

# 5 Grass Hill, Caversham Preliminary Ecological Appraisal

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## ***SURVEY AND REPORT VALIDITY***

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support an EPS licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

| <b><i>Age of Data / Survey / Report</i></b> | <b><i>Validity</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Less than 12 months</b>                  | Likely to be valid in most cases.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>12-18 months</b>                         | <p>Likely to be valid in most cases with the following exceptions:</p> <ul style="list-style-type: none"> <li>• Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe;</li> <li>• Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment;</li> <li>• Where country-specific or species-specific guidance dictates otherwise.</li> </ul> |
| <b>18 months to 3 years</b>                 | <p>A professional ecologist will need to undertake a site visit and then review the validity of the report.</p> <p>Some or all of the other ecological surveys updated.</p>                                                                                                                                                                                                                                                                                                |
| <b>Protected Species Licensing</b>          | Licence applications usually only possible using data less than 2 years old                                                                                                                                                                                                                                                                                                                                                                                                |

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

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## 1 INTRODUCTION

### 1.1 Purpose of Report

This report has been completed in connection with the proposed construction of two residential dwellings at 5 Grass Hill, Caversham (OS Grid Reference SU 7036 7509). The location of the proposed development site is shown in *Figures 1 and 2* and the proposed development plans are fully detailed in *Section 4*.

A site survey was carried out on 30<sup>th</sup> July 2020 by Turnstone Ecology Ltd and consisted of a Phase 1 Habitat Survey and protected species habitat suitability assessment. A subsequent visit was carried out on the 20<sup>th</sup> of January 2021.

This report details survey and assessment methodology and the results of a desk-based study and on-site surveys. It also provides an assessment of potential ecological impacts and appropriate mitigation to offset any ecological impacts associated with the proposal and to satisfy national and local planning policies.

*Figure 1. Location of proposed development*



## 1.2 Ecological Context

The proposed development site is located at 5 Grass Hill, Caversham, Reading, RG4 7TJ which is situated just north of central reading and the River Thames. It is accessed from Grass Hill via a driveway from the north-west. The area of the development comprises areas of bare earth and rubble (where a recently demolished building had previously been present) with ruderal vegetation that has encroached from the boundaries, as well as areas of overgrown amenity grassland. The peripheries and boundaries of the land ownership are lined with hedge to the north, trees to the east and scrub with trees to the south and west. The tree density increases adjacent to the site to form woodland along the east, south and west boundaries. The proposed houses will be built within the bare earth area and the surrounding areas will be subject to landscaping. The site is bordered by Grass Hill to the west, and residential dwellings with associated gardens on all other boundaries.

*Figure 2. Overview of the site and surrounding area (the demolished building is still present within the overhead image)*



The area beyond the site boundaries is dominated by residential dwellings, particularly to the northeast, many of which have associated gardens. The woodland surrounding the site joins another a stand of woodland approximately 80m to the south of the site at its closest point. The area to the northwest is less built up and gives way to farms and Chazey Wood, which is situated to the west of the site, approximately 1.4 km away at its closest point. The river Thames is approximately 170m to the south at its closest point, and is surrounded by more open areas, predominantly farmland. Beyond these areas to the south lies the main city of Reading.

## 2 METHODS

### 2.1 Desk-based Study

Information relating to designated sites, sites where European Protected Species (EPS) Licences have been granted between 2009 and 2018 and historic records of protected species within 2 km of the proposed development site were updated for this report and obtained from Magic ([www.magic.gov.uk](http://www.magic.gov.uk)) and other freely available information on the internet, such as planning portals.

Any species-specific historic records are detailed within the relevant species accounts in the *Results* section.

### 2.2 Phase 1 Habitat Survey

The survey methods were based on the Phase 1 Habitat Survey approach (Joint Nature Conservation Committee 2003), which is a standardised method to survey main habitat types. Plant nomenclature in this report follows Rose (*Revised Edition 2006*) for native, naturalised and garden varieties of vascular plant. Introduced species and garden varieties are not always identified.

### 2.3 Protected Fauna Survey and Assessment

The habitats on site were assessed for suitability for protected fauna that occur in the region and obvious signs and incidental sightings of protected species were noted where present. Taking into consideration the geographical region and habitat types on and adjacent to site, the protected species and species groups that could be encountered are listed below.

- Badger
- bat species
- Dormouse
- nesting birds
- Great Crested Newts
- reptile species

Details of initial survey methods for each relevant species are given below.

#### 2.3.1 Badger

Where access allowed a comprehensive assessment was carried out to identify areas that are used by Badgers (*Meles meles*) for foraging and sett digging. Signs of Badgers including setts, foraging signs, paths and latrines, were recorded where present.

### 2.3.2 Bats

Habitats within and immediately adjacent to site were assessed for their suitability for use by foraging or commuting bats. Areas of particular interest vary between species, but generally include sheltered areas and those habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland.

