

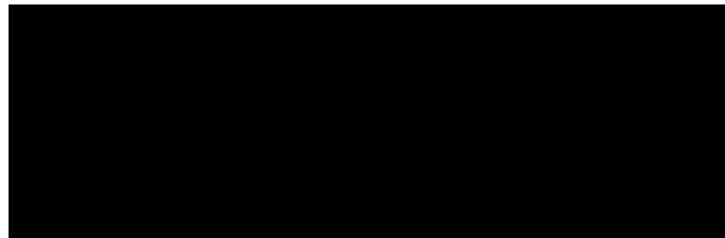


Preliminary Ecological Appraisal and Preliminary Roost Assessment

Land to the west of Dunkirk Roundabout, Dunkirk Lane, Chester, CH1 6LX

Leap 24 UK

Status	Issue	Name	Date
Draft	1	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	11/10/2023
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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 Leap 24 UK to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Land to the west of Dunkirk Roundabout, Dunkirk Lane, Enforcement Site, Chester, CH1 6LX (hereafter referred to as “the site”). The survey was required to inform a planning the construction of an electric vehicle charging station, including charging up stands and associated infrastructure (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 6 of this report.

Feature	Survey Results Summary	Impact Assessment	Recommendations
Designated sites	The site lies within a Restoration Area as part of Cheshire Ecological Network, which are areas designed to enhance connectivity, resilience and the functioning of the ecological network. Further, the woodland to the northwest is designated as a Corridor and Stepping Stone as part of the Cheshire Ecological Network, which mean that it is an area that enable mobile species move between core areas and the wider landscape.	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.	A Construction Ecological Management Plan has been outlined below in Table 7 to ensure the protection of the adjacent woodland during construction, as per the corridor and stepping stone designation. An Ecological Enhancement Plan has been provided in Table 7 to ensure the enhancement of the site for wildlife, as per the restoration area designation.
Habitats and flora	There are no notable habitats within the site. A deciduous woodland habitat is present within 2km of the site, the closest being approximately 5m northwest (on the opposite side of the adjacent footpath).	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 Ecological Management Plan has been outlined below in Table 7 to ensure the protection of the adjacent woodland during construction. A wildlife friendly lighting plan has also been outlined to ensure that any new lighting across the development site will not impact the adjacent woodland and associated species.
Foraging and commuting bats	There are no habitats on the site which could be used by bats for foraging or commuting, however the woodland to the northwest of the site will provide a suitable bat foraging and commuting habitat.	The proposed development will not result in the removal of any habitats which could be used for 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. See Table 7 below for full details.
Hedgehog	The site provides no suitable hedgehog foraging habitat or refuge, however due to the presence of suitable surrounding habitat hedgehogs may commute across the site.	No suitable hedgehog habitats will be removed during construction; however any transient hedgehogs present on site during the works could be injured or killed.	A precautionary working method will be implemented during construction. See Table 7 below.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Leap 24 UK to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Land to the west of Dunkirk Roundabout, Dunkirk Lane, Enforcement Site, Chester, CH1 6LX (hereafter referred to as “the site”). The survey was required to inform a planning application for the construction of an electric vehicle charging station, including charging up stands and associated infrastructure (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 SJ 37480 72442 and has an area of approximately 0.2ha comprising one building and developed land (hard standing). It is surrounded by woodland and agricultural land to the north, with a main road and further agricultural land to the south. The wider landscape comprises industrial land to east. 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 Mel Reid BSc (Hons) MRes, Senior Consultant (Natural England Bat Licence Number: 2019-43774-CLS-CLS; Natural England GCN Licence Number: 2022-10198-CL08-GCN) on 3rd October 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. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows.

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

<i>Classification</i>	<i>Feature of building and its context</i>
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. 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.

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 conclusion: 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. The presence of non-statutory designated sites within 2km cannot be established without biological records data from Record.

The site lies within the impact risk zone for the Hallwood Farm Site of Special Scientific Interest (SSSI) and the Mersey Estuary SSSI. The proposed development type (i.e. construction of an electric charging station) is not listed as a possible high risk with regard to this designation.

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:	03/10/2023
Temperature	18°C
Humidity	78%
Cloud Cover	50%
Wind	3mph
Rain	None

Habitats and Flora

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


Buildings (u1b5)

Developed land; sealed surface (u1b)

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

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

Table 3: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
<p>Developed land; sealed surface</p>	<p>The site consists of a tarmac and paved slip way which forr previous DVLA check point. There is minimal vegetation (<10%) across the site, with the occasional ruderal herb (rosebay willowherb <i>Chamaenerion angustifolium</i>, bramble <i>Rubus sp</i>) growing due to the lack of activity on the site. There is a grassed strip along the southern site boundary however this lies outside of the redline boundary and will be retained as part of the proposed works.</p>	

