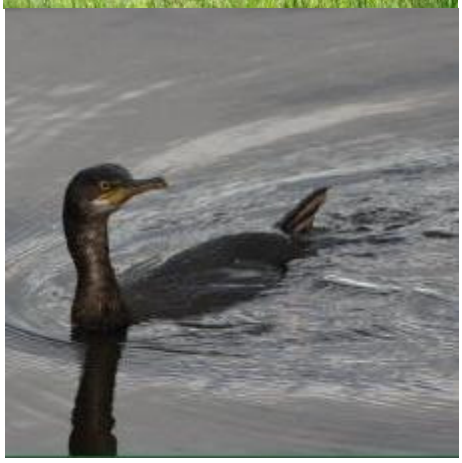






Preliminary Ecological Appraisal

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Disclaimer

This report is presented to Mario Minchella Architects in respect of the proposed development at 43 Whitburn Road, Cleadon and may not be used or relied on by any other person or by the client in relation to any other matters not covered specifically by the scope of this report. Notwithstanding anything to the contrary contained in the report, Ecosurv Ltd is obliged to exercise reasonable skill, care, and diligence in the performance of the services required by Mario Minchella Architects and Ecosurv Ltd shall not be liable except to the extent that it has failed to exercise reasonable skill, care and diligence, and this report shall be read and construed accordingly.

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Quality Assurance

All ecologists employed on this project by Ecosurv Ltd are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow the Institute's code of practice when undertaking ecological surveys and associated work, or were supervised by such a member.

All assessment is based upon, and accurate to, the information made available to Ecosurv Ltd prior to the completion of this report. Any alterations to this information at a later date will reduce the accuracy of this report, to which Ecosurv Ltd cannot be held accountable.

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1 EXECUTIVE SUMMARY

Ecosurv Ltd have been instructed to undertake a Preliminary Ecological Appraisal (PEA) at the proposed development site at 43 Whitburn Road, Cleadon. The survey area comprised of a detached residential property and associated garden comprising areas of bare ground, ruderal vegetation, mature trees and hedgerows along with a summer house and potting shed and associated hard standing. The proposals are for demolition of the existing dwelling and summer house to facilitate the construction of a new dwelling within the centre of the site. The site has recently been cleared of much of the vegetation and trees required to facilitate the development. The remaining trees and boundary hedgerows are to be retained under the current proposals, along with the potting shed to the south of the garden. The purpose of this report is to provide general advice on ecological constraints and appropriate mitigation measures with the proposed development at this site.

A Preliminary Ecological Appraisal (PEA), comprised of a desktop study and site visit were completed in September 2022 and followed the CIEEM GPEA document (CIEEM, 2017) which includes: a standard Phase 1 habitat survey (JNCC, 2010); an assessment of the presence, or likely presence, of notable species; and an assessment of the value of habitats present on site. The site visit was carried out on 23rd September 2022 by Kay Richardson BA (Hons).

The desktop study collated publicly available information on the biodiversity of the site and surrounding area, including the presence of any statutory and non-statutory sites. Biological records for a 2km radius surrounding the site were also obtained from the Environmental Records and Information Centre (ERIC) North East.

The site was considered to have low ecological value overall. The value of the site lies primarily within the suitability to support nesting birds and roosting and foraging bats. Suitable habitat for amphibians is present on site, but there is a lack of suitable breeding ponds nearby. There is suitable habitat on site to support hedgehogs.

The following mitigation measures have been recommended:

- In accordance with current guidelines, it is recommended that two bat activity surveys are carried out to determine whether the existing dwelling is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey. One survey must occur between May and August in suitable weather conditions.
- One bat activity survey is required to the summer house to determine whether the structure is being utilised by roosting bats; this may be a dusk or dawn survey. This survey must occur between May and August. The discovery of a roosting bat during this single bat activity survey will result in the requirement for further survey effort.
- No works are envisaged to the potting shed, should the proposals change further survey effort will be required to this building.
- Further vegetation clearance works to facilitate the development should be timed to occur outside the bird breeding season (March – August inclusive) to avoid impacting any actively breeding birds. Alternatively, if vegetation must be removed within the breeding bird season, a competent ecologist should undertake a breeding bird risk assessment to check for any active birds' nests. If an active nest is discovered, a 5m buffer zone must be implemented in which no vegetation removal may occur until the end of the breeding bird season or the nest can be confirmed as no longer active.

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- Care should be taken when clearing the brash piles on site to avoid harming any hedgehogs that may be present on site. Connectivity for small mammals should afforded within the final development to include small gaps (13cm x 13cm) in any boundary fencing.
- To reduce the impact to wildlife that may use the site, it is recommended that any trenches or voids are dug and filled within the same working day. Should this not be possible, an adequate means of escape should be provided and/ or the trench should be securely covered overnight.
- Any trees to be retained should be protected using *Heras* or equivalent fencing around their Root Protection Areas, in accordance with British Standard documentations BS 5837:2012 – '*Trees in relation to design, demolition and construction. Recommendations*.'
- A sensitive lighting scheme should be implemented during and after construction to avoid indirect disturbance to foraging and commuting bats, birds and small mammals that may be using the habitats on site and to the site boundaries.
- The cotoneaster species present on site should not be allowed to spread through activities arising from development.

Additional measures to compensate the loss of bird nesting habitat and to ensure a net gain in the biodiversity value of the site post development, as required by the revised NPPF have also been included within the compensation and enhancement sections of this report.

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2 INTRODUCTION

Ecosurv Ltd were instructed by Mario Minchella Architects to undertake a Preliminary Ecological Appraisal (PEA) of the proposed development site at 43 Whitburn Road, Cleadon. The survey work and preparation of this report has been undertaken by Kay Richardson BA (Hons). The report has been written in accordance with the CIEEM Guidelines on Ecological report writing (CIEEM, 2017) and BS 42020:2013 (BSI, 2013).

The purpose of this report is to provide general advice on ecological constraints and recommendations for further surveys associated with the proposed development at this site.

To inform this report on potential ecological impacts regarding the proposed development at this site a PEA, comprising a desktop study and a site visit were completed in September 2022 and followed the CIEEM GPEA document (CIEEM, 2017) which includes: a standard Phase 1 habitat survey (JNCC, 2010); an assessment of the presence, or likely presence, of notable species; and an assessment of the value of habitats present on site.

The site is centred on Grid Reference NZ 3820 6178 and can be accessed by Whitburn Road (Figure 1). The survey area comprised of an existing residential property and associated garden comprising areas of bare ground, ruderal vegetation, mature trees and hedgerows along with a summer house and potting shed and associated hard standing. The site is situated within the village of Cleadon and is enclosed by residential properties and the built environment.

The proposals are for demolition of the existing dwelling and summer house, and construction of a new dwelling within the centre of the site. The site has recently been cleared of much of the vegetation and trees required to facilitate the development. The remaining trees and boundary hedgerows are to be retained under the current proposals, along with the potting shed to the south of the garden. The aim of the study was to reasonably appraise the ecological value of the study area. The following objectives were set to achieve this aim:

- To identify potential ecological constraints to the proposed development;
- To identify the further ecological surveys needed to (inform an ecological impact assessment to be identified and appropriately designed) provide sufficiently robust data to the appropriate planning authority;
- To allow likely mitigation or compensation measures to be developed;
- To form a basis for agreeing the scope of the ecological impact assessment to be identified and appropriately designed;
- Complete a desk study of study area to gather information related to legally protected/ecologically important sites, habitats and/or species;
- Map all general habitats within the field survey area and identify any habitats that are ecologically important and/or have legal protection;
- Identify dominant species of vascular plants present within each mapped habitat type;
- Highlight any parts of the field survey area that support invasive plant species;
- Assess the potential of each identified habitat to support, and where possible also undertake initial preliminary field surveys for, any ecologically important and/or legally protected fauna species.

