



**Preliminary Ecological Appraisal, Preliminary Roost Assessment and Habitat Suitability Index
Assessment**

Burlton Manor, Burlton, Shrewsbury, Shropshire, SY4 5TD

JJ Milner

Status	Issue	Name	Date
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Guidelines

This assessment has been designed to meet:

- Chartered Institute of Ecology and Environmental Management 'Guidelines for Preliminary Ecological Appraisal Second Edition, December 2017';
- Chartered Institute of Ecology and Environmental Management 'Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine, September 2018'; and
- British Standard 42020 (2013) 'Biodiversity – Code of Practice for Planning and Development'.

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.

This approach is enshrined in Government planning guidance, for example, paragraphs 179 to 182 of the National Planning Policy Framework 2021 for England.

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

In consequence of the scale and intensity of the proposed development, the low impact on ecological receptors identified through both the site survey and search of local biological records, and the passive interface with the mitigation hierarchy, this plan-led report is considered adequate and proportionate. It communicates all relevant information necessary to determine a planning application or support the recommendations for further surveys.

Executive Summary

Arbtech Consulting Limited was commissioned by JJ Milner undertake a Preliminary Ecological Appraisal (PEA), Preliminary Roost Assessment (PRA) and Habitat Suitability Index (HSI) assessment at Burlton Manor, Burlton, Shrewsbury, Shropshire, SY4 5TD. The survey was completed on 13/09/2021. The aim of the survey was to complete an extended phase 1 habitat survey of the survey area (all land that will be impacted by the proposals), to search for bats or field signs of bats and to consider the value and suitability of the structures for roosting bats, and to complete an HSI assessment of nearby ponds and analyse this against a desk study to assess any ecological constraints in relation to great crested newts *Triturus cristatus*.

This report was commissioned in order to inform a planning application under Section 73A of the Town and Country Planning Act 1990 for the change of use of former agricultural buildings, currently used for repair, storage and sale of salvage products, to a venue for functions such as weddings and birthday parties. A planning application has been submitted to Shropshire County Council (reference 21/02302/FUL).

Summary of Survey and Recommendations.

Development has already been undertaken on the site. No evidence of protected species was found on site during the survey, and there was limited potential for protected species to be using the site within the red line boundary, therefore no further surveys have been recommended. Some suggested site specific enhancements have been made in evaluation table (See “4.0 Conclusions, Impacts and Recommendations”) to increase the potential for protected species on site in line with the Local Planning Authority’s duty to ask for enhancements under the NPPF (2021).

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was commissioned by JJ Milner undertake a Preliminary Ecological Appraisal (PEA), Preliminary Roost Assessment (PRA) and Habitat Suitability Index (HSI) assessment at Burlton Manor, Burlton, Shrewsbury, Shropshire, SY4 5TD. The survey was completed on 13/09/2021. The aim of the survey was to complete an extended phase 1 habitat survey of the survey area (all land that will be impacted by the proposals), to search for bats or field signs of bats and to consider the value and suitability of the structures for roosting bats, and to complete an HSI assessment of nearby ponds and analyse this against a desk study to assess any ecological constraints in relation to great crested newts *Triturus cristatus*.

No previous reports have been produced for this site by Arbtech Consulting Ltd.

1.2 Site Context

The site is located at National Grid Reference SJ 44319 27826. The area directly impacted by the proposed development has an area of approximately 6.0ha. The site consists of an existing barn complex that has been converted to be used as a wedding venue, which is directly adjacent to a livery yard and jumping ring. Habitats on and directly adjacent to the site include hard standing and improved grassland. The wedding venue barn and directly surrounding habitat were surveyed.

1.3 Scope of the Report

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. The PRA element of the survey the report provides a description of all features suitable for roosting 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. The report identifies significant ecological impacts as a result of the development proposals, 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.

To achieve this, the following steps were taken:

- The desk study area and field survey area (generally 50m from the site boundary or proposed footprint and including the 'zone of influence' of the scheme) have been identified.
- A desk study has been carried out.
- Baseline information on the site and surrounding area has been recorded through an 'extended phase 1 habitat survey', including a phase 1 habitat survey (JNCC 2010) and recording further details in relation to notable or protected habitats and species.
- The ecological features present within the survey area have been evaluated where possible (CIEEM, December 2017).
- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Likely impacts on features of value, as a result of the development proposals, have been identified.
- Recommendations for further survey and assessment have been made.

- Recommendations for mitigation and enhancements of the developed site have been provided based on current information.

A survey plan is presented in Appendix 1a and 1b, proposed plan in Appendix 2 (where available), HIS score in Appendix 3, desk study results in Appendix 4 and a summary of relevant legislation is presented in Appendix 5.

1.4 Project Description

This report was commissioned in order to inform a planning application under Section 73A of the Town and Country Planning Act 1990 for the change of use of former agricultural buildings, currently used for repair, storage and sale of salvage products, to a venue for functions such as weddings and birthday parties. A planning application has been submitted to Shropshire County Council (reference 21/02302/FUL).

2.0 Methodology

2.1 Desk Study Methodology

The desk study included a 2km radius review of statutory designated sites, Biodiversity Action Plan (BAP) Priority Habitats and granted EPSML records for bats held on magic.gov.uk database. An assessment of the surrounding landscape was also completed using aerial images from Google Earth and OS maps.

2.2 Site Survey Methodology

The survey was undertaken by Elen Griffin BSc (Hons), Consultant - Accredited Agent to Natural England Bat Licence Number: 2016-22119-CLS-CLS, on 13/09/2021.

The methodology for the extended phase 1 habitat survey is based on the best practice publication phase 1 habitat survey methodology (JNCC, 2010). All land parcels are described and mapped according to JNCC Phase 1 habitat classification. Where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management.

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. The likelihood of the presence of protected species is ranked; the habitats on site are evaluated against their likelihood to provide suitable habitat for protected species.

The ecological value of the survey area has been assessed based on the Guidelines for Ecological Impact Assessment (CIEEM, 2018), and the Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring (Hill, 2005), using geographic frames of reference. The biodiversity value of any identified designated sites, habitat types and associated species assemblages has been considered. The distribution and extent of invasive species listed on Schedule 9 of the Wildlife and Countryside Act (1981 as amended 1996) were also noted throughout the survey area. The methodology for the PRA is informed by the Bat Conservation Trust (BCT) publication Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins, 2016). All features that will be impacted by the project proposals were assessed for their bat roosting, foraging and commuting habitat suitability. The surveyor systematically surveyed all features suitable for bats and signs of bat activity.

For any surveyed buildings:

A non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building(s) for potential access or egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope, 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.

For any surveyed trees

A visual inspection from ground level using binoculars and where accessible an internal inspection of suitable roosting features using an endoscope, torch and ladders.

