



Preliminary Ecological Appraisal and Preliminary Roost Assessment

4 London Road, Ampney Crucis, Cirencester, Gloucestershire, GL7 5RS

Gareth Hughes

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Gareth Hughes to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at 4 London Road, Ampney Crucis, Cirencester, Gloucestershire, GL7 5RS (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing outbuildings and the creation of a new dwelling with an associated garage (hereafter referred to as “the proposed development”).

The following is work you will need to commission to comply with planning policy and legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 8 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	the site lies within the boundary for the Ampney Brook KWS and no other sites within 2km.	The proposed development is restricted to the existing footprint of the outbuildings and a small section of modified grassland and hardstanding. Therefore, no impacts to designated sites are anticipated due to the small scale and the low ecological value of the habitats being affected (modified grassland and hardstanding) as well as location of the site with surrounding physical barriers.	Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). Best practice measures to minimise the possibility of pollution to the brook must be implemented during construction.	None.
Habitats and flora	There are no notable habitats within the site, but woodland habitats are present within 2km of the site, the closest being 25m north of the site across the other side of the brook.	No impacts to any notable habitats are anticipated due to the small scale and the low ecological value of the habitats being affected (modified grassland and hardstanding) as well as location of the site with surrounding physical barriers.	Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).	None.
Amphibians	The proposed areas for development will not impact amphibians due to the habitat	No impacts are anticipated on great crested newt, as a result of the proposed development as this	None.	None.

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

	type (modified grassland) and no suitable breeding ponds within 500m of the site (physical barriers to dispersal).	species is considered to be absent from the site.		
Reptiles	The proposed areas for development will not impact reptiles due to the habitat type (modified grassland) and the regular maintenance of the grassland (short sward height). Reptiles are likely using the wider landscape.	No impacts are anticipated on reptiles as a result of the proposed development.	None.	None.
Roosting bats (B1a + B1b)	B1a and B1b have negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition of building.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	The installation of one bat box at the site will provide additional roosting habitat for bats. The bat box will be installed on the new dwelling. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat box will be a specification suitable for common species of bat (pipistrelle) such as Beumaris Woodstone Bat Box or a similar alternative brand.
Foraging and commuting bats	The hedgerows and trees could be used by local bat populations for foraging and commuting. These could also be used by bats	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. However, the new	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: <ul style="list-style-type: none"> Light spill on to northern boundary should be avoided. 	As above.

	dispersing from nearby roosts outside of the site.	dwelling could result in light spill on to the trees and hedgerow. This would disrupt/ deter bats from the site.	<ul style="list-style-type: none"> • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm colour <2,700 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available. 	
Badger	The site itself will offer very low habitat value for badgers and is unsuitable for sett-making (potential for commuting and foraging routes). There was no evidence of badgers observed on site or around the perimeter of the building.	No direct impacts are anticipated on badgers as a result of the proposed development. However, the proposed development will involve groundwork (excavations) that could cause badgers to get stuck overnight.	<p>Owing to the nature of the proposed development and the low potential for impacts to badgers, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. 	None.

			<ul style="list-style-type: none"> In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist. 	
Hazel dormouse	The majority of the site lacks the complex, structural vegetative diversity required to support dormice. The proposed areas for development will not impact hazel dormice due to the habitat type (grassland) is not suitable.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	The proposed development area is well maintained modified grassland with minimal sheltering opportunities (sheltering opportunities along the western site boundary). So, the likelihood of hedgehogs using the development area is low (commuting route). However, no evidence indicating the presence of hedgehogs was recorded during the site survey.	No impacts are anticipated on hedgehogs as a result of the proposed development. However, the proposed development will involve groundwork (excavations) that could cause hedgehogs and other small mammals to get stuck overnight.	<p>Similarly to badgers, a precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. 	None.
Otter	It is unlikely that otters will use the areas of the site impacted by the proposed development (southern modified grassland) as no evidence was identified during the survey. However, as evidence was found during the last survey (2021) otters cannot be discounted.	The proposed development will not result in the loss of any riparian habitats. However, due to the presence of the watercourse within close proximity of the site, indirect effects such as noise and light disturbance/pollution could occur during construction. Furthermore, construction activities could result in the death or injury of otters, if present.	<p>Owing to the nature of the proposed development and the low potential for impacts to otter, further otter surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> A toolbox talk will be given to contractors regarding the possible presence of otters at the site. Construction works should be restricted to avoid hours of dusk and dawn when otters may use the northern boundary of the site. A pre-commencement inspection of the site will be undertaken for otters. Heras fencing will be erected around the working area to prevent encroachment towards any watercourses where otter could be present. 	None.