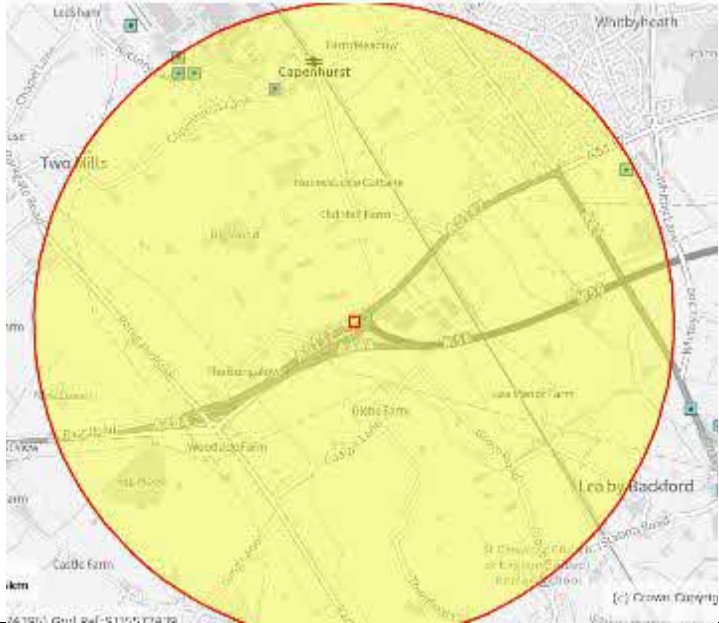

Building	<p>There is one building present on site which was the former DVL/ building. A full PRA was carried out on this building (see Table 4 below). There is a further metal cabin to the east of the building.</p>	
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Fauna



Bats


The results of the PRA are provided in Table 4. No evidence of roosting bats was identified during the survey.

Table 4: Assessment of the suitability of the site for bats

Feature	Description	Photographs
Historical records	A review of the magiv.gov.uk database revealed the presence of two granted European Protection Species Licence (EPSL) for bats within a 2km radius the site. These involved the destruction of resting places for cc pipistrelle, soprano pipistrelle, brown long eared and whiskered bats.	
Bat foraging and commuting habitat	The site is not likely to be a significant foraging habitat for bats within the local area, as the majority of the site is of negligible ecological value (i.e. buildings and hardstanding). However, the adjacent woodland to the northwest will likely provide suitable bat foraging and commuting habitat.	

<p>B1 - overview</p>	<p>B1 is a single-storey brick-built building with a pitched roof clad in slate roof tiles. The windows are shuttered providing no access for bats or birds into the building. The building was previously used a DVLA checkpoint.</p>	
<p>B1 – southern elevation</p>	<p>The brickwork across the southern elevation appears in excellent condition with no gaps suitable for crevice-dwelling bats. The roof structure appears in a good condition with no missing or raised roof tiles. The eaves are tight-fitting to the walls with no gaps suitable for roosting bats.</p>	

<p>B1 – eastern elevation</p>	<p>The brickwork across the eastern elevation appears in excellent condition with no gaps suitable for crevice-dwelling bats. The gable-end appears in a good condition with intact mortar and no gaps present.</p>	
<p>B1 – northern elevation</p>	<p>The brickwork across the northern elevation appears in excellent condition with no gaps suitable for crevice-dwelling bats. The roof structure appears in a good condition with no missing or raised roof tiles. The eaves are tight-fitting to the walls with no gaps suitable for roosting bats.</p>	

<p>B1 – western elevation</p>	<p>The brickwork across the western elevation appears in excellent condition with no gaps suitable for crevice-dwelling bats. The gable-end appears in a good condition with intact mortar and no gaps present.</p>	
<p>B1 – suitability assessment</p>	<p>B1 is considered to have negligible habitat value for supporting roosting bats due to a lack of suitable external roosting features for crevice-dwelling bats and lack of access internally for void-dwelling bats.</p>	

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 5.

Table 5: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability
Amphibians	A review of the magic.gov.uk database revealed the presence of one granted European Protection Species Licence (EPSL) for GCN within a 2km radius of the located, located approximately 1840m northwest of the site. Given the distance of this licence from the site it is unlikely that GCN from the pond would migrate to the proposed development area. Great crested newts exist in metapopulations and are known to utilise ponds and connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from ponds (Langton <i>et al.</i> 2001). A review of aerial imagery indicates the presence of 12 ponds within 500m of the site. Six of these ponds are over 250m from site and therefore connectivity between these ponds and the proposed development site is reduced given that the majority of amphibian migration occurs up to 250m from water bodies. The closest ponds are located 100m south of the site, however these are separated from the site by main road which will act as a major barrier to amphibian migration. There are three ponds located approximately 160m north of the site. These ponds are considered suitability connected to the site given the presence of optimal commuting habitat (i.e. woodland, grassland, hedgerows). However, there are no ponds present on site and due to the lack of suitable terrestrial vegetation (i.e. scrub, rank grassland) to provide refuge for GCN, it is considered likely that GCN and other common amphibians are absent from site.
Reptiles	A review of the magic.gov.uk database returned no granted EPSL records for reptiles within 2km of the site. There is no suitable habitat present on site for reptiles due to a lack of habitats such as scrub and rank grassland which would offer refuge for these species. As such it is likely that reptiles are absent from the development site.
Hazel Dormouse	The site lies outside of the known current range for hazel dormice and there are no suitable habitats within the development area. As such it is considered likely that hazel dormice are absent from site.
Hedgehog	The site provides sub-optimal habitat for hedgehogs, given the lack of suitable vegetation offering foraging opportunities and refuge. The habitats surrounding the site (i.e. woodland, fields and hedgerows) provides commuting, foraging and refuge for hedgehogs, and therefore hedgehogs are likely in the surrounding area and may commute across the site, although they are not expected to remain for significant periods of time on site.
Otter	A review of the MAGIC database returned no granted EPSL records for otters within 2km of the site. There are no water courses on or connected to the site. There are also no riparian habitats present on site or within an influencing distance. As such it is considered likely that otters are absent from site.
Water Vole	A review of the MAGIC database returned no granted EPSL records for water vole within 2km of the site. There are no water courses or water bodies present on site. The site provides no suitable terrestrial habitat for water vole. As such it is considered likely that water voles are absent from site.
Birds	Due to the small size of the site and the extent and type of the habitats recorded, the site is not considered suitable to support a significant assemblage of protected and/or notable birds. Further, the site lacks suitable vegetation for nesting birds such as trees or scrub.
Invertebrates	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 6 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 construction of an electric vehicle charging station, including charging up stands and associated infrastructure.

