

Preliminary Ecological Appraisal and Preliminary Roost Assessment

6 Coopers Villas, Coopers End Road, Takeley, Bishop's Stortford CM22 6PT Brett Lord

Status	Issue	Name	Date
Draft	1	Maddy Carter BSc, Graduate Ecologist	13/02/2024
Reviewed	1.1	Josephine McCarthy, Ecological Consultant, [Natural England Bat licence number: 2019-41480-CLS-CLS].	15/02/2024
Final	2	Maddy Carter BSc, Graduate Ecologist	16/02/2024

Arbtech Consultant's Contact Details:

Maddy Carter BSc Graduate Ecologist Email: maddycarter@arbtech.co.uk https://arbtech.co.uk

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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 Brett Lord to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at 6 Coopers Villas, Coopers End Road, Takeley, Bishop's Stortford CM22 6PT (hereafter referred to as "the site"). The survey was required to inform a planning application for the construction of a new dwelling to the end of 6 Cooper Villas (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 7 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Habitats and flora	There are no notable habitats within the site but five habitats are present within 2km of the site, the closest being deciduous woodland located <5m north and west from the site.	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland, indirect effects such as pollution or tree damage could occur during construction.	A Construction Environmental Management Plan (CEMP) will be required to protect the deciduous woodland adjacent to the site. The CEMP will outline the best practice measures to delineate the construction zone and to minimise the possibility of pollution and a strategy to reduce light spill on to the deciduous woodland adjacent to the site.
			Retained woodland 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).
Foraging and commuting bats	There are no habitats on the site which could be used by bats for foraging or commuting. The surrounding woodland provides optimal foraging and commuting habitat however.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats but may impact the surrounding woodland via an increase in light spill during and post construction.	A low impact lighting strategy will be adopted for the site during and post-development.

Contents

1.0 Introduction and Context	6
1.1 Background	6
1.1 Background 1.2 Site Location and Landscape Context	6
1.3 Scope of the Report	6
2.0 Methodology	8
2.1 Desk Study	8
2.2 Field Survey	8
2.3 Limitations	
3.0 Results and Evaluation	
3.1 Designated Sites	
3.2 Field Survey Results	
4.0 Conclusions, Impacts and Recommendations	18
4.1 Informative Guidelines	
4.2 Evaluation	18
5.0 Bibliography	26
Appendix 1: Proposed Development Plan	
Appendix 2: Site Location Plan	30
Appendix 3a: Habitat Survey Plan	31
Appendix 3b: Pond Location Plan	32
Appendix 4: Legislation and Planning Policy	33

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Brett Lord to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at 6 Coopers Villas, Coopers End Road, Takeley, Bishop's Stortford CM22 6PT (hereafter referred to as "the site"). The survey was required to inform a planning application for the construction of a new dwelling to the end of 6 Cooper Villas (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.

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author's knowledge, by any other consultancy.

1.2 Site Location and Landscape Context

The site is located at National Grid Reference TL 55558 22884 and has an area of approximately 0.1ha comprising a residential dwelling, with amenity gardens and associated hardstanding. A woodland parcel extends directly to the west of the site. To the north and northwest of the site, within 200m is London Stansted Airport. Arable fields dominate the eastern and southern landscape. The nearest water course is the Pincy Brook within 30m southwest of the site. The M11 is located to the west and the A120 runs parallel to the site to the south. 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.

2.2 Field Survey

The survey was undertaken by Maddy Carter BSc, Graduate Ecologist (accredited on Bat Licence 2018-37888-CLS-CLS) on 10/01/2024.

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 ommitted 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 one built structure 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 building 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 building 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 built structure was categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Classification	Feature of building and its context
High	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses
	and cellars.
	Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland.
	Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows.
	Site is proximate to known or likely roosts (based on historical data).
	Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Moderate	Buildings or structures with one or more features suitable for more regular roosting due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation value such as maternity or hibernation roosts.
	Continuous habitat connected to the wider landscape which could be used by bats for commuting such as lines of trees, linked gardens. Foraging habitat in the surrounding area such as trees, scrub, grassland or water.
Low	Buildings or structures with one or more features suitable for use sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators.
	Habitat suitable for foraging in close proximity, but largely isolated in the landscape. Or an isolated site not connected by prominent linear features.
Negligible	Unsuitable for use by bats.