This information has then been used to identify potential ecological constraints to development and formulate reasonable ecological recommendations and define the future ecological scope of works.

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2.1 Location

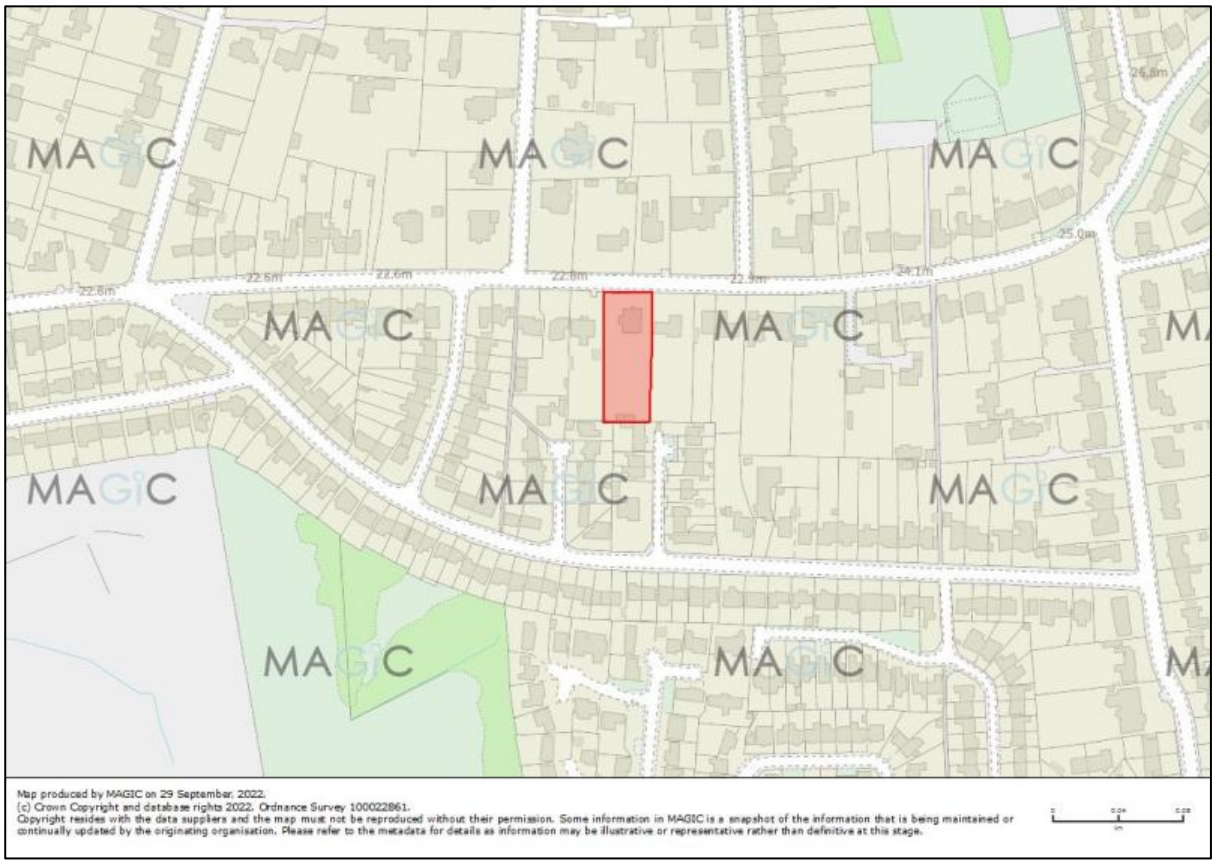


Figure 1. Site location plan. Red line shows the area proposed for development.

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3 LEGISLATION

3.1 Summary of legislation

This section summarises the legislation which is relevant, in ecological terms, to this assessment, i.e. legislation relevant to species present or potentially present within the survey area is included here along with legislation relevant to protected sites in the vicinity.

- Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way (CROW) Act 2000;
- The Protection of Badgers Act (1992);
- Wild Mammals (Protection) Act 1996;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- Environment Act 1995;
- Natural Environment and Rural Communities (NERC) Act 2006.

The most significant legislation governing the protection of British wildlife is the Wildlife and Countryside Act 1981, the Countryside Rights of Way Act 2000 and The Conservation of Habitats and Species Regulations 2017. The Wildlife and Countryside Act, as amended mainly by the Countryside Rights of Way Act, protects animal species listed in Schedule 5 and plant species in Schedule 8 of the Act from being killed, injured, and used for trade. The provisions of this act further protect certain species, such as great crested newts and bats from being disturbed or taken from the wild, as well as protecting elements of their habitats. The Act also specifies that offences occur regardless of whether they were committed intentionally or recklessly. The parts of this legislation that apply to most reptile species are in regard to killing, injury and trade only and do not protect their habitat, nor are they protected from disturbance or from being taken from their habitat.

The Conservation of Habitats and Species Regulations is the English enactment of European legislation and provides similar but subtly different protection for species listed on Schedules 2 and 4 of those regulations. The provisions of this act complement those of the Wildlife and Countryside Act. Species to which these provisions apply are the European Protected Species. Activities that might cause offences to be committed can be legitimised by obtaining a licence from the relevant statutory body.

The following EC Directives and international conventions are applied by some of the above UK Acts and Regulations:

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora (as amended);
- Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (as amended);
- Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) (1979) (as amended);
- Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention) (1979) (as amended);
- Agreement on the Conservation of Bats in Europe (1999) (as amended).

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3.2 National Planning Policy

The National Planning Policy Framework (NPPF) published in 2012 and revised in July 2021 states that policy should promote the preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species populations linked to national and local targets.

The planning system should contribute to and enhance the natural environment by;

- Protecting and enhancing valued landscapes, geological conservation interests and soils;
- Recognise the wider benefits of ecosystem services;
- Minimising impacts on and providing net gains for biodiversity, contributing to the Government's commitment to halt the overall decline in biodiversity, included by establishing coherent ecological networks that are more resilient to current and future pressures.

The NPPF also states that planning for biodiversity should be done at a landscape scale across local authority boundaries, identifying components of the local ecological network including nationally and locally important sites for biodiversity and wildlife corridors and stepping stones that connect them.

Of particular significance with the revised NPPF is the amendment to para 175(d) of the NPPF 2019 (now para 180(d) of the NPPF 2021 – see below) – it now requires opportunities to incorporate biodiversity improvements in and around development, rather than simply making it optional. This demonstrates further steps taken by the government towards achieving the 25 Year Environment Plan (2018).

175. When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons58 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Further details on the legislation protecting species of British wildlife and habitats relevant to this assessment can be found in section 9.1 of this report.

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4 METHODS

4.1 Overview

The PEA involved a desktop study and a site visit. The desktop study collected publicly available information regarding the biodiversity of the area, including the habitat structure of the site and wider landscape, as well as the presence of any statutory or non-statutory designated sites, using the Multi-Agency Geographic Information for the Countryside (MAGIC) resource. Biological records within 2km of the site were also requested from the Environmental Records and Information Centre (ERIC) North East, which included records of protected and notable species and any nearby non-statutory designated sites not available through MAGIC.

The objective of the survey was to ascertain if any protected species may be using the site, document the habitats present and identify any potential ecological constraints likely to be encountered with the proposed development. The survey would be completed under suitable weather conditions and by an experienced ecologist. The results of the desktop study and site survey would then be assessed to determine potential ecological impacts posed by the work, the requirement for additional survey work, and recommend how ecological impacts should be mitigated and compensated for.