			<ul style="list-style-type: none"> Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to the watercourse and any retained habitats which otters could use. Best practice pollution prevention measures will be implemented to minimise impacts to the watercourse and any retained habitats that otters could use. Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. In the unlikely event that an otter holt or den is identified, works must cease and advice must be sought from a suitably qualified ecologist. 	
Water vole	It is unlikely that water voles are present within the wider landscape as the only waterbodies within 500m are unsuitable (stone banks and fast-flowing water).	No impacts are anticipated on water vole as a result of the proposed development.	None.	None.
Birds	The type of the habitats recorded (scattered trees and hedgerows) are not considered suitable to support a significant assemblage of protected and/or notable birds. However, habitats recorded on site are assessed to provide nesting opportunities for common species of breeding birds in the form of scattered trees and hedgerows.	No impacts are anticipated on nesting birds as a result of the proposed development (trees and hedgerows are being retained).	None.	The installation of a minimum of one bird box on the new dwelling will provide additional nesting habitat for birds, bird nest boxes such as Woodstone Nest Box or a similar alternative brand. It should be positioned approximately 3m above ground level where it will be sheltered from prevailing wind, rain and strong sunlight.

Invertebrates	The majority of habitats recorded on site are assessed to provide low ecological value for invertebrates due to the low sward grassland and amenity pond. The hedgerows and deadwood tree stump will provide a suitable habitat for common invertebrate assemblages.	No impact is anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	None.
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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Gareth Hughes to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at 4 London Road, Ampney Crucis, Cirencester, Gloucestershire, GL7 5RS (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing outbuildings and the creation of a new dwelling with an associated garage (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting.

A Preliminary Ecological Appraisal (PEA) was completed by Cotswold Ecology in January 2021 (Cotswold Ecology, 2021). The results of the survey were that the habitats being removed and changed were of negligible nature conservation interest (garden and outbuildings). However, it was noted that the site is adjacent to Ampney Brook Key wildlife site (non-statutory designated site) and otters utilise the site. The PEA recommended that restrictions on lighting should be used during the construction period.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference SP 06752 01727 and has an area of approximately 0.1ha comprising a residential dwelling, outbuildings and garden. It is surrounded by Ampney Brook and priority deciduous woodland adjacent to the northern boundary, other residential dwelling to the west, A417 to the south and grassland to the east of the site. The wider landscape comprises agricultural fields, pockets of woodland and the village of Ampney Crucis. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

The PEA element of this report describes the baseline ecological conditions at the site, evaluates habitats within the survey area in the context of the wider environment and describes the suitability of those habitats for notable or protected species. It identifies possible ecological constraints as a result of the proposed development and summarises the requirements for further surveys and mitigation measures to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

The PRA element of this report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

To achieve this, the following steps have been taken:

- A desk study has been carried out.

- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species, including roosting bats.
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Potential impacts on features of value, as a result of the proposed development, have been identified.
- Recommendations for further surveys and mitigation have been made.
- Opportunities for the enhancement of the site for biodiversity have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a review of the magic.gov.uk database for statutory designated sites within a 2km radius of the site. Landscape value and the presence of notable habitats as well as granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database has also been considered where these are within influencing distance of the site.

Existing biological records including notable species and non-statutory designated sites within a 1km radius were obtained from the Preliminary Ecological Appraisal undertaken by Cotswold Ecology back in 2021 (Cotswold Ecology, 2021).

2.2 Field Survey

The survey was undertaken by Nicole Gullan (Natural England Bat Licence Number: 2022-10752-CL17-BAT) and Jade Lemm on 15th January 2024.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

For ease of reading, scientific names are omitted from this report for widespread, ubiquitous and well-known species. Scientific names are only included where deemed necessary in conveying correct information to the reader, for example where common names differ regionally or in specialised, notable, unusual or challenging taxa, or if there is any ambiguity in identification (e.g where a species can only be identified to genus level).

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species.

Preliminary Roost Assessment

The PRA focussed on two built structures which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the buildings for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the buildings was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

Suitability Assessment

The outbuildings were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in **Error! Reference source not found.** below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Rationale for assigning bat roost value

Assigned Bat Roosting Potential	Description/ Rationale
Confirmed roost	Evidence of roosting bats within the building.
High	A structure 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 habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/ stable hibernation site.
Medium	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, condition and surrounding habitat but unlikely to support a roost of high conservation status, such as maternity and hibernation.
Low	A building with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these 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.e. unlikely to be suitable for maternity and not a classic cool/ stable hibernation site, but could be used by individual hibernating bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
None	No habitat features likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/ suitable shelter at all ground. Underground levels.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

There were no specific limitations to the survey.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any non-statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 2 below. No statutory designated sites were identified within 2km of the site.

Table 2: Non-statutory designated sites within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural England and Gloucestershire Centre for Environmental Records
Ampney Brook – Key Wildlife Site (KWS)	Site lies within the KWS	The site was designated for the aquatic vegetation on the watercourse.

3.2 Field Survey Results

The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 3.

Table 3: Weather conditions during the survey

Date:	15/01/2024
Temperature	3°C
Humidity	60%
Cloud Cover	0%
Wind	9mph
Rain	None

Habitats and Flora


The following habitats are present within and adjacent to the site:

- Modified grassland g4
- Non-native and ornamental hedgerow h2b
- Standing open water and canals r1 (pond 42)
- Built-up areas and gardens u1 (introduced shrub 847)
- Artificial unvegetated, unsealed surface u1c
- Built linear features u1e (dry stone walls 114)
- Woodland and forest w (Trees 200)

A description and photographs of each habitat are provided in Table 4.

No protected or non-native invasive plant species (as listed under Schedules 8 or 9 of the Wildlife and Countryside Act 1981) were identified on the site.