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.

The loft was only accessible from the loft hatch, meaning a full investigation and survey of the loft space was not able to be carried out.

A biological records data search has not been undertaken. However, given the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report. The client has been advised that BRD are required to facilitate a full assessment. To date, Arbtech has not been commissioned to purchase these records. However, this data can be obtained upon request. These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 2 below. The presence of non-statutory designated sites within 2km cannot be established without biological records data from Essex Field Club.

The site lies within the impact risk zone for Hatfield Forest SSSI. Proposed development type is not listed as a possible high risk with regard to this designation.

Table 2: Statutory designated sites within 2km radius of the site

Designated site name	Distance from site	Reasons for notification from Natural England
Flitch Way Local Nature Reserve (LNR)	1,780m south	Countryside experience with the opportunity to spot wildlife. Carriage museum at Rayne. Wildlife trail at Rayne for children. Information boards covering history and wildlife along the route
Hatfield Forest Site of Special Scientific Interest (SSSI); National Nature Reserve (NNR)		Hatfield Forest is unique in being the last small medieval Royal Forest to remain virtually intact in character and composition. The Forest, together with the purlieu woods: Wall Wood, Monk's Wood and Wallis's Spring, was originally an outlying part of the extensive Forest of Essex and still covers over 400 hectares of mixed ancient coppice woodland, scrub, unimproved grassland chases and plains with ancient pollards, and herb-rich marshland bordering a large lake. The woodland is predominantly wet ashmaple and the ash-maple variant of oak-hornbeam. There is a small area of plateau alder, a restricted habitat within Essex and also the only example in the county of calcareous mixed oak coppice, with it's unusually large oak stools. More than four hundred species of higher plants have been recorded, including about thirty trees and shrubs, and many county rarities with Stinking Hellebore Helleborus foetidus and Oxlip Primula elatior of national importance. It is comparatively rich in bryophytes and lichens and has locally important breeding bird communities and insect populations.

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:	10/01/2024
Temperature	3°C
Humidity	67%
Cloud Cover	80%
Wind	15mph
Rain	None

Habitats and Flora

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

- u1b developed land, sealed surface
- u1e built linear features
- u1b5 buildings
- w1f lowland mixed deciduous woodland (adjacent to the site)

A description and photographs of each habitat are provided in Table 5.

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

Habitat type	Habitat description	Photograph
u1b – developed land, sealed surface	To the west of the building is a small patio area, approximately 22m² in size, enclosed by timber fencing.	

The majority of the site is an area (\sim 415m²) of tarmac gravel which extends from the west of the building to the east along the northern boundary. This is also enclosed by timber wooden fencing with concrete posts.



u1e – built linear features The timber fencing creates a commuting barrier for wildlife between the site and the adjacent woodland. There are no resources on site for any wildlife species



u1b5 – buildings	The dwelling onsite is an end of terrace two-storey building of brick construction, rendered to the eaves it has a hipped roof clad in slate tiles. with a single brick-built chimney on the southern aspect. The windows and doors are framed with uPVC. A single storey addition is present on the western elevation.	
w1f – lowland mixed deciduous woodland (adjacent to the site)	Adjacent to the site (west and north) is a ~3ha area of deciduous woodland. This connects to other small pockets of deciduous woodland further to the south through hedgerows and grassland.	(Off site habitat- third party land – no photo available).

Fauna

<u>Bats</u>

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

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

Feature	Description	Photographs
Bat foraging and commuting habitat	The site itself provides no suitable foraging and commuting habitat due to a lack of vegetation. However, Adjacent to the site is an area (~3ha) of deciduous woodland that provides optimal foraging and commuting habitat for bats and other terrestrial mammals. This is directly connected via hedgerows and grassland to other pockets of deciduous woodland located to the south of the site. Hatfield forest is located ~2km south from the site and is likely an important local resource for a variety of bat species. Resources for bats are limited to the north and west due to London Stansted Airport and associated development.	

