



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Stancliffe House Farm, Woodhead Road, Wortley, Sheffield, S35 7DA

Jas Singh

Status	Issue	Name	Date
Draft	1	Charlie Moore BSc (Hons) MArborA AMRSB, Arboricultural and Ecological Consultant	30-1-24
Reviewed	1.1	Nicole Gullan BSc (Hons) MRSB TechArborA, Senior Arboricultural and Ecological Consultant	06-02-2024
Final	2	Charlie Moore BSc (Hons) MArborA AMRSB, Arboricultural and Ecological Consultant	14-2-24
Update Proposals	2.1	Charlie Moore BSc (Hons) MArborA AMRSB, Arboricultural and Ecological Consultant	7-8-24

Arbtech Consultant's Contact Details:

Charlie Moore BSc (Hons) MArborA AMRSB
Arboricultural and Ecological Consultant

Tel: 07842313880 **Email:** charliemoore@arbtech.co.uk

<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

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 Jas Singh to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Stancliffe House Farm, Woodhead Road, Wortley, Sheffield, S35 7DA (hereafter referred to as “the site”). The survey was required to inform a planning application for the extension of the main dwelling area, which will necessitate the demolition of B2 (hereafter referred to as “the proposed development”).

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

Feature	Survey Results Summary	Impact Assessment	Recommendations
Habitats and flora	<p>There are no notable habitats within the site but 4no. habitats are present within 2km of the site, the closest being Deciduous woodland, located 250m from site.</p> <p>The habitats present onsite are intensely managed and are ornamental.</p>	<p>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 location of the site.</p> <p>Trees and hedgerows could be impacted as a result of the proposed development.</p>	<p>Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).</p> <p>The Local Planning Authority may request a Biodiversity Net Gain assessment to ensure that the proposals achieve a net gain for biodiversity, in line with the Local Plan.</p>
Reptiles	<p>The site has a lack of suitable habitats onsite to be suitable for reptiles. Furthermore, the site sub optimally connected to the wider area and as such, it is not likely that reptiles would be present onsite, but not impossible.</p>	<p>the presence of reptiles onsite is not likely, however small numbers of reptiles utilising the field margins around site could access the site and therefore be impacted by the construction.</p>	<p>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.</p>
Roosting bats (B1)	<p>B1 has low value for roosting bats.</p> <p>B1 has suitability for void dwelling and crevice dwelling bats due to its large open loft space, being accessible through the gaps in the eaves and around the chimney flashing.</p>	<p>The proposed development will result in the extension of B1. This could result in damage or destruction of any bat roosts present and could cause disturbance, death or injury to bats.</p>	<p>One bat emergence or re-entry survey is required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost in the building.</p>
Roosting Bats (B2)	<p>B2 has low suitability for roosting bats.</p> <p>B2 has suitability for crevice dwelling bats due to the gaps in the eaves, although the loft space is</p>	<p>The proposed development will result in the demolition of B2. This could result in damage or destruction of any bat roosts present and could cause disturbance, death or injury to bats.</p>	<p>One bat emergence or re-entry survey is required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost in the building.</p>

	likely too small to be considered overly suitable for void dwelling bats.		
Badger	<p>No evidence of badgers or badger setts has been identified within 30m of site.</p> <p>The site lacks any significant barriers that would obstruct badgers from commuting through the site.</p>	<p>No impacts are anticipated on badgers as a result of the proposed development.</p> <p>Badgers could commute through the site.</p>	A precautionary working method will be implemented during construction.
Hedgehog	Hedgehogs could utilise the hedgerows onsite.	Trees and hedgerows could be removed during construction. The loss of such 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 hedgehogs, if present.	A precautionary working method will be implemented during construction.
Birds	<p>Birds could utilise the hedgerows and trees present at the site, however the site is not likely to support any schedule 1 species of birds including barn owls.</p> <p>A bird nest consistent with swallows was identified within B1.</p> <p>B2 and B3 have no value for nesting birds due to a lack of suitable features.</p>	<p>Buildings will be removed, and hedgerows and trees could 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.</p> <p>However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.</p> <p>No works to B1 is scheduled as part of this development.</p>	Extension of B1 and any proposed felling of trees or hedgerows should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the building or 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.