Table 4: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
Modified grassland	<p>On the eastern and northern side of the site, a section of modified grassland with a sward height of approximately 10cm. Species composition is moderate, comprising predominantly perennial ryegrass (<i>D</i>) and Yorkshire fog (<i>D</i>) with herbs such as broadleaved dock (<i>A</i>), buttercup (<i>A</i>), dandelion (<i>O</i>), and cleavers (<i>R</i>).</p> <p>A section of the modified grassland is a soakway for the Ampney brook during high rainfall (target note 1) so during the time of the survey the grass was boggy.</p>	

		
Hedgerow	<p>H1 was located behind B1a (approximately 1.5m high, 1m wide and 2m length) and the species composition comprised solely of privet.</p> <p>H2 was located along the eastern boundary (approximately 0.5m high, 1m wide and 3m length) and comprised of privet. There was no understorey for these two hedgerows as they extended to the ground.</p>	

		
Standing open water and canals (pond)	An amenity pond (approximately 1m wide x 1m length) with couch paspalum on the western boundary of the site. The pond was lined and was raised with concrete slabs that would make it harder for amphibians to get in and out of the pond. The habitat surrounding the pond is mainly hardstanding with a patch of hedgerow on one of the sides.	


Built up areas and gardens (introduced shrubs)

An area (approximately 10 m²) of ornamental planting was present to the centre of the site with species including daffodils, primrose and bluebells.

A deadwood tree stump was present within the area of ornamental planting (target note 2).




<p>Artificial unvegetated, unsealed surface</p>	<p>An area of gravel (approximately 300 m²) was located to the south of the site.</p>	
<p>Built linear features (dry stone walls)</p>	<p>Approximately 45m of stone wall was present to the south-east of the site.</p>	

Woodland and forests (Trees)	There were eight scattered trees (semi-mature and mature) around the site (T1 – T8). Species composition included hazel, Hawthorne, field maple, ash and willow.	
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Fauna**Bats**

The results of the PRA are provided in Table 5 below. No evidence of roosting bats was identified during the survey.

Table 5: Assessment of the suitability of the site for bats

Feature	Description	Photographs																		
<p>Historical records</p>	<p>Within the MAGIC data base, there have been five EPSLs issued for bats within 2km of the site. The closest EPSL was 100m south.</p> <p><i>Table 6: Granted EPSLs for bats within 2km of the site</i></p> <table border="1" data-bbox="409 368 1288 983"> <thead> <tr> <th data-bbox="409 368 629 475">EPSL reference</th> <th data-bbox="629 368 1104 475">Bat species affected</th> <th data-bbox="1104 368 1288 475">Impacts allowed by licence</th> </tr> </thead> <tbody> <tr> <td data-bbox="409 475 629 582">2014-1759-EPS-MIT (1.15km north-west)</td> <td data-bbox="629 475 1104 582">Common pipistrelle, soprano pipistrelle, Natterers bat and brown long-eared bat</td> <td data-bbox="1104 475 1288 582">Destruction of a breeding site</td> </tr> <tr> <td data-bbox="409 582 629 689">EPSM2012-4185 (1.2km south-east)</td> <td data-bbox="629 582 1104 689">Common pipistrelle and Natterers bat</td> <td data-bbox="1104 582 1288 689">Damage to a breeding site</td> </tr> <tr> <td data-bbox="409 689 629 796">EPSM2011-3731 (1.3km north-west)</td> <td data-bbox="629 689 1104 796">Common pipistrelle</td> <td data-bbox="1104 689 1288 796">Destruction of a resting place</td> </tr> <tr> <td data-bbox="409 796 629 903">EPSM2011-3193 (1.5km east)</td> <td data-bbox="629 796 1104 903">Common pipistrelle and brown long-eared bat</td> <td data-bbox="1104 796 1288 903">Destruction of a resting place</td> </tr> <tr> <td data-bbox="409 903 629 983">2015-17798-EPS-MIT (2km north-east)</td> <td data-bbox="629 903 1104 983">Lesser horseshoe bat, common pipistrelle and Natterers bat</td> <td data-bbox="1104 903 1288 983">Destruction of a resting place</td> </tr> </tbody> </table> <p>The biological records data from the Preliminary Ecological Appraisal undertaken in 2021 indicates that a bat roost with five different bat species (serotine, Daubenton’s Bat, brown long-eared bat and pipistrelle bats) is located 250m northwest of the site (Cotswold Ecology, 2021).</p>	EPSL reference	Bat species affected	Impacts allowed by licence	2014-1759-EPS-MIT (1.15km north-west)	Common pipistrelle, soprano pipistrelle, Natterers bat and brown long-eared bat	Destruction of a breeding site	EPSM2012-4185 (1.2km south-east)	Common pipistrelle and Natterers bat	Damage to a breeding site	EPSM2011-3731 (1.3km north-west)	Common pipistrelle	Destruction of a resting place	EPSM2011-3193 (1.5km east)	Common pipistrelle and brown long-eared bat	Destruction of a resting place	2015-17798-EPS-MIT (2km north-east)	Lesser horseshoe bat, common pipistrelle and Natterers bat	Destruction of a resting place	 <p>The top photograph is an aerial view showing a residential development with several houses and a road labeled 'A417'. The 'Ampney Brook' is visible to the right of the houses. The bottom photograph is a ground-level view of the Ampney Brook, showing the riverbank with trees and a concrete structure in the foreground.</p>
EPSL reference	Bat species affected	Impacts allowed by licence																		
2014-1759-EPS-MIT (1.15km north-west)	Common pipistrelle, soprano pipistrelle, Natterers bat and brown long-eared bat	Destruction of a breeding site																		
EPSM2012-4185 (1.2km south-east)	Common pipistrelle and Natterers bat	Damage to a breeding site																		
EPSM2011-3731 (1.3km north-west)	Common pipistrelle	Destruction of a resting place																		
EPSM2011-3193 (1.5km east)	Common pipistrelle and brown long-eared bat	Destruction of a resting place																		
2015-17798-EPS-MIT (2km north-east)	Lesser horseshoe bat, common pipistrelle and Natterers bat	Destruction of a resting place																		