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls *Tyto alba*.

2.3 Suitability Assessment

The likelihood of occurrence of protected species is ranked according to the criteria listed in Table 1. The habitats on site were evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Table 1: showing criteria considered when assessing the likelihood of occurrence of protected species

Present	Species are confirmed as present from the current survey or historical confirmed records
High	Habitat and features of high quality for species or species assemblage. Species known to be present in wider landscape (desk study records). Good quality surrounding habitat and good connectivity.
Medium	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat or ecological conditions required by the species or assemblage. Within known national distribution of species and local records in desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance or poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features or conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor-quality habitats and features.

	No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species or species assemblage.
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For the PRA element of the survey all affected survey features on site were categorised according to the likelihood of bats being present, in line with best practice guidelines (Collins, 2016). The features that dictate the likelihood of roosting bats are summarised in Tables 2 and 3 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 2: Features of a building that are correlated with use by bats

Likelihood of bats being present	Feature of building and its context
Higher	Buildings or structures with features of particular significance for 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).
Lower	A small number of possible roost sites or features, used sporadically by more widespread species. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.

Table 3: Features of a tree that are correlated with use by bats

Likelihood of bats being present	Feature of tree and its context
Higher	A tree 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.
Lower	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.

2.4 Limitations – Evaluation of the Methodology

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area and to 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 was not commissioned by the client, therefore historical records of protected species have not been factored into this report.

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

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of the desk study results is provided below; full details are included in Appendix 3.

3.2 Designated sites

Details of any statutory and non-statutory designated sites within a 2km radius of the survey site, including their reasons for notification, are provided in Table 4 below.

Table 4: Designated sites within 2km radius of the site

Designated site name	Distance from site (approx.)	Reasons for notification from Natural England
Statutory Sites		
None identified within 2km of the site.		
Non-statutory Sites		
None known but cannot be confirmed without a BRD search.		

3.3 Landscape

A review of the designated sites, aerial photographs (Figure 1), the magic.gov.uk database and OS maps has been undertaken. Collated together, the site's local habitat is described below:

The site is located north of Burlton, a hamlet in northern Shropshire. The landscape is dominated by agricultural fields and scattered residential dwellings. The town of Ellesmere lies to the far north of the site and Shrewsbury lies to the south. There are small, scattered woodland copses and tree lines around the area, which could be used by wildlife for foraging and commuting. Scattered watercourses and irrigation ditches are located around the site and will likely provide abundant insect foraging for several protected species including bats and birds.

Priority habitats within 2km of the site are listed in Table 5.

Table 5: priority habitat inventory within 2km

Habitat	Closest distance from site
Deciduous woodland	~60m south-east
Woodpasture and parkland	~1106m south-west
Ancient woodland	~1366m south-east

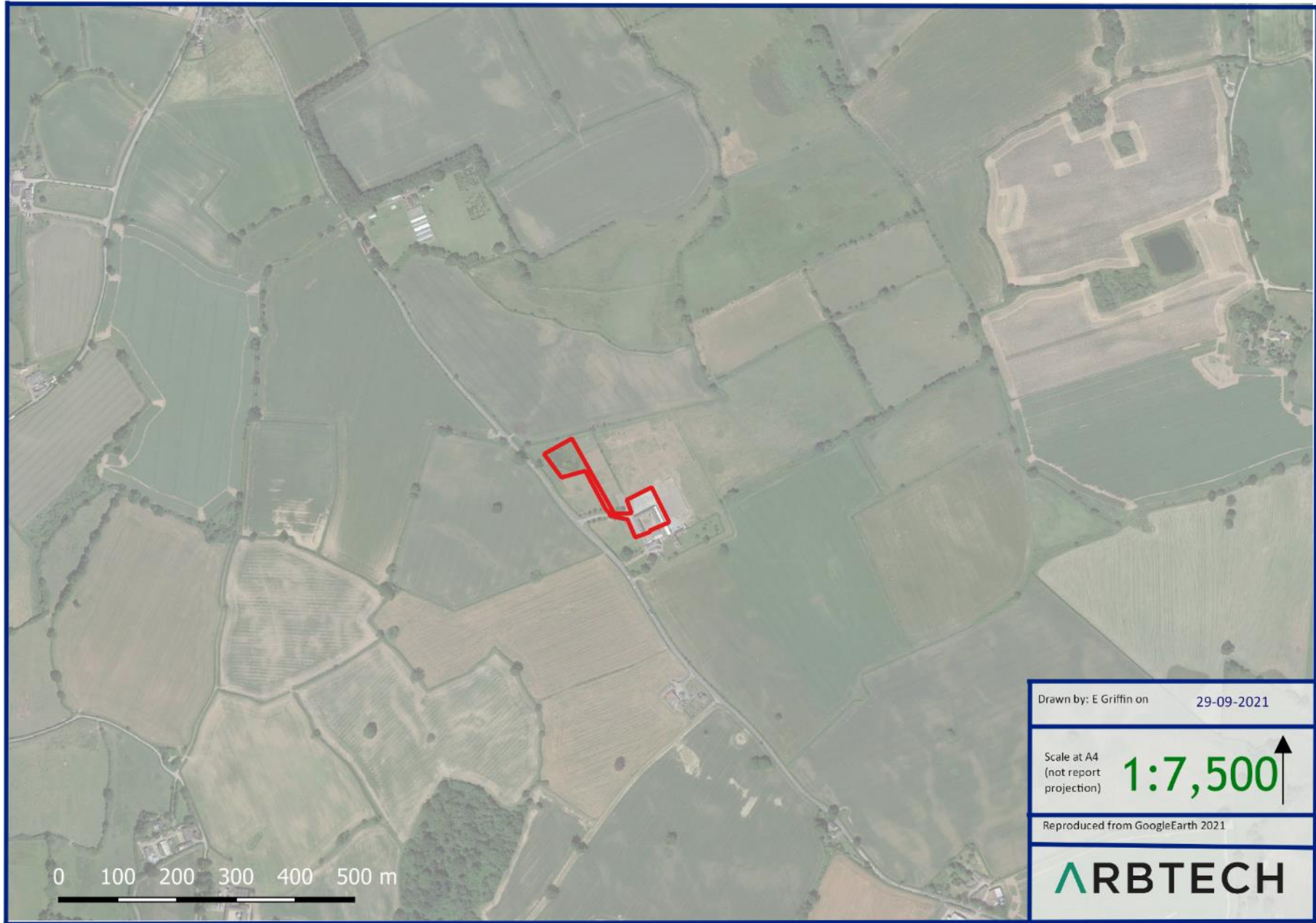


Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

Existing protected species records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release. The client has been advised that biological records data for the local area is necessary to facilitate a complete assessment. To date Arbtech has not been authorised to purchase these records from Shropshire Ecological Data Network (SEDN). The local planning authority (LPA) may request that protected species records data are obtained to conform to national guidelines, and these can be incorporated into the report at a later date.

