



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Scott's Farm, Scotts Grove Road, Chobham, Surrey, GU24 8DR

Robert Brown

Status	Issue	Name	Date
Draft	1	Georgia Chapman BSc (Hons), Graduate Ecologist	14/08/2022
Reviewed	1.1	Lizi Pimlott BSc (Hons) MSc MCIEEM MRSB, Principal Ecologist	15/08/2022
Final	2	Georgia Chapman BSc (Hons), Graduate Ecologist	15/08/2022

Arbtech Consultant's Contact Details:

Georgia Chapman BSc Hons Graduate Ecologist



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.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework 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.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Robert Brown to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Scott's Farm, Scotts Grove Road, Chobham, Surrey, GU24 8DR (hereafter referred to as "the site"). The survey was required to inform a planning application for the erection of a single storey dwelling following the demolition of existing outbuildings (hereafter referred to as "the proposed development").

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

<i>Feature</i>	<i>Foreseen impacts</i>	<i>Recommendations</i> <i>Measures required to adhere to guidance, legislation, and planning policies.</i>
Roosting bats (B1, B2, B3, B4 and trees)	The proposed development will result in the demolition of these buildings and the felling of two adjacent trees. This could result in 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 (May –September) to confirm presence or likely-absence of a bat roost in buildings B1 and B2. The survey can be either a dusk emergence or dawn re-entry survey. Three surveyors (six in total) are required to provide full coverage of each building. Best practice guidelines state that trees with low suitability for roosting bats do not require further surveys. Instead, prior to any pruning or felling, a close-up inspection of any features that could be used by roosting bats will be undertaken to determine the presence or likely absence of roosting bats
Foraging and commuting bats	The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures.
Badger	No works will be undertaken within 30m of a badger sett. Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger 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 badgers if present.	Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:
Hedgehog	Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to their low value and the presence of more extensive habitat locally. Furthermore, construction activities could result in the death or injury of hedgehogs if present.	A precautionary working method will be implemented during construction, including the following measures:

Contents

1.0 Introduction and Context	6
1.1 Background	6
1.2 Site Context	6
1.3 Scope of the Report	6
2.0 Methodology	8
2.1 Desk Study	8
2.2 Field Survey	8
2.3 Limitations	10
3.0 Results and Evaluation	11
3.1 Desk Study Results	11
3.2 Field Survey Results	11
4.0 Conclusions, Impacts and Recommendations	27
4.1 Informative Guidelines.....	31
4.2 Evaluation	31
5.0 Bibliography	39
Appendix 1: Proposed Development Plan	42
Appendix 2: Site Location Plan	42
Appendix 3: Desk Study Information	Error! Bookmark not defined.
Appendix 4: Habitat Survey Plan	44
Appendix 5: Legislation and Planning Policy	47

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Robert Brown to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Scott's Farm, Scotts Grove Road, Chobham, Surrey, GU24 8DR (hereafter referred to as "the site"). The survey was required to inform a planning application for the erection of a single storey dwelling following the demolition of existing outbuildings (hereafter referred to as "the proposed development").

A plan showing the proposed development is provided in Appendix 1.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging, or commuting.

1.2 Site Context

The site is located northwest of Woking in Surrey at National Grid Reference SU96306037 and has an area of approximately 7.5ha. The site is characterised by a large two storey dwelling with associated outbuildings including equestrian facilities comprising barns, stables, paddocks, and a surfaced arena. Habitats recorded on site include poor semi-improved grassland, buildings, bare ground, fencing, hedgerow, scattered trees, amenity grassland, and tall ruderal. The surrounding landscape comprises large arable fields, parkland to the south, tree lines, hedgerows, and small scattered woodland copses in the area, as well as urban infrastructure extending to the southeast, south, and west of the site. There are eight waterbodies within 500m, the closest being a lake approximately 125m north.

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 Georgia Chapman (Accredited Agent on Natural England Bat Licence Number: 2016-22119-CLS-CLS) on Tuesday 26th July 2022.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in *Phase 1 Habitat Survey Methodology* (JNCC, 2010). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure, and management. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

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

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 focussed on four built structures and two trees which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the 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.

For any surveyed trees:

A visual inspection was undertaken from ground level using binoculars and, where accessible and safe to do so, an internal inspection of any features which bats could use for roosting was completed using an endoscope, torch, and ladders.

Suitability Assessment

Built structures and trees were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 for buildings and Table 2 for trees below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

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

Classification	Feature of building and its context
Moderate to high	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data). Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A small number of possible roost sites or features, used sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
Negligible	Unsuitable for use by bats.

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

Classification	Feature of tree and its context
Moderate to high	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. Trees with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	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 to be used sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators.
Negligible	Unsuitable for use by bats.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

Specific limitations to the PEA were a lack of access to waterbodies within 500m of the survey site.

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.

Table 3: Statutory designated sites within 2km radius of the site.

<i>Designated site name</i>	<i>Distance from site (approx.)</i>	<i>Reasons for notification from Natural England.</i>
Brentmoor Heath Local Nature Reserve (LNR)	~1,760m northwest	The reserve is predominantly wet and dry heath habitats, with areas of woodland, acid grassland and ponds. Areas of open ground in the wet heath support the insectivorous sundews, cotton-grass, and white beak sedge in an otherwise characteristic community of cross-leaved heath, purple moor grass and deer grass.
Bisley and West End Commons LNR	~1,775m west	Open Heathland and Secondary woodland which are home to an array of flora and fauna. The wet/humid heath is well developed with deer grass, and there is also a high frequency of common dodder. The surrounding woodland contains species such as mature Scots pine, oak, and holly, along with old hazel coppice stools. An abundance of common bird species breed here and there is evidence of foxes and roe deer throughout the area.