<p>Bat foraging and commuting habitat</p>	<p>There are numerous trees within the site that could be used for foraging bats (T1 – T8). The proposed development involves the retention of all the trees and hedgerows on site. There are numerous agricultural fields, a brook, hedgerows and pockets of woodland in the local environment surrounding the buildings, all of which are favourable habitats for commuting bats (particularly the northern boundary treeline and western boundary hedgerow).</p>	
<p>B1 - overview</p>	<p>B1 is an outbuilding with two different sections (B1a and B1b). B1a is a single storey (wood built) outbuilding with a pitched roof (corrugated metal sheeting). B1b is a single storey extension attached to the southern elevation of B1a. It is constructed of concrete with a pitched corrugated metal sheet roof.</p>	

B1a – southern and western elevations



The southern and western elevations of B1a was in good condition. There was one potential hole on the southern side of the building. However, on closer inspection there were no suitable gaps for crevice dwelling bats or access points for loft dwelling bats. No evidence of bats or birds was identified.



B1a – northern and eastern elevations

The northern and eastern elevations of B1a was in good condition with no suitable bat access points or gaps for roosting bats. No evidence of bats or birds was identified.



B1a – interior	<p>No evidence of bats or nesting birds was identified within the interior of B1a. The roof was unlined and was in good condition with no suitable gaps. The interior was well lit with no suitable crevices (well-sealed), making it unsuitable for void- dwelling bats.</p>	 A photograph showing the interior of a wooden building. The roof is made of exposed wooden beams and rafters, with a corrugated metal roof sheeting visible above. The walls are made of dark wood. There are windows on the right side, and the interior is well-lit.
B1a – suitability assessment	<p>B1a was considered to be of negligible suitability for roosting bats due to the lack of roosting features, access points into the building and evidence of bat activity. This building section provides a lack of suitability for crevice and loft dwelling bats.</p>	 A close-up photograph of the exterior wooden siding of the building. The wood is weathered and greyed. There is a significant gap or crevice between the horizontal planks, which is highlighted by a shadow cast across the surface.

<p>B1b – southern and western elevations</p>	<p>B1b is a single storey extension attached to the southern elevation of B1a. It is constructed of concrete with a pitched corrugated metal sheet roof. It had multiple corrugated panels missing and this had led to water ingress to the structure.</p> <p>No evidence of bats was found during the survey of the southern and western elevations of B1b. The building was not in good condition and had multiple holes on the roof and the western and southern elevations.</p>	
<p>B1b – eastern elevation</p>	<p>No evidence of bats was found during the survey of the eastern elevation of B1b. The eastern elevation was not in good condition and had broken windows.</p>	

B1b – interior	The interior of B1b is not suitable for roosting bats (crevice and loft dwelling) due to unstable conditions from the open from the broken windows and missing panels.	
B1b – suitability assessment	B1b was considered to be of negligible suitability for roosting bats due to the lack of roosting features, access points into the building and evidence of bat activity. This building section provides a lack of suitability for crevice and loft dwelling bats.	

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 7.