Table 6: Historical records* within 2km of the site

Taxon group	Common name	Scientific binomial	Record details
Biological records data search not authorised by the client.			

*Records from the past 10 years

A search of the magic.gov.uk database for granted European Protected Species Mitigation Licences (EPSMLs) within a 2km radius of the site has been completed. Displaced protected species from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other suitable habitat in close proximity to the licensed site. The EPSML records show that no bat roosts have been destroyed within 2km.

Table 6: Granted EPSMLs within 2km of the site

Case reference of granted application	Approx. distance from site	Bat Effectuated	Species	Licence Date:	Start	Licence End Date:	Impacts allowed by licence
None identified within 2km on magic.gov.uk.							

3.5 Field Survey Results

The site consists of an existing barn complex that has been converted to be used as a wedding venue which is directly adjacent to a livery yard and jumping ring. Habitats on and directly adjacent to the site include hard standing and improved grassland. The wedding venue barn and directly surrounding habitat were surveyed and are illustrated in the map in Appendix 1. The weather conditions recorded at the time of the survey are shown in Table 7.

Table 7: Weather conditions during the survey

Date: 13/09/2021	
Temperature	14°C
Relative Humidity	93%
Cloud Cover	100%
Wind	8mph
Rain	light

3.6 Site Feature Descriptions and Photos

J3.6 & J4 – buildings & hard standing

Site overview looking north west.

The vast majority of the habitats directly impacted by the proposed development consist of the existing buildings and the surrounding driveway.



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J3.6, J4 & B4 –buildings, hard standing & improved grassland

Western site boundary.

The central barn structure is surrounded by areas of hard standing in the form of the existing driveway and paving and existing livestock paddocks which are used for equine grazing.



J4 – hard standing

North eastern boundary of the site.

An existing equine jumping arena and associated hard standing.



B6 – poor semi-improved grassland

Western site boundary.

Existing livestock paddocks extend along the western and northern boundaries of the site boundary.



Dry Pond – off site

OS maps indicate the presence of a pond to the north west of the existing barns.

The client has indicated that the pond was created as a result of the drainage for the surrounding fields however the drainage pipes have since been removed and as such the pond is now dry. However an HIS was carried out on this pond as if it was a seasonal pond rather than now permanently dry. The pond had a score of **0.46** meaning it has poor **suitability** for great crested newts.

The immediate surrounding habitat consists of poor semi-improved grassland which is regularly grazed by horses.



J3.6 Buildings

B1 – Exterior

B1 is a U shaped collection of traditional brick built barns with a pitched and hipped roof clad in slate tiles. A single-storey lean-to section is present along the eastern elevation of B1. The barn has been recently been refurbished including a new room internally and work to the exterior and surrounding area. As a result of the refurbishment the roof is in excellent condition with no gaps or areas of damage under which bats could roost.

The brick work is in excellent condition with only a small number of areas where missing mortar was identified. These areas were closely inspected with the use of ladders and a torch where needed. The gaps were found to be unsuitable for roosting bats and were cobwebbed which can indicate lack of recent use by bats.

The window and doorframes have also been replaced as part of the refurbishment and as such are well fitted and in excellent condition with no gaps which could provide suitable roosting features for bats.



South east elevation of B1 (pictured above).



Eastern elevation of B1 (pictured above).



Northern elevation of B1 (pictured above).



Example of the current exterior roof structure of B1 (pictured above).



Example gap in the mortar between the brick-work (pictured above).

B1 – Interior

There is no loft space present in B1. The main structural beams are exposed throughout. The roof structure in many places has been boarded and painted. Some areas of roof lining is still exposed and the roof structure looks to be built from a mixture of modern and traditional timber beams including the ridge beam.

Internally B1 is subject to high levels of light in addition to disturbance as part of the on going re-furnishment and change of use.



Eastern internal section of B1 (pictured above).



Western internal section of B1 (pictured above).

3.7 Protected Species Evidence

Evidence of bats

There was no evidence of bat activity located internally in B1 during the survey.

There was no evidence of bat use (e.g. bat droppings) found on external features. However, this kind of evidence is easily weathered away on the exterior of buildings and is rarely visible.

Other protected species

No evidence of other protected species was identified on the proposed development however a number of small passerine birds were seen in the immediate area during the survey.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

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. The likelihood of occupancy of protected species is ranked according to the criteria listed in Table 1.

Where this report supports a planning application, the ecological interest of the study area (including the survey area) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity. It is clearly stated where a preliminary value can be given and where further information is required.

Likelihood of the presence of bats

There are three possible outcomes of the PRA element of the survey, each with specific recommendations. These are outlined below:

Confirmed bat roost

Best practice survey guidelines (Collins, 2016) recommends additional surveys for confirmed roosts. Three further surveys are required to characterise the bat roost present including species, roost type and access points to inform a EPSML application with Natural England. Surveys must be completed during the active bat season (May – September). At least two of the surveys should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey (Collins, 2016).

Low, moderate or high likelihood of a bat roost present

Best practice survey guidelines (Collins, 2016) recommends additional surveys for features assessed as having low to high suitability for roosting bats. One, two or three further surveys are required to confirm presence or likely absence of a bat roost, based on a low, medium or high roost likelihood evaluation. Surveys must be completed during the active bat season (May – September). If more than one survey is recommended, at least one of them should be completed during the optimal survey period mid-May to August, and at least one the surveys should be a dawn re-entry survey (Collins, 2016). If two or one further survey is recommended these surveys must be completed during the optimal survey period (mid-May to August). For low and moderate roost likelihood evaluation the survey effort recommended at this stage is iterative and if bats roosts are confirmed in the building, a further survey will be required to provide sufficient information to inform an EPSML application to Natural England.

Negligible likelihood of a bat roost present

Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. However, if bats are found during any stage of the development, work should stop immediately, and a suitably qualified ecologist should be contacted for further advice.

Appropriate justification for this assessment is provided in Section 2.3 of this report.

4.2 Evaluation

Taking the desk study and site survey results into account, the following conclusions for ecological factors has been reached, as shown in Table 7.

Table 7: Evaluation of site

Ecological factor	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021)
Designated sites	The site is not subject to any designation. The MAGIC database shows that there are no statutory designated sites within 2km.	The proposed development is not of a sufficient scale to have an impact on any nearby designated sites.	None.	None.
Notable habitats and plants	The MAGIC database shows that there are no priority habitats on site. Deciduous woodland is present within 100m of the site; however, as the majority of the development works have already been undertaken, it is considered that there will be no future negative impact to any habitats as a result of the proposed development	None.	None.	Planting a greater diversity of flowering plants across the site will increase the diversity of insects, which will attract foraging bats. Planting night-scented species such as jasmine, evening primrose, honeysuckle and lavender is recommended. Installing insect boxes on site is also recommended.