Contents

1.0 Introduction and Context 7

 1.1 Background 7

 1.2 Site Location and Landscape Context..... 7

 1.3 Scope of the Report 7

2.0 Methodology..... 9

 2.1 Desk Study 9

 2.2 Field Survey 9

 2.3 Limitations 11

3.0 Results and Evaluation 12

 3.1 Designated Sites 12

 3.2 Field Survey Results 12

4.0 Conclusions, Impacts and Recommendations 27

 4.1 Informative Guidelines..... 27

 4.2 Evaluation 27

5.0 Bibliography 36

 Appendix 1: Proposed Development Plan..... 39

 Appendix 2: Site Location Plan 39

 Appendix 3a: Habitat Survey Plan 41

 Appendix 3b: PRA Plan..... 42

 Appendix 3c: Proposed BERS Plan..... 43

 Appendix 4: Legislation and Planning Policy..... 44

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Jas Singh to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Stancliffe House Farm, Woodhead Road, Wortley, Sheffield, S35 7DA (hereafter referred to as “the site”). The survey was required to inform a planning application for the extension of the main dwelling area, which will necessitate the demolition of B2 (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 SK 31936 96192 and has an area of approximately 1.01 ha. The site consists of buildings, with improved grassland populating approx. 60% of the area, and associated hardstanding. It is characterized by 1 main building - a residential dwelling with a single garage to the west with associated hardstanding and driveway to the northeast of the site. The site also consists of 6 industrial buildings in the northwest and southwest of site and 1 small shed in the western corner of the site. There is an approx. 35m long disconnected hedgerow at the centre of the site with bare ground at the northwest corner.

The site is surrounded by well-connected woodland areas: Spring Wood approx. 405m northeast, Greno Wood Nature Reserve approx. 633m to the southeast, and Wharncliffe Woods approx. 1010m southwest. The site is located approx. 1076m from Chapelton to the east as well as 1098m from the A61. The wider landscape consists of a mixture of semi-urbanised areas with hedgerows, lines of trees and ornamental gardens, as well as agricultural land with both arable farmland and pastures present and, typical for this landscape, sporadic mature trees and hedgerows. The intervening space between these features and the site is comprised of agricultural grassland, currently utilised for grazing.

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 Charlie Moore BSc (Hons) AMRSB (Accredited Agent on Natural England Bat Licence Number) on the 17th of January 2024.

Preliminary Ecological Appraisal

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

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

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

Ponds on and adjacent to the site were assessed for their suitability to support great crested newts using the *Habitat Suitability Index (HSI) Assessment Methodology* (Oldham et al, 2000).

Preliminary Roost Assessment

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

For any surveyed buildings:

A DBW survey was undertaken, comprising a non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the buildings for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine

smear marks. An internal inspection of the buildings was also made, including the living areas and any accessible roof spaces, using a torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

Suitability Assessment

Habitats were categorised in accordance with Tables 4.1 and 6.2 of the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2023), which are replicated in Tables 1 and 2 below.

Table 1: Guidelines for assessing the potential suitability of a built structure for bats

Potential Suitability	Roosting Habitats in Structures
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts e.g. maternity or classic cool/stable hibernation site.

Table 2: Guidelines for assessing the potential suitability of a site for bats

Potential Suitability	Potential Flight-Paths and Foraging Habitats
Negligible	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens.

	Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

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 conclusions and recommendations outlined in this report.

The PEA survey was completed outside of the optimal survey period (April to October) limiting the identification of ground flora species.

No proposed development plans were available at the time of writing this report and therefore a detailed impact assessment could not be made. This report should be updated once the plans are available.

The loft space of B1 was not boarded, and so a safe route to enter the void was not identified – this loft space has been viewed from the loft hatch, and so evidence of bats, if present, could have been missed.

The loft space of B2 was not accessible due to a lack of loft hatch at the time of survey, and so a detailed inspection of the loft space was not achievable.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Designated Sites

Details of any statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 3 below. The presence of non-statutory designated sites within 2km cannot be established without biological records data from the Local Records Centre.

The site lies within the Site of Special Scientific Interest (SSSI) Impact Risks Zones for Wharncliffe Heath SSSI and Deame Valley Wetlands SSSI, however the proposed development is not listed as a high risk to these designations.

