. This would simply comprise a plank of wood at a shallow angle, which would enable anything to escape should it fall into an excavation.

Reptiles and Amphibians

- 6.7 The presence of GCN is not considered a risk in this incidence, neither are the presence of reptiles. Common frog and common toad could potentially be found during any excavation works. If these are found, then these can be moved to a safe location away from any works. Any excavations would have a 'mammal ladder', which would also enable any amphibian to exit any excavation.

Non-Licensed Method of Works for Great Crested Newt

- 6.8 Although GCN is not considered a constraint, a precautionary non-licensed method of works has been drafted to account for this species within the wider landscape. It has been considered

that there is a **negligible** risk of this species being present on site, but a precautionary method of works will be adhered to. This is presented below.

- *The schedule of works is yet to be finalised, but any vegetation and soil removal should be undertaken outside of the terrestrial phase of the life cycle of great crested newt. This period is normally considered to be between March and April, with this species within aquatic habitats for their breeding season,*
- *Vegetation removal would be carried out by hand and these clearance works would be supervised by a licenced ecological consultant. This licenced ecologist would only be required onsite during this vegetation removal but would brief all site workers on amphibian identification and what to do if one is found and where to relocate it to, with the worker given advice on how to proceed with care and where to relocate any amphibian if required. If great crested newt are found, then the works would cease and consultation sought with the licenced ecological consultant,*
- *Hibernaculum habitat would be created prior to the start of the construction phase, with this being situated outside of the works impact zone. This would consist of a mixture of soil over stone and untreated wood, normally cut vegetation. Any amphibians found would be moved to this hibernacula,*
- *Any excavations should be covered at night to prevent any amphibians falling in and becoming trapped. This would also be applicable to terrestrial mammals and any transient reptiles.*
- *Ground works would be carried out for a short a period as possible and all works would be conducted during daylight hours only, so to above the time when great crested newt are most active,*
- *The storage of any debris, soil or cut vegetation on site would be avoided to prevent this becoming hibernacula for great crested newt.*

7.0 ECOLOGICAL IMPACT ASSESSMENT

- 7.1 The habitats on site did not comprise of the type that would likely support a high degree of biodiversity value. There were not any statutory or non-statutory designated sites within the site boundary or immediately adjacent. The scale of the proposed development works at this location are all relatively minor and are not considered to be of sufficient in scope to impact the wider natural environment.
- 7.2 Recommendation has been incorporated regarding ensuring that animals do not become trapped in an excavation and recommendation to install a Heras fence around the perimeter of the proposed development site, which would prevent any encroachment into adjacent habitats during any construction phase.
- 7.3 Recommendation has been incorporated into this report to provide enhancements for roosting bats and to provide nesting replacement and additional opportunities for swift (*Apus apus*). Recommendation has been incorporated into this document regarding the planting of trees, shrubs and herbaceous species.
- 7.4 It is predicted that any development at this location, following the recommendations outlined within this report, would not have any negative residual impacts in isolation or cumulatively across the local area.

8.0 ECOLOGICAL ENHANCEMENT

8.1 Development plans should maximise opportunities for enhancement, in order to achieve a net increase in biodiversity. The measures outlined below provide the means to achieve this enhancement.

8.2 As part of the scheme, it is recommended to install bird and bat boxes where appropriate. These would provide an ecological enhancement by providing suitable roosting and nesting locations for these protected species. These are all designed to be self-cleaning, discrete and able to blend into the integral structure of the buildings. More specific nest boxes could take the form of swift (*Apus apus*) nest boxes placed under the eaves around the edges of the roof at a minimum height of 5m above ground level, placing them to avoid over exposure to sunlight during the summer months. The following enhancements or their equivalent are recommended.

- *Built in Swift Box x 2 in each new building,*
- *Built in Bat Boxes x 2 in each new building.*

8.3 Tree and shrub planting of native species would provide an ecological enhancement by replacing some of the ornamental planting currently present within the property. Herbaceous species could also be planted into newly landscape areas, providing a valuable nectar source for invertebrate species.

