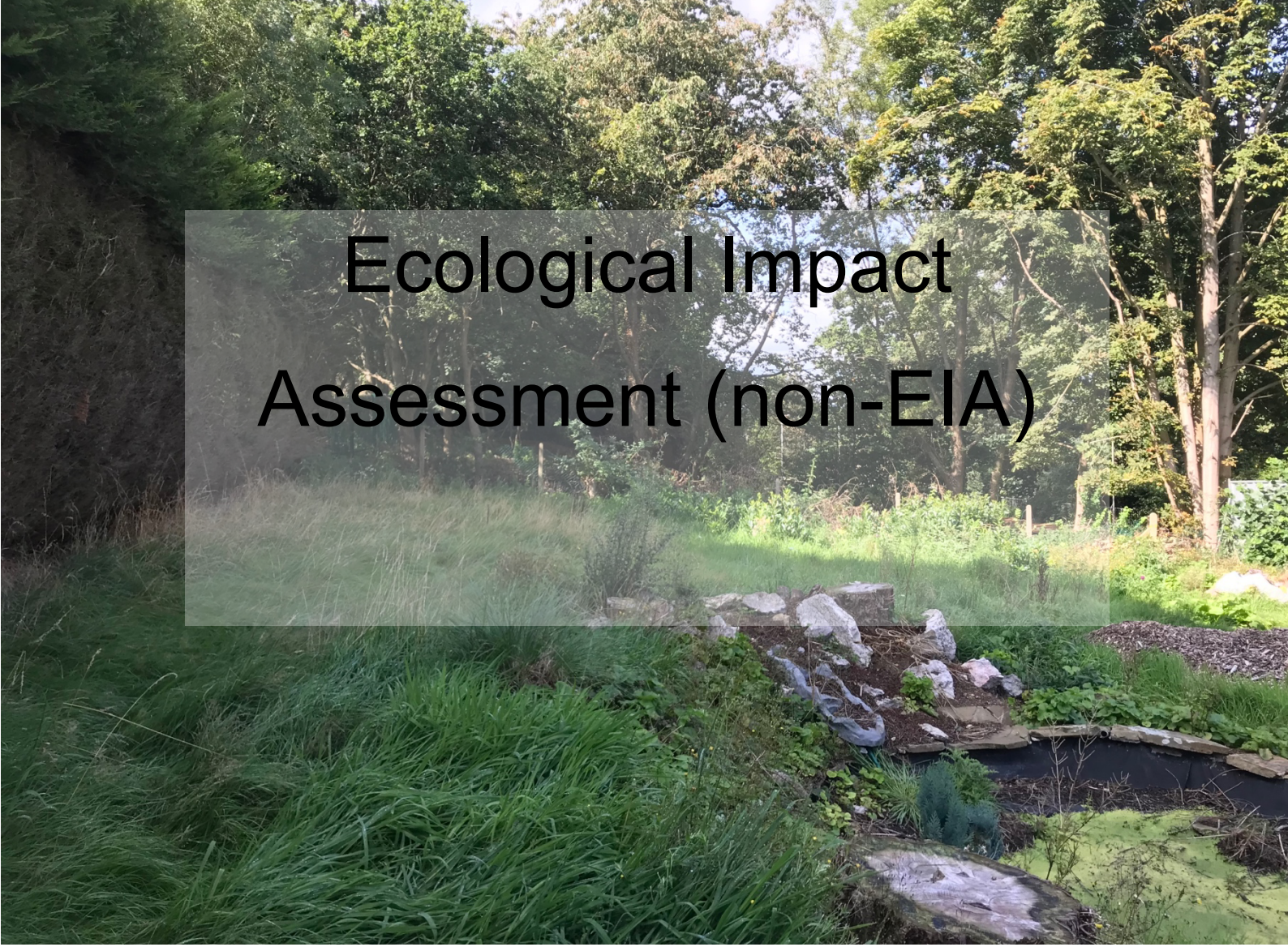




Ecological Impact Assessment (non-EIA)



Land adjacent to 25 Tredegar Road

On behalf of Creative Design and Structure Ltd

September 2023

Ecology by Design Ltd,

Hampden House, Monument Park, Chalgrove, Oxon OX44 7RW.

Tel 01865 893346 www.ecologybydesign.co.uk

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EBD0789	Land adjacent to 25 Tredegar Road, Emmer Green	12 th September 2023

	Name	Date
Prepared by	Kat Hale BSc (Hons) Jess Botha BSc (Hons), MSc	12 th September 2023
Checked by	Laura Grant BSc (Hons), MCIEEM	12 th September 2023

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1 Executive Summary

Report purpose	This report identifies the potential ecological impacts, mitigation, compensation and enhancement measures for re-development of the land adjacent to 25 Tredegar Road, Emmer Green, Reading, RG4 8QE (Central Grid Reference SU 71129 76515).
Date and methods of survey	A baseline ecological survey of the site was conducted in August 2023 which included: • An extended UKHabs habitat survey; • Habitat suitability index assessment for great crested newts; and • Daytime ground level tree assessment for roosting bats.
Key findings	The site, situated in Emmer Green is 0.06ha in extent and includes other neutral grassland, introduced shrub, mixed scrub, individual trees and an artificial pond. There is one pond within the site, however there are no ponds or watercourses within 500m of the site. Priority woodland habitats are present directly adjacent to the site. Protected and priority species present or potentially present include: • Opportunities for roosting bats within T8 and T9, directly adjacent to site, and commuting/foraging bats within the site; • Opportunities for nesting birds within the hedgerow, mixed scrub and introduced shrubs; • Opportunities for reptiles, common amphibians, and small mammals within the grassland and brash pile; and • Negligible opportunities for other protected or priority species.
Potential impacts	The proposals include the construction of a single residential dwelling with a garage and associated garden. In the absence of mitigation, development within the site may result in: • The killing, injury or disturbance of bats, reptiles, amphibians, small mammals, and nesting birds; • A loss in biodiversity; and • The compaction of tree roots through construction activities.
Measures to avoid and/or reduce impacts and deliver biodiversity enhancements	• The safeguarding of trees and hedgerows, birds, bats, reptiles; • Ecological clerk of works to oversee dismantling of brash pile and phased, directional clearance of grassland on site; • Native planting; • Sensitive lighting; • Inclusion of one bat access tile, one integrated bat box, two bird boxes and hedgehog highways/gravel boards; and • Biodiversity Net Gain (BNG) assessment to be undertaken.

2 Introduction

2.1 Background

- 2.1.1 Ecology by Design was commissioned by Creative Design and Structure Ltd, on behalf of a private client, to undertake a Preliminary Ecological Appraisal (PEA) of the land adjacent to 25 Tredegar Road, Emmer Green, Reading, RG4 8QE (Central Grid Reference: SU 71129 76515).

2.2 Site Description

- 2.2.1 The site is approximately 0.06ha in size and comprises of other neutral grassland, a small pond, mixed scrub, introduced shrub and scattered trees (recently felled). There are no buildings present on site. Woodland lies directly west of the site, as well as north-west of the site (across Tredegar Road). Highdown Secondary School lies directly to the south of the site, and sub-urban housing lies from the north to east of the site. In the wider landscape, further sub-urban housing, and woodland can be found in all directions, as well as arable fields in the north-west and a golf course in the north-east. The town of Reading is approximately 3km south.