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: 26/07/2022	
Temperature	21°C
Humidity	54%
Cloud Cover	40%
Wind	7mph
Rain	None

Habitats and Flora


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


- Poor semi-improved grassland (B6)
- Buildings (J3.6)
- Bare ground (J4)
- Fencing (J2.4)
- Species poor defunct hedgerow (J2.2.2)
- Scattered broadleaved trees (A3.1)
- Amenity grassland (J1.2)
- Scrub (A2.2)
- Tall ruderal (C3.1)
- Standing water (G1.2)

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


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



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


Habitat Type	Habitat description	Photograph
<p>Poor semi-improved grassland</p>	<p>The site is dominated by large areas of semi-improved grassland within the surrounding horse paddocks, which have been subject to frequent grazing resulting in a short sward length of approximately 10cm. Species composition is poor, comprising predominantly perennial ryegrass (D) and meadow grass species with occasional narrow leaved plantain (O), dandelion (O), creeping buttercup (F), and clover (F). This area of the site will be unaffected by the proposed development.</p>	

<p>Buildings</p>	<p>Six buildings are present on site. Only four buildings were surveyed as they will be impacted by the proposed development, comprising two stable blocks and barns divided into three sections (B1a, B1b, B1c and B2a, B2b and B2c) as well as an outbuilding (B3) and open shelter (B4). These buildings and their suitability to support roosting bats are described within the PRA section below.</p>	
<p>Bare ground</p>	<p>Bare ground comprising tarmac, concrete and gravel is concentrated within the centre of the site and towards the site entrance enabling vehicular and pedestrian access.</p>	

<p>Fencing</p>	<p>Fencing is located throughout the site in the form of timber post and rail, and large timber fence panels. The timber post and rail are present between the horse paddocks and along the boundary line.</p>	
<p>Species poor defunct hedgerow</p>	<p>There are hedgerows present along the boundary of the garden associated with the main house as well as several of the fence lines dividing the horse paddocks. The hedgerow is not continuous with gaps throughout. Species composition includes hawthorn (D), dogwood (O), bramble (F), and ivy (F).</p>	

<p>Scattered broadleaved trees</p>	<p>There are several scattered trees located throughout the site comprising oak, hazel, chestnut, and maple varieties. Two scattered oak trees will be removed as a result of the proposed development. These trees and their suitability to support roosting bats are described within the PRA section below.</p> <p>The site boundary contains oak, ash, field maple, sycamore, hazel, and beech trees. These trees will be unaffected by the proposed development.</p>	
<p>Amenity grassland</p>	<p>Areas of amenity grassland are present within the centre of the site, adjacent to the buildings. The grass is intensively managed and regularly mown retaining a short sward length of approximately 2cm. Species composition includes perennial ryegrass and clover. The grassland is dormant and is mostly brown in colour with low species composition due to a lack of recent rainfall.</p>	

<p>Scrub</p>	<p>Scrub including hawthorn (D) and bramble (F) is present along the boundary woodland where the site is managed less regularly.</p>	
<p>Tall ruderal</p>	<p>There are several areas of tall ruderal present on site, the most concentrated area being northeast of the site. Species include docks (D), willowherb (D), nettles (O), and ragwort (R).</p>	

Standing water	A small pond is located on site, adjacent to the annexe within the driveway of the main house. The ornamental garden pond contains koi fish and has limited emergent vegetation.	
----------------	--	---

Fauna

Bats



Six granted EPSL records for bats were returned by the Magic database within 2km of the site. The closest one is approximately 430m west for the destruction of a common pipistrelle, soprano pipistrelle, and brown long-eared bat resting place.

Boundary and on-site scattered trees, as well as the open grassland areas are likely to provide abundant foraging and commuting opportunities for bats.



There are six buildings present on site, only four were surveyed as they will be impacted by the proposed development.



The results of the PRA are provided in Table 6. No evidence of roosting bats was identified during the survey.



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



Feature Ref	Description	Photographs
B1a (exterior)	<p>Building B1 is a single storey timber framed outbuilding with a pitched and gabled roof clad in clay roof tiles. The majority of the roof tiles on B1 are in very good condition with only a few raised, missing and broken tiles present under which bats could roost. The ridge tiles are in good condition with no missing mortar for bats to access and roost. There is no roof void within B1, and the roof is lined with a plastic roof membrane throughout.</p> <p>The building is divided into three separate sections; B1a is a storage room, B1b is internal stables, and B1c is an open barn.</p> <p>The roof tiles on B1a are in very good condition with no raised, missing, or broken tiles present under which bats could roost.</p> <p>The timber weatherboarding is tight fitting with no gaps under which bats could roost.</p>	
B1b (exterior)	<p>B1b is an internal stable block with a pitched roof clad in clay roof tiles. The majority of the roof tiles are in good condition with only several missing or broken tiles present.</p> <p>The roof tiles on southeast elevation of this building are in very good condition with no raised, missing, or broken tiles present under which bats could exploit to roost. The ridge tiles are in good condition and there is no missing mortar along the ridge tiles for bats to roost. The valley tiles are flush and tight fitting with no gaps under which bats could roost. The building is single skinned, and the walls are clad in timber weatherboarding. The timber is in good condition and is tight fitting with no gaps for bats to roost. The verge tiles along the gable with no missing mortar for bats to access and roost.</p>	



<p>B1b (exterior)</p>	<p>The roof tiles on the northwest elevation of B1b are in good condition with no raised or missing examples present. However, there are a few broken tiles which are present, and these do not provide suitable gaps for bats to roost.</p>	 A photograph showing the roof of a building with dark grey tiles. The roof is pitched and appears to be in good condition. There are some broken tiles visible, but they do not create large gaps. The building has dark horizontal siding and a brick base. The sky is overcast.
<p>B1b (exterior)</p>	<p>The timber weatherboarding on all elevations is in very good condition and is tight fitting with no gaps in which bats could access to roost.</p>	 A close-up photograph of the timber weatherboarding on the exterior of the building. The boards are dark and appear to be in very good condition, with no visible gaps between them. The background is dark, possibly the interior of the building.