Table 3: Statutory designated sites within 2km radius of the site Delete if no sites identified order closest first

Designated site name	Distance from site	Reasons for notification from Natural England
Wheata Woods Local Nature Reserve (LNR)	~970m southeast	Wheata Wood is an ancient semi-natural woodland. Qualifying habitats within this LNR provide suitable commuting and foraging habitats for bats.
Whamcliffe Heath LNR	~2000m northwest	The Heath includes Iron Age & Romano-British archaeology of considerable interest.

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 4.

Table 4: Weather conditions during the survey

Date:	17/01/2024
Temperature	-2°C
Humidity	64%
Cloud Cover	60%
Wind	5MPH
Rain	none

Habitats and Flora

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

- Lines of trees u1b6-33
- Scattered Trees u1b6-32
- Hedgerow h2
- Buildings u1b5
- Artificial unvegetated unsealed surface u1c
- Improved grassland g4

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. However, due to the time of year in which the survey was undertaken it is possible that such species would not be visible.

Table 5: Description and photographs of habitats within and adjacent to the site

Habitat type	Habitat description	Photograph
<p>Buildings, developed land sealed surface</p>	<p>Three buildings are present onsite, a multi-story dwelling with extension (B1), a single story shed (B2) and a metal kennel building (B3).</p> <p>Throughout the site are several patches of concrete hard standing.</p>	

<p>Lines of trees and artificial unvegetated unsealed surface</p>	<p>Surrounding the site is a well-maintained gravel track.</p> <p>Lines of trees also populate the site, with species including holly, birch, elder, Leyland cypress and willow. These groups are not under regular management, and appear to have not been recently pruned.</p>	
<p>Modified Grassland and Hedgerows</p>	<p>Large areas of regularly maintained modified grassland are also present onsite, with species including meadowgrass (d), creeping buttercup (f), clover (o) and plantain (r). The sward length of these grassland areas, due to its management is less than 50mm. no mammal tracks have been identified during the survey.</p> <p>Several hedgerows are also present onsite, with species including hawthorn and leylands cypress, and range from 2.5m to 6m in height, and all appear regularly maintained. Due to the maintenance, no ground flora underneath the hedges have been identified. Due to the species present, these hedgerows can be described as ornamental.</p>	

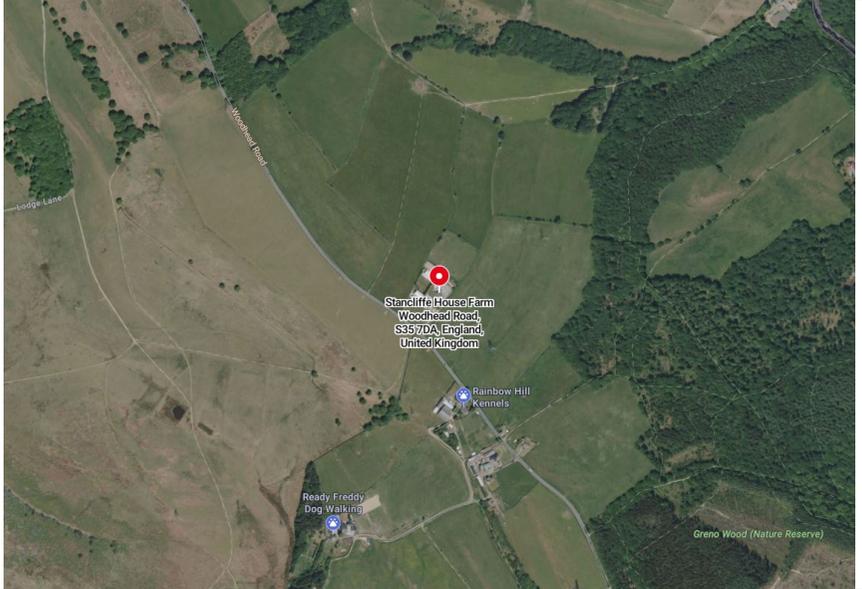
<p>Scattered trees</p>	<p>Scattered trees also inhabit the site, with species including birch and ash.</p>	
------------------------	---	---

Fauna

Bats

The results of the PRA are provided in Table 6.