### 2.3.3 Dormouse

Habitats were assessed for their general suitability for use by Dormouse (*Muscardinus avellanarius*), which generally use areas of dense woody vegetation cover. Dormice are most likely to be found where there is a wide diversity of woody species contributing to three-dimensional habitat complexity, a number of food sources, plants suitable for nest-building material and good connectivity to other areas of suitable habitat.

### 2.3.4 Nesting birds

Habitat that might be used by nesting birds was identified and actively nesting birds or evidence of nesting birds noted where present.

Different bird species use buildings, trees and shrubs, undergrowth or even open fields for nesting and suitability of the site for use by a range of nesting bird species was considered.

### 2.3.5 Great Crested Newt

The suitability of any aquatic and terrestrial habitat on the site, and in the immediate vicinity, was assessed for suitability for use by Great Crested Newts (*Triturus cristatus*). Great Crested Newts are known to travel up to 500m between breeding ponds and suitable terrestrial habitat, however, are only likely to travel up to 250m away from a breeding pond if there is suitable terrestrial habitat within that distance. Therefore, a desk-based search was undertaken for any ponds up to 250m from the site using OS maps and aerial imagery. The terrestrial habitat between the site and these ponds, and therefore connectivity to the site, was also considered.

### 2.3.6 Reptiles

The site was assessed for suitability for use by widespread species of reptiles, with particular attention paid to those features that could be used as basking areas (*e.g.* south-facing slopes), hibernation sites (*e.g.* banks, walls, piles of hardcore) and opportunities for foraging (*e.g.* rough grassland and scrub). The site was assessed for its suitability for the commoner reptile species which have broadly similar habitat requirements, but more specific requirements include those shown below (Beebee & Griffiths 2000).

- Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one habitat they use is brownfield sites;
- Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land;

- Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians;
- Adder (*Vipera berus*) use a range of fairly open habitats with some cover but are most often found in dry heath.

## 2.4 Constraints

A small section of the site was too overgrown to search thoroughly during the visit in July. This area was able to be searched more thoroughly during the subsequent visit in January.

## 2.5 Criteria for Assessment

The scientific value of habitats for nature conservation is assessed according to widely accepted criteria of which the most important are naturalness, extent, rarity, and diversity.

The assessment of impacts is based on the principles within Chartered Institute of Ecology and Environmental Management (CIEEM) Environmental Impact Assessment (EIA) Guidance (2018) which assesses the impacts of the proposal on ecological receptors taking into consideration extent, duration, reversibility, timing, frequency and certainty.

Mitigation and enhancement are designed to reduce the level of impact upon receptors and provide ecological enhancement in order to meet current legislation and planning policy. The information below has therefore been considered during assessment.

- Criteria that have been developed to assist in the identification of statutory Sites of Special Scientific Interest (SSSIs) (JNCC 2013)
- Habitats and species of Principal Importance included under Section 41 (England) and Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006
- The legal status of habitats and species according to the EU 'Habitats' Directive 1992
- CIEEM Guidelines (2018) for assessing the value of ecological receptors within a defined geographical context using the following categories: international (*i.e.* Europe); UK and national (England); regional; county; Unitary Authority; local or parish; and zone of influence. Receptors are identified as 'important' at these levels, or as 'not important'
- Species protected by European directives
- Species protected by the *Wildlife and Countryside Act 1981* (as amended)
- Other species listed as scarce or notable in literature issued by conservation organisations or learned societies *e.g.* vascular plant species listed in Stewart *et al.* (1994) and Red and Amber List Birds of Conservation Concern (Eaton *et al.* 2015)
- Local Wildlife Site selection criteria
- National Policy Planning Framework (NPPF), 2019
- BS42020:2013 – Biodiversity Code of practice for planning and development

- Protected species handbooks and best practice guidelines
- The Berkshire Biodiversity Action Plan (BAP).
- The Reading Biodiversity Action Plan (BAP) has currently expired and is in the process of being rewritten and approved. In 2020 this is expected to move away from being habitat and species focussed to being focussed on “Themes for Action”. These “themes” include; Legislation; Designated Sites; Planning and Building Control; Woodlands, Trees & Hedgerows; Grassland and Road Verges; The Two Rivers, their floodplains and other watercourses.

### 3 RESULTS

#### 3.1 Desk Study

##### 3.1.1 Statutory Designated Sites

There is one designated site within two km of the development:

- The Chilterns Area of Outstanding Natural Beauty is 915m west-northwest at its nearest point.

##### 3.1.2 European Protected Species Licence Sites

Eight Natural England EPS mitigation licence have been granted for development sites within 2 km of the proposed development between 2009 and 2018:

- 2014-1343-EPS-BDX was granted in 2014 for a site approximate 1.03 km to the east of the proposed site for the damage and destruction of roosts (resting places) of Soprano Pipistrelle (*Pipistrellus pygmaeus*).
- 2016-27061-EPS-MIT was granted in 2017 for a site approximately 390m to the east of the proposed site for the destruction of roosts of Common Pipistrelle (*Pipistrellus pipistrellus*) and Brown Long-eared Bats (*Plecotus auritus*).
- 2014-2980-EPS-MIT was granted in 2014 for a site approximately 460m south west of the proposed site for the destruction of roosts of Common Pipistrelle and Soprano Pipistrelle.
- 2015-13539-EPS-MIT was granted in 2015 for a site approximately 550m west of the proposed site for the and destruction of roosts (resting places) of Common Pipistrelle.
- 2017-29064-EPS-MIT was granted in 2017 for a site approximately 615m west-northwest of the proposed site for the damage and destruction of breeding and resting places of Soprano Pipistrelles.
- 2015-14137-EPS-MIT was granted in 2015 for a site approximately 970m west of the proposed site for the damage and destruction of resting places of Common and Soprano Pipistrelles.
- 2014-3600-EPS-MIT was granted in 2014 for a site approximately 1.03 km northwest of the proposed site for the damage and destruction of resting places of Common Pipistrelles.
- 2015-18560-EPS-MIT was granted in 2016 for a site approximately 1.15 km northwest of the proposed site for the damage and destruction of resting places of Soprano Pipistrelles and Brown Long-eared Bats.
- EPSM2011-3175 was granted in 2011 for a site approximately 1.51 km east of the proposed site for impact on Common Pipistrelles.
- 2017-28045-EPS-MIT was granted in 2017 for a site approximately 1.86 km southeast of the proposed site for impact on Daubenton's bats (*Myotis daubentonii*).

#### 3.2 Ecological Surveys

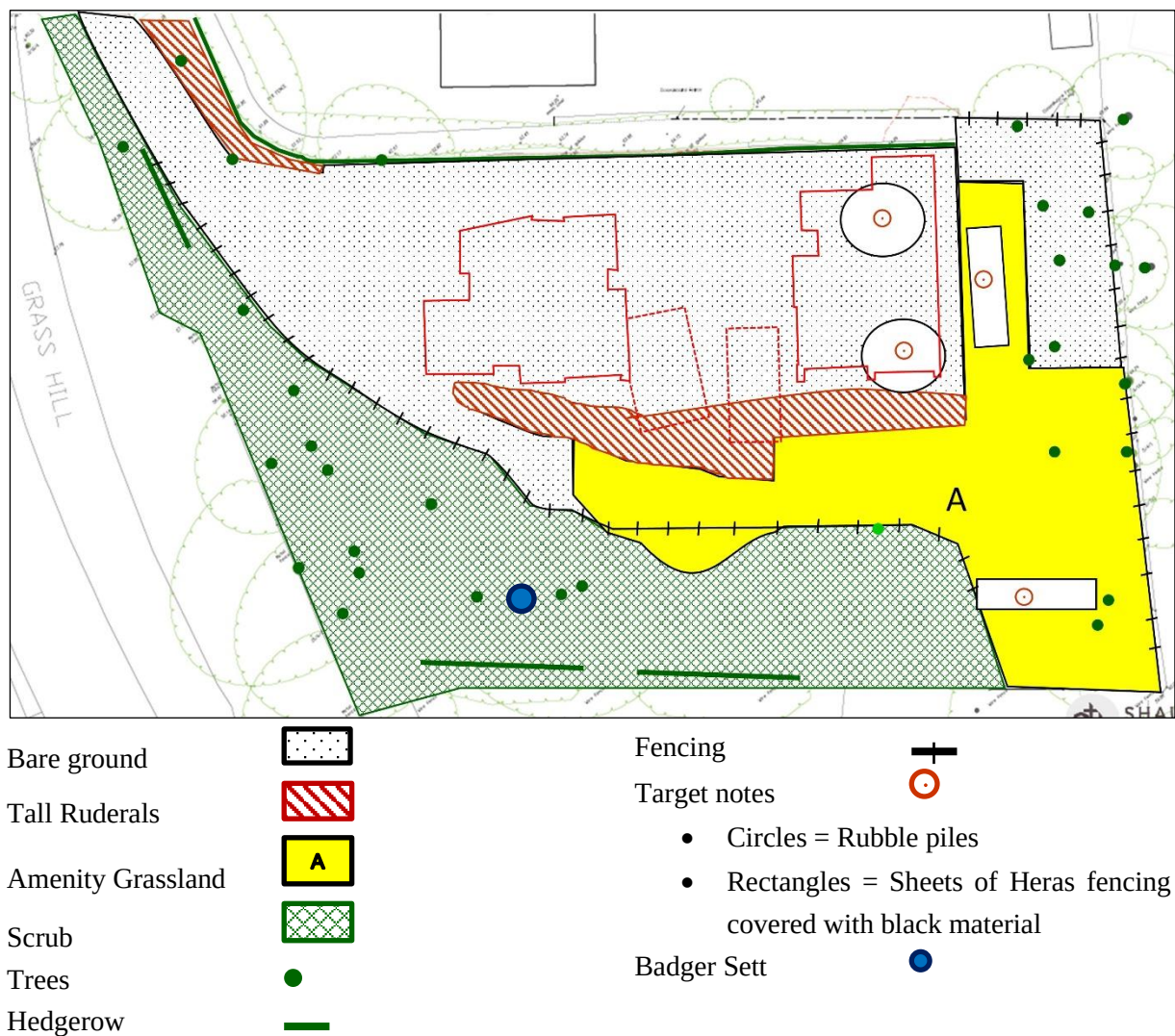
Phase 1 habitat types that were recorded within and immediately adjacent to the proposed development site are listed below and can be seen in *Figure 3*, no.