8.4 **Table 8: List of Recommended Plant Species for Native Tree and Shrub Planting**

Species Name	Common Name
<i>Carpinus betula</i>	Hornbeam
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Prunus avium</i>	Bird cherry
<i>Quercus robur</i>	Oak
<i>Sambucus nigra</i>	Elder
<i>Sorbus aucuparia</i>	Rowan

Table 9: List of Recommended Plant Species for Native Herbaceous Species Planting

Species Name	Common Name
<i>Bluebell</i> <i>Hyacinthoides non-scripta</i>	<i>Bluebell</i>
<i>Digitalis purpurea</i>	Foxglove
<i>Myosotis arvensis</i>	<i>Field forget-me-not</i>
<i>Lavandula angustifolia</i>	English lavender
<i>Leucanthemum vulgare</i>	Oxeye daisy
<i>Origanum vulgare</i>	Wild marjoram
<i>Potentilla erecta</i>	Tormentil
<i>Primula veris</i>	Cowslip
<i>Silene dioica</i>	Red campion
<i>Silene latifolia</i>	White campion
<i>Silene noctiflora</i>	Night-flowering catchfly
<i>Succisa pratensis</i>	Devil's-bit scabious

9.0 REFERENCES

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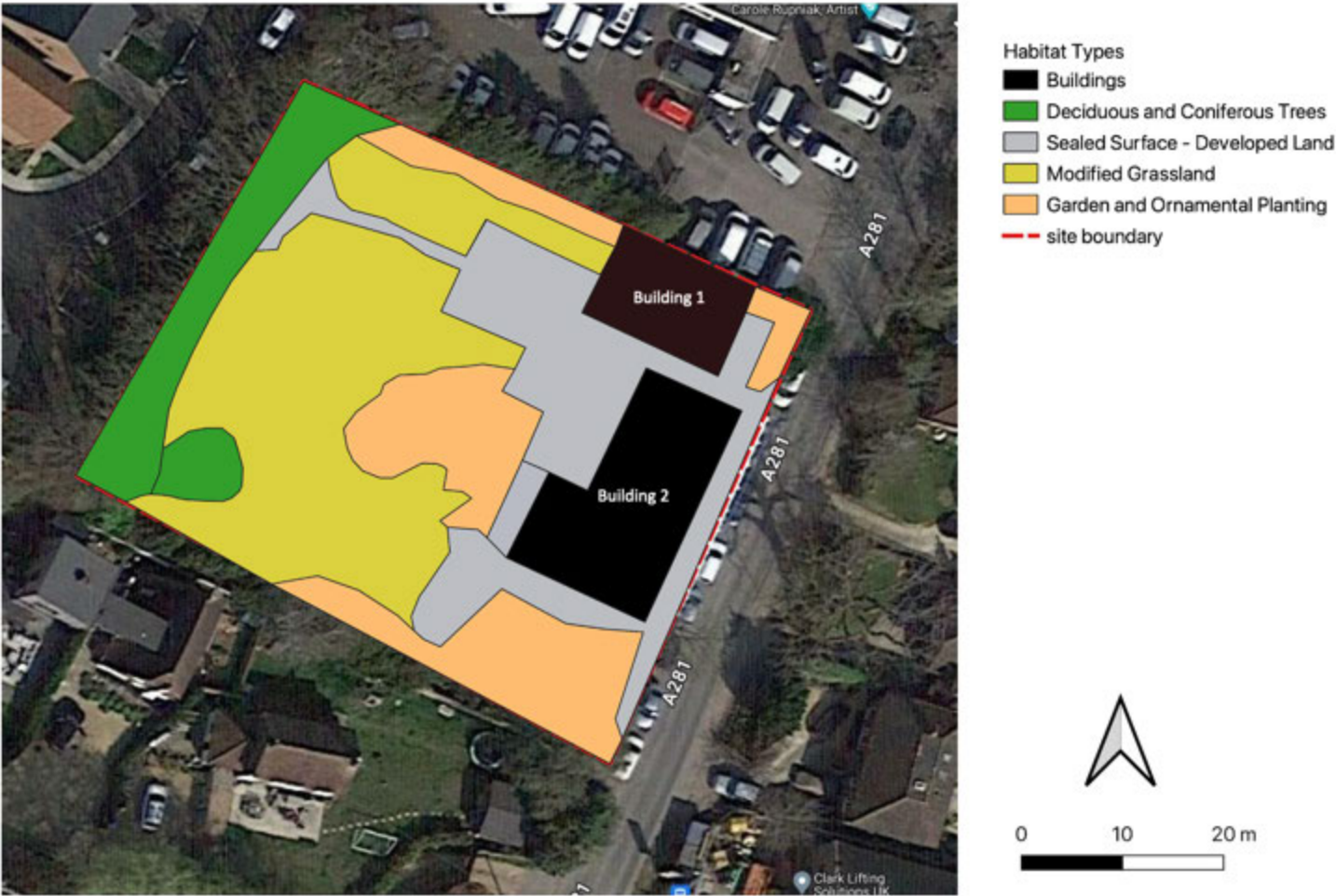
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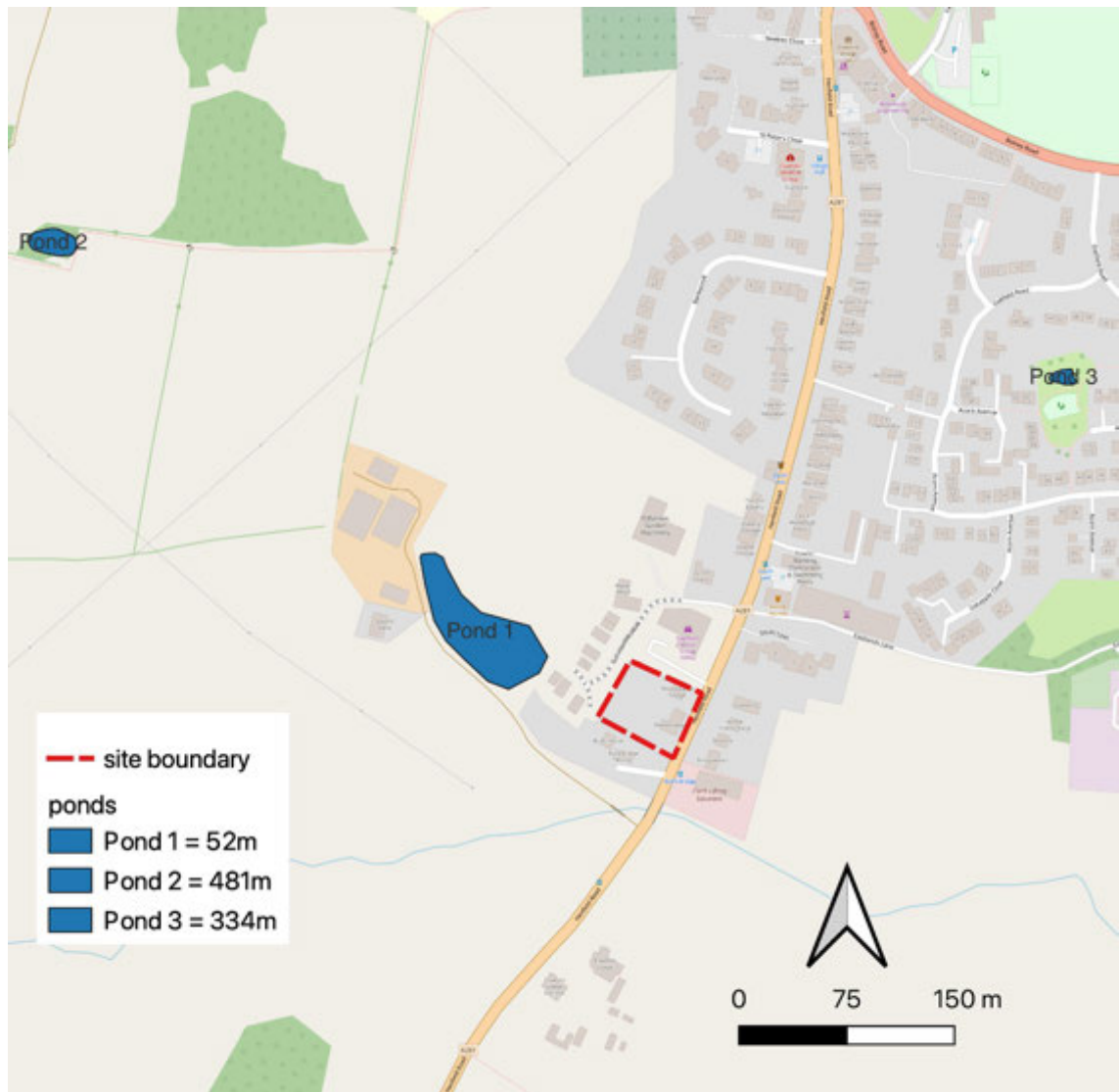
APPENDIX A: PRELIMINARY ECOLOGICAL WALKOVER SURVEY HABITAT MAP