Table 6: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	<p>There are no statutory designated sites within 2km of the site.</p> <p>The site lies within the impact risk zone for two SSSI's however the proposed development type is not listed as a possible high risk for these designations.</p>	<p>No impacts to designated sites are anticipated due to the small scale distance of the proposed development from such sites (where known) as well as the built-up location of the site with surrounding physical barriers.</p>	<p>The proposed development will not impact the function of the Corridor and Steppingstone designation as part of the Cheshire Ecological Network, however a Construction Ecological Management Plan has been outlined below Table 7 to ensure the protection of the adjacent woodland during construction, as per the designation. An Ecological Enhancement Plan has been provided in Table 8 to ensure enhancement of the site for wildlife, as per restoration area designation.</p>	None.

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

	<p>The presence of non-statutory designated sites within 2km of the site cannot be established without data from Record.</p> <p>The site lies within a Restoration Area as part of the Ches Ecological Network, which are areas designed to enhance connectivity, resilience and the functioning of the ecological network. Further, the woodland to the northwest is designated as a Corridor and Steppingstone as part of the Cheshire Ecological Network, which means that it is an area that enables mobile species to move between core areas and the wider landscape.</p>			
Habitats and flora	<p>There are no notable habitats within the site but deciduous woodland habitat is present within 2km of the site, the closest being approximately 5m northwest (on the opposite side of the adjacent footpath).</p> <p>Habitats on site comprise one building and hard standing which are of low ecological value.</p> <p>No protected or notable plant species were recorded during the survey.</p>	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.	<p>A Construction Ecological Management Plan has been outlined below in Table 7 to ensure the protection of the adjacent woodland during construction.</p> <p>A wildlife friendly lighting plan has also been outlined to ensure that any new lighting across the developed site will not impact the adjacent woodland and its associated species.</p>	See Table 7 for on-site enhancements details.
Amphibians	Although there are a number of ponds present across the surrounding area, given the lack of suitable terrestrial habitat present on site it is anticipated	No impacts are anticipated on great crested newt, as a result of the proposed development as this species is considered to be absent from the site.	None.	None.

	that GCN and other common amphibians will be absent from site.			
Reptiles	It is considered likely that reptiles are absent from site given the lack of suitable habitat.	No impacts are anticipated on reptiles as result of the proposed development.	None.	None.
Roosting bats	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 no impacts anticipated to be any impacts on roosting bats as a result of any works to this building.	In the unlikely event that a bat or evidence of bats is discovered during the development all works must stop and a bat licensed ecologist contacted for further advice.	See Table 8 below for species-specific enhancements.
Foraging and commuting bats	There are no habitats on the site which could be used by bats for foraging or commuting, however the woodland to the northwest of the site will provide suitable bat foraging and commuting habitat.	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 onto 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. See Table 7 below for full details.	See Table 8 below for species-specific enhancements.
Hazel dormouse	It is considered likely that hazel dormice are absent from site given the lack of suitable habitat and the lack of known populations in the area.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	The site provides no suitable hedgehog foraging habitat or refuge, however due to the presence of suitable surrounding habitat hedgehogs may commute across the site.	No suitable hedgehog habitats will be removed during construction; however any transient hedgehogs present on site during the works could be injured or killed.	A precautionary working method will be implemented during construction. See Table 7 below.	See Table 8 below for species-specific enhancements.
Otter	It is considered likely that otters are absent from site given the lack of suitable habitat.	No impacts are anticipated on otters as a result of the proposed development.	None.	None.

Water vole	It is considered likely that water voles are absent from site given the lack of suitable habitat.	No impacts are anticipated on water vole as a result of the proposed development.	None.	None.
Birds	Scheduled 1 bird species are not anticipated to be present on site. Further, there are no suitable bird nesting habitats within the site boundary.	No impacts are anticipated on nesting birds as a result of the proposed development.	None.	See Table 8 below for species-specific enhancements.
Invertebrates	The site is considered to have low value for invertebrates given the lack of vegetation.	No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.	None.	None.