- Bare ground
- Amenity grassland
- Tall ruderals
- Hedgerow
- Scattered trees
- Woodland

The site or immediately adjacent areas contain habitat suitable for the protected species listed below.

- Badger
- Bat species
- Dormouse
- Nesting birds
- Great Crested Newt
- Reptile species

Figure 3. The proposed development site habitats



### 3.3 Phase 1 Habitat Survey

The site comprises an area of bare ground where a previous house has been recently demolished, surrounding areas of overgrown amenity grassland that would previously have comprised the garden, tall ruderals which have grown in both of the previous areas in the time since the site was last managed, boundary hedgerows and scattered trees.

#### 3.3.1 Bare ground

This habitat is dominant within the site boundaries and includes the footprint of the previous building with a buffer of area that was affected during demolition and the access track. These areas, particularly the peripheries, have ruderal vegetation (see Section 3.3.3).

*Plate 1. Bare earth and loose rubble in the central area of the site (looking east)*



*Plate 2. Bare earth and loose rubble to the south of the site (looking east)*



*Plate 3. Bare earth and ruderals to the south of the site (looking west)*



*Plate 4. Bare earth and ruderals in the centre of the site (looking west)*



### **3.3.2 Amenity grassland**

The areas between the site footprint and wider boundaries are dominated by overgrown Amenity Grassland and ruderal vegetation (see Section 3.3.3), this is largely to the east and south of the site in areas that would have comprised the main garden of the previous house. Since the previous residential dwelling has been demolished this grassland has not been managed as it previously would have been.

*Plate 5. Overgrown amenity grassland (looking south)*



Plate 6. Overgrown amenity grassland (looking south)



### 3.3.3 Tall ruderals

Ruderal vegetation and grass species are uniform throughout the site with species in the area of bare ground having come in from the amenity grassland around the edges, these include ornamental species likely to have been present in the garden during the last occupancy (Plates 1-6). Species include Herb Robert (*Geranium robertianum*), Fool's Parsley (*Aethusa cynapium*), Selfheal (*Prunella vulgaris*), Ground Elder (*Aegopodium podagraria*), Wood Avens (*Geum urbanum*), Sun Spurge (*Euphorbia helioscopia*), Aaron's Beard (*Hypericum calycinum*), Thistles (*Cirsium* sp.), Geraniums (*Geranium* sp.), White Dead-nettle (*Lamium album*), Red Dead-nettle (*Lamium purpureum*), Poppies (*Papaveroidea* sp.), Dandelions (*Taraxacum* sp.), Common Fleabane (*Pulicaria dysenterica*), Lesser Trefoil (*Trifolium dubium*), Forget-me-not (*Myosotis* sp.), Korean Elephant's Ears (*Bergenia crassifolia*), False Oat Grass (*Arrhenatherum elatius*), Perennial Rye Grass (*Lolium perenne*), Creeping Bent (*Agrostis stolonifera*), Blue Mallow (*Malva sylvestris*), Buddleia (*Buddleja davidii*), Purple Toad Flax (*Linaria purpurea*), Chamomile (*Chamaemelum nobile*), Fringed Willowherb (*Epilobium ciliatum*), Common Ragwort (*Jacobea vulgaris*), Groundsel (*Senecio vulgaris*), Ribwort Plantain (*Plantago lanceolata*), Petunia (*Petunia* sp.), Great Mullein (*Verbascum thapsus*), Horseweed (*Erigeron canadensis*), Edging Lobelia (*Lobelia erinus*), White Champion (*Silene latifolia*), Yarrow (*Achillea millefolium*), Black Medic (*Medicago lupulina*), Timothy (*Phleum pratense*), Red Clover (*Trifolium pratense*), Spear Thistle (*Cirsium vulgare*), Cinquefoil (*Potentilla* sp.), Sweet Clovers (*Melilotus* sp.), Green Alkanet (*Pentaglottis sempervirens*), Narrow-leaved Dock (*Rumex acetosa*), Umbellifers (*Apiaceae* sp.), Ivy (*Hedera helix*), Common Nettle (*Urtica dioica*), Lord and Ladies (*Arum maculatum*), Honesty (*Lunaria annua*), Japanese Barberry (*Berberis thunbergii*), Bearded Iris (*Iris croatica*), Coralberry (*Symphoricarpos orbiculatus*), Feverfew (*Tanacetum parthenium*), Bistort (*Bistorta officinalis*), Dianthus (*Dianthus* sp.), Lady's Bedstraw (*Galium verum*), Cat's-ear (*Hypochaeris radicata*), Ivy-leaved Speedwell (*Veronica hederifolia*), Hedgerow Cranesbill (*Geranium pyrenaicum*), St John's Wort (*Hypericum perforatum*) and Spear-leaved Orache (*Atriplex prostrata*).