Invasive / Non-native species	No invasive and non-native species were recorded on site.	None.	None.	None.
Bats B1	<p>B1 has been recently refurbished which included the installation of a new roof.</p> <p>As such the roof is in excellent condition with no potential roosting features for bats.</p> <p>A small number of areas of missing mortar were identified between the brick work however upon closer inspection these were considered to be unsuitable for roosting bats.</p> <p>Therefore, B1 is considered to have negligible habitat value for roosting bats.</p>	None.	None.	<p>Bat boxes can be installed on retained trees or adjacent buildings on site to increase bat roosting opportunities on site. The following bat boxes can be installed:</p> <ul style="list-style-type: none"> • Beaumaris Woodstone Bat Box • Vivara Pro WoodStone Bat Box • Improved Crevice Bat Box <p>A mixture of these boxes will provide a range of different roosting location for different species of bat. These should be installed at a minimum height of 3m on a south or south-west facing elevation.</p>
Birds	<p>The site is considered to hold negligible habitat for barn owls due to recent building refurbishment.</p> <p>Some small passerine birds were noted during the survey.</p>	The refurbishment of the barn has already been undertaken therefore there will be no impact.	None.	<p>Bird nesting opportunities can be increased on-site by installing the following bird boxes on retained trees or buildings:</p> <ul style="list-style-type: none"> • Vivara Pro Seville 32mm WoodStone Nest Box • Vivara Pro Barcelona WoodStone Open Nest Box <p>Bird boxes should be installed at a height between 1.5m and 3m with a clear flight path.</p>
Reptiles	Limited suitable habitat for common reptiles due to the current management of the site i.e predominantly hard standing and improved and semi improved grassland.	None.	None.	Waste materials e.g. log piles, brash, rocks etc. Can be used to create hibernacula and refugia for common reptiles. These should be positioned on the site boundaries below the existing hedgerow which will be retained.
Amphibians	<p>A HSI was carried out on the pond indicated on the OS maps.</p> <p>At the time of the survey the pond was dry and the client noted that it has been that way for some time.</p> <p>The pond area had an HSI score of 0.46 meaning it is considered to have a poor suitability for great crested newts, see appendix 3 for HSI calculation.</p>	None, the pond and immediate habitat surrounding them will be unaffected by the proposed development.	None.	As above.

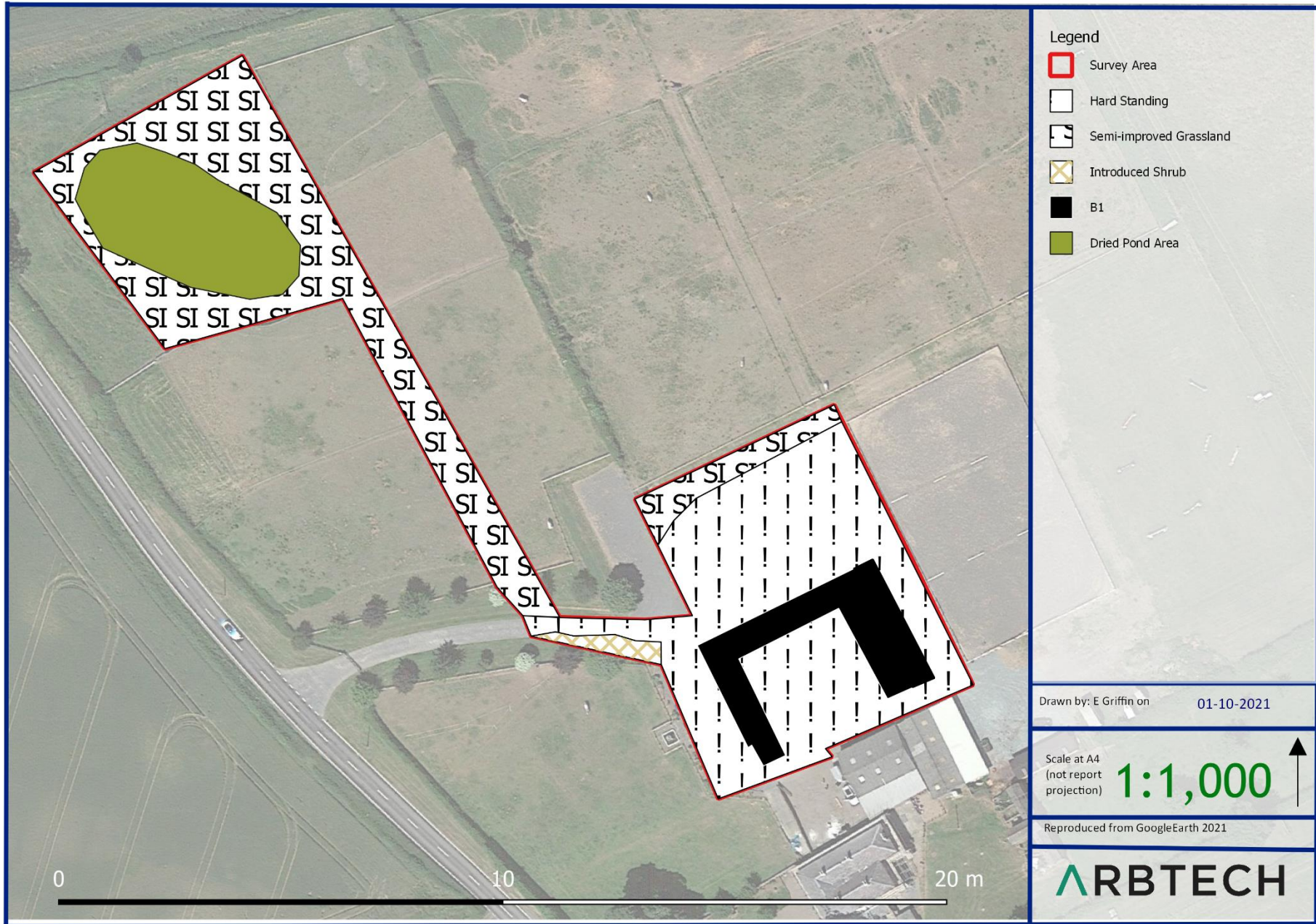
	<p>The surrounding habitat was considered to provide negligible habitat value for great crested newt due to the lack of structural diversity of the surrounding improved grassland.</p> <p>One other pond was identified within 500m of the site however has the development has already been undertaken no impact is envisaged.</p>			
Other Terrestrial Mammals	<p>Badgers</p> <p>Limited suitable habitat for badgers <i>Meles meles</i> found on site e.g. foraging and refuge.</p> <p>No badger setts were found within 30m of the site. Due to the rural location of the site badgers may traverse across the site however development works have already been undertaken and therefore no impacts on badgers are envisaged.</p>	<p>Badgers</p> <p>None.</p>	<p>Badgers</p> <p>None.</p>	<p>Badgers</p> <p>None.</p>
	<p>Water Vole</p> <p>No suitable habitat for water vole <i>Arvicola amphibius</i> on the site.</p>	<p>Water Vole</p> <p>None.</p>	<p>Water Vole</p> <p>None.</p>	<p>Water Vole</p> <p>None.</p>
	<p>Otter</p> <p>No suitable habitat for otter <i>Lutra lutra</i> on the site.</p>	<p>Otter</p> <p>None.</p>	<p>Otter</p> <p>None.</p>	<p>Otter</p> <p>None.</p>
	<p>Hedgehogs</p> <p>Habitats directly adjacent to the site i.e the surrounding gardens may provide some suitable habitat for hedgehogs <i>Erinaceus europaeus</i>. Therefore, hedgehogs may traverse across the site.</p> <p>However, the development works have already been undertaken and therefore no impacts on hedgehogs are anticipated.</p>	<p>Hedgehogs</p> <p>None.</p>	<p>Hedgehogs</p> <p>None.</p>	<p>Hedgehogs</p> <p>None.</p>