<p>B1b (interior)</p>	<p>There is no internal roof void within B1. B1a, B1b and B1c are all connected and open. The roof is built from modern timber beams, including the ridge beams and the roof is lined with a white plastic membrane. Bats could roost above the wall tops, at the timber joins or between the timber and roof lining. The space is divided by internal stables, all areas were accessible and were thoroughly searched for evidence of bat use. No evidence of bat activity including feeding remains or droppings was recorded in B1b.</p>	
<p>B1c (exterior)</p>	<p>B1c is an open barn on the northeast side of B1. The building has a pitched and gabled roof clad in clay roof tiles. The clay roof tiles are in very good condition with no raised, missing, or broken tiles present for bats to access and roost. The verge tiles are in very good condition and there is no missing mortar along the verge tiles for bats to access and roost. There are no soffits or fascia boards on the building for bats to access and roost.</p>	



<p>B1c (interior)</p>	<p>B1c is an open barn with no internal roof void. The roof is connected to B1b and is open. The roof is built from modern timber beams and is lined with a white plastic membrane. The walls are single skinned and clad in timber weatherboarding which is in very good condition with no lifted areas under which bats could roost. Bats could roost amongst the joins in the timber or between the timber beams and the roof lining. The space was fully accessible and thoroughly examined for evidence of bat use. No evidence of bat activity including feeding remains or droppings was found within B1c.</p>	
<p>B2a (exterior)</p>	<p>B2 is a single storey outbuilding with a pitched and gabled roof clad in clay roof tiles. B2a is northeast of B2. The clay roof tiles are in very good condition with no raised, missing, or broken tiles for bats to access and roost. The walls are clad in timber weatherboarding which is in very good condition and is tight fitting with no gaps in which bats could roost.</p>	


<p>B2b (exterior)</p>	<p>B2b is an open barn southeast of the stable area. The barn has a hipped roof clad in clay roof tiles. The roof tiles are in good condition with only a few missing, and broken examples present under which bats would roost.</p>	
<p>B2b (interior)</p>	<p>Building B2b is a large open barn with no internal roof void. The roof is constructed of modern timber beams, including the ridge beam. The roof is lined with a white plastic membrane which is in good condition with no gaps or tears. The timber weatherboarding walls are reinforced with concrete breezeblocks. No evidence of bat activity including feeding remains or droppings was found within B2b. However, bats could roost amongst the joins in the timber, between the timber beams and roof lining, and along the wall tops. B2 has high levels of light as a result of an open side.</p>	

<p>B2b (exterior)</p>	<p>The roof tiles on the northwest elevation of B2b are in good condition, there are only a few missing and broken tiles present on this elevation under which bats could access to roost. There are no soffits or fascia boards present on the building. The walls are clad in timber weatherboarding which is in very good condition with no gaps between the boards for bats to roost. The walls are reinforced with concrete breeze blocks which is in good condition with no gaps or cracks for bats to roost.</p>	
<p>B2c (exterior)</p>	<p>B2c is a stable block located on the southwest side of the site. The stable block has a pitched roof clad in clay roof tiles. The clay roof tiles are in very good condition with no raised, missing, or broken tiles for bats to roost. The timber weatherboarding on the gable end is in very good condition and the timber boards are tight fitting with no gaps for bats to roost. There are timber bargeboards on this elevation, the bargeboards are in well fitted with no gap between the boards and weatherboarding for bats to access and roost.</p>	

<p>B2c (interior)</p>	<p>B2c is a single storey stable block with no internal roof void. The roof is lined with a white plastic membrane which is in good condition with no gaps or tears. The timber weatherboarding walls are reinforced with concrete breezeblocks. No evidence of bat activity including feeding remains or droppings was found within B2c. However, bats could roost amongst the joins in the timber, between the timber beams and roof lining, and along the wall tops.</p>	
<p>B2c (interior)</p>	<p>The soffits of B2c open and connected to B2b. The roof is constructed of modern timber beams and is lined with a white plastic membrane. The soffits were thoroughly searched for evidence of bat use in the form of feeding remains or droppings. No evidence of bat activity was observed in this location.</p>	

<p>B3 (exterior)</p>	<p>B3 is a large open lean to shed with a corrugated tin roof. The building is open on two sides. The building has no suitable features for roosting bats.</p>	
<p>B4 (exterior)</p>	<p>B4 is a single storey building with a pitched and gabled roof clad in corrugated asbestos sheets. The walls are clad in timber weatherboarding, the timber boards are in good condition and are tight fitting with no suitable gaps for bats enter and roost. The building has negligible habitat value for roosting bats.</p>	

<p>B4 (exterior)</p>	<p>The timber weatherboarding on this elevation is in very good condition with no gaps in the timber boards for bats to access and roost.</p>	 A photograph showing the exterior of a building with dark, horizontal timber weatherboarding. The building has a gabled roof and three small, white-framed windows. The ground in front is a concrete or gravel area. The sky is overcast.
<p>T1</p>	<p>T1 will be removed as a result of the proposed development. It is semi-mature in age and although it is in good structural condition does contain knot holes which is a feature typically utilised by roosting bats. The knot hole is circled in red and is approximately 5m high.</p>	 A photograph of a large, mature tree with dense green foliage. A red circle highlights a knot hole in the tree trunk, which is approximately 5 meters high. A brick building is partially visible in the background.

<p>T2</p>	<p>T2 will be removed as a result of the proposed development. It is semi-mature in age and although it is in good structural condition this does contain knot holes which is a feature typically utilised by roosting bats. The knot holes visible from ground level are circled in red. There are two rot holes approximately 4m and 5m high.</p>	
-----------	---	---

Other Species

No EPSL records for other protected species was returned by the Magic database.