### 3.3.4 Hedgerow

Hedgerows border the site to the north and east and intermittently along the south and west (*Plates 1, 2 & 4*). Species recorded included Elder (*Sambucus nigra*), False Acacia (*Robinia pseudoacacia*), Holly (*Ilex aquifolium*), Ivy, Portugal Laurel (*Prunus lusitanica*), Laurustinus (*Viburnum tinus*), Beech (*Fagus sylvatica*), Privet (*Ligustrum ovalifolium*), Holly-leaved Barberry (*Mahonia aquifolium*) and Traveller's Joy (*Clematis vitalba*).

### 3.3.5 Scrub

An area of scrub is present with trees in the south-west of the site. At the time of the initial survey this was too overgrown and surrounded by black Heras fencing to be surveyed in detail, however tree species that could be seen were noted and are included *section 3.3.6*.

*Plate 7. Scrub and trees present behind the black fencing.*



### 3.3.6 Trees

Scattered trees were present in the amenity grassland, hedgerow and immediately adjacent to the site (*Plates 1, 2, 4, 5, 7 and 8*). Tree species included: Ash (*Fraxinus excelsior*), Hawthorn (*Crataegus laevigata*), Yew (*Taxus baccata*), Wild Cherry (*Prunus avium*), Field Maple (*Acer campestre*), Laurel (*Laurus nobilis*), Beech, Leylandii (*Cupressus x leylandii*), Sycamore (*Acer pseudoplatanus*), African Cedar (*Juniperus procera*), Elder and Hornbeam (*Carpinus betulus*).

*Plate 8. Example of on-site trees*



### **3.3.7 Woodland**

The trees around the site increase in density to form a woodland at the edges and the whole site falls within mapping as woodland by Natural England. Woodlands are a priority habitat within the framework of the Reading Biodiversity Action Plan. Species include those listed in *Section 3.3.5* which extend onto the site from the woodland areas adjacent.

## **3.4 Protected Fauna**

### **3.4.1 Badger**

No evidence of badgers was found during the initial on-site survey. During the visit to the site in January a Badger sett was found.

The hardbare is unsuitable for use by Badgers, although grassland, scrub, hedgerows and woodland on and adjacent to the site offer opportunities for foraging and sett building.

*Plate 9. Badger Sett***3.4.2 Bats**

There are records of Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared and Daubenton's Bats within 2 km of the proposed development site.

The open habitat area of the proposal site offers limited foraging habitat for bats but the surrounding tree lines provide suitable habitat for foraging and commuting bats. A mature sycamore present at the east of the site had features suitable for roosting bats.

**3.4.3 Dormouse**

There are no apparent records of Dormice within 2 km of the proposed development site. The site itself is of small size and has little suitability for Dormice. The hedges and denser areas of adjacent woodland to the south of the site offer some suitability but are likely too sparse and devoid of suitable foraging opportunities. The site is also within an urban environment and poorly connected to any extensive Dormouse habitat.

**3.4.4 Birds**

The hedgerow and trees provide suitable habitat for birds to nest. The site provides no opportunities for ground nesting birds.

**3.4.5 Great Crested Newt**

There are no ponds apparent within 250m of the site from available mapping, aerial photography or noted during the site visit. The on-site habitats are of some suitability for GCN, with the hedgerows and overgrown amenity grassland providing some cover for commuting and foraging along with refuge provided by rubble.

### 3.4.6 Reptiles

The site has good suitability for reptiles with the grassland and hedgerows providing foraging and commuting opportunities and the bare ground and rubble providing basking and hibernating opportunities (*Plate 8*). There are some stretches of Heras fencing lying in the grassland with a black material covering which also provide basking and sheltering opportunities (*Plate 9*). Three adult Slow-worm, two male and one female, were found under these stretches of Heras fencing (*Plate 10*).

*Plate 10. Potential hibernacula in the bare earth area (looking east)*



*Plate 11. Sheet of black material-lined Heras fencing*



*Plate 12. Slow-worm found under a sheet of Heras fencing lined with black material*



## 4.1 Summary of Proposals

The proposal will involve some levelling of the land upon which construction is taking place, although it is already relatively flat. No major landscaping is proposed but the existing amenity grassland garden area will be returned to an expected level of management typical of an urban garden. No work will be undertaken that will directly impact on the woodland or scrub at the edge of the site boundaries.

[illegible]

#### 4.2.1 Statutory Sites

TT3014-5 GRASS HILL, CAVERSHAM-R01

## 4.3 Habitats

### 4.3.1 General

The proposed development will directly affect areas of bare ground, overgrown amenity grassland and ruderal vegetation. None of these are priority habitats however there is woodland adjacent to the site that is listed as a priority habitat under the Reading BAP and the site is mapped as such by Natural England. There are reptiles (Slow-worms) confirmed as being present on site. In order to maintain and increase the biodiversity of the site and protect priority habitats, the following mitigation measures and safe working methods will need to be incorporated into the proposals.

### 4.3.2 Vegetation

Non-native vegetation along the eastern edge of the site will be removed.