APPENDIX B: HABITAT DISTINCTIVENESS AND CONDITION ASSESSMENT

<i>Habitat Type</i>	<i>UK Habs Code</i>	<i>Total Habitat Area (ha) or length (km)</i>	<i>Distinctiveness</i>	<i>Condition Assessment Scoring</i>	<i>Habitat Condition</i>	<i>Score</i>
Modified Grassland	G4	0.0907ha	Low	1	Poor	1
Buildings	U1B5	0.0423ha	Very Low	N/A	N/A	0
Built-up Areas and Gardens (Ornamental Planting)	U1	0.0541ha	Low	N/A	N/A	0
Urban Development Land, Sealed Surface	U1B	0.0562ha	Very Low	N/A	N/A	0
Deciduous and Coniferous Trees	11	0.0289ha	Low	1	Poor	1

APPENDIX C: LOCATION OF WATERBODIES WITHIN 500M



APPENDIX D: PHOTOS OF THE SITE

Plate 1: Modified Grassland (Lawn)



Plate 2: Southern View of Building



Plate 3: Western Face



Plate 4: Lawn and Former Treeline



Plate 5: Rubble and Site Boundary



Plate 6: Southwestern Face of Building



Plate 7: Western Boundary Long and Rubble



Plate 8: New Ruderal Growth



Plate 9: Pond 1



Plate 10: Pond 3



APPENDIX E: PROTECTED SPECIES AND DESIGNATED SITE LEGISLATION SUMMARY (ENGLAND AND WALES)

Species	Legislation (England & Wales)	Offences	Licensing procedures (England & Wales)
Bats European protected species	Conservation of Habitats and Species Regulations 2019	Deliberately ¹ capture, injure or kill a bat; deliberate disturbance ² of bats; or damage or destroy a breeding site or resting place used by a bat. [The protection of bat roosts is considered to apply regardless of whether bats are present.]	A Natural England (NE) licence in respect of development is required in England. European Protected Species: Mitigation Licensing- How to get a licence (NE 2010) Bat Mitigation Guidelines (English Nature 2023) Bat Workers Manual (JNCC 2004) BCT Survey Guidelines (2023)
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
Great Crested Newt European protected species	Conservation of Habitats and Species Regulations 2019	Deliberately ¹ capture, injure or kill a great crested newt; deliberate disturbance ² of a great crested newt; deliberately take or destroy its eggs; or damage or destroy a breeding site or resting place used by a great crested newt.	Licences issued for development by Natural England. European Protected Species: Mitigation Licensing- How to get a licence (NE 2010) Great Crested Newt Mitigation Guidelines (English Nature 2001)
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a great crested newt in such a place.	Licences issued for science (survey), education and conservation by Natural England.
Badger	Protection of Badgers Act 1992	Wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in its sett. [It is not illegal to carry out disturbance activities in the vicinity of setts that are not occupied.]	Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England (NE). Licences for activities involving watercourse maintenance, drainage works or flood defences are issued under a separate process. Licences are normally not granted from December to June inclusive because cubs may be present within setts. Badgers & Development (NE 2007)

Species	Legislation (England & Wales)	Offences	Licensing procedures (England & Wales)
Birds	Wildlife and Countryside Act 1981 (as amended) S.1	Intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; intentionally take or destroy the nest or eggs of any wild bird. [Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, and little ringed plover).] Intentionally or recklessly disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety.
Adder Common lizard Grass snake Slow worm	Wildlife and Countryside Act 1981 S.9(1) (part); S.9(5)	Intentionally kill or injure any common reptile species.	No licence is required in England. However, an assessment for the potential of a site to support reptiles should be undertaken prior to any development works which have potential to affect these animals.
Rabbits, foxes and other wild mammals	Wild Mammals (Protection) Act 1996	Intentionally inflict unnecessary suffering to any wild mammal.	Natural England provides guidance in relation to rabbits (TIN003, Rabbits- management options for preventing damage, July 2007) and foxes (which are also protected under the Wildlife and Countryside Act 1981 from live baits and decoys, see TAN43 April 2005 and TAN08 April 2005) as well as other wild mammals; see Natural England's website for the list of 'Regulatory Guidance, Best Practice and Information'.