Table 7: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability																										
Amphibians	<p>Within the MAGIC data base, there was one EPSL issued for great crested newts within 2km of the site (1.25km north-west - EPSM2011-3726).</p> <p>Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton <i>et al.</i> 2001). A review of aerial imagery indicates the presence of no ponds within 500m of the site boundary. There is one pond located within the site boundary situated within an area of hardstanding. An HSI was completed of the pond onsite (P1) which returned a result indicating below average suitability for great crested newt. The hedgerow on the western boundary on the site could provide opportunities for amphibians to have shelter from predation. However, the site itself is poorly connected to the wider landscape as there is the A417 (busy road) to the south and a fast-flowing brook to the north of the site which both act as barriers to dispersal.</p> <p>Table 7a: HSI calculation of ponds.</p> <table border="1"> <thead> <tr> <th>SI Description</th> <th>SI Value P1</th> </tr> </thead> <tbody> <tr> <td>Geographic location</td> <td>1</td> </tr> <tr> <td>Pond Area</td> <td>0.05</td> </tr> <tr> <td>Pond Permanence</td> <td>0.9</td> </tr> <tr> <td>Water Quality</td> <td>0.67</td> </tr> <tr> <td>Shade</td> <td>1</td> </tr> <tr> <td>Waterfowl Effect</td> <td>1</td> </tr> <tr> <td>Fish Presence</td> <td>0.67</td> </tr> <tr> <td>Pond Density</td> <td>0.1</td> </tr> <tr> <td>Terrestrial Habitat</td> <td>0.33</td> </tr> <tr> <td>Macrophyte Cover</td> <td>0.3</td> </tr> <tr> <td>HSI Score</td> <td>0.59</td> </tr> <tr> <td>HSI Category</td> <td>Below average</td> </tr> </tbody> </table>	SI Description	SI Value P1	Geographic location	1	Pond Area	0.05	Pond Permanence	0.9	Water Quality	0.67	Shade	1	Waterfowl Effect	1	Fish Presence	0.67	Pond Density	0.1	Terrestrial Habitat	0.33	Macrophyte Cover	0.3	HSI Score	0.59	HSI Category	Below average
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	Macrophyte Cover	0.3																									
	HSI Score	0.59																									
HSI Category	Below average																										
Reptiles	<p>The habitats within the site are assessed to provide limited opportunities for reptiles (modified grassland and scattered hedgerow/wall). The modified grassland makes up a large part of the site and is maintained regularly. This maintains a low sward height that is unsuitable for reptiles for a prolonged period due to the lack of refuge opportunities. The site offers some refuge opportunities in the scattered hedgerow sections (western boundary). The fields to the east of the site have a</p>																										

	higher sward height and are left to fallow, which has made it more favourable to reptiles. As there are no barriers to dispersal from the field to the east, there is potential for individual reptiles to utilise the garden areas such as hedgerows and walls.
Badgers	From the survey and aerial imagery, the habitats identified within the proposed development site boundary are assessed to provide no suitable habitats (modified grassland) for sett making and there are no sett making activity observed within 30m of the development boundary. It is highly unlikely for badgers to use the site for foraging and commuting due to the A417 and fast flowing brook being barriers to dispersal. Badgers likely utilise the wider landscape due to the woodland habitats and agricultural fields.
Hazel Dormouse	From the survey and aerial imagery, the habitats identified within the proposed development site are assessed to provide some suitable habitats (scattered hedgerows), thus providing some commuting and foraging opportunities for dormice. There is a 1ha pocket of woodland located 25m north of the proposed development site. There are no connective features that link the proposed development and the woodland together as there is a fast-flowing brook between the woodland and the site. So, it is considered that dormice are likely absent from the development site.
Hedgehog	The habitats recorded on site are assessed to provide foraging, commuting, and refuge opportunities for hedgehogs, in the form of modified grassland, neutral grassland and hedgerow. However, no evidence indicating the presence of hedgehogs was recorded during the site survey. Although no evidence indicating the presence of hedgehogs was recorded, access to on-site habitats is available for hedgehogs from the wider landscape and their future presence for transient periods cannot be discounted.
Otter	No evidence of otters was identified during the survey carried out. Although evidence of otters was found in the form of anal jelly and fish bones on the stone wall next to the brook during the previous Preliminary Ecological Appraisal undertaken in 2021 (Cotswold Ecology, 2021). This suggests that otters may occasionally forage and commute through the local area. So, the presence of otters cannot be discounted.
Water Vole	No evidence of water voles was identified during the site survey carried out. There was negligible suitable habitat for resting places or foraging (modified grassland) and the habitat along the brook wasn't suitable (unsuitable for burrowing due to stonewall and fast-flowing), so it is considered that water voles are likely absent from the site.
Birds	No evidence of nesting birds was identified during the survey. Although, the site has plenty of suitable nesting opportunities within the trees (as well as the abundance of other suitable habitat, including residential dwellings in the surrounding area). There is a lack of ground-nesting opportunities due to the well-managed shorter sward height of the modified grassland.
Invertebrates	The majority of the site has a low diversity of invertebrates due to the types of habitats on site and the management of these habitats (modified grassland and hardstanding). The deadwood tree stump likely provides a high assemblage of common invertebrates.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Likelihood of the Presence of Protected Species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Where this report supports a planning application, the ecological interest of the study area (i.e. the area covered by the desk study and field survey) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity.

A summary of the relevant legislation and planning policies is provided in Appendix 5.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 8 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will comprise demolition of the existing outbuildings and the creation of a new dwelling with an associated garage.

Table 8: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ²
Designated sites	the site lies within the boundary for the Ampney Brook KWS and no other sites within 2km.	The proposed development is restricted to the existing footprint of the outbuildings and a small section of modified grassland and hardstanding. Therefore, no impacts to designated sites are anticipated due to the small scale and the low ecological value of the habitats being affected (modified grassland and hardstanding) as well as location of	Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). Best practice measures to minimise the possibility of pollution to the brook must be implemented during construction.	None.