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
<p>Amphibians</p>	<p>No GCN EPSLs records were returned by the Magic database.</p> <p>One survey licence was identified by the Magic database within 2km, confirming the presence of GCN ~1,760m northeast of the site. Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). As such, the great crested newt metapopulation known to be present 1.76km northeast are not suitably connected to the site.</p> <p>There is a pond onsite as well as seven waterbodies within 500m, the closest being approximately 160m northeast, however, the site is enclosed by urban infrastructure including roads and houses with enclosed gardens between the ponds and the site which are likely to represent a significant barrier to amphibian dispersal.</p> <p>Furthermore, the site boundary is for the most part well fenced which is likely to prevent amphibians commuting between ponds and the site.</p>

A review of aerial imagery indicates there are eight waterbodies located within 500m of the site including one ornamental pond on site (P1). P1 was assessed to provide poor suitability to support great crested newts due to the raised concrete banks and limited aquatic vegetation, presence of large fish as well as the poor quality of the surrounding terrestrial habitat. Great crested newts are highly unlikely to be present within P1.

Due to the poor suitability of the onsite habitats including hardstanding and amenity grassland as well as poor habitat connectivity to nearby ponds, great crested newts are unlikely to use the site. The waterbodies are separated from the site by urban and agricultural infrastructure including tarmac roads, buildings, and extensive managed grassland which is either grazed or regularly mown resulting in a very short sward length. These landscape features are suboptimal for great crested newts due to a lack of refuge from predation and minimal opportunities for foraging. Onsite habitats are similar, although, tall ruderal and scrub along the edge of the site could provide limited suitable habitat.

When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of approximately 0.134ha of hard standing, and 0.02ha of amenity grassland. P1 is located northwest of the proposed development area and will not be directly impacted. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a green risk score, which states: Offence highly unlikely (see Figure 1 below). This rapid risk assessment score was produced based on the approximate areas of which are going to be removed (a total of 0.136ha hard standing and amenity grassland) as well as the distance of the site from waterbodies within 500m of the site. The closest being approximately 160m northeast.



Table 8a: HSI calculation of ponds.

SI Description	SI Value P1
Geographic location	1
Pond Area	0.05
Pond Permanence	0.9
Water Quality	0.67
Shade	1
Waterfowl Effect	1
Fish Presence	0
Pond Density	0.75
Terrestrial Habitat	0.67
Macrophyte Cover	0.5
HSI Score	0.387
HSI Category	Poor

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

Figure 1: Screenshot of Natural England Great Crested Newt Rapid Risk Assessment.

Reptiles
 No EPSL records for reptiles was returned by the Magic database within 2km of the site. The surrounding landscape is likely to support reptiles due to suitable foraging, commuting and refugia opportunities present within scrub, grassland, and woodland pockets in the wider area. Habitats within the site including amenity grassland and hard standing are suboptimal for supporting reptiles, however, isolated unmanaged grassland and scrub as well as bracken, scrub and tall ruderal along the boundaries could provide

	<p>suitable habitats for reptiles. The proposed development will not result in the removal of any habitats which could be utilised by reptiles for shelter, therefore it is unlikely reptiles will be encountered or impacted.</p>
Badgers	<p>No EPSL records for badgers was returned by the Magic database within 2km of the site. No evidence of badgers including snuffle holes, mammal paths, latrines, prints, hairs, or sett entrances were observed on site or adjacent to the site. Urban infrastructure including roads and residential dwellings with enclosed gardens in the immediate landscape are likely to present significant barriers to dispersal. However, it is possible badgers could forage within habitats along the site boundary.</p>
Hazel Dormouse	<p>No EPSL records for hazel dormouse was returned by the Magic database within 2km of the site. The site and surrounding area lack suitable complex vegetative structure and connectivity to support dormice. Within a different landscape context, habitats on site have potential to support dormice in the form of woodland and scrub. However, these habitats are small in extent and lack a continuous three-dimensional distribution. Dormice typically utilise a three-dimensional woodland ground flora as to commute between feeding and breeding sites whilst avoiding predation; the woodland on site supports a suboptimal understorey layer. Furthermore, for isolated woodland pockets in the UK, research indicates that dormice require 20ha of woodland habitat to support a viable population (Bright et al. 1994). The boundary woodland west of the site is not suitably connected to further pockets of woodland or wide hedgerows and thus does not provide the coverage required to support a viable population.</p>
Hedgehog	<p>There is suitable habitat for hedgehogs in the wider landscape and surrounding areas with scrub, grassland, and small woodland pockets. Additionally, there is suitable habitat on site in the form of a boundary woodland, scrub, tall ruderal, and poor semi-improved grassland habitats. The proposed development will impact areas of hard standing and amenity grassland and will not result in the removal of any vegetation which could be used by hedgehogs.</p>
Riparian mammals	<p>The site has no watercourses present or immediately adjacent to support otter or water vole.</p>
Birds	<p>Boundary woodland, scattered trees, and scrub could all provide suitable habitat for nesting birds. Evidence of nesting birds was found within both B1 and B2. This includes both feathers and droppings which were assessed to have belonged to a little owl. It is likely that Buildings B1 and B2 will provide suitable nesting opportunities for small passerine birds as well as swifts and swallows.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Figure 2: Little owl pellet.</p> </div> <div style="text-align: center;">  <p>Figure 3: Little owl feather.</p> </div> </div>

Invertebrates	The habitats on site including the amenity grassland and hard standing are of negligible ecological value and minimal vegetation will be impacted by the proposed development. The woodland, poor semi-improved grassland, bracken, tall ruderal, scrub, and introduced shrub provide suitable habitat for common invertebrate assemblages.
---------------	---

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 details any ecological constraints identified in relation to the proposed development which will comprise for the erection of a single storey dwelling following the demolition of existing outbuildings.

Table 8: Evaluation of the site and any ecological constraints.

