



Preliminary Ecological Appraisal and Preliminary Roost Assessment

The Barn, Eastleigh, SO50 7DJ

Terry Grainger

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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 Terry Grainger to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at The Barn, Eastleigh, SO50 7DJ (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing outbuilding and construction of a single dwelling (hereafter referred to as “the proposed development”).

The following is work you will need to commission to obtain planning permission and to comply with legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 5 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Amphibians	A review of the MAGIC database returned no granted EPSL, class licence or pond survey records for great crested newts within 500m of the site. A review of aerial imagery indicates the presence of four ponds within 500m of the site, located 85m west, 320m south-west, 435m north and 490m east. The pond located 85m east, is a newly developed SuDS Pond which was created in 2021/2022 for the new housing development, located adjacent to the site on the western boundary.	Scattered scrub will be removed during construction. It is noted that the development area is likely to result in the loss or significant disturbance of 0.01ha of suitable great crested newt habitat (i.e. scrub). If great crested newts are present within the pond 85m to the west of the site, this will constitute a loss of 0.01ha within 100m of a potential breeding pond. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces an Green risk score , which states: Offence Highly Unlikely .	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction.
Reptiles	The habitats on site are dominated by bare ground, hardstanding and buildings which are of low value to reptiles. However, the scrub on site could provide suitable habitat for reptiles to commute and forage.	Scrub and hedgerows may be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to their low value and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present.	Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction.

Roosting bats (B1)	B1 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 demolition 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.
Foraging and commuting bats	Adjacent tree lined boundaries 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.	The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development
Hedgehog	No evidence of hedgehogs was found on site. The habitats recorded on site are suboptimal as the site is mainly bare ground which is very exposed. The brash piles covered in scattered scrub could offer shelter to hedgehogs.	Due to the size and type of the proposed development, no significant habitat loss is anticipated as a result of the proposed development. The loss of any habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehog, if present.	A precautionary working method will be implemented during construction.
Birds	No nests were found during the survey. The scattered scrub could provide nesting opportunities.	Scattered scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	The clearance of the scatter scrub should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Terry Grainger to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at The Barn, Eastleigh, SO50 7DJ (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing outbuilding and construction of a single dwelling (hereafter referred to as “the proposed development”). A plan showing the proposed development will be provided in Appendix 1 when available.

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 SU 49498 17460 and has an area of approximately 0.05ha comprising bare ground, scattered scrub and a single dwelling. It is surrounded by arable fields to the east and west, parkland with orchards to the north and residential dwellings 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 Beth Ellison-Perrett BSc (Hons) MSc, MRSB, Consultant (2023-11066-CL17-BAT) on 3rd April 2023.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in *UK Habitat Classification User Manual* (UK Habitat Classification Working Group, 2018). 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).

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. An endoscope was used to complete a close-up inspection of any accessible features, where appropriate.

Suitability Assessment

Built structures 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 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
Moderate to 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.
Low	A small number of possible roost sites or features, used 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 isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
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. 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.

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and 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.

3.0 Results and Evaluation

3.1 Designated Sites

No statutory designated sites were identified within 2km of the site.

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 2.

Table 2: Weather conditions during the survey

Date:	03/04/2023
Temperature	11°C
Humidity	58%
Cloud Cover	10%
Wind	10mph
Rain	None

Habitats, Flora and Fauna

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

- Artificial unvegetated, unsealed surface (u1c) with scattered scrub (10) and ditch (191)
- Built linear feature (u1e) – fencing (69)
- Developed land; sealed surface (u1b)
- Building (u1b5)

A description and photographs of each habitat are provided in Table 3. Additionally, the results of the PRA are provided below. No evidence of roosting bats was identified during the survey.

Table 3: Description and photographs of habitats within the site

Habitat type	Habitat description	Photograph
Artificial unvegetated, unsealed surface (u1c) with scattered scrub (10) and ditch (191)	The site is used, mainly as a store area for excess materials from previous builds and so the majority of the site is comprised of bare ground. The bare ground is comprised of excess soil and concrete fragments and is of low ecological value. Small areas (approximately 15m² along the fence line) of scattered, disturbed grassland are beginning to grow through sections of the bare ground. Species composition is poor comprising thistle (O), creeping buttercup (O), Yorkshire fog (F), ragwort (O) and dandelion (O). Additionally, throughout the site, much of the piled building materials are covered in scattered scrub. The scrub is comprised of bramble, with the occasional nettles and dock. Towards the north-western boundary of the site, running adjacent to the western boundary, is a small, very shallow ditch. The ditch is due to surface runoff onsite and is in poor condition. The ditch is full of duck weed and cocks foot and has no obvious banks due to its shallowness.	  