Table 6: Assessment of the suitability of the site for bats

Feature	Description	Photographs
Historical records	No granted European Protected Species Applications (England) for bats were found within 2km radius during a magicmap.gov search	n/a
Bat foraging and commuting habitat	<p>The local area is comprised of several open agricultural fields utilised for grazing. A review of aerial imagery reveals a lack of substantial field boundary hedges, and so commuting routes to site are limited. However, there are several large woodlands within the general area of the site which are likely to support bat populations.</p> <p>The site has moderate value for foraging and commuting bats.</p>	

<p>Site - Overview</p>	<p>This survey includes 3 buildings: B1, a multi story dwelling area with an existing extension (red), B2, a small single story shed (blue), B3, a single story metal kennel building (green).</p> <p>Other buildings present onsite will not be affected as part of this development and so have been omitted from this report.</p>	 An aerial photograph of a farm complex. The farm is situated in a rural area with green fields. Several buildings are visible. Three specific buildings are highlighted with colored circles: a red circle around a multi-story dwelling with an extension, a blue circle around a small single-story shed, and a green circle around a large single-story metal building. A paved area with a few vehicles is visible near the buildings.
----------------------------	--	--

B1 – overview

B1 is a multi story dwelling with a pitched and gabled roof constructed from concrete tiles, with an existing flat roof extension present on the northeastern elevation of the building, and a small extension with a lean-to roof on the southwestern elevation. The building is half rendered, and the rendering appears in good condition, with exposed brick around the lower half of the building also appearing in good condition.

Generally, the construction of B1 appears to be in good condition, with few suitable roosting features identified throughout the building.

The walls, windows and doors of B1 appear in good condition, offering no suitability for roosting bats. However, the eaves on the southern gable end present two small gaps that could be utilised by bats (circled red) to access the internal loft space of B1.

Furthermore, the roof of B1 appears in very good condition, with no slipped or missing tiles identified, although gaps and lifted sections of lead flashing have been identified around the chimney (circled green).



Pictured opposite the northern elevation of B1



B1 – roosting features

The gaps in the eaves and lead flashing around the chimney identified opposite could give bats access to the internal loft space of B1, including the wall tops and loft void.



<p>B1 – interior</p>	<p>The interior loft space of B1 is constructed from wooden beams and is lined with bitumen lining, that is in good condition with no rips or tears visible that could allow access for bats into the loft space.</p> <p>Furthermore, the wall ends of the gables appear in good condition, with no visible areas of missing mortar.</p> <p>Daylight was visible around the chimney stack, indicating that the loft space around this area is not well sealed. Furthermore, a bird nest consistent with swallows has been identified within the loft space of B1, indicating again its accessible nature.</p>
----------------------	---



	<p>Pictured opposite the internal area of B1, with daylight visible around the chimney face.</p>	
<p>B1 – suitability assessment</p>	<p>B1 has low suitability for bats, due to the roosting features identified including the gaps in the roof and eaves. No evidence of bats has been identified within the loft space or exterior of B1. However, the overall condition of the interior of B1 is in good condition, meaning that there are limited features within the loft space that bats could utilise.</p> <p>Furthermore, B1 has an identified bird's nest present in the interior consistent with swallows.</p>	

<p>B2 – Overview</p>	<p>B2 is a small single story wooden shed that has been historically utilised as an office building.</p> <p>It has a shiplap construction with no visible gaps present, and a plastic gabled pitch roof.</p> <p>The general construction of B2 appears in good condition, with doors and windows appearing well sealed with no suitable gaps that bats could utilise for roosting.</p> <p>The wooden eaves of B2 have gaps suitable for utilisation by bats (circled red) – furthermore, these features could lead into the internal loft void of the building, which was not accessible at the time of survey.</p>
----------------------	---



	<p>Pictured opposite is gaps within the eaves of B2.</p>	
<p>B2 – Suitability Assessment</p>	<p>B2 has low suitability for roosting bats due to the gaps identified in the eaves presenting throughfare into the loft void.</p> <p>However, the construction medium of plastic roofing tiles is likely to result in the loft having unsuitable thermodynamic capabilities for roosting bats. Therefore, the loft space of B2 is not likely to support large numbers of bats.</p>	
<p>B3 - Overview</p>	<p>B3 is a single story, single skinned metal container building historically used as a dog kennel.</p> <p>The construction medium of this building is metal sheeting, which does not have the appropriate thermodynamic properties to be suitable for bats. Furthermore, the doors and windows appear well sealed providing no suitable gaps that bats could utilise to access the interior of the building. B3 also presents no enclosed loft spaces and is generally well lit due to the several skylights present on the roof. Due to these factors, this building has negligible suitability for bats.</p>	