5.0 Bibliography

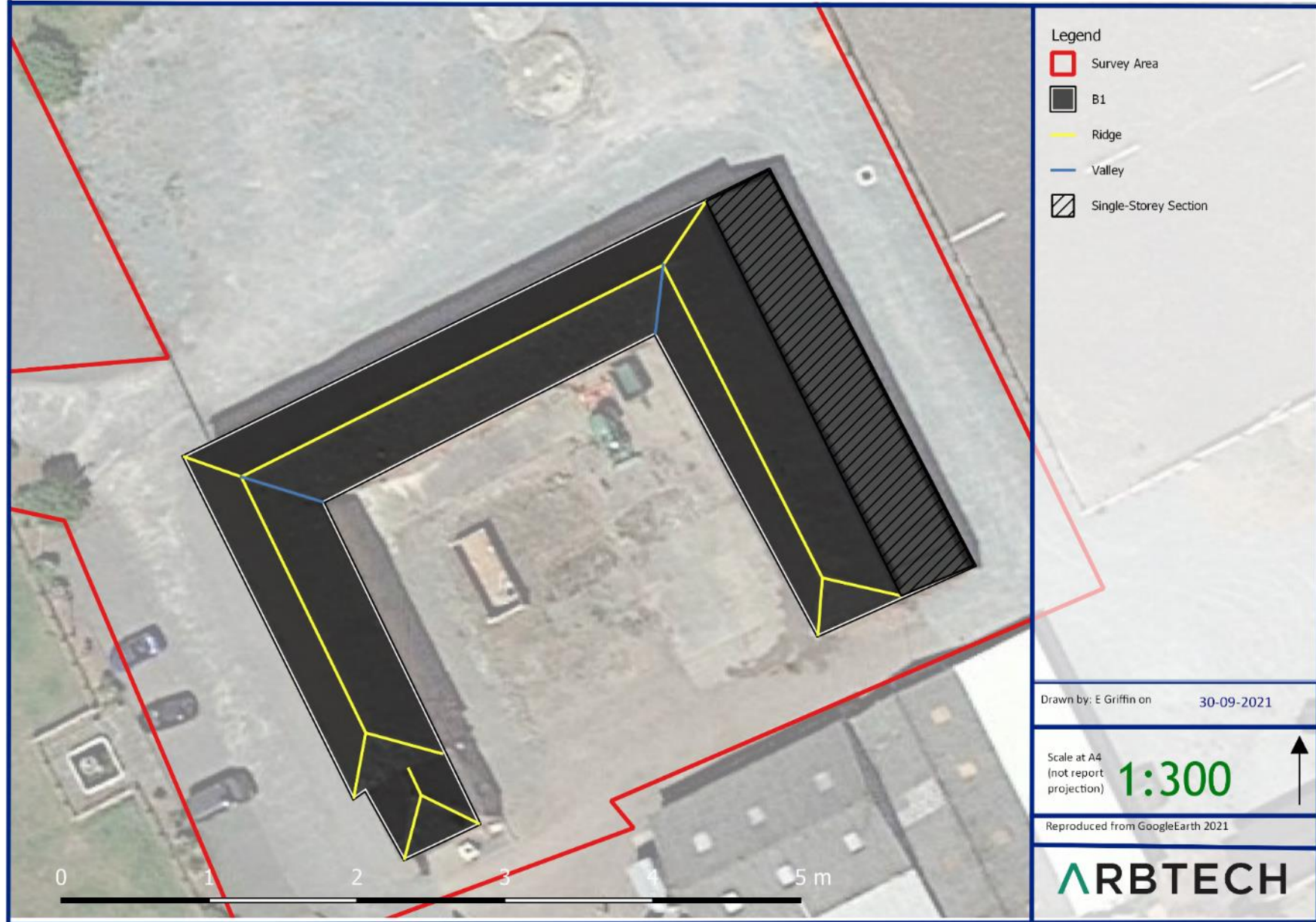
- British Trust for Ornithology (2016) www.bto.org/about-birds/nbw/putting-up-a-nest-box
- BS 42020, Biodiversity – Code of practice for planning and development (2013) <http://www.eoebiodiversity.org/pdfs/BS42020.pdf>
- Cheffings, C. and Farrell, L. (eds.) (2005) The Vascular Plant Red Data List for Great Britain. Joint Nature Conservation Committee, Peterborough.
- CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester. http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- CIEEM (2017) Guidelines for Preliminary Ecological Appraisal Institute of Ecology https://www.cieem.net/data/files/Publications/Guidelines_for_Preliminary_Ecological_Appraisal_Jan2018_1.pdf Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London. <https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition>
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? <http://biodiversitybydesign.co.uk/cmsAdmin/uploads/protection-for-bat-habitat-sep-2007.pdf>
- Google Earth (2021) accessed on 29/09/2021
- Gregory R.D., et al (2009). Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. <https://www.bto.org/sites/default/files/u12/bocc3.pdf>
- HMSO: Wildlife and Countryside Act 1981 (as amended 01.04.1996) <http://jncc.defra.gov.uk/page-1377>
- HMSO: The Protection of Badgers Act 1992 (as amended) <http://www.legislation.gov.uk/ukpga/1992/51/contents>
- 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 Conservation of Habitats and Species Regulations (2017) <http://www.legislation.gov.uk/uksi/2017/1012/contents/made>
- 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
- Magic database (2021) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 04/08/2021
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- National Planning Policy Framework, 2021 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

- 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. & 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>
- Paul Edgar, Jim Foster and John Baker (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth <http://downloads.gigl.org.uk/website/Reptile%20Habitat%20Management%20Handbook.pdf>
- Tom Langton, Catherine Beckett and Jim Foster (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

Appendix 1a: Phase 1 Habitat Survey Map



Appendix 1b: Preliminary Roost Assessment Survey Map



Appendix 2: Proposed Site Plan

None provided.