### 4.3.3 Woodland

As the site is mapped as woodland by Natural England and woodlands are a priority habitat within the framework of the Reading Biodiversity Action Plan any potential effects of the proposals on the nearby stand of woodland that surround the site must be mitigated for. There are no direct impacts proposed on the woodland and the following will ensure that indirect impacts on the nearby woodland are mitigated for:

- As mentioned above, an appropriate buffer will be established between trees/hedgerows and proposed groundworks (as detailed in BS5837:2012), in order to protect root systems.
- The new buildings will be of a similar height to the recently demolished building to ensure there is no detrimental overshadowing. The recently demolished building reached a height of 67.69m above ordinance datum(aod). The new buildings will reach heights of 68.00m aod (west building) and 68.80m aod (east building). Whilst the new buildings are 0.31m and 1.11m taller, respectively, they are also offset from the previous building, both being set further north, which will decrease shading. The east building is further east than the previously demolished building, which given the path of the sun will further offset the potential shade cast by the building on the main stand of woodland to the south-west, and only moderately increase shading on the trees to the east in the latter parts of the day.
- There is unlikely to be any new run-off from the site post-construction, as its purpose will be maintained as residential accommodation, as it was prior to the recent demolition. During construction, the proposed drainage and dirty water treatment methods will need to ensure that there are no impacts on the hydrology and ecology of the woodland. Water treatment and discharge methods will include the following:
  - The development footprint will be fenced with reptile fencing which will also prevent any surface water run-off into the woodland during construction;

- Spill kits will be stored within the site compound during and post construction and all spills will be cleaned up accordingly;
  - No chemical substances or hazardous materials will be stored on site and all diesel fuel and other lubricants will be stored in appropriate containers within double bunded storage areas;
  - Any washing of concreting vehicles will be done off site;
  - Any re-fuelling and re-lubrication will only be completed off site or in an approved area within the construction area in which a spill kit is available;
  - Any incidents / accidents would need to be immediately reported to the Environment Agency.
- Potentially higher levels of disturbance than are typical will be limited to short periods when heavy or noisy machinery is required during construction, before it will return to its previous use as residential accommodation. The location of the woodland, where it is already subject to noise of traffic and the city and where construction and demolition works have recently taken place, make it unlikely that this construction will have any significant detrimental effects.
  - No external lighting is proposed. If this is required it will use downlighting and be targeted away from tree lines, hedgerows and other priority habitats. As part of the bat mitigation, if any external light is required it will be designed in line with the BCT guidelines and will include mitigation for light spill such as the use of downlighting and ensuring that lighting is directed away from hedgerows and trees. Light spill from internal lighting will be similar to that of the previous building.

## **4.4 Protected Fauna**

### **4.4.1 General**

Reptiles were present on site and there were habitats with varying suitability for Badgers, Bats and Birds.

### **4.4.2 Badger**

A Badger sett was found in the overgrown scrub area during the site visit in January 2021.

Areas of the site, such as the scrub area, amenity grassland and hedgerow bases have suitability for foraging, commuting and sett excavation by Badgers. The bare ground part of the site with rubble or hardcore, to which construction works will be constrained, is unsuitable for foraging or excavation.

The sett that was identified will be monitored for activity using camera traps, ideally for four weeks (minimum of two). Monitoring will be carried out before May in order to allow time to apply for a licence to close the sett in the event that it is being used. In the event that no activity is identified the sett may be closed under ongoing monitoring. If activity is identified a licence to close the sett must be applied for, and if granted closure of the sett can occur from the 1<sup>st</sup> of July until the 30<sup>th</sup> of November. Prior to closure of the sett no work with heavy machinery can be carried out on site.

To ensure foraging Badgers do not become trapped within any excavation works these should either not be left uncovered overnight or ways of escape for Badgers provided (wooden planks or graded earth banks).

#### **4.4.3 Bats**

There are records of Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared and Daubenton's Bats within 2 km of the proposed site boundary.

The habitats on site have some suitability for foraging and the tree lines in the area are suitable for commuting bats.

Records of bats outside of the proposed development show there is a variety of species in the area, which may forage and/or commute over and around the proposed development site, however, the proposed developments are unlikely to negatively impact the site for bats as only a limited number of trees (each with no roosting potential) will be removed and connectivity will remain. A Sycamore with roosting potential will remain unaffected directly by works.

There is no external lighting currently planned. If this is required it will be designed in line with the Bat Conservation Trust Bats and Lighting in the UK guidance (2018). This will include mitigation for light spill such as directing lighting away from all retained hedgerows and trees around the boundaries of site and the use of downlighting to ensure that suitable roosting features and foraging and commuting habitats remain unlit.

Long term bat roosting provision will be incorporated as enhancements within the new buildings and will include a minimum of five bat tubes (or similar) across the site. Bat tubes provide integral roosting provision that is both discreet and secure, creating a self-contained unit that does not provide access into the wall cavity. The bat tubes can be covered with a fascia of the same material of the building wall so that is virtually unnoticeable yet still provides access for bats.