Other Species

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

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

Species	Assessment of suitability
Amphibians	Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). No ponds within 500m of the site were identified during a magicmap.gov and aerial imagery search. There are no ponds onsite, or any suitable wetland areas that could support amphibians onsite.
Reptiles	The areas surrounding site are comprised of a main access road and several large agricultural fields used for a mixture of arable and grazing purposes, which by itself is not considered conducive to reptile inhabitation, as the presence of livestock and general maintenance of arable fields is likely to cause disturbance to reptiles. Therefore, the site is likely isolated from the wider landscape which could support reptile populations. Furthermore, the site itself lacks suitable reptile habitat including hibernacula and scrub piles, with the majority of the site habitat being comprised of hard standing and modified grassland. Such habitats are of low value for reptiles. However, it is possible that reptiles could utilise undisturbed field margins to commute to and from the areas surrounding site.
Badgers	No evidence of badgers has been identified within 30m of site. Furthermore, no features which could be considered obstructions for commuting badgers are present around the site. therefore, it is possible for badgers to commute through the site. There is no suitable habitat onsite for use by badgers.
Hazel Dormouse	The site is located outside the known area of native or introduced dormice populations. Furthermore, the hedgerows onsite do not have a suitable 3 dimensional structure suitable for dormice.
Hedgehog	Hedgehogs could utilise the groups of trees and hedges onsite for foraging and commuting. The wider landscape consists of a main access road and several large agricultural fields used for a mixture of arable and grazing purposes, which by itself is not considered conducive to hedgehog inhabitation.
Riparian mammals	No significant watercourses are present within 2km of site including rivers. However, several small tributaries and brooks are present which could support commuting otters and water voles. The site itself does not present any suitable habitats onsite to be considered suitable for riparian mammals.
Birds	Birds could utilise the trees and hedges onsite for nesting. Furthermore, a bird's nest consistent with swallows was identified within the loft space of B1. Due to the features identified onsite, the site has suboptimal value for any schedule 1 species of birds including barn owls.
Invertebrates	Due to the common species of flora identified at the site, the site is not likely to support any noteworthy assemblages of invertebrates, although is likely to support common invertebrate 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 8 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will comprise the extension of the main dwelling area, which will necessitate the demolition of B2.

Table 8: Evaluation of the site and any ecological constraints

Feature	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Designated sites	Two statutory sites have been identified within a 2km search of the magic.gov database, including two Local Nature Reserves (England) Wheata Woods and Whamcliffe Heath. The	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.

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

	<p>closest being Wheata Woods located approximately 960m from site.</p> <p>The site lies within the impact risk zone for Wharncliffe Heath SSSI, and Deame Valley Wetlands SSSI and the proposed development is not considered a risk to this designation.</p>			
Habitats and flora	<p>There are no notable habitats within the site but 4no. habitats are present within 2km of the site, the closest being Deciduous woodland, located 250m from site.</p> <p>The habitats present onsite are intensely managed and are ornamental.</p>	<p>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 location of the site.</p> <p>Trees and hedgerows could be impacted as a result of the proposed development.</p>	<p>Retained trees and hedgerows should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).</p> <p>The Local Planning Authority may request a Biodiversity Net Gain assessment to ensure that the proposals achieve a net gain for biodiversity, in line with the Local Plan.</p>	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development:</p> <ul style="list-style-type: none"> • Species rich planting in suitable locations onsite <p>Species-specific enhancement opportunities are detailed later in this table.</p>
Amphibians	<p>No ponds are located within 500m of site, and so the site is not</p>	<p>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.</p>	<p>None.</p>	<p>None.</p>

	considered suitable for amphibians.			
Reptiles	The site has a lack of suitable habitats onsite to be suitable for reptiles. Furthermore, the site sub optimally connected to the wider area and as such, it is not likely that reptiles would be present onsite, but not impossible.	the presence of reptiles onsite is not likely, however small numbers of reptiles utilising the field margins around site could access the site and therefore be impacted by the construction.	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: <ul style="list-style-type: none"> • Vegetation will be managed at a short sward of <50mm to dissuade reptiles from commuting through the site. • 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 excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. <p>In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.</p>	None.
Roosting bats (B1)	B1 has low value for roosting bats. B1 has suitability for void dwelling and crevice	The proposed development will result in the extension of B1. This could result in damage or destruction of any bat roosts present and could cause disturbance, death or injury to bats.	One bat emergence or re-entry survey is required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost in the building.	To be confirmed upon completion of the surveys.