The survey work and the preparation of this report has been conducted by Kay Richardson BA (Hons) who is experienced in protected species survey work. All survey and assessment work has been completed in line with official guidelines produced by Natural England and the Chartered Institute for Ecology and Environmental Management, and British Standard document BS 42020: 2013 'Biodiversity – Code of practice for planning and development.'

4.2 Limitations

4.2.1 Desk study limitations

Species specific groups, such as Durham Bat Group, were not contacted for their detailed records within the survey area. However, the combination of data obtained was felt to be sufficient to achieve the objectives of the report.

4.2.2 Field Survey Limitations

Due to the time of year in which the survey was carried out some floral species are likely to have been missed, as most floral species are more readily identifiable during spring or summer. Additional species would undoubtedly be recorded at different times of the year due to the variety of flowering strategies.

4.3 Survey Area

The application site is located at Grid Reference NZ 3820 6178 and can be accessed via Whitburn Road. The assessment focused on the application site, as well as all habitats in the immediate surrounding area (where access was available).

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Figure 2. Satellite Image of the surveyed area. Application site boundary is shown by the red line.

(Image taken from Google Earth Pro: ©2022 Map Data Google 2022)

4.4 PEA Field survey

The field survey followed the CIEEM GPEA document (CIEEM, 2013) and BS 42020:2013 document (BSI, 2013). The PEA was carried out by Kay Richardson BA (Hons) on the 23rd September 2022. The survey area included the site and extended into areas which were deemed to be a potential receptor of ecological impact due to the proposed development.

Habitats found on the site were identified using the standard Phase 1 Habitat Survey methodology (JNCC 2010) with target notes made to describe features of interest.

In addition to mapping habitat types and dominant flora, the potential for the survey area to support any legally protected faunal species and/or faunal species of nature conservation importance, e.g. BAP priority species, was assessed. Detailed surveys were not undertaken; rather the potential for the survey area to support each species/species group was assessed.

Features that would likely support protected species, holes in trees, drainage ditches, ponds, embankments etc. were all examined for the possible presence of species known to utilise these features, in accordance with the methodologies outlined in section 4.5. In addition, field signs or sightings of such species were recorded as seen.

Key features identified during the survey are summarised in the form of Target Notes. Nomenclature for plant species names is taken from Stace (1991) and the Botanical Society of the British Isles (BSBI) plant checklist (2007).

4.5 Protected Species

Based on the habitats present, the site was assessed with particular regard to determine the presence or otherwise of badgers (*Meles meles*), bats, great crested newts (GCN) (*Triturus cristatus*), nesting birds, and reptiles. An overview of the survey methods used is outlined below.

Badgers: An assessment of the site and surrounding habitats (where access was available), with particular focus on any areas of dense vegetation, was carried out in order to identify any evidence of badgers, including:

- the presence of any setts
- well-used runs/tracks
- supplementary evidence, such as hairs or prints
- badgers themselves

Bats: An assessment of the building on-site was carried out in order to identify the presence of any potential roost features (PRFs) for bats, and/or evidence of roosting bats, in accordance with the current Bat Conservation Trust (BCT) survey guidelines (Collins, 2016). An external inspection of the building was carried out, focussing on features that may provide roosting opportunities or access points to roosting features internally, such as the roof and ridge tiles. An internal inspection was also carried out, with any roof spaces present checked for any evidence of bats.

In addition, an assessment of the trees on site or along the site boundary was undertaken to identify any potential roost features (PRFs) for bats, and/or observe evidence of roosting bats, in accordance with the current Bat Conservation Trust (BCT) survey guidelines (Collins, 2016) and Bat Mitigation Guidelines (Mitchell-Jones, 2014). The assessment comprised of an external inspection of the trees, concentrating on features that may provide roosting opportunities or afford access into roosting features internally, such as, woodpecker holes, rotten limbs, cracks and crevices.

The buildings and trees were then categorised based on their suitability and potential for roosting bats, which was evaluated in accordance with the BCT guidelines detailed in Table 1 and criteria outlined in the Bat Mitigation Guidelines, which are presented below.

The likelihood of bat roosts being present will be higher where structures:

- are of a pre-20th Century construction;
- are in a lowland rural setting;
- have woodland, mature trees, species-rich grassland and/or water nearby;
- have large dimension roof timbers with cracks, joints and holes;
- have numerous crevices in stonework and structures;
- have an uneven roof covering with gaps, though not too draughty;
- have hanging tiles or roof cladding, especially on south-facing walls;
- have a roof warmed by the sun;
- are disused or little used; largely undisturbed; or
- provide appropriate hibernation conditions, such as abandoned mines, tunnels, kilns, or fortifications;
- recent or historical records of bats on the site, or bat roosts in the general area.

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The likelihood of bat roosts being present will be lower where structures:

- are in an urban setting with little green space;
- are subject to heavy disturbance;
- have a small, cluttered roof void (particularly for brown long-eared);
- are of a modern construction with few gaps or crevices that bats can fly or crawl through (though pipistrelle bats may still be present);
- are comprised of prefabricated steel or sheet materials;
- are active industrial premises; Please note that the above list provides generic screening criteria only and there are exceptions to consider. For example, pipistrelle breeding roost sites are often found in modern housing estates and therefore the absence of bats from such locations should not always be assumed.

Table 1. Guidelines for assessing bat roosting potential of structures and trees.

Suitability	Habitat description	Further action required?
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further bat risk assessment effort or bat activity surveys are required.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Structures: One bat activity survey is required to determine whether the structure is being utilised by roosting bats; this may be a dusk or dawn survey. This survey must occur between May and August. The discovery of a roosting bat during this single bat activity survey will require further survey effort.
	A tree of sufficient size and age to contain PRFs, but with none seen from the ground or features seen with only very limited roosting potential.	Trees: No further bat risk assessment effort or bat activity surveys are required.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection conditions and surrounding habitat, but unlikely to support a roost of high conservation status.	Two bat activity surveys are required to determine whether the structure or tree is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey. One survey must occur between May and August.

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High	A structure or 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.	Three bat activity surveys are required to determine whether the structure or tree is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey, with an additional survey (either dusk or dawn). Two surveys must occur between May and August.

Evidence of roosting bats can include: bat droppings; staining around access points; small scratches around an entrance hole; audible squeaking at dusk or in warm weather; smoothening of surfaces around cavity or an entrance hole; distinctive smell of bats.

The bat risk assessment was completed using ladders, binoculars and a powerful torch. An endoscope was also available to check any small gaps/cracks for evidence of bats.

Great Crested Newts: The habitats on site were assessed in regards to their suitability to support GCN. Potential refugia (such as logs, stones, discarded building materials etc.) present were also checked for the presence of GCN.

Nesting Birds: Whilst the survey was completed outside of the bird nesting season, the habitats on site were also assessed in regards to their suitability for nesting birds, including the identification of any existing disused nests.

Reptiles: The site was also assessed in regards to its suitability to support reptiles, which is largely based on an assessment of the habitats present on site and whether they afford sufficient opportunities to support basking, foraging and sheltering. Any refugia present was also checked for the presence of reptiles or evidence of reptiles, such as sloughs (shed skins).

Other Wildlife: In accordance with good practice, the site was checked for the presence of any other protected/notable species, with particular regard to any other species highlighted in the desktop study.

Invasive Species: The site was also surveyed for the presence of any invasive, non-native flora or fauna.

4.6 Assessment methodology Biodiversity value

The CIEEM Guidelines

These guidelines provide a framework criterion for determining the value and importance of each potential ecological receptor found within the survey area.

Various characteristics can be used to identify important biodiversity features (sites, habitats, and species) that are likely to represent potentially significant constraints to the development project. These include a feature's:

- Rarity at various geographical scales;
- Threat status and vulnerability at various geographical scales;
- Diversity and/or its synergistic associations;
- Population size, and;
- Location in relation to its' known geographical distribution and range at various geographical scales.