The roof tiles on the eastern aspect (front) appear in good condition with no raised, broken or missing examples. Additionally, there appear to be no areas of missing or failed mortar which bats could exploit. The timber soffits which enclose the roof, and the lead flashing surrounding the chimney all appear in in good condition with no associated bat features.



B1 - exterior

The rear elevation has once section of missing mortar but otherwise appears to lack any suitable habitat for supporting roosting bats.

The corrugated metal roof on the single storey extension has no value to roosting bats. No evidence indicating the presence of roosting bats was recorded externally during the PRA



There is one loft space within B1. The roof is of timber construction. The loft floor is lined with insulation. A brick-built chimney stack is present on the southern side of the loft. Approximately half of the loft space is boarded and used for storage.



B1 - interior

The loft was not fully accessed during the survey due to lack of boarding and could only be viewed from the loft hatch. There appear to be no gaps or natural light entering into the loft. There is no roof lining which reduces the suitability for crevice dwelling bats to roost under the tiles. The tops of the items within the loft and the majority of the loft floor could be seen from the loft hatch. A torch and binoculars were used to look for droppings. Surrounding the loft hatch, and at the northern end of the loft was a large number of deceased wasps, however no bat droppings were identified.



There were no visible access opportunities for bats and no evidence indicating the presence of roosting bats internally.

B1 – suitability	Considering the external and internal inspections, B1 is assessed to be of negligible value to support roosting bats due to the lack of roosting features
assessment	found.

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 6.

Table 6: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability	
Amphibians	A review of the Magic.gov.uk showed two EPSLs for great crested newts, the closest being 1,720m west and the second is 1,915m south. Both EPSLs allowed for the destruction of a resting place. These EPSLs are separated from site by Stansted Airport and an A road respectively. There are no aquatic habitats on site or directly adjacent to the site. 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 et al. 2001). A review of aerial imagery indicates the presence of one pond within 500m of the site located 190m northeast in an arable field. The pond is separated from site by a tarmac road with	
	pavement and curbs on both sides A review of the Magic.gov.uk database returned no granted EPSL for reptiles within 2km of the site.	
Reptiles	The site is not suitable for commuting, foraging or resident reptiles. There is no refugia or hibernacula available on site for reptiles to forage and shelter within. Additionally, the site is surrounded by dug in fencing with no gaps suitable for reptiles to pass through.	
Badgers	The habitat on site and the surrounding woodland was surveyed for badgers and there was no evidence or activity of badgers on site, or within 30m, at the time of the survey. The site itself provides no foraging or sheltering opportunities for a badger as it consists of developed land. Additionally, the dug in fencing bordering the site does not allow any opportunity for badgers to commute through.	
	A review of the Magic.gov.uk database returned no granted EPSL for dormice within 2km of the site.	
	There is no vegetation on site to support this species.	
Hazel Dormouse	The site is located within the current dormouse distribution area, based on the PTES (Peoples Trust for Endangered Species) map. Dormice typically utilise a three-dimensional habitat structure, such as 20ha of woodland as to commute between feeding and breeding sites whilst avoiding predation; nowhere on site supports this habitat structure. This habitat is present within the nearby vicinity and there is surrounding woodland that is accessible but the lack of refuge from predation means this species is likely absent from the site at any time of year.	
Hedgehog	Habitats recorded on site are assessed to not provide foraging, commuting or sheltering habitats for hedgehogs. The surrounding woodland does provide optimal habitat.	
Otter and Water Vole	A review of the Magic.gov.uk database returned no granted EPSL for otters or water voles within 2km of the site. No suitable habitat on site. NO likelihood of occurrence.	
Birds	The site itself provides no opportunities for birds to forage or nest within due to a lack of vegetation. The adjacent woodland provides optimal habitat for this species	

Other protected and/ or notable flora and fauna

Due to the type and extent of habitats recorded, the site is not considered suitable to support any other protected and/ or notable species.

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.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 7 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 of the construction of a new dwelling to the end of 6 Cooper Villas.