Developed land; sealed surface (u1b)	Running down the centre of the site, adjacent to B1, is a small hard standing walkway. The walkway is comprised of broken concrete and wooden boards and is of negligible habitat value.	
Built linear feature (u1e) – fencing (69)	Surrounding the site, on all boundaries is intact fencing. The fencing, along the eastern, southern and western elevations is comprised of wooden panelling and is in good condition with no missing or broken sections. The fencing along the northern boundary is comprised of wooden pole and barbed wire.	

Building external (u1b5) -	There is one building (B1) onsite which is a wooden built, single storey outbuilding. B1 has a flat, sloped roof clad in plastic sheeting which is in excellent condition with no raised sections under which bats could roost. The wooden cladding on the northern, eastern and southern elevations are in very good condition with no raised or broken sections in which bats could roost. Additionally, the wooden boarding on the western elevation, which is covering the windows, and is also in good condition and well-sealed with no gaps.	
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Building (u1b5) - internal	There is no loft space within B1 as the roof is flat. The roof structure is built from modern timber beams and is unlined so the back of the plastic sheeting can be observed. Additionally, the western elevation and the roof is covered with metal grating reducing the likelihood of void dwelling bats from entering internally. There are cobwebs around the beams and roof to floor cobwebs which could indicate a lack of internal flying activity from void dwelling bats, such as brown long-eared bats. Daylight enters internally through the plastic sheeting on the roof of B1, further reducing the suitability for void dwelling bats. Furthermore, the building is single skinned and will be prone to temperature fluctuations. There was no evidence of bat activity located internally in B1. There was no evidence of bat use (e.g. bat droppings) found on external features. However, this kind of evidence is easily weathered away on the exterior of buildings and is rarely visible. Additionally, there was no evidence of nesting birds located internally or externally on the survey building.	 A photograph showing the interior of a storage room. The ceiling is made of corrugated metal with exposed wooden beams. The room is filled with various items, including stacks of white plastic containers, blue and white bags, and other miscellaneous objects. A large white plastic sheet is draped over some of the items on the right side. The floor is covered with more clutter, and the overall impression is of a disorganized storage space.
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Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 4.

Table 4: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability
Amphibians	A review of the MAGIC database returned no granted EPSL, class licence or pond survey records for great crested newts within 500m of the site. However, there are 3 EPSLs, located 570m, 855m and 1025m north-west, which are for the destruction of a GCN resting place and four class licence returns, located 645m north-west, 985m north-west, 1225m south-west and 1905m west, which show the presence of GCN from historic pond surveys in 2016. 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). As such, the great crested newt metapopulation known to be present over 500m from the site, are not suitably connected to the site. A review of aerial imagery indicates the presence of four ponds within 500m of the site, located 85m west, 320m south-west, 435m north and 490m east. The pond located 85m east, is a newly developed SuDS Pond which was created in 2021/2022 for the new housing development, located adjacent to the site on the western boundary. This pond was dry at the time of the survey and full of grassland species, including thistle and cocks foot, suggesting a lack of water for extended periods of time. Additionally, this pond is separated from the site by urban infrastructure including tarmac roads, buildings, and extensively managed gardens with fencing, which is regularly mown resulting in a short sward length. Additionally, the southern and western site boundaries are enclosed by a timber fence that is in good condition and impermeable to amphibians. This fence represents a barrier to dispersal between the water body adjacent to the south and the site. The second pond is surrounded immediately by a small woodland on all sides which provides optimal terrestrial opportunities for amphibians including foraging, commuting, refuge and hibernation opportunities and therefore great crested newts are unlikely to need to venture far beyond their core range. This is widely accepted to be 250m from a breeding pond (Langton <i>et al.</i>, 2001). The third and fourth ponds are also located adjacent to woodland which provides optimal terrestrial opportunities for amphibians including foraging, commuting, refuge and hibernation opportunities. Habitats recorded on site are assessed to provide terrestrial opportunities for amphibians including the scrub. It is noted that the site is dominated centrally by bare ground, a single building, and hardstanding of low value to amphibians due to an absence of refuge from predation. Although the site is considered unsuitable to support amphibians due to the absence of suitably connected aquatic opportunities, other common amphibians such as common toads have better mobility and are able to travel longer distances from breeding sites. As a result, the presence of common amphibians within peripheral scrub cannot be discounted.