#### **4.4.4 Dormouse**

No evidence of Dormice was found on or around site. There are extremely limited habitats for Dormice on and around site and the location of the site is far from ideal for Dormice. Due to the lack of suitability for Dormice on site their presence is considered very unlikely and no further mitigation is required.

#### **4.4.5 Birds**

The trees and hedgerow on and around the site provide habitats suitable for nesting birds, however, the presence of ground nesting birds (*e.g.* Skylark) is considered negligible due to the ground level habitats present. The removal of any suitable nesting habitat will be completed outside the bird nesting season (March to August inclusive) or, if this is not possible, after a survey by an experienced ecologist. If

active nests are found an appropriate buffer will be left around each nest and the chicks allowed to fledge before further vegetation is cleared.

Any habitat creation, enhancement and management, such as the planting of native trees and hedgerow, will provide an increase in suitable bird nesting habitat. Nest boxes appropriate for use by House Sparrow (*Passer domesticus*) and Starling (*Sturnus vulgaris*) will be erected/installed on trees or buildings in the area to provide nesting opportunities for these two nationally declining species.

#### **4.4.6 Great Crested Newt**

There are no ponds apparent within 250m of the site. The open areas of bare ground on site appear unsuitable for significant use by Great Crested Newts as it provides limited cover and will not hold moisture, but they may be crossed by commuting individuals. The other habitats on site provide limited suitability for use by terrestrial Great Crested Newt, with a small amount of vegetation cover and refuges.

Due to the distance of suitable habitats on site from any ponds and more suitable habitat nearer to these features it is unlikely that any newts (should they be present) would travel as far as the site when commuting or foraging, therefore, no specific mitigation is proposed for them.

#### **4.4.7 Reptiles**

The site has suitability for use by reptiles, and Slow Worms were observed using the site. The habitats on site also have suitability for Common Lizards and Grass Snakes to forage, bask, and hibernate. The surrounding habitat provides connectivity to the wider landscape.

It is likely that the reptiles have moved into the site from surrounding areas since the previous building was demolished and the garden areas have gone unmanaged, and that they have not been on the site for a long period of time. It is considered that if the previous dwelling still existed and the garden was continually maintained it is unlikely that reptiles would have been present on the site footprint.

Reptile presence was confirmed on site during the initial survey and further surveys for reptiles to establish a population estimate have not been carried out as part of the site assessment. It is considered that this approach is not required and would not be proportionate to the site, the scale and extent of the proposed development and the likely potential impacts on reptiles. Reasonable Avoidance and Mitigation measures are proposed which will ensure that reptiles will not be impacted during site preparation and construction work. These Reasonable Avoidance and Mitigation measures would not be materially changed or increased if further surveys were carried out. Enhancement measures are also proposed which will result in an increase in the extent and quality of terrestrial habitats available reptiles.

It is worthy of note that the construction will take place only on a large area of bare ground which is largely within the footprint of the previous building and is of low value for reptiles. This area will be fenced off using reptile exclusion fencing to ensure that no reptiles will be able to move into areas where

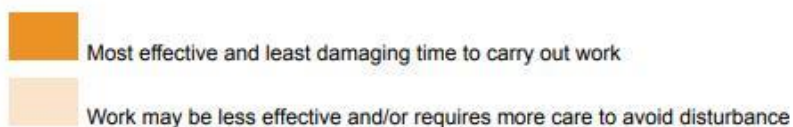
they would be at any risk from the proposed works once construction starts. The rubble piles which have potential for reptiles will be thoroughly searched by an ecologist before they are dismantled under a watching brief by a suitably qualified ecologist.

The following mitigation and Reasonable Avoidance Measures (RAMs) will be undertaken to minimise the risk of Reptiles being on site during works which will include;

- All methods to be undertaken with regard to and within the requirements of any other species mitigation;
- Work to be undertaken with an experienced Ecological Clerk of Work (ECoW) present to search for reptiles prior to work and oversee all work that impacts potential reptile habitat and toolbox talks to be given to all site staff;
- Construction will only take place on existing areas of bare ground. Reptile proof fencing will be erected around the construction zone to ensure no reptiles are able to move into areas at which they may be at risk from works;
- Vegetation that will be removed, will be cut down and maintained at 100mm prior to the commencement of the development and up to the start of construction. This will be undertaken using only hand tools;
- Prior to the commencement of any work that impacts reptile habitat directly (*i.e.* removal of the rubble piles and Herras fencing panels and supports) the ecologist will undertake a thorough search for reptiles and oversee the work at any stage that is likely to find or impact reptile species;
- During construction, any storage of piles of materials and excavated earth on the site will be kept to a minimum and away from the boundaries to deter reptiles from using them for temporary cover;
- No open excavations to be left outside the reptile proof fencing overnight (*i.e.* back filled or covered and all building materials to be stored away from site boundaries and raised on pallets);
- In the unlikely event of a reptile being found during works when an ecologist is not present, then an ecologist will be contacted, and an appropriate course of action agreed before works continue.
- To ensure the longevity of reptiles on site, areas around the south, east and west of the site will be maintained as reptile habitats with a mixture of grassland and scrub vegetation (Detailed further below and shown in *Figures 5 and 6*). There will also be hibernaculae and a basking area within the reptile habitat and a grass cutting pile adjacent.
- Timings of reptile habitat management will reflect the calendar in *Table 1*.