5.0 Construction Ecological Management Plan (CEMP)

Table 7: Mitigation Measures

Works	Specification
Persons Responsible and Lines of Communication	It is recommended that a Development Biodiversity Champion is selected for the construction phase of the development. The Biodiversity Champion should be someone with significant influence during construction, such as the contract or project manager. The Development Biodiversity Champion is responsible for ensuring all actions outlined in this CEMP are implemented including the provision of a toolbox talk prior to works commencing. Any queries with regards to the mitigation prescriptions should be addressed to the project ecologist or communication should be retained between the Development Biodiversity Champion and project ecologist or a suitably qualified Ecological Clerk of Works (ECoW) throughout the construction phase of the development where necessary to ensure the mitigation is applied and impacts to adjacent ecological receptors are effectively minimised. The project ecologist's contact details are located on the title page of this report. It is recommended that the Biodiversity Champion informs the project ecologist or ECoW of the commencement of construction works and provides updates where necessary.
Timing of Works	Construction activities will be restricted to the normal working day (7am-7pm).
General Construction Activities	<p>Heras fencing (or similar) will be installed around the perimeter of the construction zone to prevent any vehicle or construction encroachment onto habitats / species of ecological value.</p> <p>Any machinery used should be made safe or temporarily fenced off when not in use.</p> <p>Storage of construction materials will be kept to a minimum. Where materials must be stored, they will be restricted to inert objects and located on hardstanding away from hedgerows, ponds [REDACTED]. Materials will be stored on pallets to discourage animals from using them as shelter. Skip or similar containers may also be used in place of piles on the ground.</p> <p>Trenches or open excavations will be covered at the end of each working day, or include a means of escape such as a sloping ramp for any animals that may fall in. Any temporarily exposed open pipe systems or ducts will be capped at the end of each working day in such a way as to prevent animals from gaining access.</p>
Site Visit and Reporting	The ECoW will produce a report outlining the actions taken under the CEMP.
Pollution Prevention	To limit impacts of pollution resulting from the construction phase of the development, construction works must be completed in accordance with current statutory guidelines relating to pollution prevention (Environmental Agency 2016). Furthermore, although withdrawn in 2010, pollution prevention guidelines detailed within guidance document: <i>PPG6: Working at Construction and Demolition Sites</i> (Environment Agency 2010) remain applicable to the site. Considering both the relevant statutory requirements and best practice measures detailed within guidance document PPG6, the below mitigation prescriptions are considered suitable to mitigate impacts of pollution during the construction phase of the development. The allocated Biodiversity Champion will be responsible for ensuring the below mitigation recommendations are undertaken successfully during the works.

Site drainage:

It is recommended that the Biodiversity Champion ensures that:

Pollution risks are identified pre-construction.

Pollutants are prevented from entering drains where possible.

If any pollutant enters a drain, immediately stop the pollution with a physical block, stop the activity causing the pollution, then notify the Environment Agency for surface water drains or the local sewerage provider for foul water drains. If there's a spill, accide emergency, try and prevent pollutants entering the drains.

Report all pollution incidents to site management and the Environment Agency.

Inspect drains and protection measures frequently and maintain them during the construction activity. Well maintained drains will al o reduce risks of flooding and subsequent surface water run-off.

As a last resort, should any pollutants be required to enter the drainage system on site, permission from Environment Agency or the local sewerage provider must be sought before discharging anything other than clean uncontaminated surface water to a drain and other surface waters or groundwater. Apply for permission early, as authorisation can take up to four months.

Airborne particle suppression:

It is recommended that the Biodiversity Champion ensures that:

Effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.

Avoid explosive blasting, using appropriate manual or mechanical alternatives.

Bag and remove any biological debris or damp down such material before demolition.

Carry out regular site inspections to monitor compliance.

Ensure all vehicles switch off engines when stationary.

Avoid the use of petrol- or diesel-powered generators and use mains electricity or battery power where possible.

Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.

Ensure an adequate water supply on the site for effective dust/ particulate matter suppression/ mitigation, using non-potable water where possible and appropriate.

Use enclosed shuts and conveyors and covered skips.

Materials storage and water run-off:

It is recommended that the Biodiversity Champion ensures that:

No stockpiles are created on exposed ground areas and ensure that all materials and chemicals are stored securely and safely on site in accordance with current Control of Substances Hazardous to Health (COSHH) regulations (HSE 2002).

Contaminated materials, chemicals, and other hazardous substances must be stored on an impermeable surface, in a bunded area, within any area of the site.

All chemicals and hazardous substances are stored away from areas where there is heightened risk of damage from impact collision such as site traffic.

All chemicals and hazardous substances are labelled, containers are sealed when not in use and inspected regularly and for purpose.

Any damaged or old containers are replaced in line with the duty of care requirements. Note such containers may be considered hazardous waste.

Staff are trained in use of spill kits and emergency procedures.

Ensure there is a designated 'responsible person' on site at all times.

Lock storage facilities when not in use.

Implementation of the Waste Hierarchy:

The Biodiversity Champion must ensure that all construction activity is completed in accordance with the Waste Hierarchy (Defra 2011) in an attempt to reduce the amount of waste produced during the construction phase of the development. As such, the construction phase must be completed in accordance with the below core principles:

In the first instance:

Re-use products and materials where possible.

Recycle and compost material resources where possible.