<i>Ref</i>	<i>Summary of Survey Findings</i>	<i>Foreseen Impacts</i>	<i>Recommendations Measures required to adhere to guidance, legislation, and planning policies.</i>	<i>Biodiversity Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).</i>
Designated sites	The site is not subject to any statutory or non-statutory designation. There are two statutory sites within 2km of the site, the closest being Brentmoor Heath LNR located approximately ~1,760m northwest from the site.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the surrounding physical barriers.	None.	None.
Habitats and flora	There are no notable habitats within the site, but deciduous woodland is present adjacent to the northeast and northwest of the site. Deciduous woodland is listed	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 surrounding physical	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development:

	<p>as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Further notable habitats are present within 2km.</p> <p>Other habitats within the site are common and widespread and have low ecological value.</p> <p>No protected or notable plant species were recorded during the survey.</p>	<p>barriers. The proposed development will result in the demolition of three buildings and the removal and significant disturbance of approximately 0.134ha of hard standing, and 0.02ha of amenity grassland. The new development will be within the same footprint of B1 and B2 and the hard standing in that area.</p>		<ul style="list-style-type: none"> • Native tree, hedgerow, and shrub planting. • Creation of wildflower grassland. <p>Species-specific enhancement opportunities are detailed later in this table.</p>
Amphibians	<p>No GCN EPSLs records were returned by the Magic database. One survey licence was identified by the Magic database within 2km, confirming the presence of GCN -1,760m northeast of the site.</p> <p>There is a pond onsite as well as three ponds within 500m, the closest being approximately 160m northeast, however, the site is enclosed by urban infrastructure including roads and houses with enclosed gardens between the ponds and the site which are likely to represent a significant barrier to dispersal.</p> <p>Furthermore, the site boundary is for the most part well fenced which is likely to prevent amphibians commuting between ponds and the site.</p>	<p>Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local amphibian populations owing to their low value and the presence of more extensive habitat locally.</p>	None.	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for amphibians:</p> <ul style="list-style-type: none"> • The creation of a wildlife pond for wildlife to include native plant species and no fish. • Creation of amphibian refugia and hibernacula using debris and brash from site clearance. • Planting of native scrub and grassland to increase foraging opportunities.
Reptiles	<p>No EPSL records for reptiles was returned by the Magic database within 2km of the site.</p>	<p>Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will be removed during construction. The loss of such</p>	None.	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed</p>

	<p>The surrounding landscape is likely to support reptiles due to suitable foraging, commuting and refugia opportunities present within scrub, grassland, and woodland pockets in the wider area. Habitats within the site including amenity grassland and hard standing which are suboptimal for supporting reptiles, however, isolated unmanaged grassland as well as bracken, scrub and tall ruderal along the site boundaries could provide suitable habitats for reptiles. However, the proposed development is approximately 130m from the site boundary and suitable habitat for reptiles and will not result in the removal of suitable habitats.</p>	<p>habitats is likely to be inconsequential to local reptile populations owing to their low value and the presence of more extensive habitat locally.</p>		<p>development which would be beneficial for reptiles:</p> <ul style="list-style-type: none"> • The creation of a wildlife pond for wildlife to include native plant species and no fish. • Creation of reptile refugia and hibernacula using debris and brash from site clearance. • Planting of native scrub and grassland to increase foraging opportunities. • The creation of basking areas such as rock piles or areas of cleared ground with shelter nearby.
<p>Roosting bats (B1, B2, B3, B4 and trees)</p>	<p>Six granted EPSL records for bats were returned by the Magic database within 2km of the site. The closest one is approximately 430m west for the destruction of a common pipistrelle, soprano pipistrelle, and brown long-eared bat resting place.</p> <p>Buildings B1 and B2 both have low habitat value for roosting bats.</p> <p>Buildings B3 and B4 both have negligible habitat value for roosting bats.</p> <p>Both T1 and T2 have low habitat value for roosting bats due to the presence of knot holes.</p>	<p>The proposed development will result in the demolition of these buildings and the felling of two adjacent trees. This could result in 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 (May –September) to confirm presence or likely-absence of a bat roost in buildings B1 and B2. The survey can be either a dusk emergence or dawn re-entry survey. Three surveyors (six in total) are required to provide full coverage of each building. The survey is likely to be required before planning permission can be granted. If bat roosts are confirmed in the building two additional surveys will be required to inform an EPSL application to Natural England. Surveys should be a minimum of two weeks apart. The EPSL application requires that surveys</p>	<p>To be confirmed upon completion of the surveys.</p>

			<p>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>In the unlikely event that a bat or evidence of bats is discovered during the demolition of buildings B3 and B4 all work must stop, and a bat licensed ecologist contacted for further advice.</p> <p>Best practice guidelines state that trees with low suitability for roosting bats do not require further surveys. Instead, prior to any pruning or felling, a close-up inspection of any features that could be used by roosting bats will be undertaken to determine the presence or likely absence of roosting bats. This may require a qualified climbing team or a Mobile Elevated Work Platform (MEWP) to access the features.</p> <p>In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.</p>	
<p>Foraging and commuting bats</p>	<p>Scattered and boundary trees 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>	<p>The proposed development will result in the loss of two scattered trees and small areas of amenity grassland but given their low value and the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats.</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"> • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultraviolet light 	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats:</p> <ul style="list-style-type: none"> • The creation of a wildlife pond. • Planting of native tree, shrub, and hedgerows to

		<p>The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.</p>	<ul style="list-style-type: none"> • 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. <p>Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only.</p> <p>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.</p> <p>Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.</p>	<p>increase foraging opportunities.</p>
--	--	---	---	---