	<p>dwelling bats due to its large open loft space, being accessible through the gaps in the eaves and around the chimney flashing.</p>		<p>Infra-red cameras should be used as an aid. Three surveyors are required to provide full coverage of the building. If the absence of a bat roost cannot be determined during the first visit, then further surveys will be required. If bat roosts are confirmed in the building two additional surveys may be required to characterise the roost and to inform an EPSL application to Natural England. Surveys should be a minimum of two weeks apart. The EPSL application requires that surveys have been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.</p>	
<p>Roosting Bats (B2)</p>	<p>B2 has low suitability for roosting bats. B2 has suitability for crevice dwelling bats due to the gaps in the eaves, although the loft space is likely too small to be considered overly suitable for void dwelling bats.</p>	<p>The proposed development will result in the demolition of B2. This could result in damage or destruction of any bat roosts present and could cause disturbance, death or injury to bats.</p>	<p>One bat emergence or re-entry survey is required during the active bat season (optimal May to August, suboptimal September) to confirm presence or likely-absence of a bat roost in the building. Infra-red cameras should be used as an aid. Two surveyors are required to provide full coverage of the building. If the absence of a bat roost cannot be determined during the first visit, then further surveys will be required. If bat roosts are confirmed in the building two additional surveys may be required to characterise the roost and to inform an EPSL application to Natural England. Surveys should be a minimum of two weeks apart. The EPSL application requires that surveys have</p>	<p>As above.</p>

			been undertaken within the most recent active bat season and planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission.	
Roosting Bats (B3)	B3 has negligible value for roosting bats due to a lack of suitable roost features.	No impacts to B3 are scheduled as part of this development.	None.	None.
Foraging and commuting bats	Trees and hedgerows could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	<p>The proposed development could result in the loss of small areas of trees and ornamental hedgerows but given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats.</p> <p>The proposed development could include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.</p>	<p>A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures:</p> <ul style="list-style-type: none"> • Light spill on to trees and hedgerows should be avoided. • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / 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 	None.

			<p>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.</p> <ul style="list-style-type: none"> • 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. 	
Badger	<p>No evidence of badgers or badger setts has been identified within 30m of site.</p> <p>The site lacks any significant barriers that would obstruct badgers from</p>	<p>No impacts are anticipated on badgers as a result of the proposed development.</p> <p>Badgers could commute through the site.</p>	<p>A precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which badgers could use. 	None.

	commuting through the site.		<ul style="list-style-type: none"> Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist. 	
Hazel dormouse	The site is located outside the known range for any dormice populations.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	Hedgehogs could utilise the hedgerows onsite.	Trees and hedgerows could be removed during construction. The loss of such 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 hedgehogs, if present.	<p>A precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> 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 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 	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs:</p> <ul style="list-style-type: none"> New fences erected should have a small gap at the base to allow for hedgehog commuting

			<p>on to retained habitats which hedgehogs could use.</p> <ul style="list-style-type: none"> 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. 	
Riparian mammals	<p>There are no suitable habitats onsite for use by riparian mammals. Furthermore the site is not suitably connected to any major waterways.</p>	<p>No impacts are anticipated on water vole as a result of the proposed development.</p>	<p>None.</p>	<p>None.</p>
Birds	<p>Birds could utilise the hedgerows and trees present at the site, however the site is not likely to support any schedule 1 species of birds including barn owls.</p> <p>A bird nest consistent with swallows was</p>	<p>Buildings will be removed and hedgerows and trees could 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.</p> <p>However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.</p>	<p>Works to B1 and any possible felling of trees or hedgerows should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the building or 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.</p>	<p>The installation of 1No. bird boxes at the site will provide additional nesting habitat for birds.</p> <p>The bird boxes will be installed on retained trees and buildings.</p> <p>General purpose bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.</p> <p>Species-specific bird boxes should be installed in line</p>