Attempt to recover energy from waste.

Where none of the above options offer an appropriate solution, waste disposal is the final option:

Only transfer controlled waste to an "authorised person" (Waste Collection Authority, the holder of an Environmental Permit, Registered Water Carrier or Waste Disposal Authority).

Ensure that non-hazardous waste is transferred under a Waste Transfer Note which must be retained for two years.

Hazardous waste is moved under a waste consignment note that provides a clear description of the waste material. The consignment note must be retained for three years.

The waste is the responsibility of the company until it has been fully recovered or finally disposed of.

Noise:

The Biodiversity Champion must ensure that noise levels are kept to a minimum in accordance with best practice as defined in the Control of Pollution Act 1974 to avoid unacceptable levels of noise and vibrations. Further guidance can be found in British Standard 5228-1:2009. Such measures applicable to the proposed development primarily include agreed working hours limiting night work, using the quietest equipment and plant available, shutting down equipment when not in use, and completing deliveries during working hours only. Most notably, prescriptions

as to limit noise of plant machinery as detailed within **Table B.1** within the code of practice for noise control (British Standards Institution, 2014 is likely to have the most significant impact during construction activity. Table B.1 is shown below.

Table B.1 Methods of reducing noise levels from construction plant

Plant	Noise reduction of plant			Alternative plant
	Source of noise	Possible remedies (to be discussed with machine manufacturers)	A-weighted sound reduction dB	
Hammer drive piling equipment	Pneumatic/diesel hammer or steam winch vibrator driver	Enclose hammer head and top of pile in acoustic screen	5 to 10	Bored piling Vibratory system Drop hammer completely enclosed in box with opening at top for crane access Steel jacket completely enclosing drop hammer with dolly and polystyrene chips fed to impact surface to dissipate energy Pressed-in piling which generates its driving force from the frictional restraint of other piles
	Sheet pile	Acoustically dampen sheet steel piles to reduce levels of resonant vibration		
	Impact on pile	Use resilient pad (dolly) between pile and hammer head. Packing needs to be kept in good condition		
	Cranes cables, pile guides and attachments	Careful alignment of pile and rig		
	Power units or base machine	Fit more efficient sound reduction equipment or exhaust. Acoustically dampen panels and covers. When intended by the manufacturer, engine panels need to be kept closed. Use acoustic screens when possible		
Earth-moving plant: <ul style="list-style-type: none"> ▪ bulldozer ▪ compactor ▪ crane ▪ dump truck ▪ dumper ▪ excavator ▪ grader ▪ loader ▪ scraper 	Engine	Fit more efficient exhaust sound reduction equipment Manufacturers' enclosure panels need to be kept closed	5 to 10	Alternative super silenced plant might be available. Consult manufacturers for details

Table B.1 Methods of reducing noise levels from construction plant (continued)

Plant	Noise reduction of plant			Alternative plant
	Source of noise	Possible remedies (to be discussed with machine manufacturers)	A-weighted sound reduction dB	
Compressors and generators	Engine	Fit more efficient sound reduction equipment	Up to 10	Super silenced plant is available. Consult manufacturers for details Electric-powered compressors are available as opposed to diesel or petrol Sound-reduced compressor or generator can be used to supply several pieces of plant. Use centralized generator system
	Compressor or generator body shell	Acoustically dampen metal casing Manufacturers' enclosure panels need to be kept closed		
	Total machine	Erect acoustic screen between compressor or generator and noise-sensitive area. When possible, line of sight between top of machine and reception point needs to be obscured Enclose compressor or generator in ventilated acoustic enclosure	Up to 10 Up to 20	
Pneumatic concrete breaker, rock drills and tools	Tool	Fit suitably designed muffler or sound reduction equipment to reduce noise without impairing machine efficiency Ensure all leaks in air line are sealed	Up to 15	Hydraulic and electric tools are available For large areas of concrete, machine designed to break concrete in bending can be used Thermic lance
	Bit	Use dampened bit to eliminate ringing		
	Total machine	Erect acoustic screen between compressor or generator and noise-sensitive area. When possible, line of sight between top of machine and reception point needs to be obscured Enclose breaker or rock drill in portable or fixed acoustic enclosure with suitable ventilation	Up to 10 Up to 20	
Rotary drills, diamond drilling and boring	Drive motor and bit	Use machine inside acoustic shed with adequate ventilation	Up to 15	Thermic lance

Table B.1 Methods of reducing noise levels from construction plant

Plant	Noise reduction of plant			Alternative plant
	Source of noise	Possible remedies (to be discussed with machine manufacturers)	A-weighted sound reduction dB	
Hammer drive piling equipment	Pneumatic/diesel hammer or steam winch vibrator driver	Enclose hammer head and top of pile in acoustic screen	5 to 10	Soled piling Vibratory system Drop hammer completely enclosed in box with opening at top for crane arms Steel jacket completely enclosing drop hammer with dolly and polystyrene chips fed to impact surface to dissipate energy Pressed-in piling which generates its driving force from the frictional restraint of other piles
	Sheet pile	Acoustically dampen sheet steel piles to reduce levels of resonant vibration		
	Impact on pile	Use resilient pad (dolly) between pile and hammer head. Packing needs to be kept in good condition		
	Cranes cables, pile guides and attachments	Careful alignment of pile and rig		
	Power units or base machine	Fit more efficient sound reduction equipment or exhaust. Acoustically dampen panels and covers. When intended by the manufacturer, engine panels need to be kept closed. Use acoustic screens when possible		
Earth-moving plant: • bulldozer • compactor • crane • dump truck • dumper • excavator • grader • loader • scraper	Engine	Fit more efficient exhaust sound reduction equipment Manufacturers' enclosure panels need to be kept closed	5 to 10	Alternative super silenced plant might be available. Consult manufacturers for details