2.3 Proposed Works

- 2.3.1 The proposals include the construction of a single residential dwelling with a garage and associated garden.

2.4 Aims of Report

- 2.4.1 This report is an Ecological Impact Assessment which presents the approach and findings of the assessment of the potential ecological impacts of the proposed development works in accordance with industry standard guidance (CIEEM, 2019; BSI Standards Limited, 2013). It has been produced following a Preliminary Ecological Appraisal whereby no further surveys were needed in order to be confident in the potential impacts of the proposals or how these could be mitigated. The development does not require an Environmental Impact Assessment (EIA), therefore 'non-EIA' has been included on the title page.
- 2.4.2 This report will be submitted to Reading Borough Council to inform the planning application.

2.5 Personnel

- 2.5.1 The preliminary ecological appraisal (PEA) was carried out by Assistant Ecologist Kat Hale BSc (hons), QCIEEM who has been an ecological consultant for two years and is experienced at undertaking habitat and protected species surveys.

- 2.5.2 Review of this report was conducted by Associate Ecologist Laura Grant BSc MCIEEM who has been an ecological consultant for 15 years.
- 2.5.3 Ecology by Design is an independent ecological consultancy with an office in Chalgrove, Oxfordshire. The team of 20 full-time ecologists work with private and public sector clients throughout the UK to deliver surveys, assessments, technical reports and mitigation in relation to habitats and species (e.g. Ecological Impact Assessments and BREEAM ecology assessments), biodiversity (biodiversity metrics, net gain and offsetting), and designated sites (Habitats Regulations Assessments). Further details of our capabilities can be found on our website (www.ecologybydesign.co.uk).

3 Methods

3.1 Desk Study

3.1.1 A desk study was carried out to identify:

- Internationally protected sites within the potential zone of influence of the site (minimum of 7km);
- Nationally protected sites within 5km of the site; and
- Non-statutory designated sites and records of protected or priority species within 2km of the site (central OS national grid reference SU 71129 76515).

3.1.2 A 2km search radius for species and non-statutory designated sites is justified due to the small size of the site and small-scale development works being undertaken. It is thought highly unlikely that species or non-statutory sites outside this search zone would be affected by the project. A larger search radius is applied for internationally and nationally designated sites as these sites are protected to a higher level and can often be more sensitive to disturbance. These search distances are also based on industry standard guidance.

3.1.3 Sources consulted include:

- Thames Valley Environmental Records Centre (TVERC) (returned 11th September 2023);
- MAGIC (www.magic.gov.uk) (accessed 11th September 2023); and
- Local Planning Policy documents and the local planning portal.

3.2 Preliminary Ecological Appraisal

3.2.1 A Preliminary Ecological Appraisal (PEA) was conducted on 30th August 2023 by Ecology by Design Assistant Ecologist Kat Hale using standard techniques and methodologies (CIEEM, 2017) and the nomenclature of Stace (2019).

3.2.2 The PEA includes a survey of the habitats utilising the standard UK Habitat Classification system (Butcher *et al.* 2020). Weather conditions during the survey were warm (17°C), calm (wind 1 on Beaufort scale¹) and overcast (cloud 7/8²). A UK Habitat Classification map is included in Appendix 2.

3.2.3 Opportunities for or evidence of protected and priority species were also identified. Where potential impacts on features of ecological interest are identified, the PEA is extended to

¹ The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze etc.

² Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

include an assessment of impact. Any further surveys required are outlined and recommendations are made for appropriate avoidance, mitigation, compensation and enhancement measures.

3.3 Ground Level Tree Assessment (GLTA)

- 3.3.1 A ground level tree assessment was conducted by Assistant Ecologist by Kat Hale BSc (Hons).
- 3.3.2 The surveyor used a high-power torch (LEDLenser Lamp) and 10x42mm binoculars to identify features of interest. Where possible, each aspect of the tree was inspected to identify features with potential to support roosting bats such as woodpecker holes, rot holes, splits, cracks, flaking bark and/or ivy cover. Where any evidence of use by bats such as droppings, staining or scratches around such features were present this was noted.
- 3.3.3 Each tree or cluster of trees was identified as having high, moderate, low or negligible suitability for roosting bats. Collins (2016) categorizes the suitability of trees for roosting bats as follows:
 - Negligible = Negligible habitat features likely to be used by roosting bats.
 - Low = A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting suitability.
 - Moderate = A 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.
 - 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.

3.4 Habitat Suitability Index (HSI)

- 3.4.1 Habitat Suitability Index (HSI) surveys were undertaken by Kat Hale during the PEA survey visit on 30th August 2023 to assess suitability for great crested newts (*Triturus cristatus*).
- 3.4.2 Natural England recommends calculation of HSI scores for ponds as a tool to assess habitat quality in a repeatable, objective manner (Natural England, 2020). In particular, the HSI allows individual factors that influence newt presence to be easily identified. Natural England suggests that ecological consultants apply the adapted HSI methods used by the National Amphibian and Reptile Recording Scheme (Herpetological Conservation Trust, 2008) in order to determine the HSI value of each waterbody. This adapted method simplifies the way in which terrestrial habitat is evaluated.

3.4.3 The suitability index is calculated by allocating scores to features associated with each waterbody; these include features such as size, quality of surrounding habitat and presence of fish. These scores are then used to calculate the overall HSI for each waterbody as a number between 0 and 1, with 0 being the least suitable and 1 being the most suitable. The HSI score allows each waterbody to be placed in one of five pre-defined categories defining its suitability for great crested newts as follows:

- <0.5 = poor
- 0.5 – 0.59 = below average
- 0.6 – 0.69 = average
- 0.7 – 0.79 = good
- >0.8 = excellent

3.5 Ecological Impact Assessment (non-EIA)

3.5.1 Wherever potential impacts as a result of the proposals were identified, an Ecological Impact Assessment (EclA) was undertaken. The function of the EclA was to identify, quantify and evaluate the potential effects of the proposed development on designated sites, notable/protected habitats and species. The EclA was informed by the desk study, PEA and survey work described in Sections 3.2 – 3.4 above and undertaken with reference to best practice guidelines (CIEEM, 2019) whereby:

- the scope of the EclA was informed by a desk study and initial site survey;
- importance of ecological features within the site was established and ecological importance identified with reference to known criteria and geographic context where appropriate and available;
- assessment of potential impacts of the proposed development was made with reference to their significance and geographic context; and
- avoidance, mitigation, compensation and enhancement measures were identified and recommended as appropriate.

3.6 Limitations/Constraints

3.6.1 The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of surveys carried out in August 2023. For the purpose of this report the results of site visits are discussed in the present tense. Any appreciable delay in making reference to this report or changes to the proposed development boundary may necessitate a re-survey.

- 3.6.2 The species information gained from local record centres is largely derived from data submitted from members of the public and volunteers. For this reason, it should be understood that the desk study may not provide an exhaustive list of all protected species that could occur in the local area.
- 3.6.3 Weather conditions were suitable to conduct the surveys.

4 Results and Interpretation

4.1 Designated Sites

- 4.1.1 The desk study identified no internationally designated sites for nature conservation within 7km of the site, six nationally designated sites for nature conservation within 5km and eleven non-statutory sites within 2km of the site (see Tables 4.1 and 4.2 below).
- 4.1.2 An area of 0.008ha in the west of the site is within the proposed extension of Highdown Wood Local Wildlife Site (LWS).