	<p>identified within B1.</p> <p>B2 and B3 have no value for nesting birds due to a lack of suitable features.</p>			<p>with manufacturers specifications.</p>
Invertebrates	<p>Due to the common species identified at site, the site is not likely to support any noteworthy assemblages of invertebrates.</p>	<p>No impacts are anticipated on notable species or populations of invertebrates as a result of the proposed development.</p>	<p>None.</p>	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates:</p> <ul style="list-style-type: none"> • The planting of native species of grasses into wildflower meadows • Pollinator friendly planting • Construction of insect boxes

5.0 Bibliography

- Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Dejean, T., Griffiths, R., Foster, J., Wilkinson, J., Arnell, A., Brotherton, P., Williams, P. and Dunn, F. (2014). Using eDNA to Develop a National Citizen Science-based Monitoring Programme for the Great Crested Newt (*Triturus cristatus*). *Biological Conservation*. 183. 10.1016/j.biocon.2014.11.029.
- Bright, P., Morris, P., Mitchell-Jones, T. and Wroot, S. (2006). *The Dormouse Conservation Handbook* Second Edition.
- British Standard 42020 (2013). *Biodiversity – Code of Practice for Planning and Development*.
- British Standard 8683:2021 (2021). *Process for Designing and Implementing Biodiversity Net Gain*.
- Chanin, P. (2003). *Ecology of the European Otter*. *Conserving Natura 2000 Rivers Ecology Series No. 10*. Natural England, Peterborough.
- Chartered Institute of Ecology and Environmental Management (2017). *Guidelines for Preliminary Ecological Appraisal*. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK*. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*, The Bat Conservation Trust, London.
- Defra (2007). *Hedgerow Survey Handbook. A Standard Procedure for Local Surveys in the UK*. Defra, London.
- Edgar, P., Foster, J. and Baker, J (2010). *Reptile Habitat Management Handbook*. *Amphibian and Reptile Conservation*, Bournemouth
<http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf>
- Garland, L. & Markham, S. (2008) Is Important Bat Foraging and Commuting Habitat Legally Protected?
<http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Gent, T. and Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough.
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998) *Bird Monitoring Methods: A Manual of Techniques for UK Key Species*. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
- Google Earth. Accessed on 29-1-24.

- Harris, S., Cresswell, P. and Jefferies, D.J. (1989). Surveying badgers. Mammal Society, London.
- HMSO: Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 <https://www.legislation.gov.uk/ukxi/2019/579/contents/made>
- HMSO: Countryside & Rights of Way Act (2000) <http://jncc.defra.gov.uk/page-1378>
- HMSO: Natural Environmental and Rural Communities Act (2006) <http://www.legislation.gov.uk/ukpga/2006/16/contents>
- HMSO: The Protection of Badgers Act 1992 (as amended) <http://www.legislation.gov.uk/ukpga/1992/51/contents>
- HMSO: Wildlife and Countryside Act 1981 (as amended 01.04.1996) <http://jncc.defra.gov.uk/page-1377>
- Institution of Lighting Professionals (2023). Guidance Note GN08/23 Bats and Artificial Lighting at Night. Bats and the Built Environment Series Publication: <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>
- JNCC (2004). Bat Workers Manual, 3rd Edition. <http://jncc.defra.gov.uk/page-2861>
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Langton, T., Beckett, C. and Foster, J (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf
- Magic Database. <http://www.magic.gov.uk/MagicMap.aspx> Accessed on 29-1-24.
- National Planning Policy Framework (2021). <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Natural England Designated Sites View. <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> Accessed on 29-1-24.
- Natural England (2005). Organising Surveys to Determine Site Quality for Invertebrates: A Framework Guide for Ecologists. Natural England, Peterborough.
- Natural England (2007). Badgers and Development a Guide to Best Practice and Licensing. Natural England. Bristol. <http://www.wildlifeco.co.uk/wp-content/uploads/2014/03/badgers-and-development.pdf>
- Oldham R.S., Keeble J., Swan M.J.S. and Jeffcote M. (2000). Evaluating the Suitability of Habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10(4), 143-155. <https://www.thebhs.org/publications/the-herpetological-journal/volume-10-number-4-october-2000/1617-03-evaluating-the-suitability-of-habitat-for-the-great-crested-newt-triturus-cristatus/file>
- Panks, S., White., N., Newsome, A., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. and Stone, D. (2021). Biodiversity Metric 3.0: Auditing and Accounting for Biodiversity – Technical Supplement. Natural England.
- Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.