Appendix 3: Habitat Suitability Index Calculations

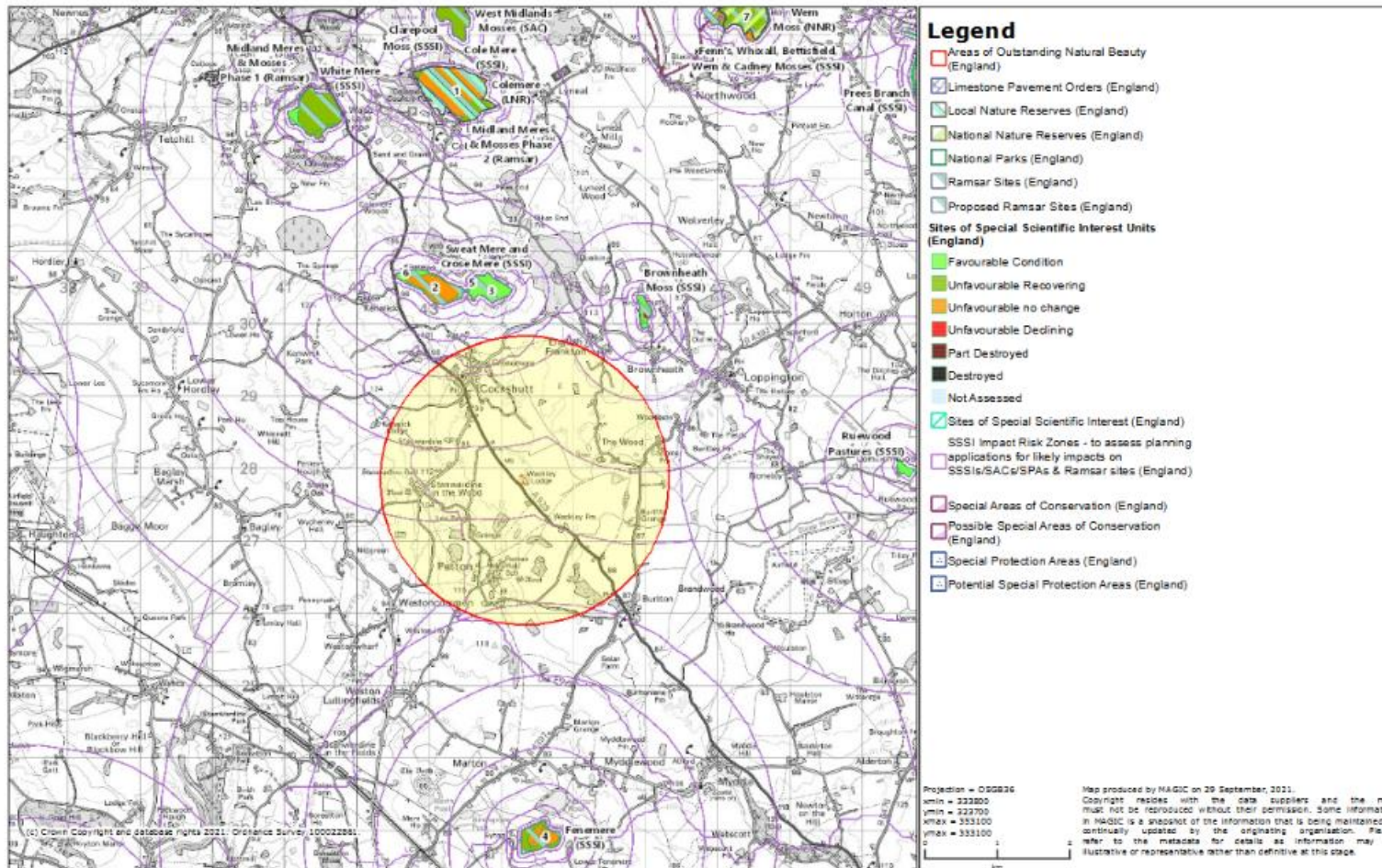
ARGUK GCN HSI Calculator				
	Pond Name	<i>Example</i>		
	Grid Ref	<i>SK123456</i>		
SI No	SI Description	SI Value	SI Value	SI Value
1	Geographic location	1.00	1	
2	Pond area	0.50	0.9	
3	Pond permanence	0.90	0.1	
4	Water quality	1.00	0.1	
5	Shade	1.00	0.5	
6	Water fowl effect	1.00	1	
7	Fish presence	1.00	1	
8	Pond Density	0.65	0.9	
9	Terrestrial habitat	1.00	0.33	
10	Macrophyte cover	0.90	0.3	
HSI Score		0.88	0.46	0.00
Pond suitability (see below)		<i>Excellent</i>		
Categorisation of HSI Score by Lee Brady				
HSI Score		Pond Suitability		
< 0.50		Poor		
0.50 - 0.59		Below average		
0.60 - 0.69		Average		
0.70 - 0.79		Good		
> 0.80		Excellent		
Based on	ARGUK advice note 5 - Great Crested Newt Habitat Suitability Index			

Appendix 4: Desk Study Information

Full historical records can be provided on request.