Table 4.1: Nationally designated sites notified within 5km of the site

Name & designation*	Distance & direction	Size and interest
Clayfield Copse LNR 1008844	1.2km NE	8.65ha; This site contains areas of ancient woodland, with bluebells (<i>Hyacinthoides non-scripta</i>), common orchids (<i>Dactylorhiza fuchsii</i>) and wood anemone (<i>Anemone nemorosa</i>) present. There is also a wild pear tree (<i>Pyrus communis</i>) at this site.
McIlroy Park LNR 1009374	3.9km SW	11.98ha; McIlroy Park is also part of West Reading Woodlands. This site is mostly grassland, with semi-ancient woodland around the edges of the site, which contains bluebells (<i>Hyacinthoides non-scripta</i>), wood anemones (<i>Anemone nemorosa</i>) and butchers broom (<i>Ruscus aculeatus</i>). There is also an ancient track lined with beech trees.
Round Copse LNR 1009628	4km SW	1.66ha; Round Copse is a dense woodland, which supports a variety of bird species, including three species of woodpecker, as well as nuthatch (<i>Sitta europaea</i>) and treecreeper (<i>Certhia familiaris</i>).
Lousehill Copse LNR 1009372	4.2km SW	13.03ha; This site is part of West Reading Woodlands and contains semi-ancient woodland, with mature oak (<i>Quercus robur</i>) and hazel (<i>Corylus avellana</i>) woodland. There are bluebells (<i>Hyacinthoides non-scripta</i>) in the woodland, as well as streams, old ponds and bogs. The site also contains an open meadow with gorse (<i>Ulex</i> sp.) and broom (<i>Genisteae</i> sp.).
Blundells Copse LNR 1009369	4.7km SW	5.55ha; This site is part of West Reading Woodlands, and is comprised of ancient woodland, including large alder (<i>Alnus glutinosa</i>), cherry (<i>Prunus avium</i>) and willow (<i>Salix</i> sp.) trees. This site contains a stream, supporting animals such as frogs. Plants along the stream include fool's watercress (<i>Apium nodiflorum</i>), yellow archangel (<i>Lamium galeobdolon</i>), and marsh marigold (<i>Caltha palustris</i>).
Ali's Pond LNR	4.8km SE	0.43ha; This site hosts 18 species of dragonfly and over 40 species of aquatic plants. This site also contains several

1009619		Biodiversity Action Plan species, including stag beetle (<i>Lucanus cervus</i>), harvest mouse (<i>Micromys minutus</i>), and great crested newt (<i>Triturus cristatus</i>).
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* Where;

LNR = Local Nature Reserve

Table 4.2: Non-statutory sites within 2km of the site.

Name & Designation*	Distance & direction	Details
Furzeplat LWS	0.013km N	1.14ha; This site is a small area of semi-natural woodland, with a diversity of tree and shrub species, with a rich ground flora in the hazel dominated sections. This site contains bluebells (<i>Hyacinthoides non-scripta</i>), a protected species. The lowland mixed deciduous woodland is a Section 41 habitat of principal importance.
Highdown Wood LWS	0.3km S	2.6ha; Highdown Wood is a small area of broadleaved woodland, providing a good mature habitat for bird species. This lowland beech (<i>Fagus sylvatica</i>) and yew (<i>Taxus baccata</i>) woodland is a Section 41 habitat of principal importance. Protected species in the site include bluebell (<i>Hyacinthoides non-scripta</i>), and red kite (<i>Milvus milvus</i>).
Hemdean Bottom LWS	0.35km W	31.21ha; This site is a chalk valley, predominantly grassland, with small woodland areas and planted scrub towards the edges. Much of the grassland is dominated by red fescue (<i>Festuca rubra</i>) with common bent (<i>Agrostis capillaris</i>) also abundant. This site also contains lowland meadow which is a Section 41 habitat of principal importance.
Reading Golf Course (West)	0.65km W	1.4ha; This site supports chalk grassland habitat, which is a national priority for nature conservation. Wildflowers here include centaury (<i>Centaurea erythraea</i>), fairy flax (<i>Linum catharticum</i>), and field scabious (<i>Knautia arvensis</i>).
Rotherfield Way Copse LWS	0.67km SE	1.26ha; This woodland is made up of Section 41 priority habitat lowland mixed deciduous woodland. Bluebell (<i>Hyacinthoides non-scripta</i>) and butcher's broom (<i>Ruscus aculeatus</i>) are present. Rhododendron (<i>Rhododendron ponticum</i>) was at this site but is no longer present.
Chambers Copse LWS	1.05km NE	5.59ha; This is an area with coppiced woodland, of which hazel (<i>Corylus avellana</i>) is the dominant species but also includes sweet chestnut (<i>Castanea sativa</i>) and lime (<i>Tilia</i> sp.). The ground flora contains bluebells (<i>Hyacinthoides non-scripta</i>), lesser celandine (<i>Ficaria verna</i>) and yellow archangel (<i>Lamium galeobdolon</i>). White helleborine (<i>Cephalanthera damasonium</i>), toothwort (<i>Cardamine concatenata</i>) and stinking hellebore (<i>Helleborus foetidus</i>) have been recorded at Chambers Copse.
Clayfield Copse LWS	1.2km NE	8.65ha; Clayfield Copse is also an LNR, with parts of the site being ancient woodland.
Blackhouse Wood LWS	1.22km E	5.85ha; This site is a small area of woodland, consisting mainly of oak (<i>Quercus robur</i>) and ash (<i>Fraxinus excelsior</i>), with occasional field maple (<i>Acer campestre</i>) in the main core of the woodland.

		Hazel (<i>Corylus avellana</i>) coppice is present on the east and north banks. The ground flora is varied, dominated by wood melick (<i>Melica uniflora</i>) and dog's mercury (<i>Mercurialis perennis</i>) along the north-east bank.
The Warren Woodland Complex LWS	1.90km SE	7.64ha; The Warren Woodland Complex comprises of six sites: Warren Woods Chalkpit, Chalkpit Wood, Chazney Wood, Grass Hill and Warren Court Wood, Woodrow Court Woods, and Long Drain. Section 41 habitats of principal importance within these sites include lowland mixed deciduous woodland, lowland beech and yew woodland, wet woodland, and fen.
Pages Shaw LWS	1.92km NW	4.7ha; This site is ancient woodland, with areas of lowland mixed deciduous woodland and areas of beech (<i>Fagus sylvatica</i>) woodland, with the northern part of the site a beech plantation. Lowland mixed deciduous woodland, lowland beech and yew woodland are Section 41 habitats of principal importance.
Reading Golf Course (East)	2.74km E	3.5ha; This is a strip of woodland and grassland on a chalk bank. The grassland is species rich, with species such as horseshoe vetch (<i>Hippocrepis comosa</i>), mouse-ear hawkweed (<i>Pilosella officinarum</i>), and common milkwort (<i>Polygala vulgaris</i>) which are characteristic of calcareous grassland. Section 41 habitats of principal importance on site are lowland calcareous grassland, and lowland mixed deciduous woodland. Sainfoin (<i>Onobrychis viciifolia</i>) a red data book species, has been recorded on site.