<p>Badger</p>	<p>No EPSL records for badgers was returned by the Magic database within 2km of the site. No evidence of badgers including snuffle holes, mammal paths, latrines, prints, hairs, or sett entrances were observed on site or adjacent to the site. Urban infrastructure including roads and residential dwellings with enclosed gardens in the immediate landscape are likely to present significant barriers to dispersal. However, it is possible badgers could forage within habitats along the site boundary.</p>	<p>No works will be undertaken within 30m of a badger sett. Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger 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 badgers if present.</p>	<p>Owing to the nature of the proposed development and the low potential for impacts to bat roosts, further badger surveys are considered to be disproportionate. 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. • 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 advise must be sought from a suitably qualified ecologist. 	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for badgers:</p> <ul style="list-style-type: none"> • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities.
<p>Hazel dormouse</p>	<p>The site lack's complex vegetative structure and connectivity to the wider landscape. In addition, the proposed works are only due to impact hard standing, amenity grassland, two scattered trees and buildings. Furthermore, the development site is approximately 130m from woodland and scrub habitats along the site boundary.</p>	<p>No impacts are anticipated on hazel dormice as a result of the proposed development.</p>	<p>None.</p>	<p>None.</p>

<p>Hedgehog</p>	<p>Although there are suitable habitats on site and within the landscape, the proposed development is only due to impact hardstanding, amenity grassland, two scattered trees and buildings. Furthermore, the development site is approximately 130m from woodland and scrub habitats along the site boundary. No evidence of hedgehogs was observed on site.</p>	<p>Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will 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>	<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 hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If a hedgehog is found, then this should be moved by gloved hand to an undisturbed and sheltered area of the site or adjacent land. 	<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"> • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities. • Creation of brush piles or installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.
<p>Riparian mammals</p>	<p>There are no suitable water courses for otter and water vole on or adjacent to site.</p>	<p>No impacts are anticipated on otters or water voles as a result of the proposed development.</p>	<p>None.</p>	<p>None.</p>
<p>Birds</p>	<p>Boundary woodland, scattered trees, and scrub could all provide suitable habitat for nesting birds. Evidence of nesting birds was found within both B1 and B2. This includes both feathers and droppings which were assessed to have belonged to a little owl. It is likely that Buildings B1 and B2 will provide suitable nesting opportunities for small passerine</p>	<p>Four buildings and two scattered trees will be removed during construction. The loss of such habitats could result in a reduction in nesting habitat. Furthermore, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.</p>	<p>Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the buildings B1 and B2 as well as T1 and T2 should be undertaken immediately, by a 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 a minimum of two bird boxes on mature trees around the site boundaries or on retained buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box (buildings) Schwegler 1SP Sparrow Terrace (buildings) Schwegler 1B Nest Boxes (trees) Schwegler 2H Robin Boxes (trees)</p>

	birds as well as swifts and swallows.		The installation of a little owl nest box placed horizontally either on a wall top or tree branch a minimum of 3m above the ground, or alternatively within an open sided or open fronted building.	Woodstone Nest Box (buildings or trees) Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain, and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole. Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction
Invertebrates	The boundary woodland, poor semi-improved grassland, tall ruderal, and scrub habitats provide suitable habitat for common invertebrate assemblages.	Approximately 0.134ha of hard standing, and 0.02ha of amenity grassland will be removed during construction.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates: <ul style="list-style-type: none"> • Native tree, hedgerow, and shrub planting. • Creation of wildflower grassland. • Retention of deadwood on the site.