Table 1. Reptile habitat management calendar

|                    | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Mowing             |     |     |     |     |     |     |     |     |     |     |     |     |
| Scrub/tree cutting |     |     |     |     |     |     |     |     |     |     |     |     |
| Stump treatment    |     |     |     |     |     |     |     |     |     |     |     |     |
| Bracken cutting    |     |     |     |     |     |     |     |     |     |     |     |     |
| Bracken spraying   |     |     |     |     |     |     |     |     |     |     |     |     |
| Sand rotovation    |     |     |     |     |     |     |     |     |     |     |     |     |



Mitigation and enhancements as part of the proposals include managing the areas currently dominated by scrub to the south and west of the site as tussocky/rank grassland, whilst leaving existing trees in place, and enhancing the area beneath the trees around the east of the site with understorey vegetation to provide an area maintained for wildlife (*Figures 5 and 6*). Two sections of, one within and one to the edge of the site, indicated by the dashed red line in *Figures 5 and 6*, respectively, will have dense scrub vegetation, but not trees, removed and replanted as grassland which will be allowed to grow out to a rank/tussocky stage. This will include a mix of species detailed in *Table 2*, sown at a rate of 20kg per acre. The wildlife area along the south of the garden will be separated from the amenity grassland by a change of ground level supported by a retaining wall and a post-and-rail fence, indicated by the dashed blue line in *Figure 5*. This area of wildlife habitat maintained around the garden, will ensure opportunities for reptiles to use the site and connectivity to the wider area. Three hibernacula are to be created within the area being maintained for reptiles, further increasing suitability for reptiles (shown in *Figure 5*). Two of these will be set into the ground and the third will be built into the structure of the retaining wall. These hibernacula will ensure long-term opportunities for reptiles that utilise the site. A grass cuttings pile will also be maintained near to the wildlife habitat to encourage Grass Snake egg-laying (shown in *Figure 5*). Overall, the proposals will result in temporary loss of a small amount of suitable reptile habitat, however, the suggested mitigation and enhancements measures will ensure that the proposals will result in a minor positive impact on common species of reptile.

[illegible][illegible]

Table 2. The species mix for planting of the tussocky grassland area.

| Percentage | Latin Name                      | Common Name                |
|------------|---------------------------------|----------------------------|
| 2.5        | <i>Alopecurus pratensis</i>     | Meadow Foxtail             |
| 20         | <i>Cynosurus cristatus</i>      | Crested Dogstail           |
| 20         | <i>Dactylis glomerata</i>       | Cocksfoot                  |
| 5          | <i>Deschampsia cespitosa</i>    | Tufted Hair-grass          |
| 30         | <i>Festuca rubra</i>            | Strong-creeping Red-fescue |
| 2.5        | <i>Holcus lanatus</i>           | Yorkshire Fog              |
| 12.5       | <i>Schedonorus arundinaceus</i> | Tall Fescue                |
| 7.5        | <i>Schedonorus pratensis</i>    | Meadow Fescue              |

## 5 LEGAL PROTECTION

This section briefly describes the legal protection afforded to the protected species referred to in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation but summarises the salient points.

### 5.1 Badger

Badger is protected in Britain under the *Protection of Badgers Act 1992* and *Schedule 6 of the Wildlife and Countryside Act 1981* (as amended).

The legislation affords protection to Badgers and Badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

### 5.2 Bats

All species of British bat are protected by *The Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European Protected Species listed on *Schedule 2 of the Conservation of Habitats and Species Regulations 2017* under *Regulation 41*. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats in such a way as to be likely to (a) impair their ability to: (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or b), to affect significantly the local distribution or abundance of the species to which they belong; and
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

Where it is necessary to carry out an action that could result in an offence under the *Conservation of Habitats and Species Regulations 2010 (SI 2010/490)* it is possible to apply for a European Protected

Species (EPS) licence from Natural England (NE). Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:

- Regulation 53(2)(e) states that licences may be granted to “preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.”
- Regulation 53(9)(a) states that a licence may not be granted unless “there is no satisfactory alternative”.
- Regulation 53(9) (b) states that a licence cannot be issued unless the action proposed “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

### 5.3 Dormouse

The Dormouse is on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended) and receives full protection under *Section 9*. This species is also listed as European Protected Species on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017*, which gives them full protection under *Regulation 41*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

Dormouse is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and as a species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRow Act.

### 5.4 Nesting Birds

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRow Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4) and 1(5)* of the Act. The protection was extended by the CRow Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

## 5.5 Great Crested Newt

Great Crested Newt is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. These species are also listed as European Protected Species on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017* which gives them full protection under *Regulation 41*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation, it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

The Great Crested Newt is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRow Act.

## 5.6 Common Reptile Species

Common Lizard, Grass Snake, Slow-worm and Adder are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the CRow Act.

Under the above legislation, it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.