* Where;

LWS = Local Wildlife Site

4.2 Habitats

4.2.1 At the time of the survey (August 2023) the following habitats were recorded on site. They are described in Table 4.3 below, Photographs are included in Appendix 1 and a habitat map is included in Figure 1, Appendix 2.

Table 4.3: *Habitat types identified during the habitat survey*

Habitat type	Description
Other Neutral Grassland (g3c)	The site is dominated by other neutral grassland, and is comprised of Yorkshire fog (<i>Holcus lanatus</i>), Creeping bent (<i>Agrostis stolonifera</i>), narrow leaf dock (<i>Rumex stenophyllus</i>), cow parsley (<i>Anthriscus sylvestris</i>), yarrow (<i>Achillea millefolium</i>), lady's bedstraw (<i>Galium verum</i>), common nettle (<i>Urtica dioica</i>), spear thistle (<i>Cirsium vulgare</i>), curled leafed dock (<i>Rumex crispus</i>), garlic mustard (<i>Alliaria petiolata</i>), tufted hair grass (<i>Deschampsia cespitosa</i>), broad leaved dock (<i>Rumex obtusifolius</i>), wisteria (<i>Wisteria</i> sp.), buddleia (<i>Buddleja davidii</i>), cherry laurel (<i>Prunus laurocerasus</i>), white clover (<i>Trifolium repens</i>), red clover (<i>Trifolium pratense</i>), rape (<i>Brassica napus</i>), cleavers (<i>Galium aparine</i>), willowherb (<i>Chamaenerion angustifolium</i>), smooth hawkbeard (<i>Crepis capillaris</i>), feverfew (<i>Tanacetum parthenium</i>), wood avens (<i>Geum urbanum</i>), garden lobelia (<i>Lobelia erinus</i>), annual beard grass (<i>Polypogon monspeliensis</i>), timothy (<i>Phleum pratense</i>), brooklime (<i>Veronica beccabunga</i>), autumn hawkweed (<i>Hieracium sabaudum</i>), red

	fescue (<i>Festuca rubra</i>), greater burdock (<i>Arctium lappa</i>), ivy (<i>Hedera helix</i>), chickweed (<i>Stellaria media</i>), crested dog's tail (<i>Cynosurus cristatus</i>), creeping buttercup (<i>Ranunculus repens</i>), black nightshade (<i>Solanum nigrum</i>), dandelion (<i>Taraxacum</i> sp.), meadow foxtail (<i>Alopecurus pratensis</i>), and sun spurge (<i>Euphorbia helioscopia</i>).
Introduced shrub (u1(1160))	There are areas of introduced shrub across the site, including cherry laurel (<i>Prunus laurocerasus</i>), wisteria (<i>Wisteria</i> sp.), and buddleia (<i>Buddleja davidii</i>).
Mixed scrub (h3h)	There is mixed scrub present within the north of the site that comprises of hazel (<i>Corylus avellana</i>), sycamore saplings (<i>Acer pseudoplatanus</i>), elder saplings (<i>Sambucus nigra</i>), and bramble (<i>Rubus fruticosus</i>).
Urban Scattered Trees (u(11))	There are individual trees across the site, some of which have recently been felled. Tree 1 (T1) and Tree 2 (T2) are both medium Cypress (<i>Cupressus</i> sp.) trees to the south of the pond that have been felled within the last three months. Tree 3 (T3) is a small elder (<i>Sambucus nigra</i>) on the western boundary of the site and has not been felled. Tree 4 (T4) is a medium tree within the brash pile in the north-west of the site, however it was not possible to identify the species as it has been felled within the last three months. Tree 5 (T5) is a medium willow (<i>Salix</i> sp.) within the east of the site and has been felled within the last three months. Tree 6 (T6) is a small silver birch (<i>Betula pendula</i>) within the north-west of the site, to the east of the brash pile. Tree 7 (T7) is a medium cypress (<i>Cupressus</i> sp.) tree on the northern boundary of the site. Tree 8 (T8) is a large horse chestnut (<i>Aesculus hippocastanum</i>) that is directly adjacent to the north-western corner of the site. It is not on site, however its canopy and root system may be affected by works on the site. Tree 9 (T9) is a medium oak tree (<i>Quercus robur</i>) that is directly adjacent to the southern boundary of the site. It is not on site, however its canopy and root system may be affected by works on the site.
Other Hedgerow (h2b)	On the southern boundary of the site there is a hedgerow comprised solely of Cypress (<i>Cupressus</i> sp.). This hedgerow appears to be dead in places and in a poor condition overall.
Artificial Pond (r1(362))	There is a small artificial pond within the south-east of the site. There is an artificial liner in the base of the pond with rocks surrounding it. The pond currently holds water to a depth of around 0.25m. The surface is covered in duckweed (<i>Lemna</i> sp.), and it is likely that there is no light reaching the base of the pond. No pond vegetation, other than duckweed was visible/present.

Target notes

4.2.2 For Target Notes, please refer to Figure 1, Appendix 2:

- TN1 = Brash pile in the north-west of the site.

Adjacent habitats

- 4.2.3 Directly adjacent to the site's western boundary, and 0.01km N of the site (across Tredegar Road) is deciduous woodland on the priority woodland inventory, which is of priority importance for the purpose of the conservation of biodiversity.

Habitat summary

- 4.2.4 The trees that have been felled on the site would have been of ecological value to nesting birds, invertebrate and amphibian species. Satellite imagery, shown in Figure 2, Appendix 2, offers an aerial perspective of the site before the tree were felled.

Conclusion

- 4.2.5 Consideration has been given as to whether the 0.008ha of proposed Local Wildlife Site in the west of the site would be considered of Local importance, however, it would need to be considered to 'appreciably enrich the habitat resource within the Parish or Neighbourhood' which is not considered to be the case. The site is of negligible ecological importance according to the definitions in Appendix 3, however, the habitats combined are of biodiversity value within the context of the site.

4.3 Protected, Priority and Invasive Species

- 4.3.1 The results of the preliminary ecological appraisal and desk study are presented together in Table 4.5 below. The species / species groups present or potentially present are presented in order of relevance to this development. Relevant legislation and policy is referred to as appropriate and further details are provided in Section 6.
- 4.3.2 There is one small artificial pond on the site, however there are no other ponds or watercourses within 500m of the site therefore species associated with such habitats such as white-clawed crayfish (*Austropotamobius pallipes*), otter (*Lutra lutra*) and water vole (*Arvicola amphibius*) will not be affected by the proposals. As such, they are not discussed further within this report.