Table 7: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	There are two statutory sites within 2km of the site, the closest being Flitch Way LNR located 1,780m south from the site. The site lies within the impact risk zone for Hatfield Forest and proposed development type is not listed as a possible high risk for this designation. The presence of non-statutory designated sites within 2km of the site cannot be established without data from Essex Field Club.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.	None.	None.

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

Habitats and flora	There are no notable habitats within the site but five habitats are present within 2km of the site, the closest being deciduous woodland located <5m north and west from the site.	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland, indirect effects such as pollution or tree damage could occur during construction.	Environmental Management	The following habitat creation and enhancement opportunities could be incorporated into the proposed development: • Native tree, hedgerow and shrub planting. Species-specific enhancement opportunities are detailed later in this table.
Amphibians	No suitable habitat. A review of aerial imagery indicates the presence of one pond within 500m of the site located 190m northeast in an arable field. The pond is separated from site by a tarmac road with pavement and curbs on both sides. This landscape feature is suboptimal for great crested newts due to a lack of refuge from predation. As a result, the road, pavements and curbs are likely to represent a significant barrier to dispersal eliminating connectivity to the site for great crested newts.	No impacts are anticipated on great crested newts, as a result of the proposed development as this species is considered to be absent from the site.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for amphibians: • Native tree, hedgerow, and shrub planting. • Provision of hibernacula.

Reptiles	The site is not suitable for commuting, foraging or resident reptiles. There is no refugia or hibernacula available on site for reptiles to forage and shelter within. The bare ground does provide basking opportunities but with no refugia available there is a large risk of predation for reptiles. Additionally, the site is surrounded by dug in fencing with no gaps suitable for reptiles to pass through.	No impacts are anticipated on reptiles as a result of the proposed development.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for reptiles: • Native tree, hedgerow, and shrub planting. • Provision of hibernacula.
Roosting bats (B1)	Building 1 has 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 extension of this 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 two bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be installed on the existing dwelling and the newly constructed 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 boxes will be a specification suitable for crevice or void dwelling bats such as the Improved Crevice Bat Box by NHBS or the Cavity Bat Box by The Nestbox Company a similar alternative brand.
Foraging and commuting bats	There are no habitats on the site which could be used by bats for foraging or commuting. The surrounding woodland provides optimal foraging and commuting habitats, .	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats but may	A low impact lighting strategy will be adopted for the site during and post-development, which will	The following habitat creation and enhancement opportunities could be incorporated into the

	impact the surrounding woodland via light spill	include the following	proposed development
	during construction.	measures:	which would be beneficial
		Light spill on to the	
		deciduous	Planting of native
		woodland to the	tree, shrub and
		north and west of	hedgerows to
		the site should be	increase foraging
		avoided. • Use narrow	opportunities.
		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 /	
		neutral colour	
		temperature	
		<4,200 kelvin.	
		Not use bare bulbs	
		and any light	
		pointing upwards.	
		The spread of light	
		will be kept in line	
<u> </u>	<u>l</u>		

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
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 habitat on site and the surrounding woodland was surveyed for badgers and there was no evidence or activity of badgers on site, or within 30m, at the time of the ecological survey. The site itself provides no foraging or sheltering opportunities for a badger as it consists of developed land. Additionally, the dug in fencing bordering the site does not allow any opportunity for badgers to commute through.	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.
Hazel dormouse	Nowhere on site supports suitable habitat structure required for by dormice. This habitat is present within the nearby vicinity and there is surrounding woodland that is accessible but the lack of refuge from predation means there is a reasonably low chance of dormice being present on site.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	Habitats recorded on site are assessed to not provide foraging, commuting or sheltering habitats for hedgehogs.	No impacts are anticipated on hedgehogs as a result of the proposed development. The surrounding woodland does provide optimal habitats however so hedgehogs presence for transient periods cannot be discounted.	A precautionary working method will be implemented during construction, including the following measures: • 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	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities.