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The characteristics listed above help define a features' conservation status which can then be used to help determine its biodiversity value. CIEEM (2006) provides further information on how the relative value and importance of a receptor can be determined and states that its biodiversity value should be measured against published selection criteria where available.

It is also useful to distinguish between the biodiversity value of a receptor and its legal status. Features of high biodiversity value may not necessarily attract legal protection and vice versa. For example, a viable area of ancient woodland is likely to be considered of high biodiversity value even if it does not receive any formal statutory designations.

In the evaluation of biodiversity value, reference is also made to HA, UK and Local BAPs, inclusion on national or county Red Data Books, and to conservation status (such as nationally notable/scarce, etc.). However, the inclusion within a BAP reflects the fact that the population of the species/habitat concerned is in a sub-optimal state (and hence that conservation action is required) and does not necessarily imply any specific level of value. Despite this, priority BAP species/habitats may represent a significant ecological constraint if their presence triggers planning guidance implications (as outlined above).

In accordance with CIEEM (2006), each biodiversity feature should be assessed as valuable, or potentially valuable, based on the following geographic frame of reference (some examples of ecological receptors that may be potentially valuable at each geographical scale are provided below):

- International e.g. biodiversity feature that warrant designation of an area as a SPA, SAC, or Ramsar site;
- National (i.e. UK), e.g. biodiversity feature that warrants designation of an area as a SSSI;
- Regional, e.g. biodiversity features valuable at a regional level e.g. North East England;
- County, e.g. biodiversity features valuable at a county (i.e. South Tyneside) level;
- District, e.g. biodiversity features of value at the district (i.e. Cleadon) level;
- Local, e.g. biodiversity features of value in a local (i.e. parish or within ~5km of the scheme extent) context;
- Biodiversity features of value within the immediate survey area of the scheme only;
- Local, e.g. species populations of value in a local (i.e. within ~5km of the scheme extent) context;
- Species of value within the immediate survey area of the scheme only.

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5 RESULTS

5.1 Desktop Study

5.1.1 Statutory Protected Sites

There are four statutory sites within 2km of the proposed development. None of the sites are on or directly adjacent to the proposed development. The closest site is Boldon Pastures Site of Special Scientific Interest (SSSI), located around 130m to the south west of the proposed development. Cleadon Hills SSSI and Fulwell Quarry SSSI are also present within a 2km radius of the proposed development, along with three Local Nature Reserves; Cleadon Hills Tilesheds and Fulwell Quarry. A summary of the sites is provided in table 2 below, with their location presented on the map in figure 3.

Due to the location, limited footprint of the development and lack of connectivity between the site and surrounding statutory protected sites, it is considered that none of the sites will be significantly impacted.

Table 2. Summary of Surrounding Statutory Protected Sites

Name	Features	Distance	Impact
Sites of Special Scientific Interest (SSSI's)			
Boldon Pastures	Boldon Pastures comprises unimproved neutral grassland formerly subject to ridge and furrow cultivation, with associated hedge banks and drainage channels. Such sites are now rare, few in this district having survived the agricultural intensification and urban development of recent decades.	130m SW	None
Cleadon Hills	Cleadon Hill is of interest for its Magnesian Limestone grassland communities which are associated in the main with shallow soils, rock outcrops and old earthworks on the flanks of the hill.	1.25km NE	None
Fulwell Quarry	The disused quarries at Fulwell and Carley Hill are of national geological importance showing the greatest variety and most spectacular development of dolomites and dedolomites in the Late Permian Concretionary Limestone Formation. Associated areas of semi- natural Magnesian Limestone grassland are fragments of an important vegetation type which was previously more widespread within the region.	1.8km S	None
Local Nature Reserves (LNR's)			
Cleadon Hills	Its thin soils and underlying magnesian limestone geology are ideal for the range of beautiful and nationally-important wildflowers.	1.25km NE	None

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Tilesheds	Woodland, wildflower meadow and pond.	1.4km W	None
Fulwell Quarry	As above.	1.8km S	None

5.1.2 Non-statutory sites

A total of nine local wildlife sites were identified within 2km of the proposed development site. A summary of the sites is provided in table 3 below with their location shown in relation to the development on figure 3.

Due to the limited footprint of the development and distance away from the identified LWS's, it is unlikely that any of these sites will be significantly impacted.

Table 3. Summary of Surrounding Local Wildlife Sites

Name	Features	Distance	Impact
Local Wildlife Sites			
Boldon Flats	The Flats has traditionally been a low-lying, wet area, managed as grazing pasture. Since 1986 the Council has carried out a controlled annual flood to attract winter birds.	260m W	None
Low House Copse	Small area of plantation woodland to the north east of Low House Farm. There is a relatively open canopy comprising of crack willow, ash, pedunculate oak and elm.	600m SW	None
Tilesheds Burn	Small area of wetland habitat associated with drainage ditches near Tilesheds Lane, together with two adjacent ridge and furrow fields	1.3km W	None
Undercliffe Pond	Historic pond surrounded by mature trees.	900m E	None
Cotman Gardens	Species rich lowland grassland.	1.5km NW	None
Cleadon Hill Cliffs	The highest points in South Tyneside, thin soils and underlying magnesian limestone geology are ideal for the range of nationally important wildflowers that grow here.	1.8km NE	None
Cleadon Quarry	There are two main areas – a former limestone quarry, now well scrubbed over in places with gorse, and to the south an area of more open grassland, which is cut annually for hay. Both areas have strong elements of species-rich Magnesian limestone grassland.	1.8km N	None
Temple Park East	Temple Park East is an unmanaged area of coarse grassland and scrub at the south western end of the park. The scrub is well	1.8km S	None

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	used by songbirds, whilst the unmanaged grassland holds small mammals which in turn provide prey for kestrels.		
Fulwell Meadows	The site contains areas of calcareous (presumably Magnesian Limestone) grassland, rank grassland and scrub.	1.8km S	None