Table 4.5: Presence of or potential for protected / notable / invasive species within the site and local area

Species	Protection or Status *	Presence/potential at the site
Bats	EPS. Some species are also SPIs. W&CA 1981 Sch5	805 records of at least eleven bat species have been recorded within 2km of the site including soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), brown long-eared (<i>Plecotus auritus</i>), noctule (<i>Nyctalus noctula</i>), Leisler's bat (<i>Nyctalus leisleri</i>), Serotine (<i>Eptesicus serotinus</i>), and Daubenton's (<i>Myotis daubentonii</i>). The

		closest of these records was of a common pipistrelle bat 0.02km southwest of the site in 2011. Sixteen European Protected Species Licence (EPSL) for bats were returned, with the closest for the destruction of a common pipistrelle resting place in 2018, approximately 0.2km NE of the site. Individuals are likely to forage over the site and to commute along hedgerows, and treeline edges. There is also potential for them to roost in buildings and mature trees adjacent to site. Potential adverse impacts likely, further consideration required.
Nesting birds	W&CA 1981 Sch1 / Sch5	1,105 records of 62 bird species were returned by the desk study, comprising a mix of species typical of urban, arable, wetland and woodland habitats. The closest of these were of a brambling in 2004, although the exact location of this record is only accurate to 1km². There are opportunities for foraging and nesting birds within the site. Nesting opportunities included hedgerows, scrub, and shrubs. Potential adverse impacts likely, further consideration required.
Badger (<i>Meles meles</i>)	Protection of Badgers Act 1992.	59 records of badger were returned by the desk study. One of the records potentially overlaps with the site, however the exact location of this record, recorded in 2020, is only accurate to 1km². Due to the lack of suitable habitat for sett creation on site, it is unlikely that badgers will be found here. There is some suitable habitat in Desborough Fields (Tom Burt's Hill), and in nearby woodland areas. There were push-throughs that could be used by badgers and other small mammals in the west of the site, making it likely that mammals such as badger commute through and forage within the site. No badger setts were found on the site, however due to the incline and wooded nature of the site directly adjacent to the west of the site, there may be badger setts nearby, off-site. Some potential adverse impacts, further consideration required.
Hedgehog (<i>Erinaceus europaeus</i>)	SPI	92 records of hedgehog were returned by the desk study, with the closest of these 0.4km northeast of the site in 2019. There is suitability for hedgehogs to nest on site within the brash pile in the north-east. Hedgehogs are also likely to commute through and forage within the grassland on the site as well as within the areas directly adjacent to the site. Some potential adverse impacts, further consideration required.
Invasive species	W&CA 1981 Sch9	Seventeen records of six invasive plant species were returned by the desk study. The closest of these was rhododendron (<i>Rhododendron ponticum</i>) 0.4km south of the site in 2004. 1 record of one invasive faunal species was returned by the desk study. This was American mink (<i>Neovison vison</i>), 1.98km southwest of the site in 2014. Buddleia (<i>Buddleia sp.</i>) was found across the site during the PEA.

		Some potential adverse impacts likely, further consideration required.
Common toad (<i>Bufo bufo</i>)	SPI	Three records of the species were returned by the desk study. The closest of these was 0.8km northeast of the site in 2005. The pond on site is unlikely to provide suitability for breeding toads, however the grassland provide suitability for resting, foraging and commuting toads. Some potential adverse impacts likely, further consideration required.
Great crested newt (<i>Triturus cristatus</i>)	EPS. SPI. W&CA 1981 Sch5	No records for this species were returned for within 2km of the site. No European protect Species Licences (EPSL) were returned for GCN within 2km of the site. The pond on site offers poor suitability for great crested newts are therefore it is unlikely that they breed on site. However, the brash pile, the grassland present on site and the woodland adjacent to the western boundary of the site offered suitable foraging, commuting and resting habitat for amphibians such as great crested newts. Some potential adverse impacts likely, further consideration required.
Reptiles	W&CA 1981 Sch5	Six reptile records comprising grass snake (<i>Natrix helvetica</i>) and slow-worm (<i>Anguis fragilis</i>) were returned by the desk study. The closest of these was for slow-worm, 1.5km south of the site in 1999. There are suitable habitats on site for reptiles within the brash piles and grassland on the site, for breeding, commuting, foraging and resting. Some potential adverse impacts likely, further consideration required.
Dormouse (<i>Muscardinus avellanarius</i>)	EPS. SPI. W&CA 1981 Sch5	Three records of the species were returned by the desk study. The closest of these was approximately 1.6km southwest of the site in 2022. The site does not contain any suitable habitat for dormice to nest or forage due to the lack of suitable woodland or hedgerow habitat. The woodland adjacent to the western boundary may provide some suitability, however it is unlikely that dormouse would be found on site due to the poor species diversity and structure. No adverse impacts likely.
Brown Hare (<i>Lepus europaeus</i>)	SPI	No records of the species were returned by the desk study. There are no suitable habitats for brown hare on the site or in the adjacent areas due to the urban nature of the wider landscape, and the lack of arable field adjacent to the site. This makes it unlikely that brown hare would be present on site for commuting, foraging, or resting. No adverse impacts likely.
Invertebrates	SPIs.	1,084 records of 68 protected invertebrate species were returned by the desk study. The closest of these was for a stag

		beetle (<i>Lucanus cervus</i>), however the exact location of this record, recorded in 2015, is only accurate to 1km² There are opportunities for common invertebrates on the site, however rarer and protected species are unlikely to be found within the site. No adverse impacts likely.
Protected plants	W&CA 1981 Sch8	107 records of 25 protected plant species were returned by the desk study. The closest of these was for butcher's broom (<i>Ruscus aculeatus</i>), 0.02km northwest of the site in 2018. The habitats present within the site are largely unsuitable for protected plant species and therefore it is unlikely that they will be found here. No adverse impacts likely.

* Where:

EPS = European Protected Species under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended)

SPI = Species of Principal Importance under Section 41 of the NERC Act 2006

W&CA 1981 = Wildlife and Countryside Act 1981 (as amended)

Sch1 = Schedule 1 Birds which are Protected by Special Penalties (W&CA 1981)

Sch5 = Schedule 5 Animals which are Protected (W&CA 1981)

Sch8 = Schedule 8 Plants which are Protected (W&CA 1981)

Sch9 = Schedule 9 Animals and Plants to which Section 14 Applies (W&CA 1981)

Conclusion

- 4.3.3 The site, according to the definitions in Appendix 4, is of local importance for species due to the presence of suitable habitats for a range of species, particularly those which might also utilise the adjacent woodland.

4.4 Ground Level Tree Assessment (GLTA)

- 4.4.1 Though six of the nine trees on, or directly adjacent to the site have been felled within the last three months, two trees, T8 and T9, were identified as having suitability to support roosting bats. T8 is a large horse chestnut tree and T9 is a medium oak tree. Though no features were visible on these trees, the maturity of T8 and T9 means that there may be features towards the top of the tree that are not visible from ground level and therefore it must be assumed that these trees are of low potential, at least, for roosting bats.

Conclusion

- 4.4.2 T8 and T9 have low suitability for roosting bats which should be considered if these trees are to be affected by the construction occurring on site or considered for felling.

4.5 Habitat Suitability Assessment (HSI)

- 4.5.1 The HSI completed of the pond indicate that the pond on site has a HSI score of 0.47, indicating that the pond has poor suitability to support great crested newts. It is therefore unlikely that great crested newts would use this pond for breeding, especially given the absence of other ponds within 500m of the site.

5 Potential Impacts and Recommendations

5.1 Designated Sites

- 5.1.1 As detailed in Section 4.2.4, the 0.008ha of proposed Local Wildlife Site in the west of the site is not considered to ‘appreciably enrich the habitat resource within the Parish or Neighbourhood’. As such, loss of trees is not considered to be of significance to the proposed designated site, however, loss of biodiversity should be avoided and a biodiversity impact assessment is required to identify biodiversity losses and gains as a result of the recent habitat loss and proposals (see Recommendation R10 below).
- 5.1.2 Whilst the construction of a single residential dwelling may increase recreational use of the publicly accessible Local Wildlife Sites within the local area, the impacts are considered insignificant.