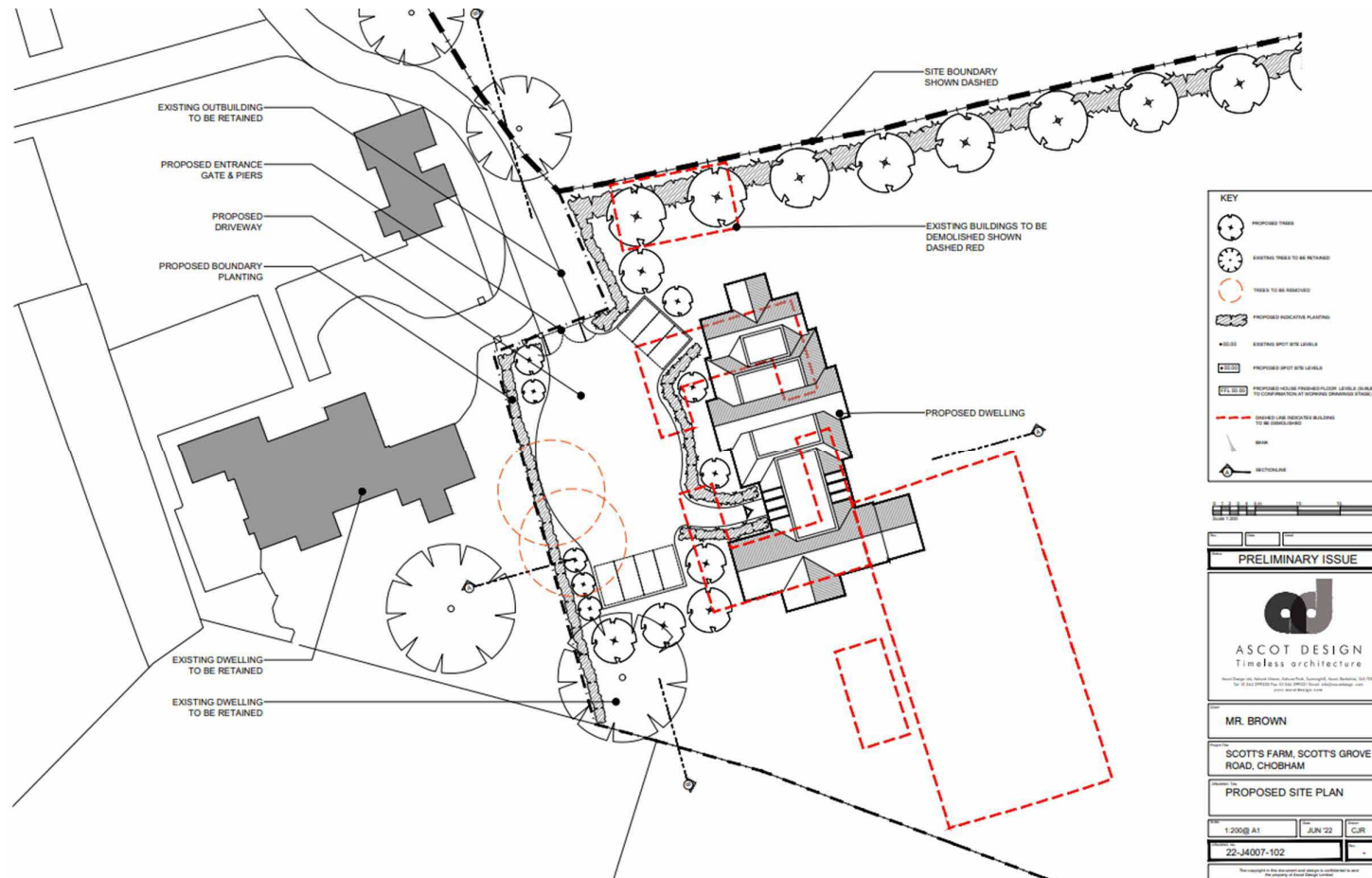
5.0 Bibliography

- 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. (2016). Bat Surveys for Professional Ecologists –Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Defra (2007). Hedgerow Survey Handbook. A Standard Procedure for Local Surveys in the UK. Defra, London.
- Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn R.D., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D. (2015). Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746
- 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.

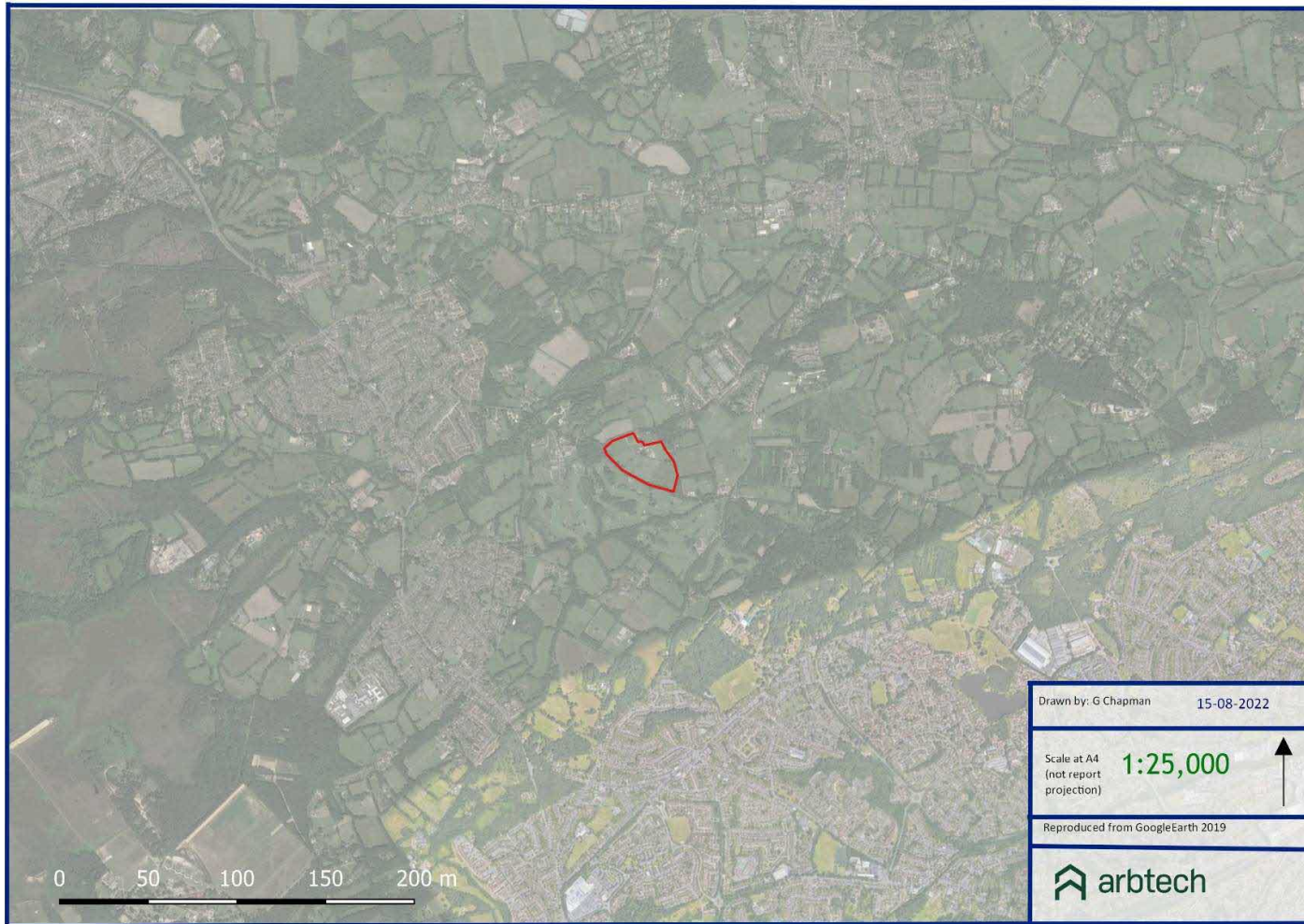
- Gilbert, G., Gibbons, D.W., and Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
- Google Earth. Accessed on 26/07/2022.
- Harris, S., Cresswell, P. and Jefferies, D.J. (1989). Surveying badgers. Mammal Society, London.
- HMSO: Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 <https://www.legislation.gov.uk/uksi/2019/579/contents/made>
- HMSO: Countryside & Rights of Way Act (2000) <http://jncc.defra.gov.uk/page-1378>
- HMSO: Natural Environmental and Rural Communities Act (2006) <http://www.legislation.gov.uk/ukpga/2006/16/contents>
- HMSO: The Protection of Badgers Act 1992 (as amended) <http://www.legislation.gov.uk/ukpga/1992/51/contents>
- HMSO: Wildlife and Countryside Act 1981 (as amended 01.04.1996) <http://jncc.defra.gov.uk/page-1377>
- Institution of Lighting Professionals (2018). Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the Built Environment Series Publication: http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting.
- JNCC (2004). Bat Workers Manual, 3rd Edition. <http://jncc.defra.gov.uk/page-2861>
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Langton, T., Beckett, C. and Foster, J (2001). Great Crested Newt Conservation Handbook. Froglife. Suffolk. http://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf
- Magic Database. <http://www.magic.gov.uk/MagicMap.aspx> Accessed on 26/07/2022.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- National Planning Policy Framework (2021). <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Natural England Designated Sites View. <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx> Accessed on 26/07/2022.
- 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.
- Strachan, R., Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook. Third Edition. Wildlife Conservation Research Unit, Oxford.
- UK Habitat Classification Working Group (2018). UK Habitat Classification User Manual at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>
- 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.