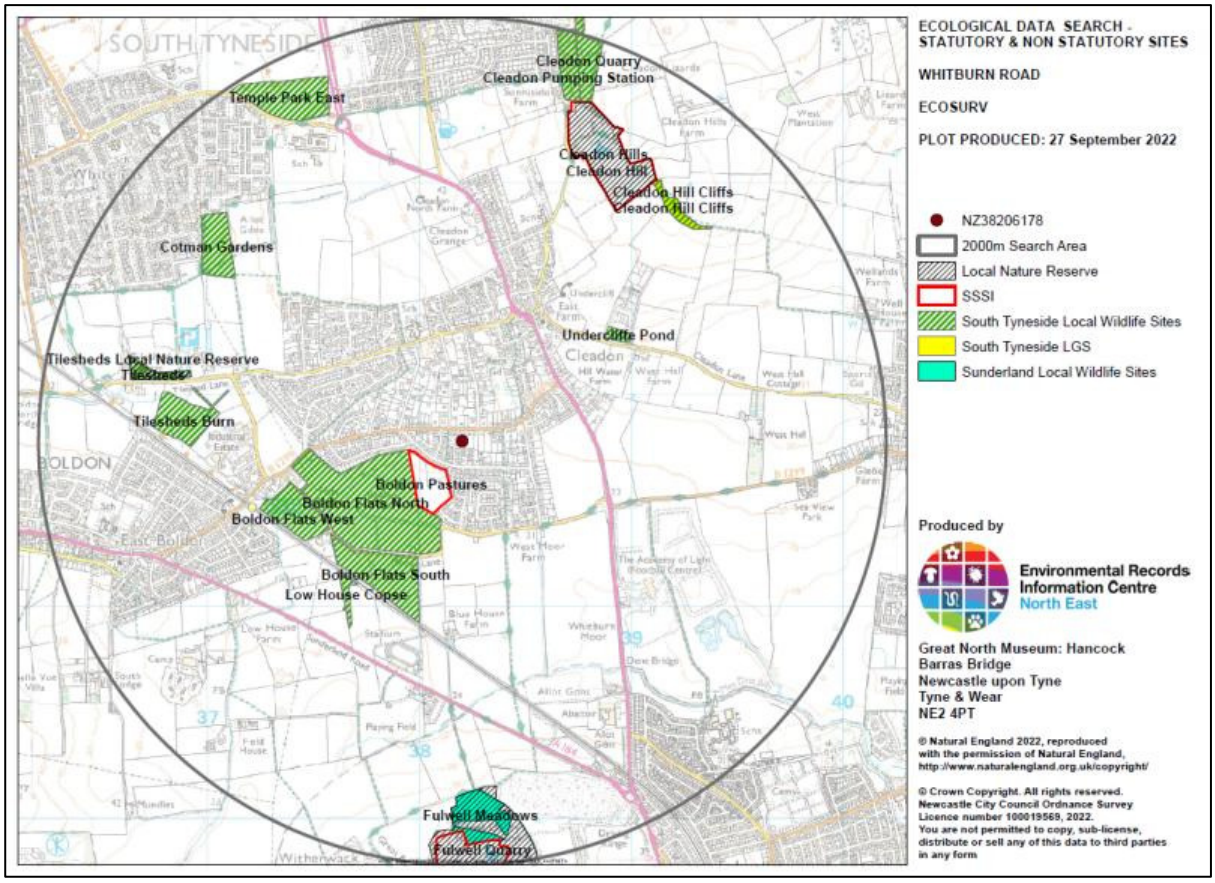


Figure 3. Map of protected sites located within a 2km radius of the proposed development.

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5.1.3 Priority Habitats

There is no designated priority habitat directly on or adjacent to the proposed development site. Priority habitat within the wider area is mostly comprised of areas of Lowland Meadows, the closest located around 130m to the south west of the site. Other habitats present include small areas of Deciduous Woodland, Lowland Calcareous Grassland, Lowland fen, Traditional Orchard and 'No main habitat but additional habitats present'. The location of nearby Priority Habitats is shown on the map in figure 4.

Due to the footprint of the development and its proximity to surrounding priority habitat, it is unlikely that there will be any significant impacts to surrounding Priority Habitats.

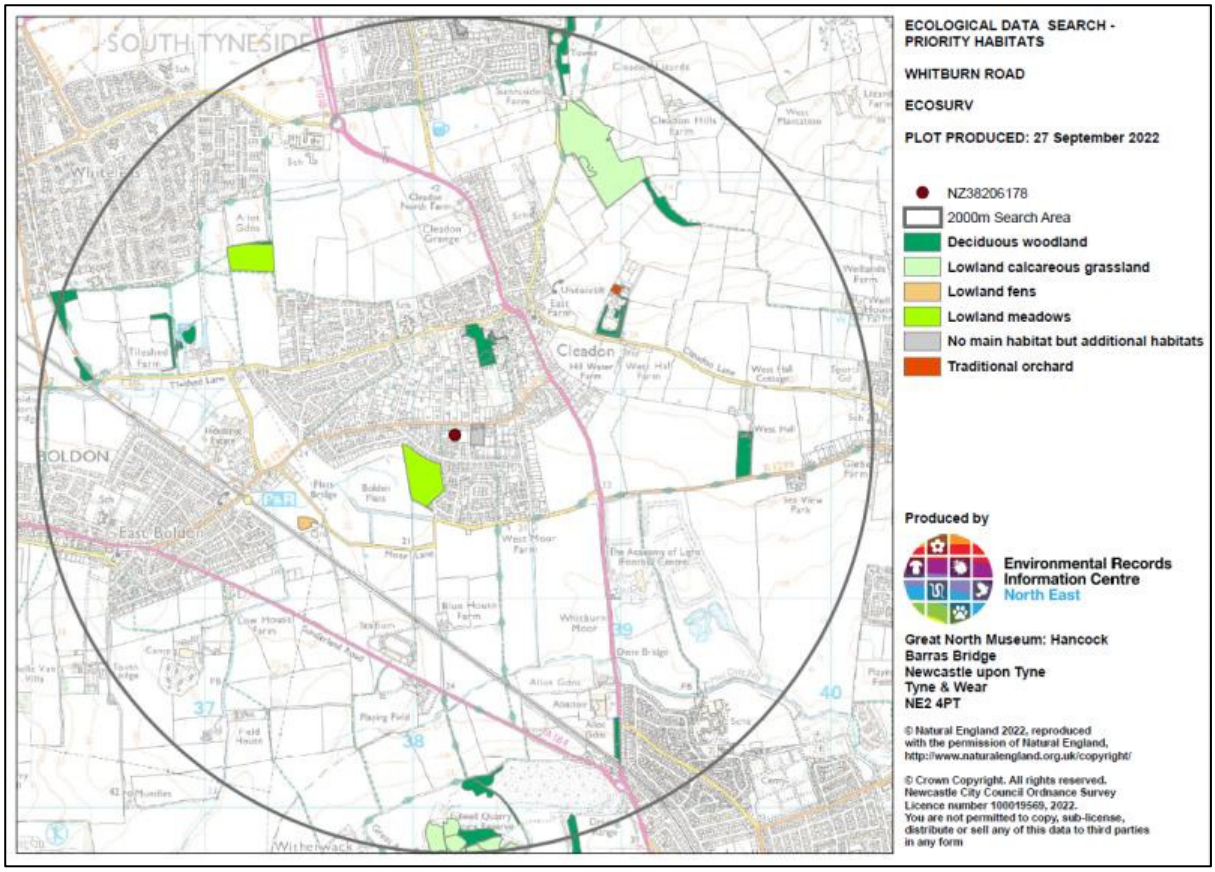


Figure 4. Map of Priority Habitat within 2km of the Proposed Development

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5.1.4 Biological Records

Biological records were obtained from the Environmental Records Information Centre North East for a 2km radius surrounding the application site. A total of 14299 records were obtained, which can be separated into the following groups: 32 amphibian records (common toad, common frog, smooth newt, palmate newt, Great Crested newt, alpine newt); 13754 bird records (248 species); 3 conifer record; 2 fish records (1 species); 106 flowering plant records (37 species); 94 insect records (30 species); 2 marine mammal records (dolphin, Harbour Seal); 185 terrestrial mammal records (16 species).The significance of individual species records in the context of the current proposals is discussed in section 5.3. A full list of received records is available on request with the permission of the records centre, excluding records of sensitive species.

5.2 Site Assessment

5.2.1 On-site Habitats and Ecological Features

The site comprised of an existing residential property and associated garden comprising areas of bare ground, ruderal vegetation, mature trees and hedgerows along with a summer house and potting shed with timber fences to the property boundaries. The characteristics and ecological value of each habitat is described in the paragraphs below. The extent and locations of these habitats and ecological features is also outlined on the phase 1 habitat map (Appendix 9.3 - Figure 7).

Trees and Hedgerow

Well managed privet *Ligustrum ovafolium* hedgerows are present to the northern and eastern boundaries of the garden.

Two mature trees are present within the southern garden of the property; a horse chestnut *Aesculus hippocastanum* and a willow *Salix alba*. A mature cherry *Prunus avium* tree is present within the front garden of the property, to the north. The site has recently been cleared of a number of trees and vegetation to facilitate the development.