5.2 Habitats

Potential Impacts

- 5.2.1 In the absence of avoidance measures, the proposals are likely to cause the compaction of the roots of the trees adjacent to the site, as well as the hedgerow on site (albeit the hedgerow is of negligible ecological value due to being non-native).

Recommendation R1 – Safeguarding Trees and Hedgerows:

- 5.2.2 The trees and hedgerows within site will be fully safeguarded from harm as part of any detailed proposals through the demarcation and fencing of root protection areas during construction works or as otherwise indicated by a suitably qualified arboriculturist. These root projection zones must be strictly enforced, by excluding storing materials and machinery from the zones, to prevent further damage to the trees on site.

Recommendation R2 - Native Planting:

- 5.2.3 Included in the proposals wherever appropriate, biodiversity gain will be maximised, for instance through the usage of Emorsgate Flowering Lawn Mixture EL1 in place of traditional monoculture turfs and native hedges in place of or in addition to fences. New planting to support biodiversity may comprise a mixture of native and formal landscaping species that simultaneously provide resources to local wildlife and remain appropriate to amenity or residential settings. Examples appropriate to formal and garden settings include the usage of native species such as dogwood (*Cornus sanguinea*) and ornamental varieties of known value to wildlife such as plants for pollinators, for example lavender ‘Gros Bleu’.

5.3 Species

Potential Impacts

- 5.3.1 Species/groups and other ecological features for which potential impacts are not considered likely to occur as a result of the proposals are outlined alongside justification in Table 4.5 above; these are excluded from further assessment. The following focuses on those ecological features likely to be significantly impacted (adverse or beneficial impacts) only.
- 5.3.2 In order to avoid and/or mitigate for any such impacts, further ecological survey, assessment and mitigation work is likely to be required prior to any development or vegetation clearance/building demolition at the site. Following completion of the Biodiversity Impact Assessment, and further surveys, a full EcIA report will be required to inform a planning application at the site. This PEA report should not be submitted alongside a planning application.

Reptiles

- 5.3.3 In the absence of avoidance measures, the development of the site will include the clearance of the grassland on the site, which would result in the killing, injury, or disturbance of reptiles that are likely to utilise the site for resting, commuting and breeding.

Recommendation R3 – Safeguarding of Reptiles

- 5.3.4 A phased directional cut of the grassland on site will be carried out over two consecutive days, from April – October (inclusive) to avoid the hibernation period, wherein the temperature at night must not go below 5°C, and the temperature in the day must be between 9°C and 18°C.
- 5.3.5 On the first day, given that the above criteria has been met, the first cut should be to 150mm, starting the cut in the north of the site and working gradually towards the south of the site, so as to allow any animals to escape to the woodland in the east and the land adjacent to the south of the site. A fingertip search of the arising left in situ will be undertaken by a suitable qualified Ecological Clerk of Work (ECOW) following the first cut. A second cut of the grassland to ground level will then occur in the same manner as the first cut, i.e. from north to south.
- 5.3.6 Clearance and other work should then halt and be left overnight.
- 5.3.7 On the second day, full clearance and track over of the site will occur.
- 5.3.8 The site must then be maintained to this standard, with piles of brash and vegetation being prevented from forming, so that animals are unlikely to move back onto the site.

Bats

- 5.3.9 In the absence of avoidance measures, the development of the site could result in the disturbance of roosting, foraging, and commuting bats. An area of 0.008ha of the site is within the proposed extension of the Highdown Wood LWS. While this is unlikely to impact the viability of the woodland, it is important that the development does not severe potential commuting routes for species, including bats.
- 5.3.10 Increased levels of artificial light can cause disturbance to bats. Though several bat species can take advantage of artificial lighting systems for foraging, feeding off the insects they attract, other species avoid them as foraging within an illuminated area increases the risk of predation by nocturnal birds of prey or even domestic cats. If lighting is intensive and widespread, particularly lighting from lamps, which emit UV light (such as mercury vapour); it can deter some bats from utilising the site and in some instances can act as a barrier across commuting lines. Research has also shown that certain types of artificial lighting have been proven to disturb the emergence patterns of bats when they are placed within the vicinity of entrances to a bat roost.

Recommendation R4 – Lighting

- 5.3.11 Any lighting for the development (if required) will be designed sensitively in accordance with industry standard guidance (BCT & ILP, 2023) and the following principles will need to be adopted:
- Maintaining dark corridors along the site boundaries;
 - Where lighting is required, ensuring:
 - Light levels are less than 3 Lux;
 - LED luminaires with a warm white spectrum ideally <2700 Kelvin (to avoid blue / UV elements);
 - Bollard or low-level downward directional luminaires are used and mounted on the horizontal (with no upward tilt); and
 - Security lighting, if required, is motion-activated with short (<1 minute) timers.

Recommendation R5 – Bat boxes

- 5.3.12 The inclusion of one integrated bat box (See suggestion in Appendix 5) will be secured as part of the proposed development. The bat box will need to be integrated within the southern or western aspect of the building at 3-5m height with a clear flight line away from artificial light sources.

Nesting Birds

- 5.3.13 The proposals will result in the clearance of vegetation that may be suitable for nesting birds. This would result in a contravention of relevant wildlife legislation if active nests are present. In the absence of mitigation measures, this would be considered to represent an adverse ecological impact of significance within a local context.

Recommendation R6 – Safeguarding Nesting Birds

- 5.3.14 Any wild birds' nests are protected whilst in use. If any active wild birds' nests are found prior to the vegetation clearance, or building demolition, then these must be left alone until they cease to be in use. Ideally, works to suitable nesting habitat/features should be scheduled to avoid the bird nesting season (March to August inclusive). Should such works take place during March-August inclusive, they must be immediately preceded by a check for any active nests by a suitably qualified ecologist. Any active nests identified during works (regardless of time of year) would need to be protected and left with a suitable buffer (to be defined by the ecologist) until the nest is no longer active.

Recommendation R7 – Bird Boxes

- 5.3.15 The inclusion of two bird boxes will be secured as part of the proposed development. Specified boxes should target local notable species for which presence was confirmed on site or records of which were returned within the local area such as house sparrow (*Passer domesticus*).
- 5.3.16 The boxes will be integrated within the exterior of the proposed building on the northern or eastern aspect. Boxes must be positioned at a minimum height of 3m in a sheltered area with a clear flight path to the entrance.
- 5.3.17 A suitably qualified ecologist must direct and/or approve the installation of bird boxes to ensure their suitable placement; this can be achieved by:
- signing off on detailed design plans showing inclusion within architectural drawings;
 - providing detailed instruction and signing off on evidence of installation such as photos; or
 - attending site to direct installation via affixture to buildings/trees.

Badgers and other wild mammals

- 5.3.18 Site clearance and construction works could result in the killing / injury of wide-ranging wild mammals which make use of the site. This would be considered an offence as all wild mammals are protected from unnecessary harm (see Section 7).