Otter and Water Vole	Habitats recorded on site are assessed to be unsuitable for both otters and water voles, and the site is poorly connected to significant water bodies in the wider landscape. Therefore, the site is considered to be of negligible value to support otter and water vole.	No impacts are anticipated on otters as a result of the proposed development.	• None.	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.	Creation of brash piles or installation of hedgehog houses in shady areas. None.
Birds	The site itself provides no opportunities for birds to forage or nest within due to a lack of trees. However, the surrounding woodland does provide optimal habitat for common species of breeding birds, but is not suitable	No impacts are anticipated on nesting birds as a result of the proposed development.	None.		The installation of two bird boxes at the site will provide additional nesting habitat for birds.

to support a significant assemblage of	The bird boxes will be
protected and/or notable birds.	installed on the existing
	dwelling and newly
	constructed dwelling.
	General purpose bird boxes
	should be positioned 3m
	above ground level where
	they will be sheltered from
	prevailing wind, rain and
	strong sunlight.
	Species-specific bird boxes
	should be installed in line
	with manufacturers
	specifications.

5.0 Bibliography

- Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Dejean, T., Griffiths, R., Foster, J., Wilkinson, J., Arnell, A., Brotherton, P., Williams, P. and Dunn, F. (2014). Using eDNA to Develop a National Citizen Science-based Monitoring Programme for the Great Crested Newt (*Triturus cristatus*). Biological Conservation. 183. 10.1016/j.biocon.2014.11.029.
- Bright, P., Morris, P., Mitchell-Jones, T. and Wroot, S. (2006). The Dormouse Conservation Handbook Second Edition.
- 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.
- Chanin, P. (2003). Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. Natural England, Peterborough.
- 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 (2017). Guidelines on Ecological Report Writing. 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 (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition.

 Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (2023). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 4th edition, Bat Conservation Trust, London.
- Defra (2007). Hedgerow Survey Handbook. A Standard Procedure for Local Surveys in the UK. Defra, London.
- Edgar, P., Foster, J. and Baker, J (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf
- Garland. L. & Markham. S. (2008)ls **Important** Bat Foraging and Commuting Habitat Legally Protected? http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf
- Gent, T. and Gibson, S. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
- Google Earth. Accessed on 31/01/2024.

- Harris, S., Cresswell, P. and Jefferies, D.J. (1989). Surveying badgers. Mammal Society, London.
- HMSO: Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 https://www.legislation.gov.uk/uksi/2019/579/contents/made
- HMSO: Countryside & Rights of Way Act (2000) http://jncc.defra.gov.uk/page-1378
- HMSO: Natural Environmental and Rural Communities Act (2006) http://www.legislation.gov.uk/ukpga/2006/16/contents
- HMSO: The Protection of Badgers Act 1992 (as amended) http://www.legislation.gov.uk/ukpga/1992/51/contents
- HMSO: Wildlife and Countryside Act 1981 (as amended 01.04.1996) http://jncc.defra.gov.uk/page-1377
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting.
- JNCC (2004). Bat Workers Manual, 3rd Edition. http://jncc.defra.gov.uk/page-2861
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Langton, T., Beckett, C. and Foster, J (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf
- Magic Database. http://www.magic.gov.uk/MagicMap.aspx Accessed on 31/01/2024.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- National Planning Policy Framework (2021). https://www.gov.uk/government/publications/national-planning-policy-framework-2
- Natural England Designated Sites View. https://designatedsites.naturalengland.org.uk/SiteSearch.aspx Accessed on 31/01/2024.
- Natural England (2005). Organising Surveys to Determine Site Quality for Invertebrates: A Framework Guide for Ecologists. Natural England, Peterborough.
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf
- Oldham R.S., Keeble J., Swan M.J.S. and Jeffcote M. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155. <a href="https://www.thebhs.org/publications/the-herpetological-journal/volume-10-number-4-october-2000/1617-03-evaluating-the-suitability-of-habitat-for-the-great-crested-newt-triturus-cristatus/file
- Panks, S., White., N., Newsome, A., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2021). Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity Technical Supplement. Natural England.

- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.
- Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)
- Wray, S., Wells, D., Long, E. and Mitchell-Jones, T (2010). Valuing Bats in Ecological Impact Assessment. IEEM In-Practice. Number 70 (December 2010). Pp. 23-25.