Ruderal/ephemeral

The site has recently been cleared of vegetation and trees therefore most of the rear garden now comprises bare ground colonised with self-seeded ephemeral and garden species including cotoneaster *cotoneaster horizontalis*, ivy *Hedera helix*, daisy *Bellis perennis*, foxglove *Digitalis sp.*, rose *Rosa sp.*, thistle *Cirsium sp.*, bramble *Rubus fruticosus*, honeysuckle *Lonicera sp.*, purple toadflax *Linaria purpurea*. Brash piles are present within this area.

Hardstanding

Various areas of hard standing including a macadam driveway, patio and paths are present within the landscaping of the property.

Buildings

Three buildings are present on the site. The residential dwelling is a 2.5 storey brick structure with a slate hipped roof. To the south, a single storey extension is present, this has a flat, bitumen type roof covering. Tudor-style timber details are present to the gables at high level where the timber roof construction protrudes at eaves level.
A small, timber framed summer house is present to the west of the site, the building has timber panels to two elevations and pitched roof with bitumen felt tiles. To the southern site boundary is a single storey potting shed constructed with single-skin brick walls with a pitched slate roof to the east, and a section of flat, bitumen covered roof to the west.

5.2.2 Off-site Habitat and Ecological Features

The site is largely enclosed by residential properties and the built environment of Cleadon. Counthard Park, an area of ammenity grassland with mature trees and woodland is approximately 200m to the north east. Mature trees are present with the gardens of the adjacent properties. Within the wider landscape, predominantly arable land surrounds the village.

5.3 Protected Species

Badgers: The site offers some suitable, albeit sub-optimal habitat for badger sett creation. No badger setts were observed or evidence of badger behaviour. The isolated nature of the site in relation to surrounding habitats and its location in proximity to the built environment may deter badgers. Overall, the proposals are unlikely to significantly impact badgers.

Bats: A total of 3 buildings are present on the site and each was assessed for its value to support roosting bats. The results of this assessment are summarised in Table 4 and the locations of each building are shown on Figure 5.

Table 4. Bat Risk Assessment of Buildings

Building Ref.	Description	Assessment	Bat Value
B1	The residential dwelling is a 2.5 storey brick structure with a slate hipped roof. To the south, a single storey extension is present, this has a flat,	Numerous cracks and crevices are present to the brickwork where mortar is missing. Where the timber roof structure protrudes through the	Moderate

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	bitumen type roof covering. Tudor-style timber details are present to the gables at high level where the timber roof construction protrudes at eaves level.	external walls, gaps are also present providing access into voids for crevice dwelling species. Some displaced tiles can be seen to the roof. The roof space has been converted to provide living accommodation therefore there are minimal roof voids present.	
B2	A small, timber framed summer house is present to the west of the site, the building has timber panels to two elevations and pitched roof with bitumen felt tiles.	Gaps at the eaves may provide access into the void for bats. No evidence of bats was observed.	Low
B3	To the southern site boundary is a single storey potting shed constructed with single-skin brick walls with a pitched slate roof to the east, and a section of flat, bitumen covered roof to the west.	Numerous cracks and crevices are present in the brickwork and to the timber lintels above the doors and windows. No evidence of bats was observed.	Low

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Figure 5. Location of buildings on site

The trees on site are considered to have low bat roost potential, based on their size and the potential to contain PRFs as opposed to direct observation of suitable features. Under the current proposals these trees are to be retained however should this change; suitable mitigation should be implemented comprised of a soft fell methodology to avoid impacting roosting bats if present.

The habitats on site are of value for foraging bats. Indirect impacts, such as disturbance from lighting post construction should be considered.

Great Crested Newts: The habitats on site offer some suitability for amphibians, including great crested newts. The brash piles create suitable refugia, with other sheltering and foraging opportunities present within the vegetation on site. One pond is located within 500m of the proposed development site, this pond is located within Boldon Flatts which is seasonally dry and intentionally flooded to attract migrant birds therefore it is unlikely to support GCN. Three records of GCN were identified within 2km of the application site during the desktop study, none of which are recent records. Overall, it is unlikely that GCN will be significantly impacted by the proposed development.

Nesting Birds: The trees and hedgerow on site offer suitable habitat for nesting species of passerines. Open timbers within the potting shed and overhanging eaves to the existing dwelling have the potential to support nesting birds such as swallow and house martin. Clearance of these habitats has the potential to significantly impact nesting birds, therefore appropriate mitigation should be implemented if further site clearance is required.

Reptiles: The habitats on site offer some suitable habitat for reptiles, with opportunities for basking, sheltering, and foraging. Historically the site appears to have been much more overgrown, which may have limited basking spots. In addition, the site is somewhat isolated from suitable habitat within the surrounding area, with the built environment, arable fields and urban greenspace creation barriers to dispersal/colonisation. No recent records were obtained for reptiles within the search area. Overall, it is unlikely that that reptiles will not be significantly impacted by the development.

5.3.1 Other notable species:

The habitats on site offer some suitability for hedgehog, which may forage and shelter on site. Particularly the existing brash piles.

5.4 Invasive Species

Cotoneaster is present throughout the site, generally within the areas of introduced shrub and soft landscaping. The species is considered to be *Cotoneaster horizontalis*. which is listed on Schedule 9 of the Wildlife and Countryside Act. Where this is to be disturbed, it should be mechanically removed and either chipped or burnt on site or disposed of in licensed landfill as controlled waste.

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6 CONCLUSIONS & RECOMMENDATIONS

The ecological value of the site predominantly lies within the potential to support roosting bats and nesting birds. Numerous cracks and crevices are present to the brickwork of the existing dwelling where mortar is missing. Where the timber roof structure protrudes through the external walls gaps are also present. Some displaced tiles can be seen to the roof. Suitable bat roosting features are also present within the potting shed and summer house. The existing dwelling is considered to have moderate bat roost potential, the potting shed and summer house are considered to have low bat roost potential. Further survey effort is recommended to determine the presence or likely absence of bats within these structures.

The trees and hedgerow on site offer suitable habitat for nesting species of passerines. Open timbers within the potting shed and overhanging eaves to the existing dwelling have the potential to support nesting birds such as swallow and house martin therefore demolition of the existing dwelling has the potential to significantly impact nesting birds.

The mature trees, hedgerows and brash piles provide potential nesting habitat for birds, habitat for small mammals and connectivity to the further landscape. Consideration should be given to the inclusion of an appropriate landscaping scheme on site to mitigate significant impacts arising from the development to local wildlife, and loss of habitat. Suitable landscaping includes retention of trees and hedgerows and inclusion of semi-improved grassland, shrub planting and creation of refugia/hibernaculum. Such a landscaping scheme would be used to maintain suitable habitat for birds, bats, small mammals and invertebrates throughout and post development.

If construction is to take place within close proximity to trees to be retained, or trees beyond the site boundary, an arboricultural method statement should be sought and implemented to ensure these are protected from damage throughout the construction process. Urban trees within the garden and neighbouring properties provide connectivity to wider habitats for commuting and foraging bats, consideration should be given to the impact of the works on these habitats.

Additional measures to ensure a net gain in the biodiversity value of the site post development, as required by the revised NPPF have also been included within the compensation and enhancement sections of this report.

Following the site assessment and upon review of the findings, the following is recommended:

6.1 Further Surveys

Table 5. Recommended further Surveys

Habitats/Species	Action required
Birds	If vegetation must be removed, or demolition of the existing dwelling must occur within the breeding bird season, a competent ecologist should undertake a breeding bird risk assessment to check for any active birds' nests. If an active nest is discovered, a 5m buffer zone must be implemented in which no vegetation removal may occur until the end of the breeding bird season or the nest can be confirmed as no longer active.