² The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

		the site with surrounding physical barriers.		
Habitats and flora	There are no notable habitats within the site, but woodland habitats are present within 2km of the site, the closest being 25m north of the site across the other side of the brook.	No impacts to any notable habitats are anticipated due to the small scale and the low ecological value of the habitats being affected (modified grassland and hardstanding) as well as location of the site with surrounding physical barriers.	Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).	None.
Amphibians	The proposed areas for development will not impact amphibians due to the habitat type (modified grassland) and no suitable breeding ponds within 500m of the site (physical barriers to dispersal).	No impacts are anticipated on great crested newt, as a result of the proposed development as this species is considered to be absent from the site.	None.	None.
Reptiles	The proposed areas for development will not impact reptiles due to the habitat type (modified grassland) and the regular maintenance of the grassland (short sward height). Reptiles are likely using the wider landscape.	No impacts are anticipated on reptiles as a result of the proposed development.	None.	None.
Roosting bats (B1a + B1b)	B1a and B1b have negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on roosting bats as a result of the demolition of building.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	The installation of one bat box at the site will provide additional roosting habitat for bats. The bat box will be installed on the new dwelling. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear

				<p>flight path to and from the entrance, away from artificial light. The bat box will be a specification suitable for common species of bat (pipistrelle) such as Beaumaris Woodstone Bat Box or a similar alternative brand.</p>
<p>Foraging and commuting bats</p>	<p>The hedgerows and trees could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.</p>	<p>The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. However, the new dwelling could result in light spill on to the trees and hedgerow. This would disrupt/ deter bats from the site.</p>	<p>A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:</p> <ul style="list-style-type: none"> • Light spill on to northern boundary should be avoided. • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm colour <2,700 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be ‘dimnable’ and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available. 	<p>As above.</p>

Badger	The site itself will offer very low habitat value for badgers and is unsuitable for sett-making (potential for commuting and foraging routes). There was no evidence of badgers observed on site or around the perimeter of the building.	No direct impacts are anticipated on badgers as a result of the proposed development. However, the proposed development will involve groundwork (excavations) that could cause badgers to get stuck overnight.	Owing to the nature of the proposed development and the low potential for impacts to badgers, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: <ul style="list-style-type: none"> Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist. 	None.
Hazel dormouse	The majority of the site lacks the complex, structural vegetative diversity required to support dormice. The proposed areas for development will not impact hazel dormice due to the habitat type (grassland) is not suitable.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	The proposed development area is well maintained modified grassland with minimal sheltering opportunities (sheltering opportunities along the western site boundary). So, the likelihood of hedgehogs using the development area is low (commuting route). However, no evidence indicating the presence of hedgehogs was recorded during the site survey.	No impacts are anticipated on hedgehogs as a result of the proposed development. However, the proposed development will involve groundwork (excavations) that could cause hedgehogs and other small mammals to get stuck overnight.	Similarly to badgers, a precautionary working method will be implemented during construction, including the following measures: <ul style="list-style-type: none"> Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. 	None.

Otter	It is unlikely that otters will use the areas of the site impacted by the proposed development (southern modified grassland) as no evidence was identified during the survey. However, as evidence was found during the last survey (2021) otters cannot be discounted.	The proposed development will not result in the loss of any riparian habitats. However, due to the presence of the watercourse within close proximity of the site, indirect effects such as noise and light disturbance/pollution could occur during construction. Furthermore, construction activities could result in the death or injury of otters, if present.	<p>Owing to the nature of the proposed development and the low potential for impacts to otter, further otter surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> • A toolbox talk will be given to contractors regarding the possible presence of otters at the site. • Construction works should be restricted to avoid hours of dusk and dawn when otters may use the northern boundary of the site. • A pre-commencement inspection of the site will be undertaken for otters. • Heras fencing will be erected around the working area to prevent encroachment towards any watercourses where otter could be present. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to the watercourse and any retained habitats which otters could use. • Best practice pollution prevention measures will be implemented to minimise impacts to the watercourse and any retained habitats that otters could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that an otter holt or den is identified, works must cease and advice must be sought from a suitably qualified ecologist. 	None.
Water vole	It is unlikely that water voles are present within the wider landscape as the only waterbodies within 500m are unsuitable (stone banks and fast-flowing water).	No impacts are anticipated on water vole as a result of the proposed development.	None.	None.
Birds	The type of the habitats recorded (scattered trees and hedgerows) are not considered suitable to	No impacts are anticipated on nesting birds as a result of the	None.	The installation of a minimum of one bird box on the new dwelling

	support a significant assemblage of protected and/or notable birds. However, habitats recorded on site are assessed to provide nesting opportunities for common species of breeding birds in the form of scattered trees and hedgerows.	proposed development (trees and hedgerows are being retained).		will provide additional nesting habitat for birds, bird nest boxes such as Woodstone Nest Box or a similar alternative brand. It should be positioned approximately 3m above ground level where it will be sheltered from prevailing wind, rain and strong sunlight.
Invertebrates	The majority of habitats recorded on site are assessed to provide low ecological value for invertebrates due to the low sward grassland and amenity pond. The hedgerows and deadwood tree stump will provide a suitable habitat for common invertebrate assemblages.	No impact is anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	None.