Recommendation R8 – Safeguarding Wild Mammals:

- 5.3.19 The brash piles within the site will be dismantled by hand under supervision of an Ecological Clerk of Works to ensure the protection of any species which may be present such as reptiles, toads or hedgehog.
- 5.3.20 Detailed proposals should include measures to safeguard wild animals should they enter the site during construction works, and to discourage wild animals from entering the site. This can be achieved by implementing the following standard mitigation measures:
- trenches or pits left overnight should be provided with a means of escape for wild animals should they enter such as a collapsed edge or a flat roughened stable plank (no steeper than 45°) acting as a ramp to the surface;
 - pipes should be capped off overnight to prevent animals entering and becoming trapped; and
 - all trenches and pits will be inspected each morning to ensure no wild animals have become trapped overnight. Should a badger become trapped in a trench it will likely dig itself into the side of the trench. Should a trapped badger be encountered, a suitably qualified ecologist should be contacted immediately for further advice.

Recommendation R9 – Hedgehog Highways and Gravel Boards

- 5.3.21 Any fences being installed will include hedgehog gravel boards, which allow hedgehogs to travel between suitable habitats (See Appendix 5). These gravel boards will also include hedgehog highways signage to inform people within the area of the purpose of the gravel boards, thereby limiting the risk of blocking these points of connectivity for hedgehogs.

5.4 Opportunities for Ecological Enhancement

- 5.4.1 In line with the Reading Borough Council Local Plan (see section 6.1), which requires developments to demonstrate a biodiversity net gain, a number of enhancements, listed both below and within the recommended BIA report, will be included within the design plans (example specifications are included in Appendix 5).

Recommendation R10 – Biodiversity Net Gain:

- 5.4.2 A Biodiversity Impact Assessment (BIA) will be conducted by a suitably qualified ecologist, with the use of a biodiversity net gain (BNG) calculator (such as the DEFRA 4.0 metric), to assess the effect the proposals will have on biodiversity on the site and decide whether enhancements can be made on site to enhance biodiversity, or if offsetting offsite will be necessary.

Recommendation R11 – Enhancements

- 5.4.3 In order to enhance the local area for wildlife ecological features and contribute towards biodiversity net gain, it is recommended that proposals include the following:
- Native planting
 - One bat box and two bird boxes will be incorporated as recommended in R5 and R7, respectively.
 - Hedgehog highways and holes in gravel boards will be incorporated in any proposed fencing as recommended in recommendation R9.
- 5.4.4 Once ecological enhancements have been delivered a 'statement of good practice' shall be signed by the competent ecologist, and be submitted to the LPA, confirming that the specified enhancement measures have been implemented in accordance with good practice upon which the planning consent was granted.

6 Relevant Legislation and Policy

6.1 Reading Borough Council – Local Plan 2019-2036 (Adopted November 2019)

EN12: BIODIVERSITY AND THE GREEN NETWORK

6.1.1 a) The identified Green Network, the key elements of which are shown on the Proposals Map, shall be maintained, protected, consolidated, extended and enhanced. Permission will not be granted for development that negatively affects the sites with identified interest or fragments the overall network. The Green Network comprises:

- Sites with identified biodiversity interest - Local Wildlife Sites, Local Nature Reserves, Biodiversity Opportunity Areas, protected and priority species and their habitats, Priority and Biodiversity Action Plan habitats, and the River Thames and all its tributaries (including the River Kennet and the Kennet & Avon Canal); and
- Areas with potential for biodiversity value and which stitch the Green Network together – designated Local Green Space and open green spaces, and existing and potential Green Links.

New development shall demonstrate how the location and type of green space, landscaping and water features provided within a scheme have been arranged such that they maintain or link into the existing Green Network and contribute to its consolidation. Such features should be designed to maximise the opportunities for enhancing this network. All new development should maximise opportunities to create new assets and links into areas where opportunities are as yet unidentified on the Proposals Map.

6.1.2 b) On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible.

Development should:

- Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable; and
- Provide new tree planting, wildlife friendly landscaping and ecological enhancements (such as wildlife ponds, bird and bat boxes) wherever practicable. In exceptional circumstances where the need for development clearly outweighs the need to protect the value of the site, and it is demonstrated that the impacts cannot be: 1) avoided; 2) mitigated or; 3) compensated for on-site; then new development will provide off-site compensation to ensure that there is “no net loss” of biodiversity. Provision of off-site compensation shall be

calculated in accordance with nationally or locally recognised guidance and metrics. It should not replace existing alternative habitats, and should be provided prior to development.

6.2 Exit from European Union

- 6.2.1 The Conservation of Habitats and Species Regulations 2017 (as amended), referred to as the '2017 Regulations,' are one of the pieces of domestic law that transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives). Changes to the 2017 Regulations have been made by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (referred to as the '2019 Regulations') to transfer functions from the European Commission to the appropriate authorities in England and Wales.
- 6.2.2 The amendments prescribed by the 2019 Regulations allow existing protections afforded by current wildlife legislation and transposed EC Council Directives to be operable from 01 January 2021.
- 6.2.3 The 2019 Regulations protect rare and vulnerable birds and the habitats that they depend upon. This is achieved in part through the classification of Special Protection Areas (SPAs). The Habitats Directive aims to protect plants, habitats and animals other than birds. This is achieved in part through the creation of Special Areas of Conservation (SACs). SPAs and SACs are collectively referred to as the 'National Site Network'.
- 6.2.4 Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network, however, all Ramsar sites remain protected in the same way as SACs and SPAs.

6.3 National Planning Policy Framework

- 6.3.1 The National Planning Policy Framework (NPPF) was updated in July 2021 (MHCLG, 2021) thereby replacing the older version of February 2019. The new framework sets out in section 15 that to protect and enhance biodiversity and geodiversity, plans should:
 - identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and

- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

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

- 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;
- 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;
- 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 reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

6.3.3 The following should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

6.3.4 The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

6.4 European Protected Species (EPS) Animals

- 6.4.1 The Conservation of Habitats and Species Regulations 2017 (as amended) transpose the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.
- 6.4.2 “European protected species” (EPS) of animal are those which are shown on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:
- a) intentionally or deliberately capture, injure or kill any wild animal included amongst these species;
 - b) possess or control any live or dead specimens or any part of, or anything derived from these species;
 - c) deliberately disturb wild animals of any such species;
 - d) deliberately take or destroy the eggs of such an animal; or
 - e) intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place.
- 6.4.3 For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—
- a) to impair their ability—
 - 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.
- 6.4.4 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of The Conservation of Habitats and Species Regulations 2017 (as amended), a licence can only be issued where the following requirements, known as the “Three Tests”, are satisfied:

1. The proposal is necessary ‘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’
2. ‘There is no satisfactory alternative’

6.4.5 The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.’

6.5 Bats

6.5.1 Bats and their roost sites are protected by UK legislation.

6.5.2 The Wildlife and Countryside Act (1981) (as amended) makes it an offence to:

- Intentionally kill, injure or take a bat;
- Possess or control any live or dead specimen or anything derived from a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; and
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

6.5.3 Additionally, The Conservation of Habitats and Species Regulations 2017 (as amended) make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding site or a resting place of a bat; and
- Keep, transport, sell or exchange or offer for sale or exchange a live or dead bat or any part of a bat.

6.6 Birds

6.6.1 All nesting wild birds 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 its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

6.6.2 The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to

wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, 'Birds Directive') (Regulation 10 (3)) requires that the objective is the 'preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...' Regulation 10 (7) states: 'In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements'.