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Bats	In accordance with current guidelines, it is recommended that two bat activity surveys are carried out to determine whether the building deemed to have moderate bat risk potential is being utilised by roosting bats; this should be comprised of one dusk and one dawn survey. One survey must occur between May and August in suitable weather conditions. One bat activity survey is required to the summer house to determine whether the structure is being utilised by roosting bats; this may be a dusk or dawn survey. This survey must occur between May and August. The discovery of a roosting bat during this single bat activity survey will require further survey effort. No works are envisaged to the potting shed, should the proposals change further survey effort will be required to this building.

6.2 Mitigation

- Appropriate mitigation will be determined following the results of the bat activity surveys on the buildings.
- Works should be timed to occur outside the bird breeding season (March – August inclusive) to avoid impacting any actively breeding birds. Alternatively, if vegetation must be removed within the breeding bird season, a competent ecologist should undertake a breeding bird risk assessment to check for any active birds' nests. If an active nest is discovered, a 5m buffer zone must be implemented in which no vegetation removal may occur until the end of the breeding bird season or the nest can be confirmed as no longer active.
- To reduce the impact to other wildlife that may use the site, it is recommended that any trenches or voids are dug and filled within the same working day. Should this not be possible, an adequate means of escape should be provided and/ or the trench should be securely covered overnight.
- Any trees to be retained should be protected using *Heras* or equivalent fencing around their Root Protection Areas, in accordance with British Standard documentations BS 5837:2012 – '*Trees in relation to design, demolition and construction. Recommendations.*'
- A sensitive lighting scheme should be implemented during and after construction to avoid indirect disturbance to foraging and commuting bats, birds and small mammals that may be using the habitats on site and to the site boundaries, this should include the following elements:
    - Sensitive positioning of lighting: to avoid unnecessary spill onto the adjacent trees and hedgerow;
    - Angle of lighting: avoidance of direct lighting and light spill onto areas of habitat that are of importance as commuting pathways and/or foraging areas;
    - Type of lighting: studies have shown that light sources emitting higher amounts of UV light have a greater impact to wildlife. Use of narrow-spectrum bulbs that avoid white and blue wavelengths are likely to reduce the number of species impacted by the lighting;
    - Reduce the height of lighting columns to avoid unnecessary light spill.
- Consideration should be given to the inclusion of an appropriate landscaping scheme on site to mitigate significant impacts arising from the development to local wildlife, and loss of habitat. Suitable landscaping includes retention of trees and hedgerows, semi-improved grassland, shrub planting, creation of

refugia/hibernaculum and hedgerow planting. Such a landscaping scheme would be used to maintain suitable habitat for birds, bats, small mammals and invertebrates throughout and post development.

- The cotoneaster species present on site should not be allowed to spread through activities arising from development. The control of this species is therefore advised and includes either mechanical and chemical measures.
    - Mechanical methods of control comprise pulling young seedlings and excavating the root mass. Any material from the cotoneaster/containing cotoneaster waste must be chipped/burnt on site or removed to licensed landfill as controlled waste.
    - Chemical methods of control include spraying plants with herbicide and treating stumps of larger plants to prevent regrowth.
- Suitable habitat for European hedgehogs is present within the dense areas of ruderal vegetation on site. No evidence of hedgehog was identified during the site, however, contractors should be vigilant when clearing the site and when moving vehicles over the site, if a hedgehog is identified care should be taken to protect it from harm and an ecologist should be consulted.

6.3 Compensation

- Appropriate compensation measures for bats, if required, will be determined following the results of the bat activity surveys.
- Compensatory planting of shrubs and small trees should be adopted within the final landscaping scheme. The improvement of any retained grassland areas, through wildflower seeding and appropriate management, should also be considered.
- As some suitable bird nesting habitat has been lost through the previous clearance of vegetation on site, it is recommended that bird nesting features are installed on any retained trees or integrated within the final building design. Some example designs can be seen in Appendix 9.5.

6.4 Enhancement

- Appropriate measures for enhancement will be determined following the results of the bat activity surveys but would likely involve the integration of additional bat roosting features within the building and the integration of bird nesting boxes. Some example designs have been included within appendix 9.5.
- Swift have been recorded within the local area. The inclusion of integrated swift nesting bricks within the new development would enhance the value of the site for this species post development. Example nesting features are provided in Appendix 9.5.

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8 SITE IMAGES

No.	Description	Image
1.	Northern elevation of the dwelling (B1)	
2.	Western elevation of the dwelling (B1)	

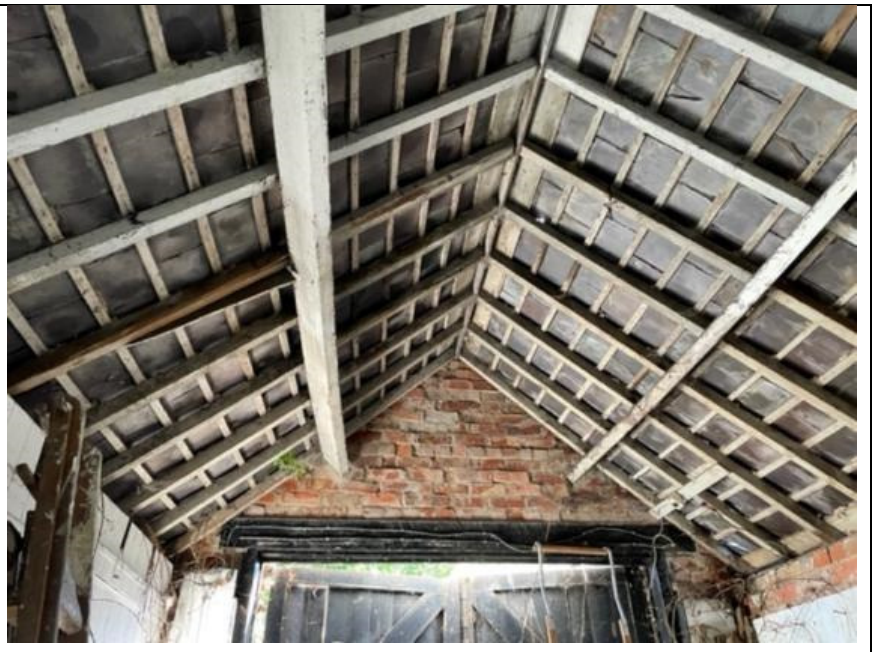
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3.	Eastern elevation of the dwelling (B1)	
4.	Northern elevation of the potting shed (B3)	

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5.	Western elevation of the potting shed (B3)	
6.	Eastern elevation of the potting shed (B3)	

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7.	Internal view of the potting shed roof (east)	
8.	Internal view of the potting shed roof (west)	

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9.	Summer house (B2)	
10.	Ruderal vegetation and mature horse chestnut tree to the west of the rear garden	

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11.	Ruderal vegetation and mature willow tree to the east of the rear garden	
12.	Cotoneaster species	

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13.	Brash piles within the rear garden	
14.	Mature cherry tree to the front garden	

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9 APPENDIX

9.1 Additional Information for the Legislation of Protected Habitats and Species

Species Legislation

European protected species (EPS)

These animals are fully protected through inclusion within Schedule II of The Conservation of Habitats and Species Regulations 2010(as amended).

This legislation makes it an offence to deliberately capture, kill or disturb an EPS. For the purposes of this legislation disturbance has been defined by the European Commission (EC) and Natural England as that likely to significantly affect: i) the ability of a significant group of an EPS to survive, breed, rear or nurture their young or ii) the local distribution or abundance of the species (EC, 2007, Natural England, 2007). Further detail on what constitutes significant disturbance and significant groups in relation to most EPS can be obtained from these guidance documents.

It is also an offence under the Habitats Regulations 1994 (as amended) to damage or destroy and/or obstruct access to a breeding site or resting place of these species; please note the former is a strict liability offence. This legislation applies to all life stages of an EPS, including eggs. Former defences relating to actions being the incidental result of a lawful operation or taking place within a dwelling house no longer apply to offences under the Habitats Regulation 1994 for EPS.