Lighting	<p>A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:</p> <ul style="list-style-type: none">Lighting of the adjacent woodland will be avoided.Use narrow spectrum light sources to lower the range of species affected by lighting.Use light sources that emit minimal ultra-violet light.Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / 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 set to the shortest time duration to reduce the amount of time the lights are on.Wall lights and security lights will be 'dimnable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.
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6.0 Provision of New Landscaping and Species-Specific Enhancements

Table 8: Provision of New Landscaping and Species-Specific Enhancements

Works	Specification
Persons Responsible	The Biodiversity Champion will be responsible for the provision of the new landscaping and species-specific enhancements. The occupier of the proposed development (i.e. the landowner or managing agent) will be responsible for the management of these features post development
Site Visit and Reporting	The ECoW will make a final site check and sign off once the landscaping and installation of species-specific enhancements are complete.
Tree and Shrub Planting	<p>Overview: Multiple areas of proposed landscaping will be created through new tree and shrub planting including: The creation of native shrubs (exact area and location to be confirmed) The planting of native trees (exact area and location to be confirmed)</p> <p>Objectives: To plant native trees and shrubs that will provide pollinating, foraging, and refuge opportunities for protected and/ or notable species groups including amphibians, bats, birds, hedgehogs, invertebrates, and reptiles. Ensure that good horticultural practice is employed to encourage long-term health and vitality of all trees and shrubs. Ensure well-balanced crowns and/ or natural shape by preventing over competition.</p> <p>Creation Method: Ground preparation and planting Each tree and shrub should be planted within a hole three times as wide of the supplied pot and of a similar depth. Root balls should be soaked thoroughly in water before planting and root balls should be loosened to expose restricted roots before planting. The planted trees and shrubs should then be backfilled ensuring there are no air pockets around roots or any roots protruding out of the ground.</p> <p>Timing It is best to prepare the land during the summer ready for planting between November and March. Planting trees and shrubs before the new year helps ensure better rooting and subsequent establishment including faster growth during the first growing season.</p>

*Management Prescriptions:***Table 3.3:** New tree and shrub planting.

Management	When	Rationale
At the end of each growing season all plant failures are to be 100% replaced	When required; checked annually in Autumn.	To maintain amenity and wildlife value.
If required, provision of stakes and guards. Guards to be left on for a minimum of 5 years	N/A	Protect from damage
Stakes should be checked and any broken or damaged stakes during this time would be removed (as above) and replaced with ties re-fixed	When required; checked annually in Autumn.	Maintain protection
Remove weeds	When required; checked twice annually in early spring and in Autumn.	Reduce competition for resources nutrients etc.by weeds
Application of bark mulch at a depth of 50 mm	Immediately after planting and then when required; checked annually in Autumn.	Reduce competition for resources nutrients etc.by weeds
Do not apply chemical fertilisers	At all times.	The use of chemical fertilisers will encourage vigorous grasses and weeds to grow
Apply a light dressing of well-rotted manure	Annually in the winter	Note the overuse of manure fertilisers will encourage vigorous grasses and weeds to

	<table border="1"> <tr> <td data-bbox="734 181 1055 325">Removal of spent flowers from perennial plants should be removed through 'deadheading'</td> <td data-bbox="1088 181 1330 288">Twice annually, late spring and in the Autumn.</td> <td data-bbox="1429 140 1749 288">grow. Allows plants to place more energy into re-growth.</td> </tr> <tr> <td data-bbox="734 341 1043 560">Watering should be undertaken before and after planting out and as necessary for the continued thriving of all planting.</td> <td data-bbox="1088 341 1375 523">When required; provide more water during periods of draught and less water during times of prolonged rain.</td> <td data-bbox="1429 341 1738 411">Ensures plants do not dry out and subsequently fail.</td> </tr> <tr> <td data-bbox="734 576 1048 644">Check and replace any plant failures once a year</td> <td data-bbox="1088 576 1330 608">For the first 5 years</td> <td data-bbox="1429 576 1720 608">To ensure no gaps form.</td> </tr> </table>	Removal of spent flowers from perennial plants should be removed through 'deadheading'	Twice annually, late spring and in the Autumn.	grow. Allows plants to place more energy into re-growth.	Watering should be undertaken before and after planting out and as necessary for the continued thriving of all planting.	When required; provide more water during periods of draught and less water during times of prolonged rain.	Ensures plants do not dry out and subsequently fail.	Check and replace any plant failures once a year	For the first 5 years	To ensure no gaps form.
Removal of spent flowers from perennial plants should be removed through 'deadheading'	Twice annually, late spring and in the Autumn.	grow. Allows plants to place more energy into re-growth.								
Watering should be undertaken before and after planting out and as necessary for the continued thriving of all planting.	When required; provide more water during periods of draught and less water during times of prolonged rain.	Ensures plants do not dry out and subsequently fail.								
Check and replace any plant failures once a year	For the first 5 years	To ensure no gaps form.								
<p>Bat Boxes</p>	<p>One bat box is recommended to be installed on the retained building on site.</p> <p><i>Bat boxes specification:</i></p> <p>The recommended bat boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are designed to require maintenance and have a lifespan of 25 years plus.</p> <p>1 x Beaumaris Bat Box (or similar alternative brand) is recommended on the building, as shown in Figure 1.</p> <p>Bat boxes should be positioned 3-5m above ground level facing in a south, southeast, or southwest aspect with a clear flight path and from the entrance, away from artificial light.</p> <div data-bbox="1025 970 1458 1417" data-label="Image"> </div> <p style="text-align: center;">Figure 1: Beaumaris Bat Box (image credit https://www.nhbs.com/beaumaris-woodstone-bat-box)</p>									