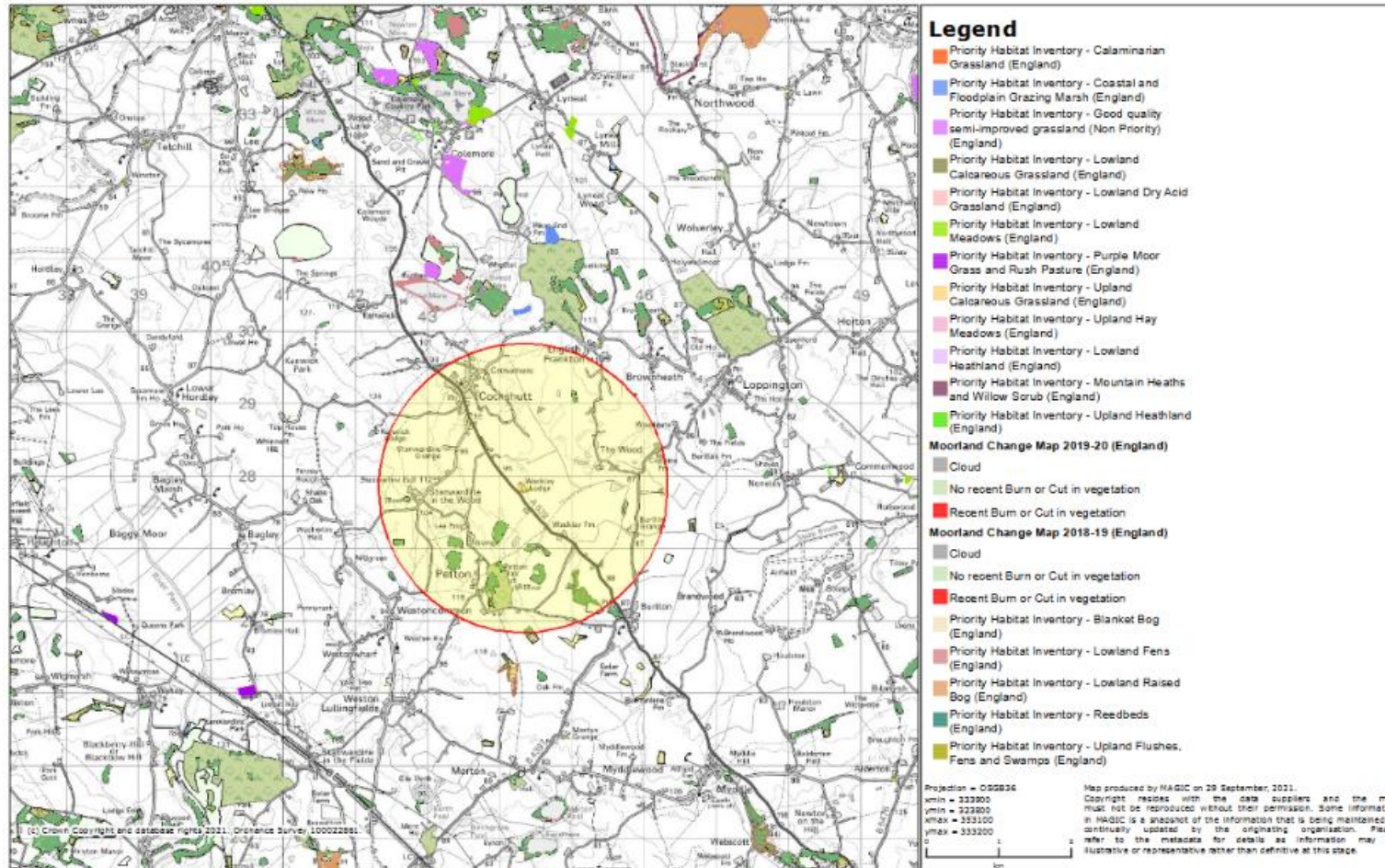
MAGiC

Statutory Designated Sites



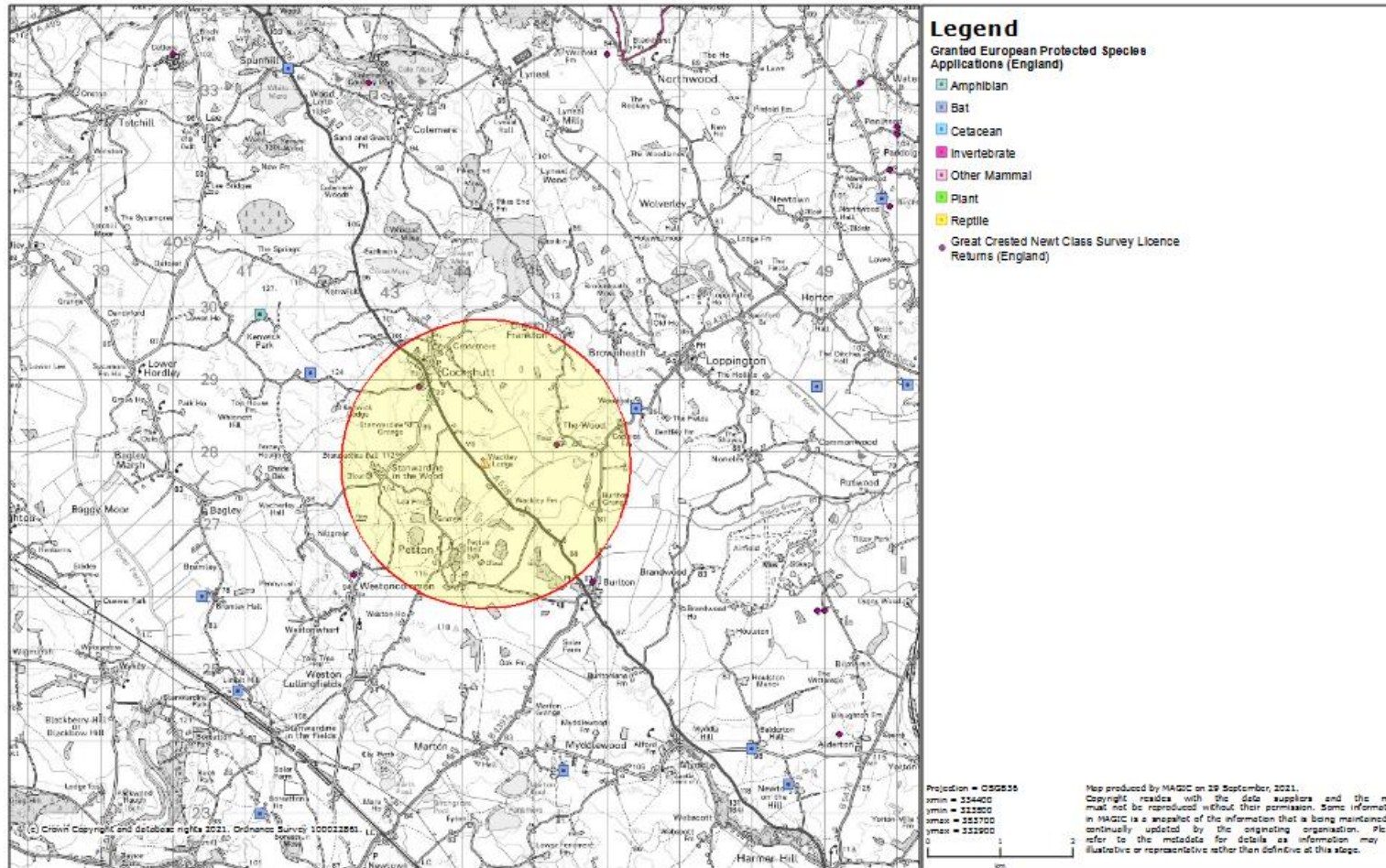
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Habitats