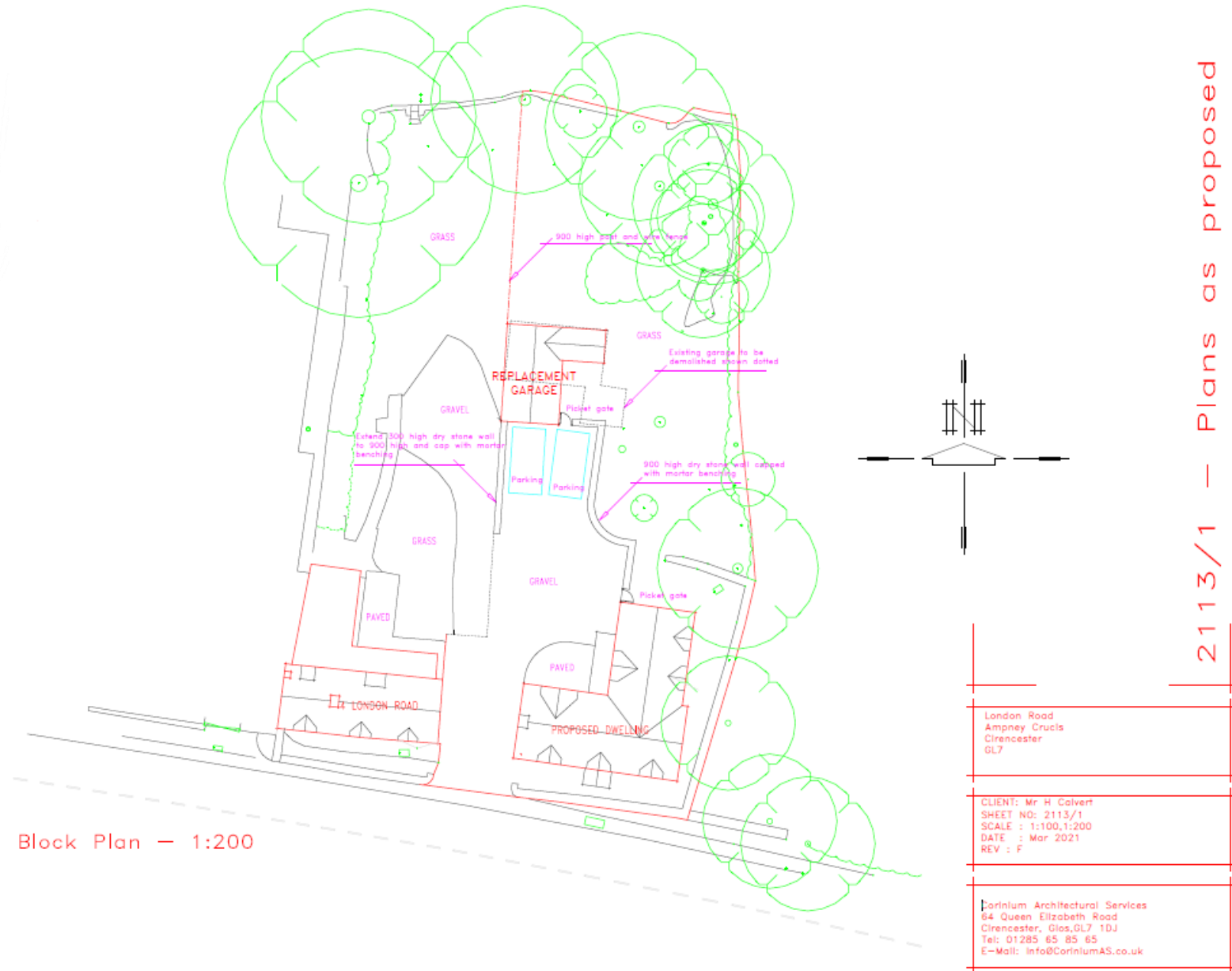
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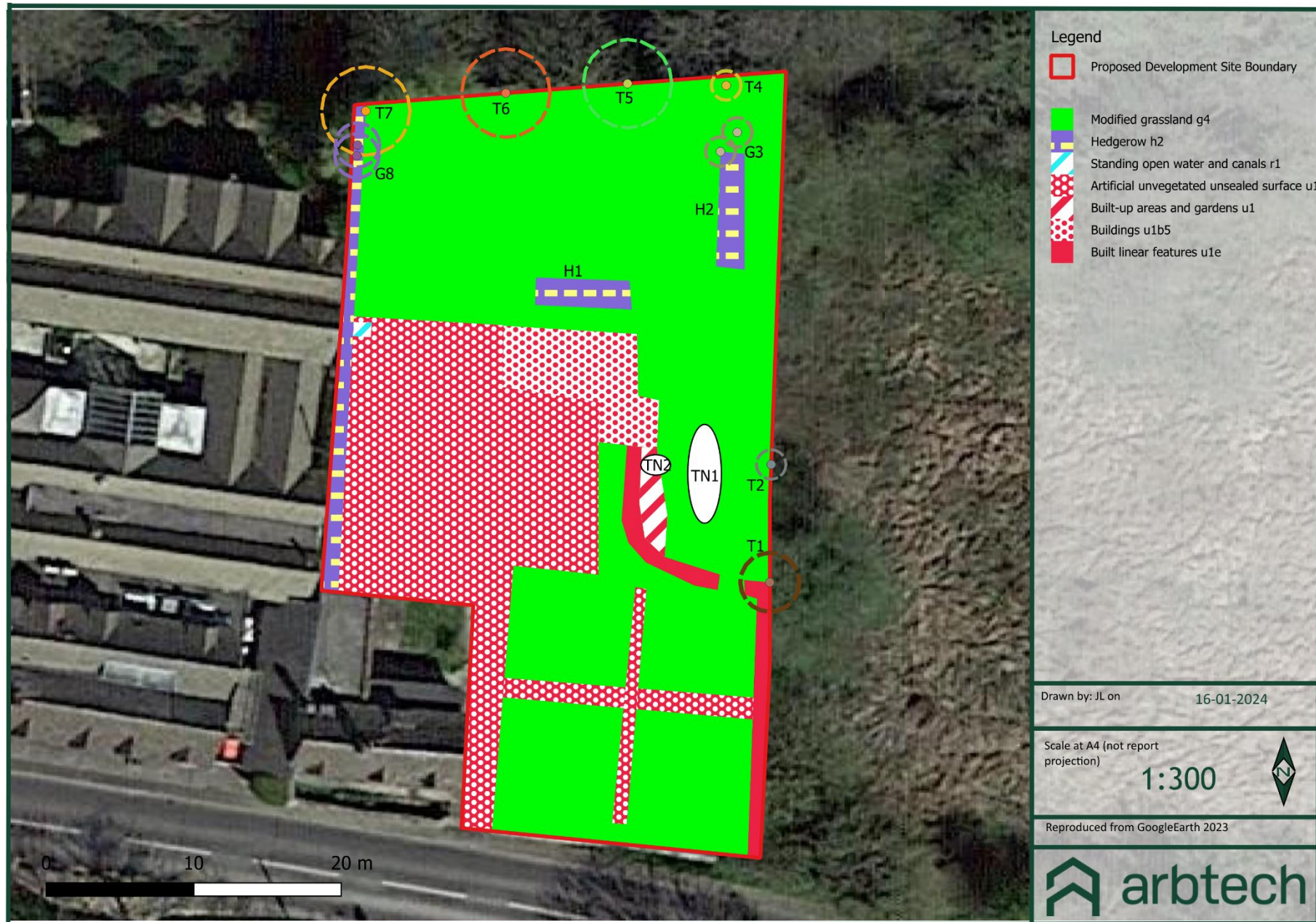
Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan



Appendix 4: PRA Plan



Appendix 5: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds (the Wild Birds Directive) respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as Sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many Annex II species): a strict protection regime must be applied across their entire natural range, both within and outside Natura 2000 sites.

Annex V species (over 90): their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as “*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*”.

However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites.

The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A development licence will be required from the relevant countryside agency (i.e. Natural England) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agencies to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and are commonly referred to as “Schedule 1” birds.

This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young
- Intentional or reckless disturbance of dependent young of such a bird

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works should be planned to avoid the possibility of killing or injuring any wild bird or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the WCA.

Water Voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works likely to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSL. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Hazel Dormice

Hazel dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate

- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking
- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

The relevant countryside agency (i.e. Natural England) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

Wild Mammals (Protection Act) 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation Afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally picking, uprooting or destruction of any wild Schedule 8 species
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof
- In addition to the UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. These are species of European importance. Regulation 45 makes it an offence to:
 - Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species
 - Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural England) for works which are likely to affect species of planted listed on Schedule 5 of the Conservation or Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England to plant or cause to grow in the wild due to their impact on native wildlife.

Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any landowner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY***Environment Act 2021***

The Environment Act 2021 (EA 2021) received Royal Assent on 9 November 2021 and is expected to become fully mandated within the next couple of years. The Act principally creates a post Brexit framework to protect and enhance the natural environment. Through amendments to the Town and Country Planning Act 1990, the Act will require all planning permissions in England (subject to exemptions which is likely to include householder applications) to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity net gain plan. This will ensure the delivery of a minimum of 10% measurable biodiversity net gain. The principal tool to calculate this will be the Defra Biodiversity 3.0 Metric. Works to enhance habitats can be carried out either onsite or offsite or through the purchase of 'biodiversity credits' from the Secretary of State. However, this flexibility may be removed (subject to regulations) if the onsite habitat is 'irreplaceable'. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development (which period may be amended).

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANNING POLICY

Cotswold District Council Local Plan 2011 - 2031 (Adopted 2018)

The Cotswold District Council Local Plan 2011 - 2031 can be viewed here: <https://www.cotswold.gov.uk/planning-and-building/planning-policy/local-plan-2011-to-2031/>

The following planning policies have implications in relation to biodiversity and the proposed development:

- EN8: Biodiversity, Features, Habitats and Species – [summarise main points] Development will be permitted that conserves and enhances biodiversity and geodiversity, providing net gains where possible. Proposals that would result in significant habitat fragmentation and loss of ecological connectivity will not be permitted. Proposals that reverse habitat fragmentation and promote creation, restoration and beneficial management of ecological networks, habitats and features will be permitted, particularly in areas subject to landscape-scale biodiversity initiatives. Developer contributions may be sought in this regard. Proposals that would result in the loss or deterioration of irreplaceable habitats and resources, or which are likely to have an adverse effect on internationally protected species, will not be permitted.

The following species could be present on the site or in the surrounding area (based on the site survey and a review of the magic.gov.uk database) and are included in the plan:

- Otters

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.