	<p>Recommended Management: The proposed bat boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bat boxes will increase the chances of occupation by roosting bats. However, it is recommended that the bat boxes are inspected annually for the first five years outside of the typical active season for bats (May to September inclusive) following installation. Bat boxes must be replaced if they are damaged, removed, or have fallen from their recommended location.</p>
<p>Bird Boxes</p>	<p>One bird box is recommended to be installed on site, on the retained building.</p> <p>Bird box specification: The recommended bird boxes will be constructed of woodcrete/ woodstone. Boxes of this construction are designed to require no maintenance and a lifespan of 25 years plus. 1 x Eco Sparrow Tower (or a similar alternative brand) is proposed on the retained building, as shown in Figure 2. Nest Boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.</p> <div data-bbox="1137 699 1265 1045" data-label="Image"> </div> <p style="text-align: center;">Figure 2: Eco Sparrow Tower (image credit https://www.nhbs.com/eco-sparrow-tower)</p> <p>Recommended Management: The proposed bird boxes are designed to require no management or maintenance. Furthermore, preventing physical disturbance of bird boxes will increase the chances of occupation by nesting birds. However, it is recommended that the bird boxes are inspected annually for the first five years outside of the typical nesting bird season (March to September inclusive) following installation. Bird boxes must be replaced if they are damaged, removed, or have fallen from their recommended location.</p>