	When georeferencing the proposed development over scaled mapping of the site, it is noted that the development area is likely to result in the loss or disturbance of approximately 0.01ha of scattered scrub. If great crested newts are present within the pond 85m to the west of the site, this will constitute a loss of 0.01ha within 100m of a potential breeding pond. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces an Green risk score, which states: Offence Highly Unlikely (see figure 1 below). <table><tr><th>Component</th><th>Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)</th><th>Notional offence probability score</th></tr><tr><td>Great crested newt breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land within 100m of any breeding pond(s)</td><td>0.001 - 0.01 ha lost or damaged</td><td>0.05</td></tr><tr><td>Land 100-250m from any breeding pond(s)</td><td>0.001 - 0.01 ha lost or damaged</td><td>0.005</td></tr><tr><td>Land >250m from any breeding pond(s)</td><td>0.001 - 0.01 ha lost or damaged</td><td>0.0005</td></tr><tr><td>Individual great crested newts</td><td>No effect</td><td>0</td></tr><tr><td></td><td>Maximum:</td><td>0.05</td></tr><tr><td>Rapid risk assessment result:</td><td colspan="2">GREEN: OFFENCE HIGHLY UNLIKELY</td></tr></table> Figure 1: Screenshot of Natural England GCN rapid Risk Assessment completed.	Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score	Great crested newt breeding pond(s)	No effect	0	Land within 100m of any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.05	Land 100-250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.005	Land >250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.0005	Individual great crested newts	No effect	0		Maximum:	0.05	Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	
Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score																							
Great crested newt breeding pond(s)	No effect	0																							
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Individual great crested newts	No effect	0																							
	Maximum:	0.05																							
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY																								
Reptiles	A review of the MAGIC database returned no granted EPSL for reptiles within 2km of the site. Habitats recorded on site are assessed to provide foraging, commuting, and refuge opportunities for reptiles in the form of scattered scrub. These habitats provide suitable refuge from predation and are suitably connected to further habitat in the wider landscape, including grassland to the north. However, habitats dominating the site centrally, include bare ground, buildings, and hardstanding, which is considered unsuitable to support reptiles due to an absence of structural and species diversity. Reptiles are highly unlikely to be present within the site but the presence of reptiles within peripheral hedgerows and scrub cannot be discounted.																								
Badgers	No evidence of badgers was found on site or within the surrounding 30m, the site is flat with minimal vegetation and therefore has little to offer in the way of foraging or sett excavation habitat. The site is connected to suitable habitat for badgers including arable fields, hedgerows and woodlands in the further landscape. However, the site itself has no suitable habitats for foraging badgers and is fenced on three boundaries, reducing the likelihood of badger commuting through the site.																								
Hazel Dormouse	A review of the MAGIC database returned no granted EPSL for dormice within 2km of the site. No evidence of dormice was found within the site. It is not anticipated that dormice are present on the site due to the lack of suitable of the habitats present. Furthermore, for isolated habitats in the UK, research indicates that dormice require 20ha of woodland habitat to support a viable population (Bright <i>et al.</i> 1994). There are no areas of woodland present on or directly adjacent to the site that are big enough (20ha) to support dormice.																								
Hedgehog	No evidence of hedgehogs was found on site. The habitats recorded on site are suboptimal as the site is mainly bare ground which is very exposed. The brash piles covered in scattered scrub offer shelter to hedgehogs. Additionally, the area of development is partially fenced however, hedgehogs can access this area through gaps in the fencing on the northern boundary. The site is connected to grassland which hedgehogs may also use.																								

Riparian Mammals	There was no evidence of otters or water voles onsite. There is a small ditch onsite (approximately 9m in length) which runs adjacent to the western boundary. This ditch is very shallow and full of stagnant, runoff water which has no fish or other prey species within, creating a lack of foraging opportunities onsite. Additionally, the ditch has no obvious banks (as it is created due to a lower section of land within the site) in which otters could create holts within or water voles could burrow within. Furthermore, the site is surrounded by intact wooden fencing which will reduce the likelihood of otters commuting through the site.
Birds	Due to the type and extent of habitats recorded, the site is not considered suitable to support a significant assemblage of protected and/ or notable bird species. However, the scattered scrub could provide nesting opportunities for common species of breeding birds.

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 5 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 the demolition of the existing outbuilding and construction of a single dwelling.

Table 5: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	There are no statutory designated sites within 2km of the site.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known).	None.	None.
Habitats and flora	There are no notable habitats within the site but four habitats are present within 2km of the site, the closest being deciduous	No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development:

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

	woodland located 360m west from the site. Habitats within the site are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey.	location of the site with surrounding physical barriers.		• Native tree, hedgerow and shrub planting. • Creation of wildflower grassland.
Amphibians	A review of the MAGIC database returned no granted EPSL, class licence or pond survey records for great crested newts within 500m of the site. A review of aerial imagery indicates the presence of four ponds within 500m of the site, located 85m west, 320m south-west, 435m north and 490m east. The pond located 85m east, is a newly developed SuDS Pond which was created in 2021/2022 for the new housing development, located adjacent to the site on the western boundary. This pond was dry at the time of the survey and is separated from the site by	Scattered scrub will be removed during construction. When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of 0.01ha of suitable great crested newt habitat (i.e. scrub). If great crested newts are present within the pond 85m to the west of the site, this will constitute a loss of 0.01ha within 100m of a potential breeding pond. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces an Green risk score, which states: Offence Highly Unlikely.	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: • Site clearance will be undertaken outside of the amphibian hibernation season (November to February) insofar as is possible. • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any amphibians to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter amphibians from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for amphibians: • Creation of amphibian refugia and hibernacula using debris and brash from site clearance. • Planting of native scrub and grassland to increase foraging opportunities.

	urban infrastructure. Additionally, the southern and western site boundaries are enclosed by a timber fence that is in good condition and impermeable to amphibians. This fence represents a barrier to dispersal between the water body adjacent to the south and the site.		removed from the site to prevent amphibians from utilising these areas. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians 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 common amphibians 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. • In the unlikely event that a great crested newt is identified, works must cease and advice must be sought from a suitably qualified ecologist.	
Reptiles	The habitats on site are dominated by bare ground, hardstanding and buildings which are of low value to reptiles. However, the scrub on site could provide suitable habitat for reptiles to commute and forage.	Scrub and hedgerows may be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to their low value and the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present.	Owing to the nature of the proposed development and the low potential for impacts to reptiles, further surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any reptiles to disperse. The vegetation can then be cleared to ground level and must be maintained at	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for reptiles: • Creation of reptile refugia and hibernacula using debris and brash from site clearance.

			this level for the duration of construction to deter reptiles from the working area. - Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent reptiles from utilising these areas. - 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 reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.	- Planting of native scrub and grassland to increase foraging opportunities. - The creation of basking areas such as rock piles or areas of cleared ground with shelter nearby.
Roosting bats (B1)	B1 has negligible value for roosting bats due to a lack of potential roost features. There are five EPSLs within 2km of the site, involving common pipistrelle, soprano pipistrelle, Natterer's and brown long eared bats. The closest EPSL is located 535m south and involves the destruction of a breeding site for common pipistrelle, Natterer's and brown long eared bats	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 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 a minimum of two bat boxes on mature trees around the site boundaries or on retained buildings will provide additional roosting habitat for bats e.g. Habibat bat box Integrated Eco Bat Box, Cavity/Crevice Vivara Pro Woodstone Bat Box Or a similar alternative brand. 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.
Foraging and commuting bats	Adjacent tree lined boundaries 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.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • 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 / neutral colour temperature <4,200 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	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats: • Planting of native tree, shrub and hedgerows to increase foraging opportunities.

			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	Badgers anticipated to be absent due to lack of suitable habitat and inaccessibility due to surrounding fencing.	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.
Hazel dormouse	No evidence of dormice was found within the site. It is not anticipated that dormice are present on the site due to the lack of suitable of the habitats present.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	No evidence of hedgehogs was found on site. The habitats recorded on site are suboptimal as the site is mainly bare ground which is very exposed. The brash piles covered in scattered scrub could offer shelter to hedgehogs.	Due to the size and type of the proposed development, no significant habitat loss is anticipated as a result of the proposed development. The loss of any habitats is likely to be inconsequential to local hedgehog populations owing to their low value and	A precautionary working method will be implemented during construction, including the following measures: A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 30cm and left overnight to allow any hedgehogs to disperse. The vegetation can then be cleared to ground level and must be maintained at	enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: Planting fruit bearing trees and species-rich grassland to

		the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehog, if present.	this level for the duration of construction to deter hedgehogs from the working area. - 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.	increase foraging opportunities. - Creation of brash piles or installation of hedgehog houses in shady areas. - Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.
Riparian Mammals	There was no evidence of otters or water voles onsite. There is a small ditch onsite (approximately 9m in length) which runs adjacent to the western boundary. This ditch is very shallow and full of stagnant, runoff water which has no fish or other prey species within,	No impacts are anticipated on otters or water voles as a result of the proposed development.	None.	None.

	creating a lack of foraging opportunities onsite.			
Birds	No nests were found during the survey. The scattered scrub could provide nesting opportunities.	Scattered scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to their low value and the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	The clearance of the scatter scrub should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of a minimum of one bird box around the site will provide additional nesting habitat for birds e.g. Schwegler 1B Nest Boxes Schwegler 2H Robin Boxes Woodstone Nest Box Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole.

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Appendix 1: Proposed Development Plan

Not available at the time of writing this report.

Appendix 2: Site Location Plan



Appendix 3: Habitat Survey 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 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 not 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.

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.