EPS potentially present in the survey area:

- All bats within England and Wales.
- Great Crested Newt.

Bats

The primary legislative protection for bats is under the Habitats Regulations 1994 through designation as an EPS (see above). However, bats are also partially protected in England and Wales through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly disturb a bat whilst it is using a place of rest or shelter. This applies to individuals, but is subject to a number of defences including if the disturbance was the 'incidental result of a lawful operation that could not reasonably have been avoided'. The legislation applies to all life stages.

Great crested newt

The primary legislative protection for GCNs is under the Habitats Regulations 1994 through designation as an EPS (see above). However, the GCN is also partially protected in England and Wales through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to intentionally or recklessly disturb a GCN whilst it is using a place of rest or shelter. This applies to individuals, but is subject to some defences including if the disturbance was the 'incidental result of a lawful operation that could not reasonably have been avoided'. The legislation applies to all life stages.

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Breeding birds

All wild birds in England and Wales are protected under Section 1 of the Wildlife and Countryside Act, 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs. Species listed on Schedule 1 of The Act, e.g. kingfisher *Alcedo atthis*, receive further protection which makes it an offence to intentionally or recklessly disturb these species while building a nest, or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird. Further enhanced statutory protection is provided for bird species included on Annexe 1 of the Wild Birds Directive.

Badger

Badgers receive protection under the Protection of Badgers Act 1992 and the Wildlife and Countryside Act 1981 (as amended), under Schedule 6, Section 11. Under this legislation badgers receive protection from killing or taking by certain methods. It is also an offence to wilfully kill, injure, take or attempt to kill, injure or take a badger or interfere with a badger sett by damaging a sett or any part thereof. It is also an offence to wilfully destroy a sett, obstruct access to a sett or disturb a badger while occupying a sett. The 1992 Act defines a badger sett as "any structure or place, which displays signs indicating current use by a badger".

Penalties for offences can be severe with fines of up to £5000, plus six months imprisonment for each illegal interference, badger death or injury. It is recognised however that there exists a range of certain legitimate activities which need to be conducted in spite of badger presence.

Other wildlife protection/control

The main legislation dealing with species protection/control at the national level is the Wildlife and Countryside Act 1981 (as amended). Plants listed under Schedule 8 and animals under Schedule 5 of the Act receive varying levels of protection. There are also measures to control the spread of non-native species contained in Schedule 9. Other relevant legislation may include the Protection of Badgers Act 1992 and the Wild Mammals (protection) Act 1996. Details of the protection/control afforded to the following species/groups considered of relevance to the survey area are given below.

Invasive plant species

Heracleum *mantegazzianum* giant hogweed, *Fallopia japonica* Japanese Knotweed and *Impatiens glandulifera* Indian Balsam are listed in Schedule 9, Part II of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to plant these species or otherwise cause them to grow in the wild. Any material containing Japanese knotweed or giant hogweed is also identified as 'controlled waste' under the Environment Protection Act 1990 and must be disposed of properly at landfill.

Rare and/or protected plants

Some plants are listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally pick, uproot, destroy or trade in these plants. Other plants appear on national red data lists, or are considered nationally, regionally or locally scarce, though these classifications do not confer any legal protection.

Other invertebrates

In England and Wales the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010 (as amended) offer legal protection to certain invertebrate species. Under the

aforementioned legislation, 17 invertebrate species in Britain have European protection and 45 species in England and Wales are fully protected at a national level.

Other Mammals

All non-domesticated mammal species including common species, such as rabbit Oryctolagus cuniculus and deer, receive protection under the Wild Mammals (Protection) Act 1996. This act protects wild mammals from certain cruel acts and makes it an offence to intentionally inflict unnecessary suffering on wild mammals.

Habitat Legislation Statutory Protected Sites & Features

Ramsar sites

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. Originally intended to protect sites of importance, especially as waterfowl habitat, the Convention has broadened its scope over the years to cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. They generally receive legal protection under the Wildlife and Countryside Act 1981 (as amended) as most UK Ramsar sites are also designated as SSSIs (see below). The majority are also SPAs (see below). Planning Policy Statement (PPS) 9 (see Section 2.3) also recommends that all Ramsar sites receive similar protection from development as Natura 2000 sites.

Special Areas of Conservation (SAC)

SACs receive full protection under the EC Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). SACs are areas that have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II of the Directive. SACs, together with Special Protection Areas (SPAs), form the Natura 2000 network. Natura 2000 sites are protected under The Conservation of Habitats and Species Regulations 2010(as amended) and any development likely to have significant impacts upon such a site will have to be assessed for its implications on the site's conservation status, an obligation under the aforementioned Regulations.

Special Protection Areas (SPAs)

SPAs receive full protection under the EC Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds). SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union. SPAs, together with SACs, form the Natura 2000 network. Natura 2000 sites are protected under The Conservation of Habitats and Species Regulations 2010(as amended) and any development likely to have significant impacts upon such a site will have to be assessed for its implications on the site's conservation status, an obligation under the aforementioned Regulations.

Sites of Special Scientific Interest (SSSIs)

SSSIs provide full statutory protection for the best examples of the UK's flora, fauna, geological, or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs are now notified under the Wildlife and Countryside Act 1981 (as amended). Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000. They are designated in England by Natural England who have powers to prevent damaging operations within and around the site. There is an obligation upon landowners and relevant authorities to notify Natural England if any activity they undertake may impact upon the conservation status of a SSSI.

National Nature Reserves (NNRs)

NNRs are fully protected from damaging operations within and around them under the National Parks and Access to the Countryside Act 1949 (as amended) and the Wildlife and Countryside Act 1981 (as amended). NNRs contain examples of nationally important natural and semi-natural terrestrial and coastal ecosystems in Great Britain.

Local Nature Reserves (LNRs)

LNRs are designated under the National Parks and Access to the Countryside Act 1949 (as amended) as areas of geological or wildlife interest of special local interest. They are normally owned and managed by local authorities, though increasingly local wildlife trusts are taking over this role. They can be protected from damaging operations within or around them through local bylaws or the policies of the local development framework.

Local Wildlife Sites (LWS) / Sites of Importance for Nature Conservation (SINC's)

SINCs/LWSs are identified by local planning authorities (in this case Durham County Council) on account of their value for wildlife. These receive a measure of protection through local planning policies.

Important hedgerows

The Hedgerows Regulations 1997 seek to protect 'important' hedgerows in the countryside by controlling their removal through a system of notification to the relevant local planning authority.

Tree Preservation Orders (TPOs)

TPOs give some measure of protection to individual trees, groups or trees or even entire woodlands that are considered by the Local Planning Authority (LPA) to be of value. They are protected under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999. Trees subject to a TPO are protected from deliberate damage, and an application to the LPA would be necessary to remove any such tree.

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9.2 Proposed Development Plan



Figure 6. Proposed Site Plan

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9.3 Phase One Habitat Map



Figure 7. Phase One Habitat Map

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9.4 Table of Target Notes

Table 6. List of Target Notes for Phase One Habitat Map

Target Note	Description
1	Brash piles
2	Large willow overhanging the site from the adjacent property
3	*Cotoneaster horizontalis*

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9.5 Example Compensatory and Enhancement Features

Habibat Tree/Wall Mounted Nest Boxes





Habibat Integrated Nest Boxes; Sparrow Terrace (Left) and Swift Bricks (right)





Habibat Wall/Tree Mounted Bat Boxes

017 External Access Box



Triple Chambered Access Box



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Integrated Bat Roosting/Access Features

3S Integrated Bat Box



Clay Access Tile



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