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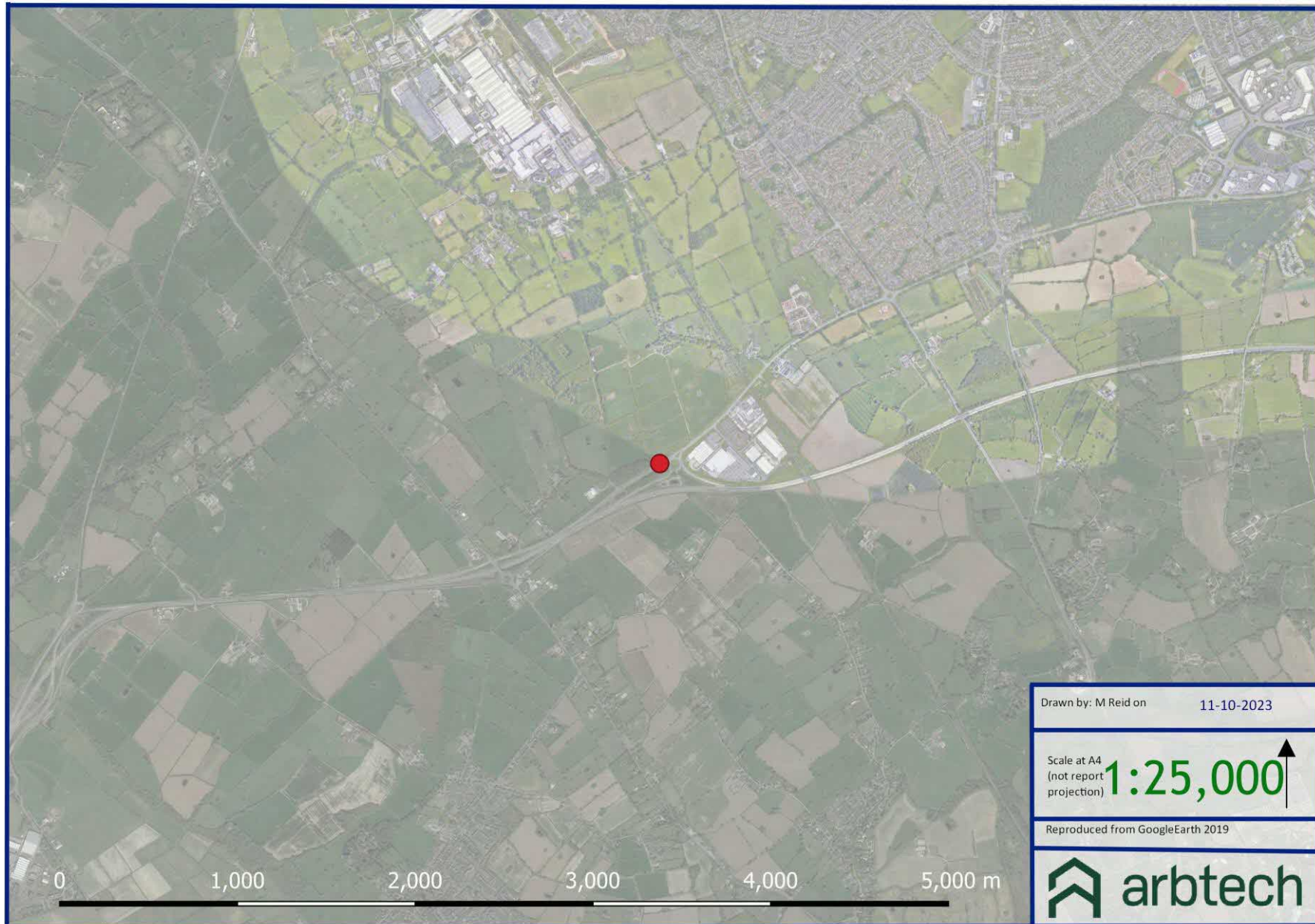
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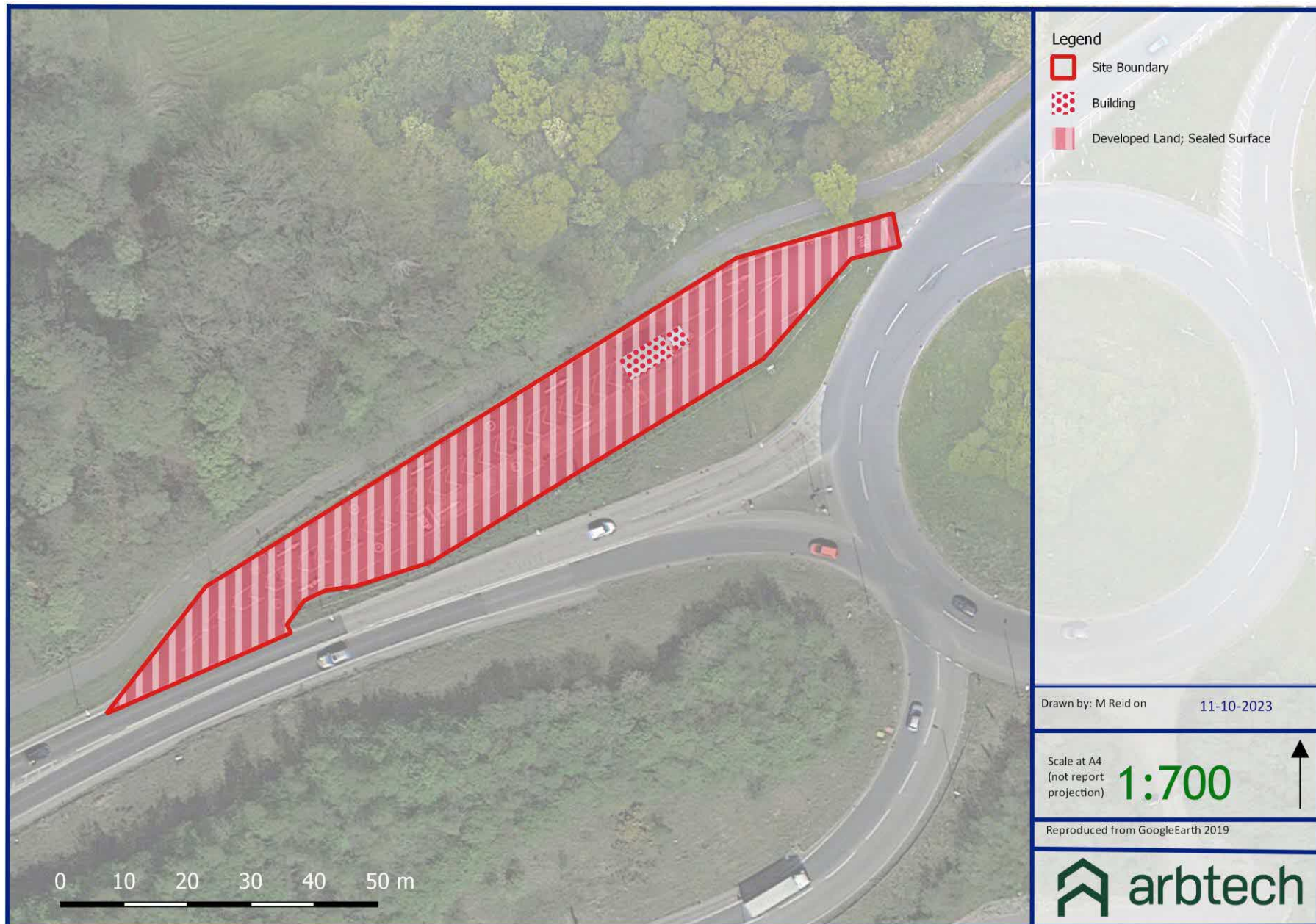
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Appendix 2: Site Location Plan



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



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 plants listed on Schedule 5 of the Conservation of 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.