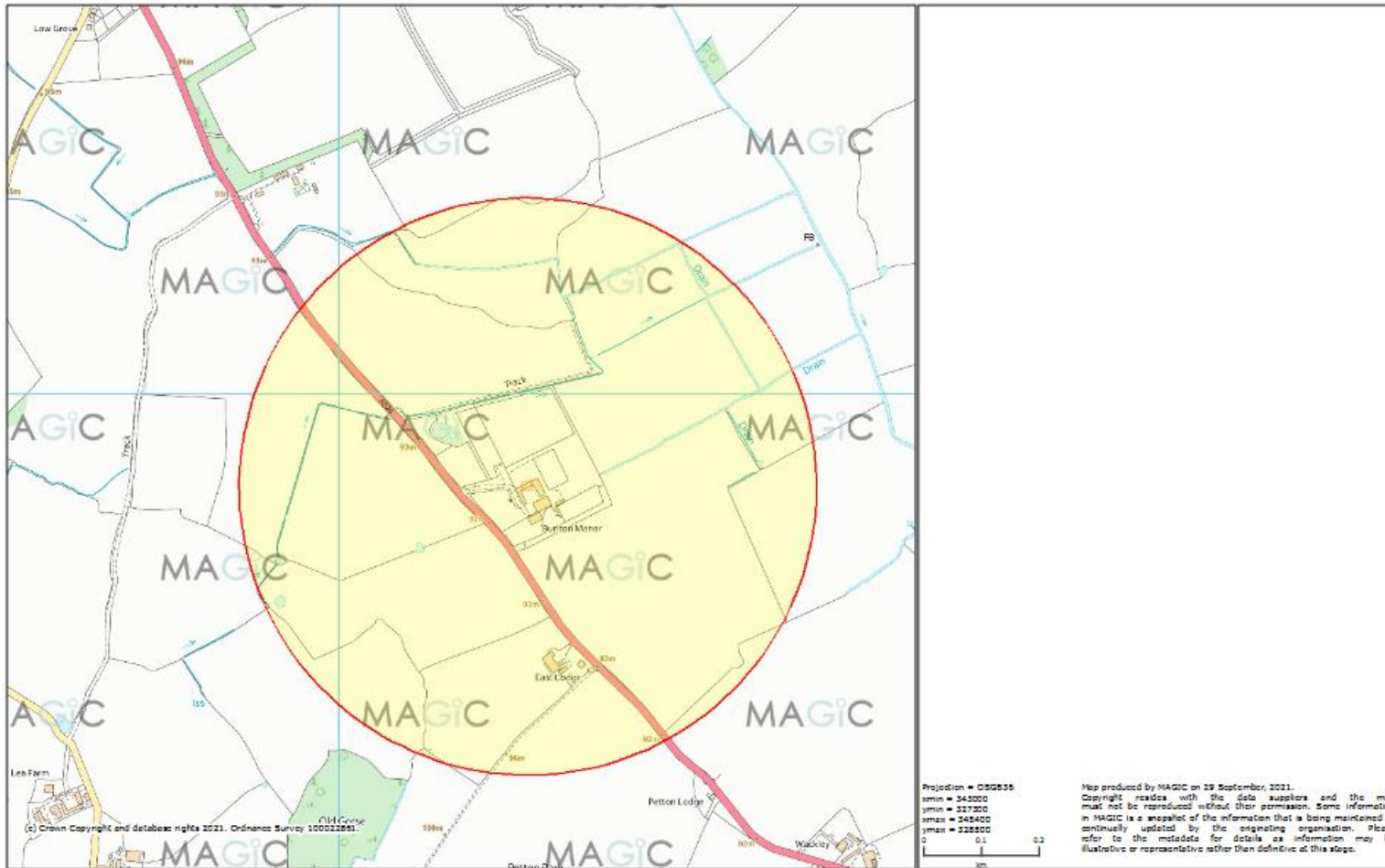
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EPSL



MAGiC

Ponds within 500m



Appendix 5: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds 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 1,000 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 within the EU, both within and outside Natura 2000 sites.

Annex V species (over 90): Member States must ensure that 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.

SACs and SPAs up to 12 nautical miles from the coast (i.e. 'territorial waters') are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2017 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994.

The Conservation of Offshore Marine Habitats and Species Regulations 2017 consolidate and update the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007. The 2017 Regulations introduce amendments which transfer responsibility for European nature conservation in the Welsh offshore region to Welsh Ministers. This gives Welsh Ministers similar powers in Welsh offshore waters to those currently exercised by Scottish Ministers in Scottish offshore waters. These regulations transpose into national law Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), and elements of Council Directive 2009/147/EC on the conservation of wild birds (Wild Birds Directive) in the UK offshore area. They came into force on 30th November 2017. These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area. The Conservation of Habitats and Species Regulations 2017 form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12nm 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 Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). This has been amended by the Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations (2019) which continue the same provision for European protected species, licensing requirements and protected sites after the UK leaves the EU.

The following notes are relevant for all species protected under the EC Habitats Directive:

In the Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

The Habitats Regulations do not define the act of 'migration' and, therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.

In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three 'tests':

- The action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment;
- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

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) and Nature Conservation (Scotland) Act 2004.

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

Effects on development works:

A development licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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 agency's to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

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

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) 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.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) 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
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects 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.

Reptiles (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.

Effects on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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

Effects on development works:

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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

Effects on development works:

An EPSM Licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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 EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

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

Effects 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 an EPSM licence issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales (NB: Hazel Dormouse are entirely absent from Scotland)). 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

It is also classified as Endangered in the IUCN Red List of Endangered Species. As a result of this and other relevant crayfish legislation such as the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, a series of licences are needed for working with White-clawed and non-native crayfish. These are:

- A licence to handle crayfish (therefore survey work) in England
- A licence for the keeping of crayfish in England and Wales with an exemption for Signal crayfish (England).
- People in the post-code areas listed with crayfish present prior to 1996 do not need to apply for consent for crayfish already established. It does not, however, allow any new stocking of non-native crayfish into waterbodies. Consent for trapping of non-native crayfish for control or consumption is most likely to be granted in Thames and Anglian regions in the areas with "go area" postcodes.
- Harvesting of crayfish is prohibited in much of England and in any part of Scotland and Wales.

Effects on development works:

The relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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 (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- 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.

Effects on development works:

An EPSM licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) 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 and Wales 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*

Effects 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 land owner 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*

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 Framework (England)

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 UK Biodiversity Action Plan priority species) 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; opportunities to incorporate biodiversity in and around developments are encouraged; 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 (Section 42 in Wales) 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.