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

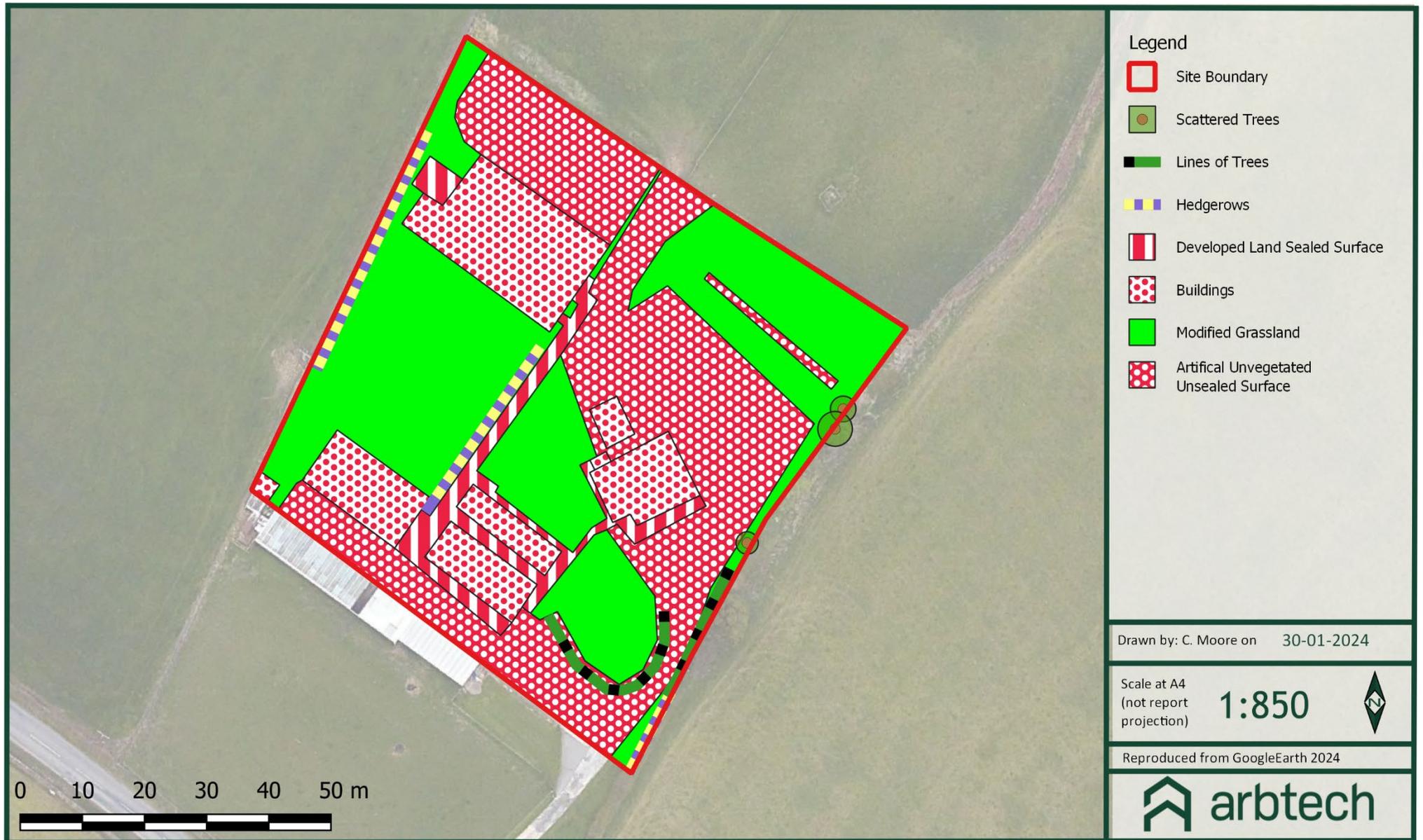
Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3a: Habitat Survey Plan



Appendix 3b: PRA Plan



Appendix 3c: Proposed BERS 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 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.