- 6.6.3 In relation to the duties placed on competent authorities under the 2017 Regulations (as amended), Regulation 10 (8) states: 'So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).'

6.7 Badgers

- 6.7.1 Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "a structure or place, which displays signs indicating current use by a badger".
- 6.7.2 ODPM Circular 06/2005 (ODPM, 20005) provides further guidance on statutory obligations towards badger within the planning system. Of particular note is paragraph 124, which states that "The likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions."
- 6.7.3 Natural England provides Standing Advice (Gov.uk, 2015), which is capable of being a material consideration in planning decisions. Natural England recommends mitigation to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and foraging/watering areas.

6.8 Wild Mammals

- 6.8.1 The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts, making it an offence for any person to intentionally cause suffering to any wild mammal. In the context of development sites, for example, this may apply to rabbits in their burrows.

6.9 Invasive non-native species

- 6.9.1 An invasive non-native species is any non-native animal or plant that has the ability to spread causing damage to the environment.
- 6.9.2 Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to release, or to allow to escape into the wild, any animal which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state or is listed under Schedule 9 of the Act.
- 6.9.3 It is an offence to plant or otherwise cause to grow in the wild invasive non-native plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

7 References

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Appendix 1 - Photographs

Photograph 1: Artificial Pond



Photograph 2: Pond, Other Neutral Grassland and Cypress Hedgerow



Photograph 3: Scrub and tall herb within the north



Photograph 4: Elder Tree (T3) in west



Photograph 5: View of introduced cherry laurel and buddleia shrub with T8 in the background.



Photograph 6: Brash Pile in the north-east of the site.



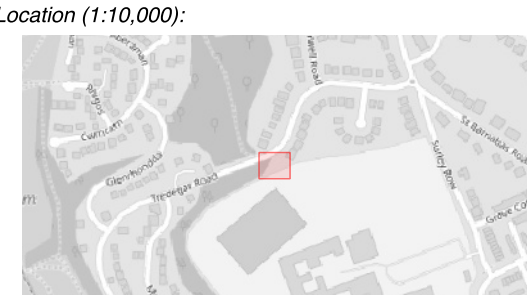
Appendix 2 - Figures

Next page:

- Figure 1: Baseline Habitats



- LEGEND
- Site boundary (0.06 ha)
 - Target Notes
 - h2b - other hedgerows (0.03 km)
 - g3c - other neutral grassland (0.0475 ha)
 - h3h - mixed scrub (0.0064 ha)
 - r1(362) - artificial lake or pond (0.0011 ha)
 - u(11) - scattered tree, large (1 trees)
 - u(11) - scattered tree, medium (5 trees)
 - u(11) - scattered tree, small (2 trees)
 - u1(1160) - introduced shrub (0.0025 ha)



Project:
Land Adjacent to 25 Tredegar Road

Client:
Creative Design and Structure Ltd.

Drawing Title:
2023 Habitats

Drawing No.:	Scale (@A3):
EBD_0789_DR001_2023	1:125
Central Eastings, Northings:	Date Drawn:
471128, 176512	11/09/2023
Drawn by:	Approved by:
KH	BG

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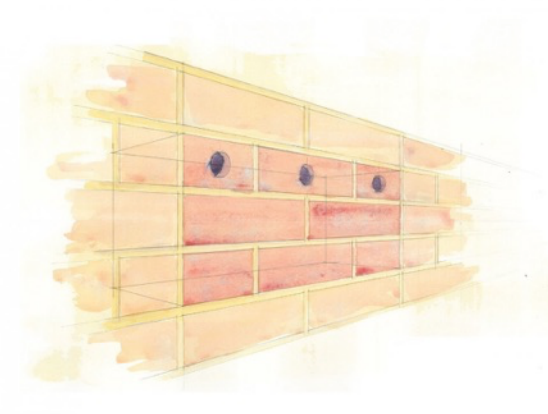
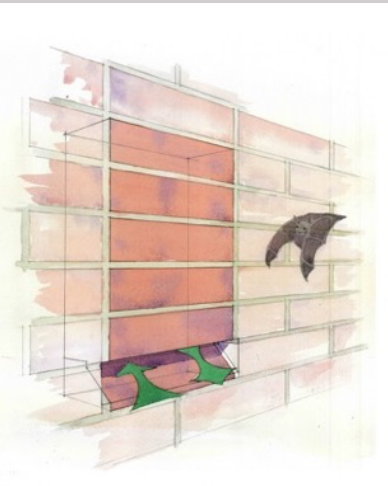
Appendix 3 - Definitions of the Geographic Context of Habitat Importance

Geographic Context of Importance	Examples
International value	Ramsar Sites, Special Protection Areas, Biosphere Reserves, Special Areas of Conservation. Sites supporting populations of internationally important species.
National value	SSSIs or non-designated Sites meeting SSSI selection criteria, NNRs, Marine Nature Reserves, NCR Grade 1 Sites. Sites containing viable areas of key habitats identified in the UK Biodiversity Action Plan.
Regional value	Sites containing viable areas of threatened habitats listed in a Regional BAP (or some Natural Areas), comfortably exceeding SINC criteria, but not exceeding SSSI criteria.
County / Metropolitan	Sites meeting the criteria for county or metropolitan designation (SINC, CWS, etc.). Ancient semi-natural woodland, LNRs or viable areas of key habitat types listed in county BAPs/Natural Areas.
District / Borough	Undesignated Sites or features considered to appreciably enrich the habitat resource in the District or Borough.
Local i.e. Parish / Neighbourhood	Undesignated Sites or features which appreciably enrich the habitat resource within the Parish or Neighbourhood.
Negligible value	Low grade and widespread habitats.

Appendix 4 - Definitions of the geographic Context of Species Importance

Geographic Context of Importance	Examples
International	Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population/number of any internationally important species.
National	Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population/number of any nationally important species.
Regional	Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species.
County/ Metropolitan	Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan “red data book” or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species.
District / Borough	A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Local i.e. Parish / Neighbourhood	Species that are not threatened but are valued at a local level on intrinsic appeal.
Negligible	Common or widespread species.

Appendix 5 - Proposed Enhancements

Products	Description
	Habibat Terraced Sparrow Box Three-chambered box designed for sparrows that can be integrated into a wall and faced with the same material as the wall to leave only small holes for bird access. http://www.habibat.co.uk/category/bird-boxes/habibat-terraced-sparrow-box
 	Habibat Bat Box The Habibat Bat Box is a solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any building. The box is suitable for Pipistrelle bats and other common UK species. https://www.nhbs.com/habibat-bat-box-plain-for-rendering



Hedgehog gravel boards

A gravel board for use with slotted posts to allow hedgehogs free passage between gardens. Holes 13cm x 13cm could be installed at the base of any gravel board.

https://www.jacksons-fencing.co.uk/product/sc_667610/hedgehog-gravel-board-for-use-with-slotted-posts-1.83m-x-150-x-28mm-incl.1-x-end-packer-1-x-length-packer-jakcured



Hedgehog Highways

Number of signs/stencils: (2 per hole)

Hedgehog highways are formed by a series of ground-level holes in boundary fences. The holes must be 150 mm x 150 mm and marked on both sides by either a sign (see left and link below) or a spray-painted stencil labelling them as:

“Hedgehog Highway

Please keep this hole open”.

<https://www.arkwildlife.co.uk/product/hedgehog-highway-sign/>