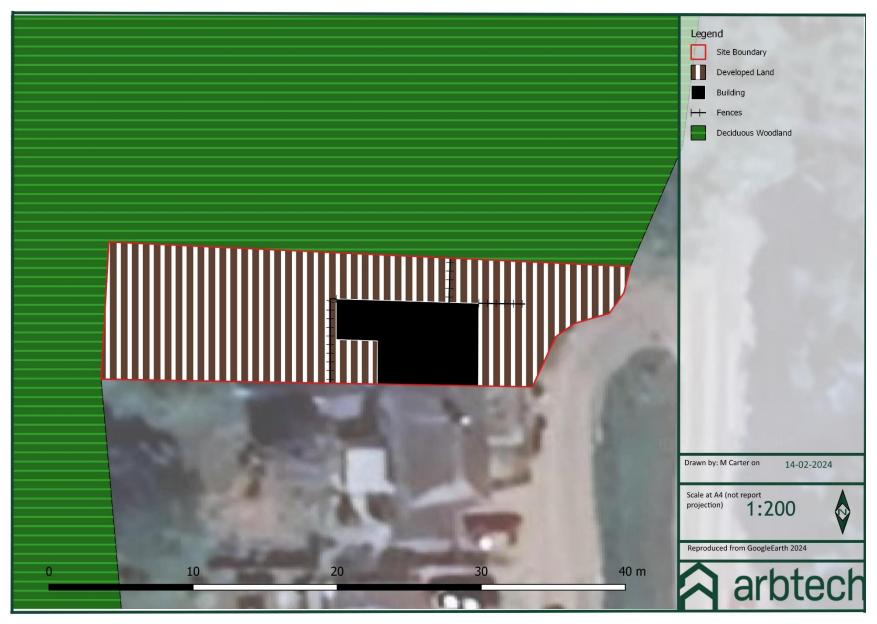
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Appendix 1: Proposed Development Plan

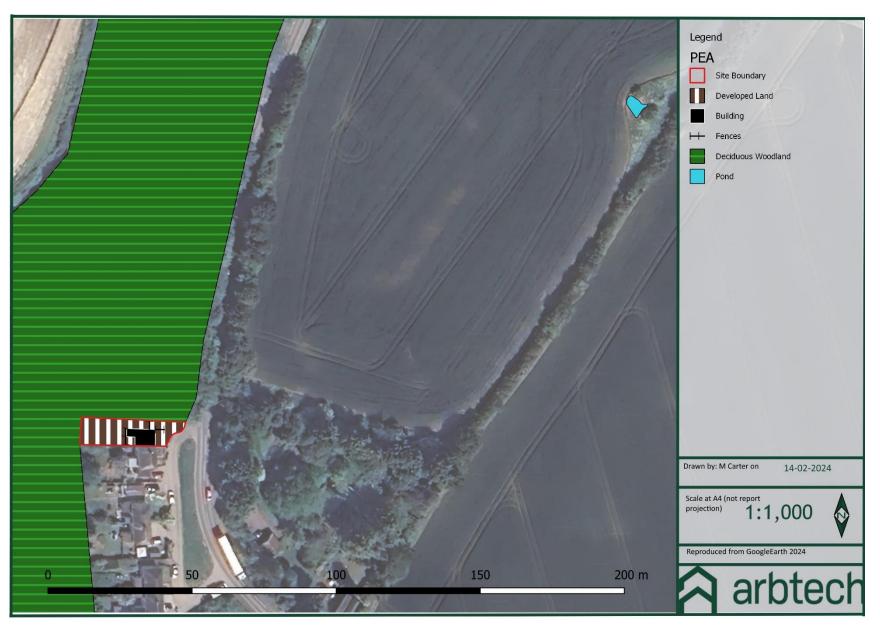
Appendix 2: Site Location Plan



Appendix 3a: Habitat Survey Plan



Appendix 3b: Pond Location Plan



Appendix 4: 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). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

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 &

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 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 precommencement 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.

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.