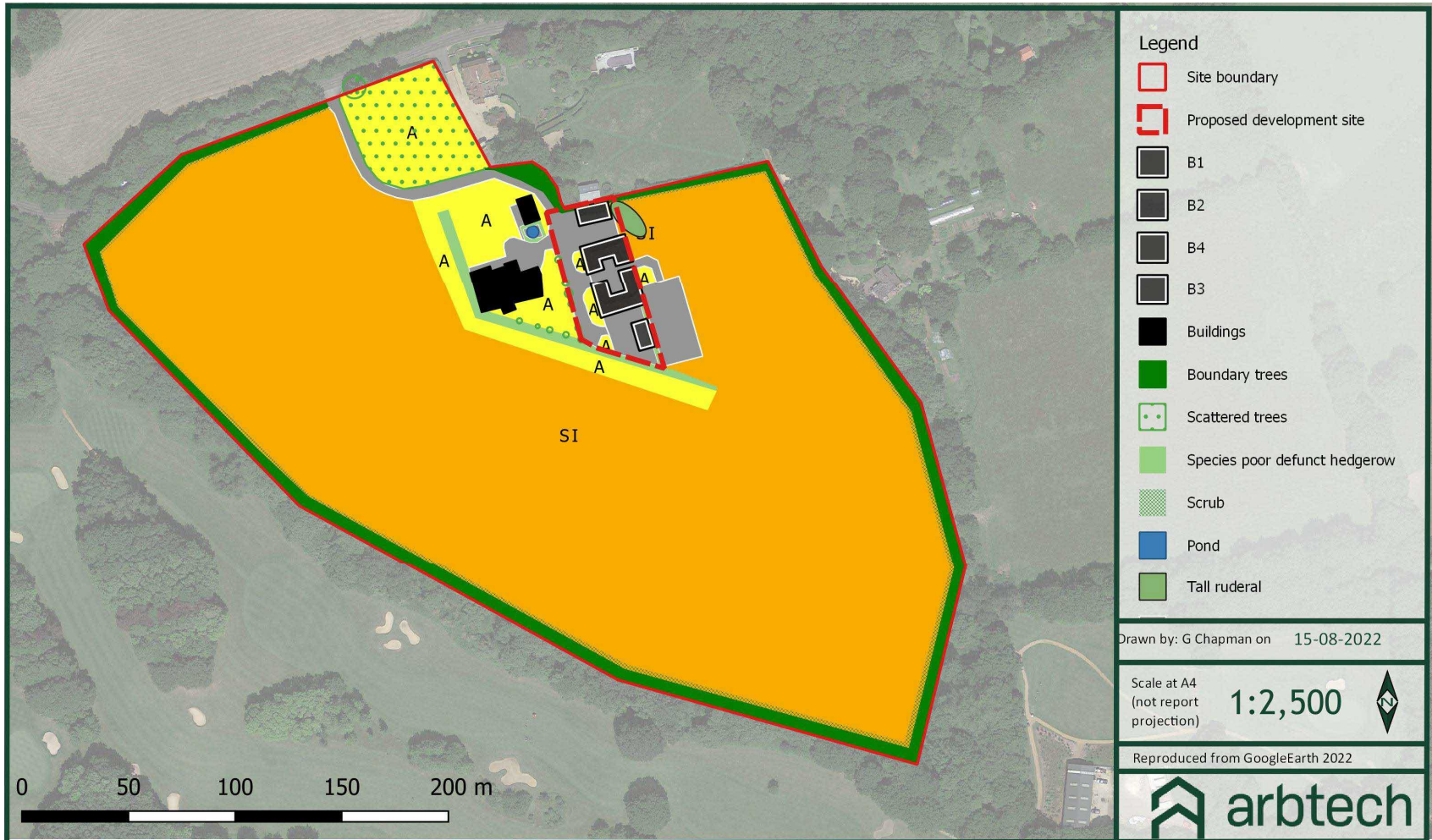
Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3a: Habitat Survey Plan



Appendix 3b: Development Site Habitat Plan



PRA Survey Plan



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds (the Wild Birds Directive) respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as Sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many Annex II species): a strict protection regime must be applied across their entire natural range, both within and outside Natura 2000 sites.

Annex V species (over 90): their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland.

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as "*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*". However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority.

Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

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 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 (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 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.

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 Licence (EPSL) 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:

A European Protected Species Licence (EPSL) 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:

A European Protected Species Licence (EPSL) 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.

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

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 a European Protected Species Licence (EPSL) 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:

A European Protected Species Licence (EPSL) 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 planted listed on Schedule 5 of the Conservation or Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England 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 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*

Effects 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 (ENGLAND)***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.